



# 11<sup>th</sup> ICCMI

International Conference on Contemporary Marketing Issues

## CONFERENCE PROCEEDINGS

12 - 14 July  
CORFU/GREECE/2023

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**11<sup>TH</sup> International Conference on Contemporary Marketing Issues.**

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co-Organized by **Department of Business Administration, School of Economics, Aristotle University of Thessaloniki, Greece** and **Chair of International Business, Department of Marketing and International Business, University of Vienna, Austria.**

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## Preface

Welcome to the 11th “International Conference on Contemporary Marketing Issues” (ICCM I 2023) co-organized by the Department of Business Administration, School of Economics, Aristotle University of Thessaloniki, Greece and the Chair of International Business, Department of Marketing and International Business, University of Vienna, Austria. The 11th ICCMI is hosted by the Ionian University, Department of Tourism, in Corfu, Greece, between July 12<sup>th</sup> and July 14<sup>th</sup>, 2023.

The vision to organize a conference in Marketing as a personal aspiration of the founder of ICCMI, Christos Sarmaniotis but materialized for the first time, in June 2012 in Thessaloniki, Greece. Throughout the year significant cooperations with institutions from Greece and Europe such as Manchester Metropolitan University, Kingston University, International Hellenic University, Leeds University Business School, and University of Glasgow Adams Smith Business School have transformed ICCMI to a well-known conference that brings together scholars, researchers, practitioners, and students from around the world to discuss and exchange ideas on contemporary marketing issues. The conference aims to provide a platform for meaningful discussions, networking opportunities, and the presentation of cutting-edge research in the field of marketing. And all these in picturesque locations in Thessaloniki, Athens, Crete, Chalkidiki, Santorini, Naxos.

ICCM I 2022 marked a successful revival of the conference following the global pandemic. Taking place on the picturesque island of Naxos, the event drew more than 80 attendees from 11 different countries, fostering a vibrant environment for knowledge exchange and research feedback. Notably, ICCMI 2022 embraced an innovative approach by expanding its focus to encompass diverse fields of study, including tourism and management, alongside traditional marketing topics. This widened scope provided a valuable platform for scholars to explore interdisciplinary perspectives and further enrich the conference experience.

The upcoming ICCMI 2023 conference anticipates captivating presentations and engaging debates across the domains of Marketing, Tourism, and Management. Rigorously selected through a blind review process, accepted papers will be published in the conference proceedings, ensuring wide dissemination of the research findings. ICCMI 2023 benefits from the support and expertise of distinguished scholars who form the international advisory scientific board and the international scientific committee. Moreover, the conference's impact and relevance are further elevated by esteemed journals, which have expressed their commitment to publishing a limited number of exceptional, top-quality papers submitted to ICCMI 2023, providing valuable publication opportunities for conference participants.

We are delighted to announce that Professor George Nakos, a renowned scholar in the field, will join ICCMI 2023 as our esteemed Keynote Speaker. Professor Nakos currently holds the position of Professor of Marketing and International Business at Clayton State University, located in Atlanta, Georgia. We express our sincere gratitude to Professor Nakos for his invaluable contribution, which undoubtedly contributes to the overall success of the conference. His expertise and insights are eagerly anticipated, and we look forward to his impactful keynote address at ICCMI 2023.

We would like to extend our heartfelt appreciation to the Ionian University, Department of Tourism, our gracious host, for their invaluable support in organizing the conference. Their contribution has

been instrumental in ensuring the smooth execution of ICCMI 2023. We are also deeply grateful to the members of the international advisory scientific board and the international scientific committee, whose expertise and commitment have played a crucial role in upholding the high quality of the papers presented at the conference.

Our sincere thanks are extended to the editors of the collaborating journals for their generous support and willingness to endorse ICCMI. Their involvement enhances the prestige and impact of the conference, offering authors exceptional publication opportunities. Furthermore, we would like to express our gratitude to all the authors who have submitted their papers, as their contributions form the foundation of ICCMI 2023.

Finally, we extend our appreciation to our sponsors Tziolas Publishing and Broken-Hill Publishing, for their invaluable support in making ICCMI 2023 a reality. Their generous sponsorship has played a crucial role in ensuring the success and impact of the conference. We also extend our heartfelt thanks to msquare for their ongoing dedication and meticulous organization and administration of the conference. Their expertise and efforts have been instrumental in creating a seamless and enriching experience for all participants.

On behalf of all the conference co-Chairs, we extend a warm and enthusiastic welcome to all participants. We are excited to have you join us for ICCMI 2023, and we look forward to a productive and enlightening conference experience.

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# Advertising

## **The Role of Disinformation in Advertising: the case of Innisfree Paper Bottle Campaign**

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### **Abstract:**

This study explores the effect of disinformation in advertising in the context of Socially Conscious Responsible (SCR) brands. Using a case study methodological approach, we examine the advertising campaign of a South Korean beauty brand, introducing its newest sustainable packaging through the theoretical lenses of the Expectancy Disconfirmation theory, and brand activism. Our data is collected online and analysed following a thematic analysis. Our proposed findings reveal the increased scepticism echoing on social media conversations. Consumers' negative disconfirmation of inauthentic brand activism leads to mistrusting the brand in its communicated claims. It further primes consumers in engaging into online debates, where most claims made by the brand are put into question. Our findings are then discussed with regards to their theoretical and practical implications to SCR branding and advertising.

**Keywords:** *Disinformation, SCR brand, Brand activism, Misinformation, Greenwashing, Socially Conscious Responsible brand*

**References:** Available Upon Requested

## Gender and advertising: a study of depictions and stereotypes

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### Abstract

This research investigates the presence of stereotypes in advertising, focusing on the portrayal of men, women, and homosexuals, as well as the public's reactions to these depictions. The study begins by conducting a thorough review of existing literature in this field, which leads to the development of research hypotheses.

In the second part of the research, a quantitative survey was employed, utilizing a Google Forms questionnaire. The sample size for the survey consisted of 206 individuals, predominantly comprising women. To analyze the data collected from the survey, Microsoft Excel and the SPSS statistical program were utilized.

The findings of the research reveal that advertising frequently relies on gender and sexual stereotypes, employing predefined roles for each examined gender and sexual group, including homosexuals. Furthermore, the study identifies the factors that influence consumers' reactions to advertising depictions, including sex and social group.

Overall, this research contributes to enhancing our understanding of the role played by stereotypes in advertising and sheds light on how the public perceives and responds to such portrayals.

**Index Terms:** *stereotypes, women, men, homosexuals, advertising*

### Introduction

The media has a significant impact on society, including advertising, which shapes consciousness and creates a reality that influences the consumer (Baker, 2011; Monro & Huon, 2005; Plakoyiannaki et al., 2008; Wolska, 2011). Advertising can reinforce stereotypical perceptions and promote certain values, behaviors, and lifestyles (Kim & Lowry, 2005; Navarro & Martin, 2013). Gender depiction in advertising has been controversial, with researchers arguing that it is based on a stereotypical perception of social roles (Furnham & Li, 2008; Bakir, 2013; Eisend et al., 2014). Stereotypes in advertising can be seen as reflecting changes in society and culture (Zhang et al., 2009), and there is a theory that advertising can contribute to the redefinition of gender roles (Eisend et al., 2014)

### Literature Review

#### *Gender stereotypes and their representation in advertising*

Studies on gender stereotypes suggest that both men and women tend to perceive men as independent and capable, while women are seen as warm and expressive (Broverman et al., 1972; Spence, Helmreich, and Stapp, 1974). However, not everyone may hold consistent personal beliefs about these stereotypes (Devine, 1989). In Western societies, four dominant sub-types of women are identified, including the traditional housewife and object of desire, as well as the feminist and careerist types. For men, there are mainly two sub-types: the entrepreneur and the masculine type. It remains unclear whether gender stereotypes accurately reflect actual gender differences in personality and behavior or simply reflect assigned gender roles in society (Parsons, Adler, and Meece, 1984). Advertising reproduces stereotypes that exist in society and can influence social attitudes and values through repetition. Gender is often used as a segmentation variable in marketing strategies, and advertising is believed to reflect and reinforce gender stereotypes (Thrush & Zotos, 2013; An & Kim, 2007).

Gender stereotypes are divided into four different categories: a) descriptions of characteristics (confirmation), b) physical characteristics (height, weight, color), c) roles (e.g. household chores), d) professional status (e.g. housewife, manager, taxi driver) (Deaux and Lewis, 1984), which is the element with the highest degree of stereotypical depiction in advertising. Each element is associated with a male and female version which is automatically associated with the gender of the man and woman. This connection usually has negative effects, especially for women, as it has been proven, such as the need for affirmation, decreased self-confidence, their

role that has professional limitations, and the "musts" (e.g. "the woman must undertake the upbringing of children"). There is a tendency to combine genders with products in one advertisement. Women are usually associated with products related to beauty (cosmetics, perfumes, clothing), care (aesthetics, hygiene products, treatments), and household (cleaning products).

The European Union adopted a resolution in 2008 on how marketing and advertising affect equality between women and men, urging Member States to ensure that advertising does not contain material promoting violence or discrimination (Article 19) and to create prizes for non-stereotypical and positive images of women and men (Article 22). The literature on gender stereotypes in advertising is divided into optimistic and pessimistic categories (Eisend, 2010). While some research shows progress in the representation of women, others report that women continue to be depicted in secondary positions (Verhellen, 2014). The degree of stereotypical depiction has decreased significantly in countries with strong patriarchy, but not in countries where these variables did not prevail (Eisend, 2010).

#### *The depiction of the female sex in advertising and the feminist movement*

The way the female sex is portrayed has piqued the interest of most researchers for many decades. The woman in advertising is usually presented as being interested in her external appearance and attractiveness, as a housewife, and as an object in a sexual role (Lysonski, 1985). Compared to men, women are portrayed much more in a sexist way, useful for household chores, dependent and without power, needing support from men. There is a tendency to portray women as inferior to men in a sexual and decorative role. In appearance, they are most often presented as new, fresh, cheerful, with beautiful external features. Also, advertising often promotes a woman who manages to carry out all her activities and obligations successfully in her daily life without getting tired (Kates and Shaw-Garlock, 1999, 2010).

In addition, Jones, Gelb, and Stanaland (1998) report that women express negative feelings towards advertisements featuring a model with a sexual role, and Domenech-Rodriguez (2003) points out that teenage girls criticize traditional images of the role of women in advertisements. However, according to the findings of Orth and Holancova (2004), women consider non-stereotypical advertising, in which the female sex is presented as superior to the male, to be negative and harmful. Ads with equal role portrayals, in terms of female advertising preferences, are considered ideal and effective (Jafee and Berger, 1994).

Retro-sexism, is a social and stylistic trend that communicates cultural expectations of femininity, such as dependence and attractiveness (Gill and Arthurs, 2006). Some researchers argue that retro-sexism empowers women, while others suggest that it was a response to the feminist movement (Gill and Arthurs, 2006). In Greece, women continued to be portrayed in inactive, decorative roles in print advertisements, despite changing societal roles and a decrease in dependence on male audiences (Zotos and Lysonski, 1994). Even in recent years, studies show that advertising still does not reflect modern gender roles, with women being depicted in decorative, traditional, non-traditional, or equal roles with men (Plakogiannaki and Zotos, 2009). Print and online advertisements often display persistent stereotypical depictions of women, with decorative roles being more prevalent in women's magazines and those aimed at women, and dependent or non-traditional roles in those aimed at men (Plakogiannaki et al., 2008; Lindner, 2004; Landreth and Bang, 2005; Plakogiannaki and Zotos, 2009)."

#### *The depiction of the male sex in advertising and the modern role*

Research on the portrayal of men in advertising is limited compared to studies on women (Bretl and Cantor, 1988; Coltrane and Adams, 1997; Stern and Mastro, 2004), with a lack of attention to the topic (Good and Sherrod, 2001). However, recent changes in gender roles and stereotypes necessitate an understanding of the evolution of male roles (Elliott, 2005). Lysonski (1985) systematically studied male stereotypes in advertising and found that men are often depicted as powerful, dynamic, and independent in both professional and entertainment roles. They are commonly used to promote technological products, with an emphasis on their professional roles (Klassen, Jasper, and Schwartz, 1993).

Recent years have seen changes in the roles of men portrayed in advertising, reflecting the impact of the feminist movement. The representation of men as the leading character has declined, with the percentage of men depicted as a "figure of power" dropping from 30.5% to 16.6% after 2000 (Hadjithomas, 2016). The changing roles of men in society have garnered increasing attention in the literature (Grau and Zotos, 2016).

Also, research results show evidence to suggest that fathers are increasingly taking on household chores, indicating a shift in the acceptance of men in caregiving roles (Cantor, 1990). This change is reflected in media, with fathers depicted as caring supporters. Hochschild (1989) identified three categories of marital roles for housework: traditionalists who believe men should provide financial security, traditionalists who accept men and women in paid work but still prioritize men earning income, and equals who believe responsibilities should be shared evenly. While conventional gender depictions still appear in advertising, they are modified (Coltrane and Messineo, 2000).

### *The depiction of homosexuals in advertising and the company supporters*

The portrayal of homosexuals in advertising has received significant attention in academic research, with a focus on consumer reactions and trajectory of their depiction in advertising. IKEA's 1994 advertisement featuring a gay couple buying a table for their engagement was the first depiction of homosexuals in advertising. Gay individuals in advertising are often depicted as successful, happy, in shape, and taking care of themselves, creating an image stereotype of "dream consumers." However, negative stereotypes exist for lesbians, including that they have lower incomes and do not take care of themselves. Advertisers typically use images of gay men to reach gay consumers (Witeck and Combs, 2006; Baxter, 2010).

Public acceptance of homosexuality has increased significantly in many societies over the past two decades (Ghaziani et al., 2016). This is reflected by the legalization of gay marriage in many countries and more favorable responses to survey questions about gay marriage (Lax et al., 2016). Increasing representation of gay people in the media and advertising also indicates growing acceptance (Bond, 2014). Positive changes in support of homosexuality have helped many gay consumers express their sexual identity and preferences, which is related to higher life satisfaction, positive emotions, and self-esteem (Beals et al., 2009). Gay role models in the media can also serve as sources of pride, inspiration, and comfort (Gomillion and Giuliano, 2011). As a result, homosexual consumers may react more positively to homosexual images in advertising over time as a reflection of growing social support and companies' appreciation of homosexuality.

Studies on men and women's support for homosexual ads are inconclusive (Ginder and Byun, 2015). Oakenfull and Greenlee (2004) recommend using lesbians in advertising, as research shows that heterosexuals generally hold more negative attitudes towards gay men than towards lesbian women. Heterosexual men, in particular, tend to express more negative attitudes towards homosexual people of the same sex than heterosexual women (Herek, 2002). The portrayal of homosexual women in advertising may be seen as having an erotic appeal for heterosexual men, making it more appealing to them (Oakenfull and Greenlee, 2004).

Advertisers have avoided explicit portrayal of homosexuals due to homophobia, negative stereotypes, and the fear of offending a large part of the market (Clark, 2000; Kates, 2002; Schroeder and Zwick, 2004). Instead, they have used "gay window" advertising (Bronski, 1984) as a strategy to reach out to gay audiences without offending the heterosexual public. This strategy features same-sex characters that can be interpreted as friends or roommates by heterosexual audiences and as homosexual couples by gay audiences, avoiding explicit references or stereotypes (Sender, 1999; Chasin, 2000). This type of advertising has been positively received by consumers (Ritson and Elliot, 1999) and can be enjoyed by gay audiences who decipher the innuendo and create multiple meanings based on their personal experiences and beliefs (Hirshman and Thompson, 1997).

### **Methodology**

The purpose of this paper is to investigate the presence of stereotypes in advertising, particularly the representation of genders. Two research questions guide this study: firstly, to examine the influence of the public's views on advertising content and stereotypes; secondly, to explore the impact of advertising on the public's perception of gender roles. The current study employed a quantitative approach.

#### *Quantitative Research*

This study utilized a standardized questionnaire with 19 closed-ended questions, including dichotomous and multiple-choice formats. The questionnaire aimed to examine stereotypes in advertising, gender portrayal in advertisements, and public reactions to these depictions. The study included 206 participants who all received the same questionnaire. Data analysis was done using inductive statistical methods.

#### *1st research question*

What is the impact of the audience's demographic profile on their views on the content displayed by the ads?

Table 1 presents the results of the independent samples t-test of ad content for gender.

Factor/Questions	t	df	p-value
Representative Advertising	-0,051	204	0,960
Do you think that ads project stereotypes?	-2,649	162,123	0,009
Do you think that ads now feature fewer stereotypes than in previous years?	-0,631	163,021	0,529
Advertising "embraces" all social groups.	-0,536	204	0,593
Should there be ads depicting gay couples?	-4,221	204	<0,001
Do you see concepts like sexism in advertising?	-1,845	156,552	0,067



Advertising should represent society.	-3,607	131,720	<0,001
Do you support a change in gender stereotypes, for women to take on a dynamic role and for men to take on household jobs?	-2,355	204	0,019
Was there an ad that offended your aesthetics about representing a gender in a certain way?	-2,366	157,599	0,019
Could it be that to eliminate some stereotypes, new ones are created?	-1,038	159,127	0,301

Table 2 presents the results of the ANOVA check of the content of the advertisements for the age of the participants.

Factor/Questions	F (2,202)	p-value
Representative Advertising	1,861	0,158
Do you think that ads project stereotypes?	1,302	0,274
Do you think that ads now feature fewer stereotypes than in previous years?	0,273	0,761
Advertising "embraces" all social groups.	1,066	0,346
Should there be ads depicting gay couples?	11,637	<0,001
Do you see concepts like sexism in advertising?	2,138	0,121
Advertising should represent society.	1,194	0,305
Do you support a change in gender stereotypes, for women to take on a dynamic role and for men to take on household jobs?	2,775	0,065
Was there an ad that offended your aesthetics about representing a gender in a certain way?	3,326	0,038
Could it be that in an attempt to eliminate some stereotypes, new ones are created?	0,946	0,390

Table 3 presents the results of the Kruskal Wallis and ANOVA tests of ad content in terms of educational attainment.

Factor/Questions	Audit	Statistical	P-value
Representative Advertising	ANOVA	F (3,202) = 1,811	0,146
Do you think that ads project stereotypes?	Kruskal Wallis	H (3) =3,018	0,389
Do you think that ads now feature fewer stereotypes than in previous years?	Kruskal Wallis	H (3) =10,760	0,013
Advertising "embraces" all social groups.	Kruskal Wallis	H (3) =12,461	0,006
Should there be ads depicting gay couples?	Kruskal Wallis	H (3) =14,420	0,002
Do you see concepts like sexism in advertising?	Kruskal Wallis	H (3) =3,054	0,383
Advertising should represent society.	Kruskal Wallis	H (3) =1,388	0,708
Do you support a change in gender stereotypes, for women to take on a dynamic role and for men to take on household jobs?	Kruskal Wallis	H (3) =0,952	0,813
Was there an ad that offended your aesthetics about representing a gender in a certain way?	Kruskal Wallis	H (3) =7,088	0,069
Could it be that in an attempt to eliminate some stereotypes, new ones are created?	Kruskal Wallis	H (3) =2,721	0,437

Table 4 presents the results of the t-test and Mann Whitney tests for sexuality for the factor and the individual questions, for the sexuality of the respondents.

Factor/Questions	Audit	Statistical	p-value
Representative Advertising	t-test	t (204) =-0,768	0,444
Do you think that ads project stereotypes?	Mann Whitney	U = 480,500	0,821
Do you think that ads now feature fewer stereotypes than in previous years?	t-test	t (204) =0,501	0,617
Advertising "embraces" all social groups.	Mann Whitney	U = 424,000	0,471
Should there be ads depicting gay couples?	Mann Whitney	U = 333,500	0,170
Do you see concepts like sexism in advertising?	t-test	t (204) =1,026	0,306
Advertising should represent society.	t-test	t (204) =1,881	0,061
Do you support a change in gender stereotypes, for women to take on a dynamic role and for men to take on household jobs?	t-test	t (204) =0,732	0,465
Was there an ad that offended your aesthetics about representing a gender in a certain way?	Mann Whitney	U = 461,500	0,720
Could it be that in an attempt to eliminate some stereotypes, new ones are created?	Mann Whitney	U = 411,000	0,411

## 2nd research question

What is the effect of the public's demographic profile on their perception of how they see men and women through advertisements?

Table 5 presents the results of the x2 test of gender imaging characteristics

Attribute	x <sup>2</sup> (1)	p-value
Working Woman-Leadership	0,000	0,982
Housewife – Household Chores	5,388	<b>0,020</b>
Object of desire	0,799	0,371
Decorative role	1,210	0,271
Dynamics	0,047	0,829
Sensitive	4,225	<b>0,040</b>
Working Man – Leadership	3,329	0,068
Housewife – Household Chores	4,392	<b>0,036</b>
Object of Desire	3,770	0,052
Decorative role	0,006	0,941
Dynamic	0,085	0,771
Sensitive	12,144	<b>&lt;0,001</b>

Table 6 presents the results of the test  $\chi^2$ , in terms of the age of the participants

Attribute	x 2 (2)	p-value
Working Woman-Leadership	1,505	0,471
Housewife – Household Chores	15,889	<b>&lt;0,001</b>
Object of desire	2,727	0,256
Decorative role	1,351	0,509
Dynamics	0,555	0,758
Sensitive	6,209	<b>0,045</b>
Working Man – Leadership	5,952	0,051
Housewife – Household Chores	0,380	0,827
Object of Desire	1,938	0,380
Decorative role	0,325	0,850
Dynamic	9,064	<b>0,011</b>
Sensitive	1,646	0,439

Table 7 presents the results of the test  $\chi^2$ , in terms of the age of the participants.

Attribute	x <sup>2</sup> (3)	p-value
Working Woman-Leadership	1,627	0,653
Housewife – Household Chores	8,128	<b>0,043</b>
Object of desire	3,009	0,390
Decorative role	1,222	0,748
Dynamics	2,062	0,560
Sensitive	3,166	0,367
Working Man – Leadership	7,115	0,068
Housewife – Household Chores	2,368	0,500
Object of Desire	1,146	0,766
Decorative role	3,037	0,386
Dynamic	1,781	0,619
Sensitive	3,746	0,290

Table 8 presents the results of the test  $\chi^2$ , for the sexuality of the participants.

Attribute	$\chi^2$ (1)	p-value
Working Woman-Leadership	0,457	0,660+
Housewife – Household Chores	0,247	0,678+
Object of desire	0,370	0,666+
Decorative role	1,312	0,586+
Dynamics	0,784	0,400+
Sensitive	0,006	1,000+
Working Man – Leadership	1,960	0,325+
Housewife – Household Chores	0,006	1,000+
Object of Desire	2,206	0,325+
Decorative role	0,619	0,403+
Dynamic	0,021	1,000+
Sensitive	0,538	0,419+

### Conclusion

The results show that advertising projects stereotypes with women more than men, and the consumer public advocates the persistence of traditional stereotypes in advertising, although not in the frequency they used to appear. Most do not agree with traditional roles for women and support changes in gender stereotypes. Participants showed pleasure in advertisements depicting modern/transitional gender roles. In the depiction of the woman in the advertisements, it was observed that more than half of the respondents believe that the advertisements present the woman as an object of desire, almost half that she is also portrayed as a housewife, and almost 40% believe that the advertisements depict the woman as a worker and dynamic. For the depiction of the man in the commercials, participants believe that the men are portrayed as housewives and as workers with a leading position, and they also focus on the depiction of man as an object of desire. In the depiction of homosexuals in advertising, the majority of respondents in focus groups accept the portrayals of homosexuals in advertising but with some reservations about the content. Women think there should be ads depicting homosexuals, as opposed to men who tend to disagree. People who are up to 30 years old think there should be ads depicting gay couples, as opposed to those over 31 who seem to disagree. Finally, the educational level of the respondents also influenced their views on advertising depicting homosexual couples.

### References (Indicative)

- Grau, S. L., & Zotos, Y. C. (2016). *Gender stereotypes in advertising: A review of current research*. *International Journal of Advertising*, 35(5), 761-770.
- Hatzithomas, L., Boutsouki, C., & Ziamou, P. (2016). *A longitudinal analysis of the changing roles of gender in advertising: A content analysis of Super Bowl commercials*. *International Journal of Advertising*, 35(5), 888-906.
- Stanković, J., Živković, R., Marić, T., & Gajić, J. (2018). *Effects of Women Representation in Advertising on Customers' Attitudes*. *Marketing*, 49(3), 192-205.
- Tsichla, E., & Zotos, Y. (2016). *Gender portrayals revisited: Searching for explicit and implicit stereotypes in Cypriot magazine advertisements*. *International Journal of Advertising*, 35(6), 983-1007.

All references cited in this paper are available upon request.

## **Understanding the impact of media consumption types on ad comprehension: the roles of cognitive load and general hurry**

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### **Abstract**

The purpose of our study is twofold: to empirically test how cognitive load affects the impact media consumption types have on the comprehension of advertising content; and to identify the moderating effect of general hurry on the influence of cognitive load on ad comprehension. We suggest that sequential media exposure results in higher ad comprehension via lower cognitive load, compared to simultaneous media consumption. The limited mental capacity theory provides the theoretical basis for this analysis. Findings test and support that general hurry has a moderating effect on the relationship between cognitive load and ad comprehension. Our findings advance the understanding of media consumption types and multimedia advertising and generate an interesting discussion of the associated managerial implications.

*Keywords: media consumption types, ad comprehension, cognitive load, general hurry*

### **Introduction**

Different media can be consumed either sequentially or simultaneously. Sequential consumption refers to the situation where people engage in different media activities sequentially, being involved in a single medium at any one time. Consumers are thus exposed to advertisement(s) in various orders, which is significant in cross-media campaigns (Voorveld, Neijens and Smit 2012). In recent years though, simultaneous media consumption (i.e. media multitasking behavior) is becoming the new norm (Wiradhany and Koerts 2021). People are prompt to engage in media multitasking during advertising breaks, as they often consider ads annoying and try to avoid them (Duff and Segijn 2019). Media multitasking activities are considered disruptive of the information processing (Jeong and Hwang 2012) and raise concerns among advertisers as they find it difficult to evaluate the quality of ad effectiveness in simultaneous media compared to single medium consumption (Bourne, Dominowski and Loftus 1979). For advertisers, the comprehension of advertising content is an important measure to assess ad effectiveness. Although past papers have delved into the topic (e.g. Chatterjee 2012; Jeong and Hwang 2012; Macias 2003), the effects of different media consumption types on the comprehension of advertising content remain relatively undetected (Segijn, Voorveld and Smit 2016; Jeong and Hwang 2012) thus becoming the initial objective of the present study.

Timing issues, such as general hurry, have also been considered essential factors affecting the cognitive functions of attention, comprehension, and memory (Wittmann 2009). Understanding how people use their time and how they respond to the conflicting demands of different tasks may be important considerations regarding the media multitasking phenomenon and its impact on cognitive outcomes. For example, people who value efficient time use may prefer to carry out two alongside activities (Circella et al. 2012). In this respect, people with high levels of general hurry (i.e. the general tempo of an individual's activities being fast or slow according to Shipp et al. (2009, p.3) may encourage high levels of simultaneous task performance. It is therefore the second objective of this study to examine how general hurry may affect ad comprehension during different media consumption types.

## Literature Review and Research Hypotheses

### *Media consumption types*

During sequential media consumption, brand information is progressively added resulting in higher levels of brand recall and brand attitude as the memory traces established by the first medium facilitate processing during the second medium exposure (Chattrjee 2012). A recent study (Voorverd, Neijens and Smit 2011) suggests that the ad in the first medium can prime interest in the ad displayed in the second medium. Assessing the role of product involvement in the effects of media sequences in multimedia advertising campaigns, Voorveld, Neijens and Smit (2012) found that the TV ad – website sequence was more effective in informing consumers about low-involvement products compared to the website–TV ad sequence.

Prior studies suggest that simultaneous media consumption correlates with cognitive functioning (Kazakova et al. 2016; Wiradhany and Koerts 2021). For example, it can distract attention to media and ad content (Chinchanachokchai, Duff and Sar 2015), lead to poorer comprehension and counterarguing of persuasive ad messages (Jeong and Hwang 2012) and reduce memory of the advertised brands and favorite ad attitudes (Kazakova et al. 2016). Consuming the media simultaneously can result in information loss the extent of which is subject to the cognitive load involved (Jeong and Hwang 2012).

### *Ad comprehension*

Ad comprehension, the degree to which an individual has understood and grasped the meaning of an advertisement (Mohanty and Ratneshwar 2015), is critical in attitude change processes (Ratneshwar and Chaiken 1991), in memory, motivation, and intention (Mick 1992). Advertising message comprehension positively affects persuasive outcomes and is thus considered as a measure to assess advertising effectiveness (Macias 2003). The present study examines ad comprehension with respect to consumers' cognitive load.

### *Cognitive load as mediator*

Previous research demonstrated the decremental effects of increased cognitive load on recall and comprehension of the media content (Van Cauwenberge, Schaap and Van Roy 2014). Cognitive load is a critical factor in determining the level of information retained when people perform multiple tasks at any one time (Lee, Lin and Robertson 2012). People can also be distracted under mid-high cognitive load conditions and lose their ability to pursue their goals or perform well at their tasks (Duff and Segijn 2019). Several factors can affect how thoroughly an advertising message is processed, a critical one being whether the recipient of the advertising message has sufficient cognitive capacities to process and comprehend the ad message. According to Kahneman (2011) and Lang (2000) people have limited cognitive capacities and can perform several tasks simultaneously only if these are easy and undemanding. In this context, the study of Schaap, Kleemans and Van Cauwenberge (2018) provided evidence that the simultaneous exposure to two media screens is a cognitively more demanding situation compared to single screening with significant negative effects on the processing outcomes. Other studies suggest that task difficulty increases for media multitaskers because cognitive load is higher compared to situations where people consume only one medium content (Chinchanachokchai, Duff and Sar 2015; Kazakova et al. 2015). Thus, it is expected that the levels of cognitive load on media viewers increase when they consume different media simultaneously rather than sequentially. This condition is also expected to have detrimental effects on ad comprehension because media viewers cannot thoroughly elaborate the media content due to their limited mental resources. Instead, in sequential media consumption, viewers can elaborate the advertising content thoroughly and systematically, because it requires less effort to process it (i.e., less cognitive load). The resulting hypotheses are depicted in Figure 1.

**H1:** Consuming the media sequentially yields less cognitive load than consuming them simultaneously.

**H2:** Cognitive load leads to lower ad comprehension.

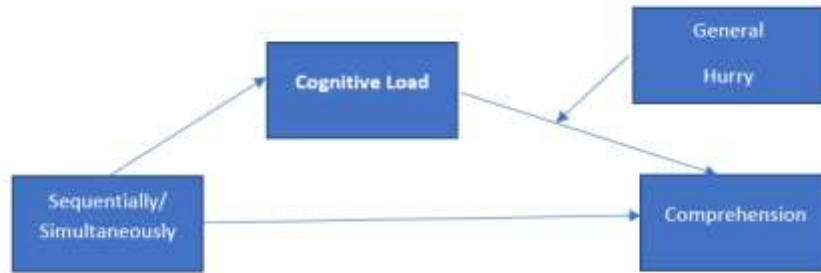
### *General hurry as moderator*

Simultaneous task performance has been identified as a characteristic of the time urgency behavior (Conte et al. 1995). Time urgency is clearly a subjective perspective and therefore represents an individual behavioral tendency (Conte et al. 1998; Landy et al. 1991). Some people are more concerned about time and its passage, they consider time as a scarce resource and plan its use carefully. Prior studies (Conte et al. 1995; Landy et al. 1991) provided evidence that time urgency is a multidimensional construct with several distinct facets. Landy et

al. (1991) in particular, developed a multifaceted construct with five subscales of time urgency: competitiveness, eating behavior, general hurry, task-related hurry, and speech pattern. Knowledge of general hurry, as an individual trait, could provide a roadmap to decipher how cognitive load is associated with ad comprehension. This, to the best of our knowledge, is a significant void in the literature that this study aims to address. Hence, as depicted in Figure 1 it is suggested that:

**H3:** General hurry moderates the relationship between cognitive load and ad comprehension.

Figure 1: Conceptual model



**Methodology**

To address the research hypotheses, we designed a single factor between subjects experiment (media conditions; between-subjects factor). Overall, 291 students from two large universities in Northern Greece participated in the study. Participants were divided into two groups. They all watched a video (television content) and browsed a website either sequentially or simultaneously. The video entailed a travel documentary film and a commercial break. The website displayed fitness and wellbeing images and information. Both the video and website promoted advertisements for the same target brand. All stimuli used in the experiment (target brand and advertisements) were unfamiliar in Greece, to prevent familiarity bias (Segijn, Voorveld and Smit, 2016).

Following their exposure to the media, students filled out an online self-reported questionnaire about the target TV commercial and the target web banner they saw on their computer screen. The questionnaire recorded the underlying mechanism of cognitive load based on a four-item 5-point Likert scale (Eveland and Dunwoody, 2001), the moderating role of general hurry (three item 5-point scale by Landy et al., 1991) and ad comprehension (two item 5-point scale adopted by Mohanty and Ratneshwar 2015).

Table 1: Measures

Variables	Items	Responses	Reference	Cronbach's alpha
Cognitive Load	I had difficulty understanding how the information was structured into the ads for the drink "28 Back".	1.Strongly disagree...5.Strongly agree	Eveland and Dunwoody (2001)	> 0.7
	I felt "lost"when watching the ads for the drink "28 Black".			
	The main points of the ad for the drink "28 Black" were clear and coherent (reversed).			
	It was clear how all information fit into the ad for the drink "28 Black" as a whole (reversed).			
General hurry	1. When I attend the media, I am pressed for time.		Landy et al. 1991	> 0.7
	2. When I attend the media, I am in a hurry.			
	3. When I attend the media, I am never in a rush (reversed).			
Ad comprehension	To what extent did you understand the ads for the energy drink "28 Black"?	1.Did not understand it at all ...5.Completely understood it	Mohanty and Ratneshwar (2015)	> 0.7
	How certain are you that you understood the ads for the energy drink "28 Black"?	1.Very uncertain...5.Very certain		

**Results**

To test the research hypotheses, a moderated mediating effect analysis was performed using model 14 with 5000 bootstrap samples was conducted (Hayes 2013). In this analysis, media exposure type was the independent variable, cognitive load was the mediator, general hurry was the moderator, and ad comprehension was the dependent variable. The type of media exposure was dummy coded in two levels (sequential vs. simultaneous exposure). According to the findings, sequential exposure leads to lower levels of cognitive load compared to simultaneous exposure ( $\beta=.74$ ,  $SE=.14$ ,  $t=-5.1$ ,  $p<.001$ ) (H1 is supported). Cognitive load has a statistically significant impact on ad comprehension ( $\beta=.75$ ,  $SE=.25$ ,  $t=-3.02$ ,  $p<.01$ ) (H2 is supported). General hurry moderates the relationship between cognitive load and ad comprehension ( $\beta=.17$ ,  $SE=.06$ ,  $t=2.69$ ,  $p<.01$ ) (H3 is supported).

## Conclusions and Discussion

Our results indicate that consuming different media simultaneously is a highly demanding situation (i.e., high cognitive load). Consumers must allocate their cognitive capacities to multiple tasks, thus reducing their intellectual ability to elaborate and thoroughly comprehend the advertising content. Thus, high cognitive load (as a measure of task difficulty) yields lower ad comprehension. Consuming different media sequentially though is a cognitively easier task that favors ad comprehension, as people can benefit from the conscious and systematic information processing of the advertising content. Our findings are in complete alignment with the limited mental capacity theory (Kahneman 2011, Lang 2000).

Moreover, the analysis showed that general hurry moderates the effects of cognitive load on ad comprehension and that media multitaskers can better comprehend advertising content when they are in a hurry. It seems that hurried people can handle different tasks at the same time more efficiently and respond better to highly demanding situations (i.e., high cognitive load).

Significant practical implications arise from the above findings. As media planners cannot control the way people consume media, they could consider consumption effects when planning. Moreover, advertisers could explore specific advertising features (i.e., simplifying the ad content) to facilitate ad comprehension for media multitaskers.

With respect to the study's limitations, one should highlight the university student's sample despite their appropriateness to the type of experiment used in the study. Future research could investigate media consumption types and their effect on ad comprehension of younger children and older adults, as age can impact information processing. Another limitation is that respondents couldn't freely choose their primary versus secondary medium and were obliged to consume the media in a specific order. Future research could replicate the current study using different media sequences and different media combinations. Future research could also examine more mediators and moderators in the type of media consumption and ad comprehension relationship. It would be interesting to assess whether other time related personality traits, such as polychronicity and time perception, facilitate ad comprehension during media multitasking.

## References

- Chatterjee, P. (2012). The role of varying information quantity in ads on immediate and enduring cross-media synergies. *Journal of Marketing Communications*, 18(3), 217-240.
- Chinchanachokchai, S., Duff, B. R., & Sar, S. (2015). The effect of multitasking on time perception, enjoyment, and ad evaluation. *Computers in Human Behavior*, 45, 185-191.
- Circella, G., Mokhtarian, P. L., & Poff, L. K. (2012). A conceptual typology of multitasking behavior and polychronicity preferences. *Electronic International Journal of Time Use Research*, 9(1).
- Conte, J. M., Landy, F. J., & Mathieu, J. E. (1995). Time urgency: Conceptual and construct development. *Journal of Applied Psychology*, 80(1), 178.
- Conte, J. M., Mathieu, J. E., & Landy, F. J. (1998). The nomological and predictive validity of time urgency. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 19(1), 1-13.
- Duff, B. R., & Segijn, C. M. (2019). Advertising in a media multitasking era: Considerations and future directions. *Journal of Advertising*, 48(1), 27-37.



- Eveland Jr, W. P., & Dunwoody, S. (2001). User control and structural isomorphism or disorientation and cognitive load? Learning from the Web versus print. *Communication research*, 28(1), 48-78.
- Jeong, S. H., & Hwang, Y. (2012). Does multitasking increase or decrease persuasion? Effects of multitasking on comprehension and counterarguing. *Journal of Communication*, 62(4), 571-587.
- Jeuris, S., & Bardram, J. E. (2016). Dedicated workspaces: Faster resumption times and reduced cognitive load in sequential multitasking. *Computers in Human Behavior*, 62, 404-414.
- Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.
- Kazakova, S., Cauberghe, V., Hudders, L., & Labyt, C. (2016). The impact of media multitasking on the cognitive and attitudinal responses to television commercials: The moderating role of type of advertising appeal. *Journal of Advertising*, 45(4), 403-416.
- Kazakova, S., Cauberghe, V., Pandelaere, M., & De Pelsmacker, P. (2015). Can't see the forest for the trees? The effect of media multitasking on cognitive processing style. *Media psychology*, 18(4), 425-450.
- Landy, F. J., Rastegary, H., Thayer, J., & Colvin, C. (1991). Time urgency: The construct and its measurement. *Journal of Applied Psychology*, 76(5), 644.
- Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of communication*, 50(1), 46-70.
- Lee, J., Lin, L., & Robertson, T. (2012). The impact of media multitasking on learning. *Learning, Media and Technology*, 37(1), 94-104.
- Macias, W. (2003). A preliminary structural equation model of comprehension and persuasion of interactive advertising brand web sites. *Journal of interactive advertising*, 3(2), 36-48.
- Mick, D. G. (1992). Levels of subjective comprehension in advertising processing and their relations to ad perceptions, attitudes, and memory. *Journal of Consumer Research*, 18(4), 411-424.
- Mohanty, P., & Ratneshwar, S. (2015). Did you get it? Factors influencing subjective comprehension of visual metaphors in advertising. *Journal of Advertising*, 44(3), 232-242.
- Ratneshwar, S., & Chaiken, S. (1991). Comprehension's role in persuasion: The case of its moderating effect on the persuasive impact of source cues. *Journal of consumer research*, 18(1), 52-62.
- Schaap, G., Kleemans, M., & Van Cauwenberge, A. (2018). Second screening for news: Effects of presentation on information processing and program liking. *Computers in Human Behavior*, 84, 76-85.
- Segijn, C. M., Voorveld, H. A., & Smit, E. G. (2016). The underlying mechanisms of multiscreening effects. *Journal of Advertising*, 45(4), 391-402.
- Shipp, A. J., Edwards, J. R., & Lambert, L. S. (2009). Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational behavior and human decision processes*, 110(1), 1-22.
- Van Cauwenberge, A., Schaap, G., & Van Roy, R. (2014). "TV no longer commands our full attention": Effects of second-screen viewing and task relevance on cognitive load and learning from news. *Computers in Human Behavior*, 38, 100-109.
- Voorveld, H. A., Neijens, P. C., & Smit, E. G. (2011). Opening the black box: Understanding cross-media effects. *Journal of Marketing Communications*, 17(02), 69-85.
- Voorveld, H. A., Neijens, P. C., & Smit, E. G. (2012). The interacting role of media sequence and product involvement in cross-media campaigns. *Journal of Marketing Communications*, 18(3), 203-216.
- Wiradhany, W., & Koerts, J. (2021). Everyday functioning-related cognitive correlates of media multitasking: A mini meta-analysis. *Media psychology*, 24(2), 276-303.
- Wittmann, M. (2009). The inner experience of time. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1525), 1955-1967.

## **LGBT in Advertising. How audience's sexual conservatism influences the attitude towards the ads depicting LGBT characters.**

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### **Abstract:**

**Purpose.** In recent years there has been a growing tendency to study the Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) community in advertising (e.g., Li, 2022). Previous studies evaluating X observed inconsistent results on whether LGBT ad portrayals have positive or negative effects on brand attitude and purchase intention. Eisend & Hermann, (2019) conducted a meta-analysis of previous research on the persuasive effects of homosexual portrayals. The outcome showed that the net persuasive effect between homosexual and heterosexual portrayals, as well as between gay and lesbian advertising, did not differ. In another study, Northey et al. (2019) examined how the interaction between gender representation and sexual orientation affect consumer attitudes, reporting disgust as a mediator. Therefore, this study makes a major contribution to research on the effectiveness of LGBT ad portrayals by examining sexual conservatism as a moderator in the relationship between ad portrayal (straight, gay, lesbian, and transgender characters) and ad attitude.

**Method.** A between-subjects single factor (character's sexual orientation: straight vs. lesbian vs. gay vs. transgender) online experiment was designed for an unknown water brand.

**Findings.** 198 respondents participated in the experiment. A statistically significant ANCOVA effect was observed only for ad irritation ( $F(3,104) = 4.011, p = .01$ ) and a marginally statistically significant effect for Aad ( $F(3,104) = 2.167, p = .097$ ). Sexual liberals expressed lower ad irritation than sexual conservatives in ads with gay ( $p < .001$ ), lesbian ( $p = .001$ ), and transgender ( $p = .009$ ) characters. In addition, sexual liberals revealed more positive ad attitude toward gay ( $p = .001$ ), lesbian, ( $p = .014$ ), and transgender ( $p = .024$ ) portrayals than sexual conservatives. In the ad depicting straight characters a non-statistically significant difference was found between sexual conservatives and liberals in perceived irritation and ad attitude.

**Originality.** This empirical investigation bridges the research gap posited in examining the moderating role of sexual conservatism in the way consumers behave towards advertisements depicting LGBT portrayals, and more specifically transgender portrayals.

**Keywords:** *LGBT, ad attitude, sexual conservatism, ad irritation.*

### **References:**

- Eisend, M., & Hermann, E. (2019). Consumer responses to homosexual imagery in advertising: A meta-analysis. *Journal of Advertising*, 48(4), 380-400. DOI: 10.1080/00913367.2019.1628676
- Li, M. (2022). Influence for social good: Exploring the roles of influencer identity and comment section in Instagram-based LGBTQ-centric corporate social responsibility advertising. *International Journal of Advertising*, 41(3), 462-499. DOI:10.1080/02650487.2021.1884399
- Northey, G., Dolan, R., Etheridge, J., Septianto, F., & Van Esch, P. (2020). LGBTQ imagery in advertising: How viewers' political ideology shapes their emotional response to gender and sexuality in advertisements. *Journal of Advertising Research*, 60(2), 222-236. DOI: 10.2501/JAR-2020-009

# Branding

## **Entering a new era of luxury travel retail: how luxury brand managers can utilise the power of airports to luxury shoppers post-pandemic**

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### **Abstract:**

In 2019, 16% of global luxury goods purchases were made in airports (Deloitte, 2019) and with a record travelling amount reported by Heathrow (SP) Limited (2023), the luxury goods industry was presented with growth opportunities in this channel. Despite two years of travel restrictions, The Airports Council International (ACI) World report global air traffic (2023 had reached the same high as of pre-pandemic. The ACI World Airport Traffic forecasts that by 2041 passenger traffic worldwide is expected to reach 19.3 billion (ACI, 2023). With an estimated market size of 60,3 billion dollars and reported to grow to 174.9 billion dollars (Statista, 2022), the revenue potentials in the travel retail sector are proven to be auspicious. The airport as a distribution channel compiles exclusive impacts on the consumer's behaviour and shopping motivations.

Consumers within travel retail are widely influenced by the impulsivity and emotional decision-making which enlarges the importance of consumer behaviour (Lin and Chen, 2013). There is no doubt that luxury brands are required to react to these specifics and adapt their outlets and marketing strategy towards the airport influences. The general problem is that brands do not exploit the full potential of airports as a brand touchpoint. The aim of the paper is to identify and profile the airport shoppers and how different they are to the conventional retail consumers of luxury brands. In addition to that, we aim to investigate the variety of strategies that are adjusted by luxury brand managers for this unique market segment to enhance sales and brand equity. The research paper will concern the travel retail segment within the luxury goods sector. It will examine the traveller as a consumer and the airport as the shopping destination – distinctly identifying the differences in consumer behaviour and the influence on brand equity. As fashion practitioners and now as researchers, the authors have been exposed to the travel retail sector through work projects, prompting an interest in further investigating the topic. Insights into different distribution channels and the development of its proportion within businesses proposes several research questions:

- *What motivates and ultimately make the purchase decision among airport retail shoppers compared to their conventional counterparts?*
- *How do luxury brand managers perceive the potential of luxury retail and what marketing adjustments have been made to approach the right customers?*
- *What can be done to further enhance sale revenues and brand equity for luxury brands through this shopping channel?*

Examining various literature in travel retail management (Geuens, 2004, Torres et al., 2005, Perng et al., 2010 and Hoffmann, 2015), luxury strategy (Kapferer and Bastien, 2012 and Kapferer, 2015) and consumer behaviour in travel (Swarbrooke et al., 2017 and Han, 2018) provide a theoretical grounding, which enables the researchers to develop a conceptual framework covering three themes of this paper: luxury consumer, luxury strategy and brand equity. In term of luxury goods, we will not distinguish between apparel, accessories, footwear or cosmetics (or other market sectors) due to restrictions in both the length of research and the data available.

As it is an exploratory study, qualitative research method was chosen to provide the researchers an opportunity to have an in-depth understanding of the subject matters and gain an insight into luxury retail shopping from the brand manager' perspective. As it is under-researched field, this approach also allows a dynamic view on the findings and can shape the outcome of the research (Lapan et al., 2011). The consent of participants is enquired in the interview guide. The sample as well as all data lays under confidentiality and are not to be disclosed without the consent of the participants (Lapan et al., 2011). The experts contacted for interviews either currently

work directly for the brand themselves that directly distribute or stock goods to airports or contracted retail experts dealing with the process on the luxury brand's behalf.

Ten experts were contacted through snow sampling methods as well as referral, out of which four responded and agreed. Interviews took place in London (2) and Paris (2) between Jan 2023 to April 2023. The findings reveal that the airport shopper for luxury goods cannot be distinguished completely from the conventional luxury consumer but external and internal aspects, derived from airport influences, are triggering a difference in attitudes and behaviours. Furthermore, the main qualities enhancing luxury brand's sales and brand equity are Digitalisation and Entertainment/Experience. Both aspects have been identified to be key success drivers before and after the pandemic and provide valuable recommendations for luxury brand manager in the context of airport retail.

**Keywords:** *Luxury retail, airport retail management, luxury brand management*

#### **References:**

Deloitte (2019) *Global Powers of Luxury Goods 2019: Bridging the gap between the old and the new*. Deloitte Touche Tohmatsu Limited.

Geuens, M., Vantomme, D., Brengman, M. (2004) 'Developing a typology of airport shoppers', *Tourism Management* 25 (2004) p. 615–622.

Han, H. and Hyun, S. S. (2018) 'Investigating customers' shopping behaviors at airport duty-free shops: impact of shopping flow and alternative shopping malls' attractiveness', *Asia Pacific Journal of Tourism Research*, Vol. 23, No. 7, p. 627–638

Hoffmann, Jonas (2015) *Independent luxury: the four innovation strategies to endure in the consolidation jungle*. New York: Palgrave Macmillan, 2015.

Kapferer, J.-N. and Bastien, V. (2012) *The luxury strategy: break the rules of marketing to build luxury brands*. London: Kogan Page

Kapferer, J.-N (2014) *Kapferer on Luxury*. London: Kogan Page.

Lapan, S. D., Quartaroli, M. T., Riemer, F. J. (2011) *Qualitative Research: An Introduction to Methods and Designs*. San Francisco: John Wiley & Sons, Incorporated

Lin, Y.-H. and Chen, C.-F. (2013) 'Passengers' shopping motivations and commercial activities at airports - The moderating effects of time pressure and impulse buying tendency', *Tourism Management*, 36, 2013, p. 426-434.

Perng, S.-W., Chowa, C.-C., Liao, W.-C. (2010) 'Analysis of shopping preference and satisfaction with airport retailing products', *Journal of Air Transport Management*, 16 (2010), 279-283.

Swarbrooke, J. and Horner, S. (2017) *Consumer Behaviour in Tourism*. Oxfordshire: Routledge Ltd

Torres, E., Domínguez, J.S., Valdés, L. and Aza, R., (2005) 'Passenger waiting time in an airport and expenditure carried out in the commercial area.' *Journal of Air Transport Management* 11, p. 363-367.

The Airports Council International (2023). Available at: <https://aci.aero/2023/02/22/what-to-expect-latest-air-travel-outlook-reveals-short-and-long-term-demand/#:~:text=The%20ACI%20World%20Airport%20Traffic,tonnes%20of%20air%20cargo%20worldwide.> [access 5<sup>th</sup> April 2023]

Statista (2022). Available at: <https://www.statista.com/statistics/1290358/travel-retail-market-size/> [access 5<sup>th</sup> April 2023]

## **Brand Experience of a Ski Brand: Does Environmental Concern Matter?**

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### **Abstract**

Consumers' experiences are important in their evaluations of brands. Previous research shows that brand experience has a positive influence on brand knowledge, brand satisfaction, brand loyalty, brand personality, word of mouth and revisit intention. A critical question for brand managers, therefore, is how to stimulate brand experiences. Identifying relevant antecedents of brand experience, or moderators of the impact of brand experience on consumer evaluation, may give us more insight into how to strengthen a brand's position in the marketplace. This paper contributes to the literature in two ways, firstly by showing how brand experiences impact brand attitude and word of mouth regarding a brand in the winter sport industry and secondly by showing how one variable, environmental concern, moderates the effect of brand experiences on brand attitude and word of mouth in a sport segment context. The research context is the Norwegian ski brand, SGN skis, a company focusing on touring- and freeride skis. Quantitative data were collected through an online survey sent to a sample of SGN's customers. In total there were 386 responses, which were analysed and processed using SPSS software. The survey results confirm that, for SGN skis, the sensory, affective, behavioural and relational experience dimensions have a positive and significant impact on brand attitude and word of mouth. However, the cognitive dimension has a negative impact on brand attitude. The results also show that environmental concern has a moderating effect on two of the relationships: firstly, between the affective dimension and brand attitude, and secondly, between the relational dimension and word of mouth.

*Keywords:* Brand experiences, sport brand, environmental concern, survey

### **Introduction**

Brand experience has a positive influence on brand knowledge, brand satisfaction, brand loyalty, brand personality, word of mouth and revisit intention (Brakus et al., 2009; Manthiou et al., 2016; Khan & Rahman, 2017). In recognising these positive influences of brand experience, a critical question for brand managers is how to

stimulate brand experience. Examining the antecedents of brand experience, or moderators of the impact of brand experience, on consumer evaluation is also in line with Khan and Rahman's (2017) and King's (2017)

recommendations. This paper contributes to the literature in two ways, firstly by showing how brand experiences impact brand attitude and word of mouth regarding a brand in the winter sport industry and secondly by showing how one variable, environmental concern, moderates the effect of brand experiences on brand attitude and word of mouth in a sport segment context. In order to test the possible influence of environmental concern on the relationship between brand experiences and customer evaluations like brand attitude and word of mouth, we chose a context where the environmental issue should be highly present, the winter sport equipment industry. Increased global average temperatures lead to shorter cold seasons, warmer and wetter climates and loss of seasonal snow cover. The ski industry is naturally dependent on snow and is therefore directly affected by the negative changes. Furthermore, to our knowledge, there are few examples of studies that have investigated the effect of brand experiences in the sports industry.

## Literature

In line with Brakus et al. (2009, p. 53), we define brand experience as “subjective, internal consumer responses (sensations, feelings, and cognitions) and behavioral responses evoked by brand-related stimuli that are part of a brand’s design and identity, packaging, communications, and environments”. *Sensory* brand experience is the degree to which a brand makes a strong impression on and is interesting and appealing to customers’ senses. *Affective* brand experience is about the emotions, feelings and sentiments induced by a brand. *Cognitive* brand experience captures how a brand stimulates curiosity, thinking and problem solving among customers. Further, Brakus et al. (2009) explain that the *behavioural* dimension of brand experience taps into the degree to which a brand engages customers in physical actions and behavioural responses. We also include *relational* experience as a brand dimension expressing customers’ feelings of being part of a brand family or community (Nysveen et al., 2013). The brand experience literature has evolved since 2009 and the seminal article by Brakus et al. (2009). Research studies are very much concentrated on product-related contexts and somewhat on service-related contexts (Nysveen et al., 2018). However, to our knowledge, little is done in the context of sport equipment, even some exceptions exist (Akoglu & Özbek, 2021; Chung & Welty Peachey, 2021; Mokhtaran & Bakhtiyari, 2014). In a study done in South Korea, researchers tested the brand experience scale on brands that produce golf clubs (Chung & Welty Peachey, 2021). The purpose of the study of Chung et al. (2021) was to find connections between brand experiences and the three concepts of satisfaction, loyalty and uncertainty. However, the study did not distinguish between the different dimensions of brand experiences. Regarding Brakus et al. (2009) and Nysveen et al. (2013), the different dimensions of brand experiences may lead to different consumer evaluations of a brand. It is therefore important for brand managers to understand how these mechanisms function in order to operate their brands in an optimal way. Chung et al. (2021) tested the impact of brand experiences on the three concepts of satisfaction, loyalty and uncertainty at an aggregated level. They were unable to find significant correlations with brand experiences and the concepts of satisfaction and loyalty. The authors argue that customers do not feel satisfied or establish bonds of loyalty by simply experiencing a brand in the sports industry. They believe that the brand’s products must be tested and used in order for satisfaction and loyalty to be established, and for this reason they recommend using demonstration events, where customers can test and experience the products in their intended surroundings. In contrast to the findings of Chung and Welty Peachey (2021), Akoglu and Özbek (2021) find strong correlations between brand experiences and loyalty in a survey done on customers who purchased sports apparel in Turkey. Furthermore, they point out the importance of brand experience for a sports apparel manufacturer, arguing that brand experience is a vital part of building brand loyalty. Mokhtaran and Bakhtiyari (2014) also confirm that the scale works in another study on sports clothing conducted in Iran. Here, the authors find a connection between brand experience, brand value and attitude. Our literature review reveals that the number of studies investigating the impact of brand experiences on brand evaluation variables is sparse, with diverging results for brands in the sport industry. Little is known about possible moderators and mediators, such that the mechanisms behind these relationships are not fully understood. We suggest that environmental concern may function as such a variable. Environmental concern has been treated as an evaluation of one’s own behaviour, or others’ behaviour, with consequences for the environment (Fransson & Gärling, 1999). Maichum et al. (2016) find that environmental concerns impact attitudes toward environmental behaviour. Further, consumers’ interpretations of a brand’s green image influence the brand attitude positively (Jeong et al., 2014).

## Method

The research context is the Norwegian ski brand, SGN skis, a company focusing on touring- and freeride skis. The relationship between brand experiences, brand attitude and word of mouth was investigated. The relationship between these constructs was also analysed in the light of the customers’ environmental concern. The research question of this thesis is: “*Do brand experiences have a positive effect on brand attitude and word of mouth for a brand in the ski industry? Does environmental concern moderate this effect?*”

Quantitative data were collected through an online survey sent to a sample of SGN’s customers, who were reached via the company’s email register. The survey was developed with questions adopted from prior research in the field. In total there were 386 accepted responses, which were analysed and processed using Statistical Package for the Social Sciences (SPSS) software. The survey results confirm that, for SGN skis, the sensory, affective, behavioural and relational experience dimensions have a positive and significant impact on brand attitude and word of mouth. However, the cognitive dimension has a negative impact on brand attitude. The results also show that environmental concern has a moderating effect on two relationships: firstly, between the affective dimension and brand attitude and secondly, between the relational dimension and word of mouth.

## Results and Discussion

This study shows that brand experiences impact brand attitude and word of mouth regarding a brand in the winter sport industry. It also shows how one variable, environmental concern, moderates the effect of brand experiences on brand attitude and word of mouth. This work expands the theoretical basis within the brand experience field, as well as validating the brand experience scale in an industry not previously researched. The results of the study have a number of practical implications. The findings show that, on the one hand, the sensory, affective, physical and relational dimensions have an important positive impact on attitudes towards the brand and word of mouth. The cognitive dimension, on the other hand, has a significant negative impact on brand attitudes. Marketers should be aware and conscious about this and facilitate actions that may influence the first four dimensions of brand experiences and avoid actions that may influence the fifth (cognitive) dimension of brand experience. Additionally, it was tested whether environmental considerations affect the relationship between brand experiences and brand attitude and word of mouth, respectively. Here it was found that environmental concerns moderate the impact of the affective dimension on brand attitude and the impact of the relational dimension on word of mouth.

## References

- Akoglu, H. E., & Özbek, O. (2021). The effect of brand experiences on brand loyalty through perceived quality and brand trust: A study on sports consumers. *Asia Pacific Journal of Marketing and Logistics, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/APJML-05-2021-0333>
- Brakus, J.J., Schmitt, B.H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty?, *Journal of Marketing*, 73(3), 52-68.
- Chung, M. R., & Welty Peachey, J. (2021). The influence of brand experience on satisfaction, uncertainty and brand loyalty: A focus on the golf club industry. *Sport, Business and Management: An International Journal*, 12(2), 154–170. <https://doi.org/10.1108/SBM-11-2020-0115>
- Fransson, N., & Gärling, T. (1999). Environmental concern: conceptual definitions, measurement methods, and research findings. *Journal of Environmental Psychology*, 19(4), 369–382. <https://doi.org/10.1006/jevp.1999.0141>
- Jeong, E., Jang, S., Day, J., & Ha, S. (2014). The impact of eco-friendly practices on green image and customer attitudes: An investigation in a café setting. *International Journal of Hospitality Management*, 41, 10–20. <https://doi.org/10.1016/j.ijhm.2014.03.002>
- Khan, I., & Rahman, Z. (2017). Development of a scale to measure hotel brand experiences. *International Journal of Contemporary Hospitality Management*, 29(1), 268-287.
- King, C. (2017). Brand management – standing out from the crowd. *International Journal of Contemporary Hospitality Management*, 29(1), 115-140.
- Maichum, K., Parichatnon, S., & Peng, K.-C. (2016). Application of the Extended Theory of Planned Behavior Model to Investigate Purchase Intention of Green Products among Thai Consumers. *Sustainability*, 8(10), 1077. <https://doi.org/10.3390/su8101077>
- Manthiou, A., Kang, J., Sumarjan, N., & Tang, L. (2016). The incorporation of consumer experience into the branding process: an investigation of name-brand hotels. *International Journal of Tourism Research*, 18(2), 105-115.
- Mokhtaran, M., & Bakhtiyari, F. (2014). Investigating the effect of brand experience on reaction of sport goods consumers (Case study: Nike and Adidas sports apparel consumers in Iran). *European Online Journal of Natural and Social Sciences: Proceedings*, 2(3), 2523–2529.
- Nysveen, H., Oklevik, O., & Pedersen, P.E. (2018). Brand satisfaction: exploring the role of innovativeness, green image, and experience in the hotel sector. *International Journal of Contemporary Hospitality Management*, 30(9), 2908–2924.



Nysveen, H., Pedersen, P. E., & Skard, S. (2013). Brand experiences in service organizations: Exploring the individual effects of brand experience dimensions. *Journal of Brand Management*, 20(5), 404–423.  
<https://doi.org/10.1057/bm.2012.31>

# **Internal branding and entrepreneurial orientation: a tail of risk and innovation**

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## **Abstract:**

Although literature has repeatedly shown that internal branding enables organizational success, to date, there is limited knowledge on whether and how internal branding affects entrepreneurial orientation as a key determinant of firm performance. Drawing on theories of organizational creativity and following a survey of 242 managers of Greek firms spanning a range of industries, we find that internal brand orientation influences the two dimensions of entrepreneurial orientation (i.e., innovativeness and risk-taking) in opposing ways, ultimately affecting firm performance. Our results counterintuitively suggest that, although internal brand orientation boosts firm innovativeness, it also reinforces excessive risk-taking which might hurt firm performance. Our results also show that the effects of internal brand orientation differ across market types (B2B vs. B2C) and exhibit firm structure contingencies (i.e., they are stronger for exclusively domestic compared to multinational companies). Our findings enrich branding and strategy literatures by unveiling the benefits of being internally brand-oriented while also highlighting their unintended backfiring consequences.

## **Keywords**

*Internal branding, Innovation, Risk-taking*

## **1. Introduction**

Internal branding literature has attracted significant attention over the last two decades. One reason for this momentum is that marketers are increasingly recognizing that brand performance depends on staff reinforcing the desired brand values through appropriate behavior (e.g. Merrilees & Frazer, 2013; Piehler, King, Burmann, & Xiong, 2016). A growing number of firms view the role of branding activities targeted to internal customers (i.e., employees) to be as important as that of those targeted to external customers and increasingly invest in internal branding efforts (e.g. Liu, Ko, & Chapleo, 2017). Yet, despite its contribution to value co-creation, the area of internal branding remains largely underexplored (e.g., Dean et al., 2016; Sarasvuo et al., 2022). This comes in surprising contrast to real-world internal branding practices by leading brands. For example, Google allows its employees to dedicate 20% of their workload on creative projects that lead to innovative products (Time, 2014), while FedEx's challenging idea of "overnight delivery" that led to a successful new service was originally developed by a customer service employee (MIT News, 2023). Such initiatives raise questions with regards to the underlying mechanisms through which internal branding may foster entrepreneurial creativity and ultimately improve firm performance.

Against this background, in this paper, we investigate the effects of internal brand orientation (IBO) on two critical entrepreneurial orientation (EO) dimensions, namely innovation and risk-taking. Inspired by theories of organizational creativity, we examine whether an internally brand oriented company is better poised to to innovate, take market risks and achieve superior brand and financial performance. Our findings reveal that

internal branding has a strong impact on firm performance through entrepreneurial orientation, decomposed in a positive indirect effect via innovativeness and a parallel negative (yet, weaker) indirect effect through risk-taking. Our results also show that the positive effects of IBO on entrepreneurial orientation are attenuated for B2B firms and multinational enterprises (MNEs).

## 2. Conceptual Background and Research Hypotheses

Internal Brand Orientation is defined as “*the extent to which a company is committed to generating the desired brand internalization across the organization and motivating towards the alignment of staff behavior with brand values*” (Piha & Avlonitis, 2018, p. 379). Its conceptual domain includes two organizational aspects. First, *Top Management Brand Commitment* (TMBC), defined as top management’s dedication to support the transmission of the brands’ values across the organization and encourage brand supporting behaviors. Second, *Shared Brand Values* (SBV), referring to the company’s devotion to generate a common assimilation of the brand values by all internal stakeholders, so that the proper delivery of the brands’ promise to customers is guaranteed. Entrepreneurial orientation (EO) is a strategy-making process that characterizes an organization’s level of entrepreneurship (Shan et al., 2016). It promotes values such as being highly proactive toward market opportunities, tolerant of risk, and receptive to innovations (Lumpkin and Dess, 1996; Matsuno et al., 2002). Entrepreneurially oriented firms are characterized, among others, by *innovativeness* and *risk-taking* (Covin and Slevin, 1989), aspects that often result in strong performance (Lisboa et al., 2011).

Theories of organizational creativity (e.g., Woodman et al., 1993) propose that organizational innovativeness is associated with the presence of collaborative leadership that promotes goal clarity (Amabile et al., 1996). Communicating strategic goals from top management, along with a supportive leadership style, make employees less likely to experience the fear of negative criticism that undermines risk-taking and the intrinsic motivation necessary for creativity (Amabile, 1983). Top management brand commitment represents the consistent engagement of senior executives to the spread of brand values across the organization and the encouragement of brand supportive behaviors (Piha & Avlonitis, 2018). As such, companies with strong TMBC should prioritize branding goals and help employees feel free to take risks and innovate for the purpose of bringing the firm’s brand values to life. Thus, we propose that:

**H1a:** Top Management Brand Commitment (TBMC) has a positive effect on Innovation.

**H1b:** Top Management Brand Commitment (TBMC) has a positive effect on Risk Taking.

Similarly, group cohesiveness and organizational commitment is expected to help employees be more creative, innovative and willing to take risks (King and Anderson, 1990; Ng et al., 2010). Shared value commitment is likely to increase intrinsic motivation, as one of its primary features is a focus on the work itself (Amabile et al., 1994). Shared brand values (SBV) guarantee a common understanding and appreciation of brand values by all employees and thus enables the alignment of staff behaviors with commonly agreed brand principles and positioning (Piha & Avlonitis, 2018). As such, SBV generates the desired group cohesiveness and organizational commitment needed to facilitate inter-organizational knowledge sharing that is of strategic importance for product innovation performance (Curado et al., 2018). We, thus, therefore propose that:

**H2a:** Shared Brand Values (SBV) has a positive effect on Innovation.

**H2b:** Shared Brand Values (SBV) has a positive effect on Risk Taking.

Entrepreneurial orientation is deemed necessary for firms operating in an increasingly competitive environment. On the one hand, innovation is a key source of competitive advantage (e.g., Weerawardena, 2003), for reasons including the enhancement of product and service quality, the development of new customers and markets, and the improvement in a firm’s marketplace position (Hogan and Coote, 2014). However, the link between risk-taking and performance is more ambiguous than that between innovation and performance (Naldi et al., 2007), often operating in a value-destructive manner. For instance, research has shown that risk-taking may result in poor returns (e.g. Bromiley, 1991; Rodríguez et al., 2021). Therefore, we expect that:

**H3a:** Innovation has a positive effect on Firm Performance.

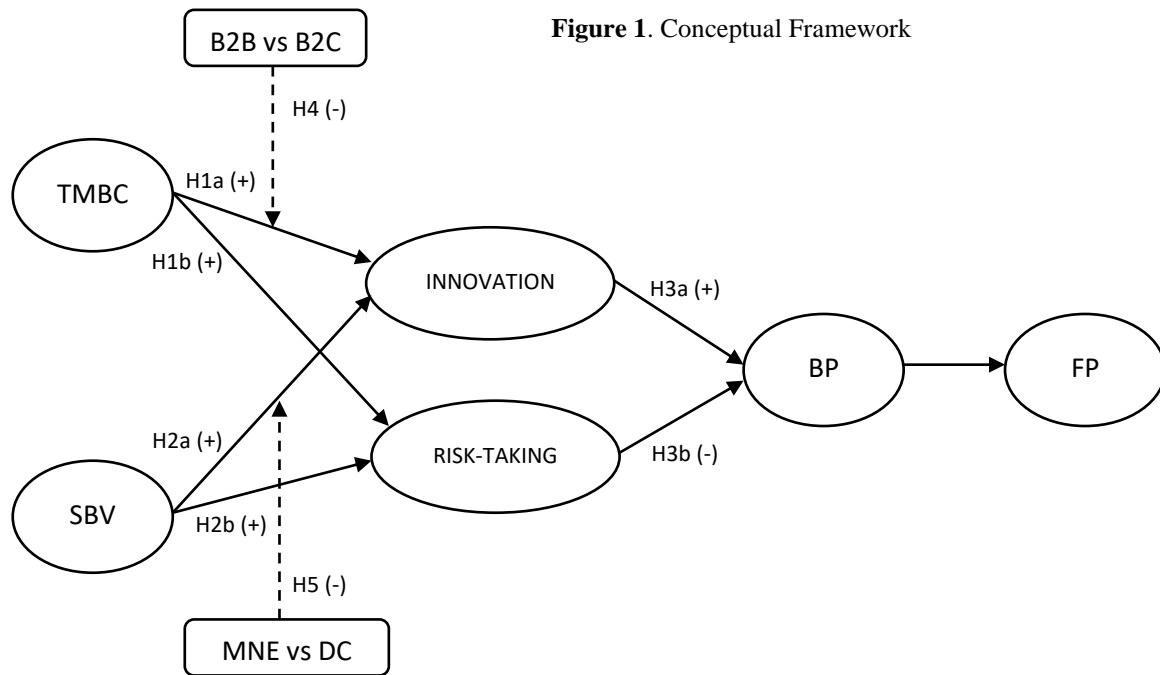
**H3b:** Risk Taking has a negative effect on Firm Performance.

For firms operating in industrial sectors (i.e., B2B firms), branding has been shown to have a limited influence on organizational decision making (e.g. Zablah et al., 2010). Although the importance of branding for such companies is increasing, other attributes continue to be more important in business markets, including perceived quality, delivery, continuity of supply, price, and after-sale service (Bendixen et al., 2004; Österle et al., 2018). On the other hand, B2C companies exhibit an organizational mindset that values brands as significantly stronger assets and their senior management pays more attention to branding efforts compared to B2B firms (Österle et al., 2018; Piha et al., 2021). Consequently, we predict that:

**H4:** The positive effect of TMBC on Innovation is attenuated for firms serving B2B (compared to the B2C) markets.

The MNEs are by nature multicultural, comprising of members with different cultural backgrounds (Fallah & Lechler, 2008). Such cultural differences hinder the adoption of shared brand values by all internal stakeholders. In parallel, MNEs international structures show higher level of organizational complexity, resulting in barriers when communicating values, principles, and strategies across different organizational units (e.g., subsidiaries) around the world. Hence, the internal branding process in multinational organizations is often a more complicated task, making it harder for employees to internalize the core brand values and find ways to implement brand creativity (Bhattacharya & Michael, 2008). We, thus, predict that:

**H5:** The positive effect of SBV on Innovation is attenuated for multinational (compared to domestic) firms.



### 3. Research Methodology

Based on a literature review, we drafted a questionnaire that included the 14-item IBO scale (Piha & Avlonitis, 2018), the 9-item EO scale (Covin and Slevin, 1989), eight items based on Wong and Merrilees (2007) measuring brand performance against competitors, and four items measuring financial performance against competitors based on Yau et al. (2007). Seven-point Likert scales were used to assess all constructs. Then, we pretested the questionnaire by circulating a survey to 39 marketing professionals attending a part-time executive postgraduate program at a local university. The pretest finalized the questionnaire structure to be used in the main data collection.

Following questionnaire validation, we undertook a large quantitative study to test our hypotheses. The population of interest were large firms representative across several sectors and industries. We restricted our population to relatively large firms of the target European country, using an inclusion criterion of an annual turnover exceeding 10 million Euros to ensure the observation of some minimum form of internal branding strategy and entrepreneurship. As a sampling frame, we used a list of 4260 firms from the database of a Gallup subsidiary in the selected country. A stratified sample of 850 firms was selected from these companies. A web-based survey procedure was used for data collection, through which questionnaires were distributed to Marketing or Senior Brand Managers from the selected firms. Informants' names and contact details were confirmed through telephone contact with the relevant company. A formal cover letter was then sent to the personal e-mail of the participant, providing a brief introduction and a general explanation of the study. From the 850 questionnaires sent, 265 questionnaires were returned, but we dropped 23 because of substantially incomplete data. Thus, 242 usable questionnaires were collected, representing a 28.4% response rate.

### 4. Analysis and Results

*Measurement Model Assessment.* Confirmatory Factor Analysis (CFA) including all multi-item scales demonstrates satisfactory fit of the measurement model to the data ( $\chi^2 = 1137.95$ ,  $df = 480$ ,  $RMSEA = .075$ ,  $CFI = .904$ ,  $SRMR = .051$ ). All standardized loadings exceed the value of .70 (Table 1). Composite reliabilities

(CR), Average Variances Extracted (AVE) and Cronbach alphas ( $\alpha$ ) for all scales exceed conventional thresholds (CRs  $\geq .883$ , AVEs  $\geq .590$ ,  $\alpha \geq .883$ ). Also, for each construct pair, the minimum AVE exceeds the corresponding squared inter-construct correlation, providing evidence of discriminant validity.

**Table 1.** Construct measurement

Construct	Psychometric properties
<i>Top Management Brand Commitment (TMBC)</i> <i>Piha and Avlonitis (2018)</i>	CR = .932 / AVE = .734 / $\alpha$ = .931
Our top management is actively involved in the brand building efforts	.796***
Our senior managers work across the organization to ensure enthusiasm in delivering the brands' values	.856***
Top management seems particularly interested in issues that relate with the building and maintenance of our brands	.880***
Our senior managers are the firsts to deliver the brands' promise in an honest way	.841***
Top management considers issues regarding our brands as being of high priority	.907***
<i>Shared Brand Values (SBV)</i> <i>Piha and Avlonitis (2018)</i>	CR = .938 / AVE = .628 / $\alpha$ = .935
Our brands' values are absolutely clear to all employees and partners of our company	.758***
Our brands' values define in large our staff recruitment selection criteria	.716***
Our company monitors whether all employees are proud of our brands	.766***
Entry employees are provided with the necessary information (e.g. through manuals, videos) that clearly describes our brands' values	.707***
Exemplar brand behavior is acknowledged and rewarded (e.g. salary increase, promotion)	.769***
Our company constantly safeguards that employees' behaviors are aligned with our brands' values	.857***
All employees are communicated their role as advocates of our brands	.907***
Everyone in our company has clearly communicated responsibilities regarding our brands	.847***
All employees are well informed that their future in the company is utterly attached with that of our brands	.784***
<i>Entrepreneurial Orientation – Risk taking (RISK)</i> <i>Covin and Slevin (1989)</i>	CR = .883 / AVE = .716 / $\alpha$ = .883
We have a strong proclivity for high risk projects with chances of high return	.880***
When faced with risk, we adopt an aggressive, bold posture to maximize the probability of exploiting potential opportunities	.832***

We believe that the business environment requires boldness to achieve objectives	.826***
<b>Entrepreneurial Orientation – Innovation (INNOV)</b> <i>Covin and Slevin (1989)</i>	CR = .898 / AVE = .689 / $\alpha$ = .896
Our company is characterized by a strong emphasis on R&D, technological leadership and innovations	.747***
We are usually the first to introduce new products/services, administrative techniques, operating technologies, etc.	.888***
Our product development process is bold and innovative	.809***
We tend to be initiators, with a proactive posture in our sector	.868***
<b>Brand Performance (BP)</b> <i>Wong and Merrilees (2007)</i>	CR = .920 / AVE = .590 / $\alpha$ = .938
Brand perceived quality	.864***
Brand satisfaction	.864***
Brand image	.864***
Brand awareness	.747***
Brand reputation	.828***
Brand trust	.823***
Brand loyalty	.779***
Brand market share	.738***
<b>Firm Performance (FP)</b> <i>Yau et al. (2007)</i>	CR = .915 / AVE = .729 / $\alpha$ = .914
Profitability	.813***
Turnover	.888***
Market share	.851***
ROI	.861***

Notes: Column entries refer to standardized loadings.

Two items of the original Entrepreneurial Orientation scale were dropped due to poor loadings.

\*\*\*  $p < .001$

*Common Method Variance Assessment.* We tested for common method variance (CMV) using the common latent factor approach (Podsakoff et al., 2003). Specifically, we conducted an additional CFA including a latent variable with all items measured with the same scale format as indicators. We constrained the common factor loadings to equality and its variance to unity. The estimated loading obtains a value of .585, suggesting the presence of common method variance estimated at  $(.585)^2 = 34\%$ .

To ensure that CMV does not invalidate our structural model estimates, we re-estimated our structural model after retaining the common latent factor in the model specification. Neither model fit indices nor hypothesized

path estimates (size, directionality or significance) changed substantially, suggesting that our results are robust after accounting for CMV.

*Structural Model Estimation.* We estimated a structural model to test the conceptual framework in AMOS environment. For the estimation of the moderation effects, we constructed interaction terms following the three-stage residual centering approach proposed by Lance (1988).

The results reveal satisfactory model fit ( $\chi^2 = 1542.60$ ,  $df = 772$ ,  $RMSEA = .064$ ,  $CFI = .894$ ,  $SRMR = .078$ ). TMBC has a positive effect on INNOV ( $\beta = .253$ ,  $p = .007$ ) but no effect on RISK ( $\beta = .142$ ,  $p = .221$ ). Thus, H1a is supported but H1b is not. SBV has a positive effect on both INNOV ( $\beta = .427$ ,  $p < .001$ ) and RISK ( $\beta = .290$ ,  $p = .013$ ). Thus, both H2a and H2b are supported. INNOV has a positive effect on BP ( $\beta = .700$ ,  $p < .001$ ) while RISK has a negative effect on BP ( $\beta = -.281$ ,  $p = .003$ ), lending support to both H3a and H3b. BP has a significant positive effect on FP ( $\beta = .586$ ,  $p < .001$ ). Overall, TMBC has a significant positive indirect effect on FP through INNOV and BP ( $\beta_{TMBC \rightarrow INNOV \rightarrow BP \rightarrow FP} = .095$ ,  $p = .035$ , 90% CI = [.019, .195]). Interestingly, SBV has two competing indirect effects on FP – a negative one through RISK and a positive through INNOV – with the latter exceeding the former, ultimately leading to an overall positive total indirect effect ( $\beta = .125$ ,  $p < .001$ , 90% CI = [.060, .211]).

Regarding moderation effects, the TMBC×B2B interaction has a negative and significant effect on INNOV ( $\beta_{TMBC \times B2B \rightarrow INNOV} = -.142$ ,  $p = .005$ ), suggesting that for firms serving B2B (compared to the B2C) markets, the positive effect of TMBC on INNOV is attenuated. Thus, H4 is supported. Additionally, the SBV×MNC interaction has a negative and significant effect on INNOV ( $\beta_{SBV \times MNC \rightarrow INNOV} = -.115$ ,  $p = .023$ ). Thus, in support of H5, the effect of SBV on INNOV is attenuated for multinational (compared to domestic) firms. Notably, neither the TMBC×B2B nor the SBV×MNC interactions have significant effects on RISK ( $\beta_{TMBC \times B2B \rightarrow RISK} = -.048$ ,  $p = .444$ ;  $\beta_{SBV \times MNC \rightarrow RISK} = -.084$ ,  $p = .186$ ), suggesting that only the positive effects of internal brand orientation exhibit market and structure contingencies while the negative ones remain unaffected by the market type or the firm's multinational structure.

Finally, no control variable had a significant effect on either BP or FP, except for the B2B dummy which has a negative effect on BP ( $\beta = -.412$ ,  $p = .017$ ) (Table 2).

**Table 2.** Structural model estimates

	Endogenous variables			
	Entrepreneurial orientation Risk-taking (RISK)	Entrepreneurial orientation Innovation (INNOV)	Brand performance (BP)	Firm performance (FP)
<i>Exogenous variables</i>				
TMBC (H1)	.223 (.182)	.330 (.122) **		
SBV (H2)	.380 (.153) *	.465 (.107) ***		
<i>Mediators</i>				
RISK (H3a)			-.190 (.063) **	
INNOV (H3b)			.567 (.086) ***	
BP				.653 (.077) ***
<i>Moderators</i>				
B2B (1 = B2B, 0 = B2C)	.208 (.262)	.361 (.175) *	-.412 (.172) *	-.008 (.189)
MNC (1 = MNC, 0 = DOM)	.196 (.168)	.414 (.114) ***	-.032 (.114)	.120 (.315)
<i>Interactions</i>				
TMBC×B2B (H4)	-.203 (.266)	-.499 (.178) **		
SBV×MNC (H5)	-.191 (.144)	-.219 (.096) *		

<i>Controls</i>				
Number of employees			.000 (.000) †	.000 (.000)
Years of market presence			.047 (.064)	-.061 (.071)
Industry dummies (Reference category = Other)				
FMCG			.052 (.144)	.074 (.159)
Retail			.023 (.203)	.108 (.224)
Industrial			-.123 (.212)	-.212 (.235)
Services			-.039 (.193)	-.036 (.212)
R <sup>2</sup>	.191	.518	.347	.368

Note: Column entries refer to unstandardized parameter estimates (standard errors in parentheses); standardized parameters reported in text.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .10$

*Direct Effects Testing.* We conducted a series of formal comparisons between the baseline model and models including direct effects from the two IBO dimensions on BP and FP. In all instances, the inclusion of direct effects from TMBC and SBV on BP and FP led to significant improvement in model fit, as evidenced by significant  $\chi^2$  reductions (TMBC→BP:  $\Delta\chi^2 = 22.12$ ,  $\Delta df = 1$ ,  $p < .001$ ,  $\beta = .380$ ; TMBC→FP:  $\Delta\chi^2 = 8.92$ ,  $\Delta df = 1$ ,  $p = .001$ ,  $\beta = .224$ ; SBV→BP:  $\Delta\chi^2 = 24.01$ ,  $\Delta df = 1$ ,  $p < .001$ ,  $\beta = .345$ ; SBV→FP:  $\Delta\chi^2 = 16.35$ ,  $\Delta df = 1$ ,  $p < .001$ ,  $\beta = .285$ ). Notably, the inclusion of direct effects does not affect the size or significance of indirect or moderating effects. In sum, these results suggest that the entrepreneurial orientation dimensions are only partial mediators of the effects of internal brand orientation on brand/firm performance.

## 5. Discussion

This research aimed at extending the internal branding literature by investigating a novel relationship between IBO and EO. In line with organizational creativity theories (e.g., Woodman et al., 1993), our findings empirically support the positive impact of internal branding on brand and financial performance, but also show that this effect is significantly mediated by innovation and risk-taking. Therefore, we extend current knowledge in the field and provide evidence that the internal customer should not be neglected when dealing with brand strategy and entrepreneurial issues. Instead, as both TMBC and SBV help firms to innovate, leading to better performance, companies should ensure that brand internalization is adequately supported across the organization through investments in internal brand orientation.

Our results show that TMBC has no significant effect on risk-taking. This is plausibly attributed to the fact that top management acts as an inhibitor of excessive risk-taking which ensures that innovation is realized as a process of “calculated risk assessment”. The findings also reveal that SBV has two competing indirect effects on FP, namely a negative one through risk-taking and a positive one through innovation (with the latter exceeding the former, ultimately leading to an overall positive total indirect effect). This finding reveals that SBV might represent a “double-edged sword”. Thus, managers should be warned that, although building and spreading brand values within the organization might foster innovation, it may also increase risk tolerance, leading to adverse effects on performance. This further elevates the role of top management as a safeguard of calculated risk-taking and a regulator of radical internal brand enthusiasts.

Finally, our findings reveal that the positive effects of internal brand orientation on innovation exhibit market and structure contingencies. First, for firms serving B2B (compared to the B2C) markets, the positive effect of TMBC on innovation is attenuated, a fact that can be attributed to the limited influence of branding on organizational decision making in B2B firms (e.g., Zablah et al., 2010). Therefore, top management of industrial companies wishing to increase their creativity and innovation should pay more attention to branding issues and take a more active role in the company’s branding efforts. Second, the results show that the effect of SBV on innovation is attenuated for multinational (compared to domestic) firms. Given the humongous size of some MNEs, their internal cultural differences and their organizational complexity, the removal of the structural



barriers that hinder the proliferation of brand values to internal stakeholders appears critical. Employee recognition, rewards of exemplar brand behavior, development of internal brand champions and training on how each employee can contribute to the brand's values could also help towards this direction (Piha & Avlonitis, 2018).

## References

- Amabile, T. M., 1983. *The social psychology of creativity*. New York: Springer-Verlag.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1184.
- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. 1994. The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, 66: 950-967.
- Bendixen, M., Bukasa, K. A., & Abratt, R. (2004). Brand equity in the business-to business market. *Industrial Marketing Management*, 33, 371–380.
- Bhattacharya, A. K., & Michael, D. C. (2008). How local companies keep multinationals at bay. *Harvard Business Review*, 86(3), 20-33.
- Covin, J. G. and Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*. 10 (January), 75 – 87.
- Curado, C., Muñoz-Pascual, L., & Galende, J. (2018). Antecedents to innovation performance in SMEs: A mixed methods approach. *Journal of Business Research*, 89, 206-215.
- Fallah, M. H., & Lechler, T. G. (2008). Global innovation performance: Strategic challenges for multinational corporations. *Journal of Engineering and Technology Management*, 25(1-2), 58-74.
- Hogan, S. J., & Coote, L. V. (2014). Organizational culture, innovation, and performance: A test of Schein's model. *Journal of Business Research*, 67(8), 1609-1621.
- King, N., & Anderson, N. 1990. *Innovation in working groups*. In M, A. West & J. L. Farr (Eds.). *Innovation and creativity at work*: 81-100. Chichester, England: Wiley.
- Lance, C. E. (1988). Residual centering, exploratory and confirmatory moderator analysis, and decomposition of effects in path models containing interactions. *Applied Psychological Measurement*, 12(2), 163–175.
- Lisboa, A., Skarmeas, D., & Lages, C. (2011). Entrepreneurial orientation, exploitative and explorative capabilities, and performance outcomes in export markets: A resource based approach. *Industrial Marketing Management*, 40(8), 1274–1284.
- Liu, C.-Y., Ko, W. W. and Chapleo, C. (2017). Managing employee attention and internal branding. *Journal of Business Research*, 79(1), 1–11.
- Lumpkin, G.T. and Dess, D. D. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, 21(1), 135 –72.
- Matsuno, K., Mentzer, J. T. and Özsoy, A. (2002). The Effects of Entrepreneurial Proclivity and Market Orientation on Business Performance. *Journal of Marketing*, 66 (July), 18 – 32.
- McCool, D. (February 15, 2023). In visit to MIT, FedEx founder Frederick Smith shares thoughts on innovation, MIT News. Retrieved from <https://news.mit.edu/2023/fedex-founder-frederick-smith-mit-visit-0215>. (Last accessed, April 21, 2023).
- McCracken, H. (April 1, 2014). How Gmail Happened: The Inside Story of Its Launch 10 Years Ago. Retrieved from <https://time.com/43263/gmail-10th-anniversary/>. (Last accessed, April 21, 2023)
- Merrilees, B., & Frazer, L. (2013). Internal branding: franchisor leadership as a critical determinant. *Journal of Business Research*, 66(2), 158–164.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47.
- Ng, T. W., Feldman, D. C., & Lam, S. S. (2010). Psychological contract breaches, organizational commitment, and innovation-related behaviors: a latent growth modeling approach. *Journal of applied Psychology*, 95(4), 744.
- Österle, B., Kuhn, M. M., & Henseler, J. (2018). Brand worlds: Introducing experiential marketing to B2B branding. *Industrial Marketing Management*, 72, 71-98.
- Piha, L., & Avlonitis, G. (2018). Internal brand orientation: conceptualisation, scale development and validation. *Journal of Marketing Management*, 34(3-4), 370–394.
- Piehler, R., King, C., Burmann, C., & Xiong, L. (2016). The importance of employee brand understanding, brand identification, and brand commitment in realizing brand citizenship behavior. *European Journal of Marketing*, 50(9), 1575-1601.
- Piha, L., Papadas, K., & Davvetas, V. (2021). Brand orientation: Conceptual extension, scale development and validation. *Journal of Business Research*, 134, 203-222.

- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Rodríguez, Y. E., Gómez, J. M., Chávez, H., & Chea, J. (2021). Family business risk-taking and financial performance: Is it easier said than done?. *Journal of Family Business Strategy*, 12(4), 100435.
- Sarasvuo, S., Rindell, A., & Kovalchuk, M. (2022). Toward a conceptual understanding of co-creation in branding. *Journal of Business Research*, 139, 543-563.
- Shan, P., Song, M., & Jua, X. (2016). Entrepreneurial orientation and performance: Is innovation speed a missing link? *Journal of Business Research*, 69(2), 683–690.
- Weerawardena, J. (2003). The role of marketing capability in innovation-based competitive strategy. *Journal of Strategic Marketing*, 11, 15–35.
- Wong, H. Y., & Merrilees, B. (2007). Closing the marketing strategy to performance gap: The role of brand orientation. *Journal of Strategic Marketing*, 15(5), 387–402.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18(2), 293-321.
- Yau, O., Chow, R., Sin, L., Tse, A., Luk, C., & Lee, J. (2007). Developing a scale for stakeholder orientation. *European Journal of Marketing*, 41(11/12), 1306-1327.
- Zablah, A. R., Brown, B. P., & Donthu, N. (2010). The relative importance of brands in modified rebuy purchase situations. *International Journal of Research in Marketing*, 27, 248–260.

## Marketing department power, brand orientation dimensions and brand performance

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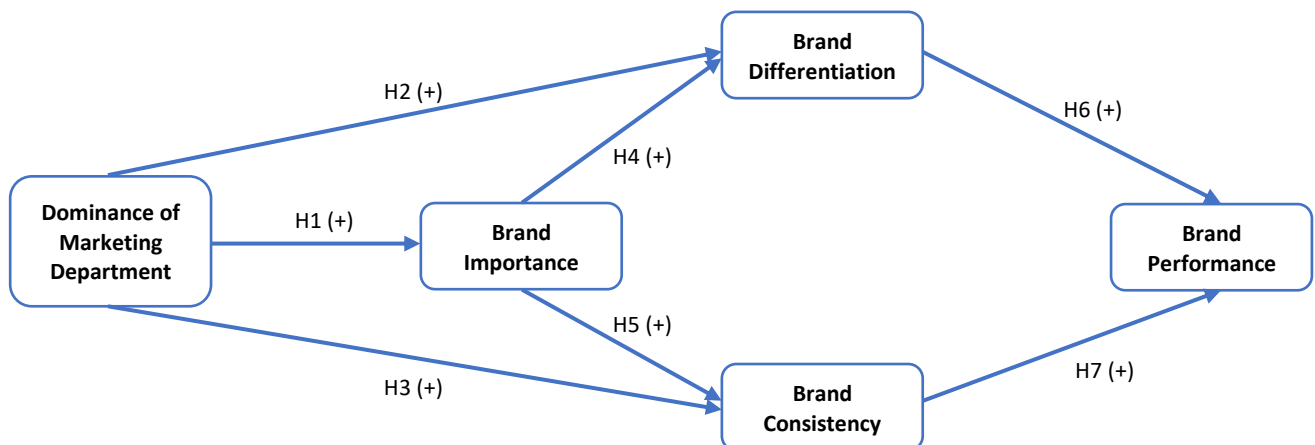
**Abstract:**

Powerful brands are economically important to companies and constitute one of their most valuable assets (Ertekin, Sorescu, & Houston, 2018; Fischer, Völckner, & Sattler, 2010). Global, well-established brands such as Amazon or Google are valued at around \$275 and \$251 billion, respectively (Interbrand, 2022), but only a small part of their valuation can be attributed to tangible non-brand-related assets. Professionals are increasingly recognizing the importance of strong brands, as they benefit companies by adding value, positively affecting consumer perceptions, acting as barriers to competition, and improving profits (Greyser & Urde, 2019; Park, Eisingerich, Pol, & Park, 2013).

However, building and sustaining strong brands presupposes resources, winning strategies, and careful executions from committed, disciplined organizations (Aaker, 1996; Lee, O’Cass, & Sok, 2017). This is the reason why creating powerful brands that stand out from competition, deliver on their promise, and strengthen over time is considered among the greatest challenges managers face today. To address this challenge, researchers attempted to describe an integrated organizational focus on developing and sustaining strong brands over time and introduced the term “brand orientation” (Urde, 1994). Recently, Piha, Papadas and Davvetas (2021) expanded prior efforts on brand orientation by re-conceptualizing the notion to include the main organizational behaviors manifested by strategically brand-oriented firms. Specifically, they approached “Brand Orientation” as capturing *the degree to which an organization strives to adopt an attitude toward brands as important marketing assets (Brand Importance), achieve a brand character that remains consistent and aligned with brand values over time (Brand Consistency), develop brands that are distinct, unique, and sufficiently differentiated from the competition (Brand Differentiation), and engage in activities that pool brand knowledge and organize it in a way that sustains the brand’s understanding of its target market (Brand Intelligence)* (Piha et al., 2021, p. 211).

In this study, we try to further investigate how brand value is created, by examining for the first time the inter-relationships among the main dimensions of brand orientation, as well as their effect on brand performance. Also, we explore the impact of marketing departmental power on three brand orientation dimensions, namely brand importance, brand differentiation and brand consistency, as a key determinant of brand success (Figure 1).

**Figure 1: Research Framework**



Our methodology included a large quantitative study to test our hypotheses. The population of interest were large firms, representative across several sectors and industries. We restricted our population to relatively large firms operating in Greece, using an inclusion criterion of an annual turnover exceeding 10 million Euros to ensure the observation of some minimum form of branding strategy. As a sampling frame, we used a list of 4260 firms from the database of a Gallup subsidiary in the selected country. A stratified sample of 900 firms was selected from these companies. A web-based survey procedure was used for data collection, through which questionnaires were distributed to Marketing or Senior Brand Managers from the selected firms. Informants' names and contact details were confirmed through telephone contact with the relevant company. A formal cover letter was then sent to the personal e-mail of the participant, providing a brief introduction and a general explanation of the study. From the 900 questionnaires sent, 273 questionnaires were returned, but we dropped 28 because of substantially incomplete data. Thus, 245 usable questionnaires were collected, representing a 27.2% response rate.

Results confirmed our hypothesized effects, as shown in Table 1. More specifically, Marketing Departmental Power has a strong positive effect on the attitudinal aspect of brand orientation, namely Brand Importance, as well as a positive impact on Brand Differentiation and Brand Consistency. Regarding the inter-relationships of the brand orientation dimensions, brand importance seems to act as an antecedent of both behavioral perspectives of brand orientation, as the level of importance a company attaches to its brands positively and strongly affects brand differentiation and brand consistency. Finally, these two behavioral dimensions have a significant positive impact on brand performance.

**Table 1: Model estimation results**

Structural relationships	Path estimate	t-value	Hypothesis	Result
<i>Hypothesized paths</i>				
DMD → BIM	0.407	5.860***	H1 (+)	Support
DMD → BDIFF	0.268	4.375***	H2 (+)	Support
DMD → BCONS	0.171	2.853**	H3 (+)	Support
BIM → BDIFF	0.583	8.276***	H4 (+)	Support
BIM → BCONS	0.628	8.472***	H5 (+)	Support
BDIFF → BPERF	0.469	5.921***	H6 (+)	Support
BCONS → BPERF	0.169	2.293*	H7 (+)	Support
<i>Controls</i>				
Firm's Size → BPERF	0.039	0.640		
Firm's Age → BPERF	0.040	0.590		
Sector (reference: Construction-Remaking)				
FMCG → BPERF	-0.101	-1.233		
Services → BPERF	-0.099	-1.192		
Industrial Products → BPERF	-0.133	-1.998*		
Wholesaler/Retailer → BPERF	-0.045	-0.684		

*Model fit*

$\chi^2 = 849.192$ ,  $df = 417$ ,  $RMSEA = 0.072$ ,  $CFI = 0.92$ ,  $SRMR = 0.085$

Notes: The significance of the indirect effect was estimated with bootstrapping 95% confidence interval based on 5000 bootstrap samples (e.g., Hayes, 2009; Preacher and Hayes, 2004).

\*\*\* $p < 0.001$

\*\* $p < 0.01$

\* $p < 0.05$

Our findings have hopefully important implications. Theoretically, we delve for the first time into the structure of brand orientation and provide new and more detailed perspectives on how brand value is generated. Regarding our managerial implications, we offer additional evidence regarding the significance of marketing departmental power. A strong and dominant marketing department can create the desired branding culture and prioritize relevant decisions and actions to strengthen the company's brands. On the other hand, a company with a powerless marketing department is in a weaker position to develop and sustain strong brands, as its influence towards brand supportive decisions is limited. Also, our findings alert managers to the fact that believing in the critical role of branding is a prerequisite for developing behaviors that reinforce consistency and differentiation,

both key factors of brand performance. Therefore, companies should give real power to their marketing department and work towards developing a strong internal culture that values brands as the most valuable organizational assets. In this way, branding can become a top company priority with significant impact on the desired differentiation and consistency, leading to increased brand performance.

## Keywords

*Marketing department power, Brand differentiation, Brand consistency, Brand performance*

## References

- Aaker D. A. (1996a). *Building strong brands*. New York: Free Press.
- Ertekin, L., Sorescu, A., & Houston, M. (2018). Hands off my brand! The financial consequences of protecting brands through trademark infringement lawsuits. *Journal of Marketing*, 82(5), 45–65.
- Fischer, M., Völckner, F. & Sattler, H. (2010). How important are brands? A cross-category cross-country study. *Journal of Marketing Research*, 47(5), 823–839.
- Greyser, S., & Urde, M. (2019). What does your corporate brand stand for? *Harvard Business Review*, 97(1), 80–88.
- Interbrand (2022). Best Global Brands 2022 Rankings. Retrieved April 29, 2023, from <https://interbrand.com/best-global-brands/>.
- Lee, W., O’Cass, A., & Sok, P., (2017). Unpacking brand management superiority: Examining the interplay of brand management capability, brand orientation and formalization. *European Journal of Marketing*, 51(1), 177–199.
- Park, C., Eisingerich, A., Pol, G., & Park, J. (2013). The role of brand logos in fir performance. *Journal of Business Research*, 66(2), 180–187.
- Piha, L., Papadas, K., & Davvetas, V., (2021). Brand orientation: Conceptual extension, scale development and validation, *Journal of Business Research*, vol. 134, pages 203-222.
- Urde, M. (1994). Brand orientation: A strategy for survival. *Journal of Consumer Marketing*, 11(3), 18–32.

## **A study on the impact of corporate actions on consumer attitudes in the case of a brand scandal: mediating role of pre-scandal brand experience and brand trust**

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*Keywords: Corporate actions, brand scandal, brand forgiveness, attitude about product category, consumer behaviour*

### **INTRODUCTION**

Brand scandal is defined as an issue that results in either a consumer losing confidence entirely in the brand (Wang & Alexander, 2018) or having second thoughts on purchasing the brand (Kapoor & Banerjee, 2020). Such incidents disappoint consumers' expectations and have negative consequences for the brand's reputational and financial assets (Coombs, 2007; Huber et al., 2010), revenue losses (Cleeren et al., 2013), deterioration of brand equity (Dawar & Pillutla, 2000; Hegner et al., 2017), negative brand perceptions and lower purchase intentions (Huber et al., 2010), and decreased effectiveness of marketing activities (Heerde et al., 2007).

Consumer brand relationships and brand wrongdoings are immensely related because of the consequences. For instance, consumer's purchase behavior (Baghi & Gabrielli, 2019), brand evaluation (Trump, 2014), and the brand's perceived trustworthiness (Liu et al., 2018) get impacted by the brand's wrongdoings. Moreover, consumer repurchase decision (Huber et al., 2010), consumer word of mouth (Baghi & Gabrielli, 2019) and protest behavior (Grappi et al., 2013), consumer negative emotions (Romani et al., 2012), consumer brand attachment (Roy et al., 2018, Shimul et al., 2023), consumer's affective commitment (Hsiao et al., 2015), brand advocacy and advocacy intention (Hsiao et al., 2015), consumer satisfaction and trust (Hsiao et al., 2015; Tong et al., 2023), negative consumer emotions (Baghi & Gabrielli, 2019), consumer's blame attribution (Roy et al., 2018), consumer's confidence (Wang & Alexander, 2018), and magnification of wrongdoing by highly

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emotional bonded consumers (Mattila, 2004) also get influenced by brand wrongdoings. As brand scandals may jeopardize consumer-brand relationships, the same is a matter of grave concern for marketers.

## LITERATURE BACKGROUND OF THE CONCEPTUAL MODEL

An organization is expected to strategically deal with a scandal before, during, and after its occurrence (Benoit, 1997; Grebe, 2013; Kovoov-Misara, 1996; Pearson & Mitroff, 1993). The inability of an organization to manage a scandal in these three phases can worsen the scandal by generating negative publicity (Dean, 2004), eventually ruining the brand's image and reputation (Claeys et al., 2010; Dean, 2004) and even endangering the survival of the organization leading to a crisis (Pearson & Mitroff, 1993).

Recently, Chandrasekar & Rehman (2023) propagate a brand scandal as one of the causes of the brand crisis. Unlike the consumer expectations, if the brand they trusted the most could supply them a harmful/defective product category, then any other brand offering the same product category could also be harmful. It leads to scepticism about the specific product category. On the contrary, consumers that are highly attached with the brand portray high brand loyalty that further strengthens their willingness to forgive a brand after a misconduct (shimul et al., 2023). Besides brand's responsible actions before a misconduct act as a defense mechanism and further results in reduced attribution of blame on the tarnished brand (Kang et al., 2023).

Consumer's trust in the brand is adversely influenced when they encounter negative brand publicity (Tong et al., 2023). Consumers with high brand trust before a scandal may act as a shield or catalyst in brimming backlash in the case of a brand scandal. Consumers act as a shield by defending the brand and mitigating the negative consequences of brand scandals (Kapoor & Banerjee, 2021; Baghi et al., 2016). However, consumers with high BT may feel disappointed such that trust can be eroded and replaced with distrust leading to negative responses to the brand (Robson and Farquhar, 2021). Similarly, when consumer receives negative information about their preferred brand, it tends to challenge their existing brand experience embedded in their memory (Kapoor & Banerjee, 2021). As a result, consumer responses may be unpredictable as it threatens their attitude about the brand scandal.

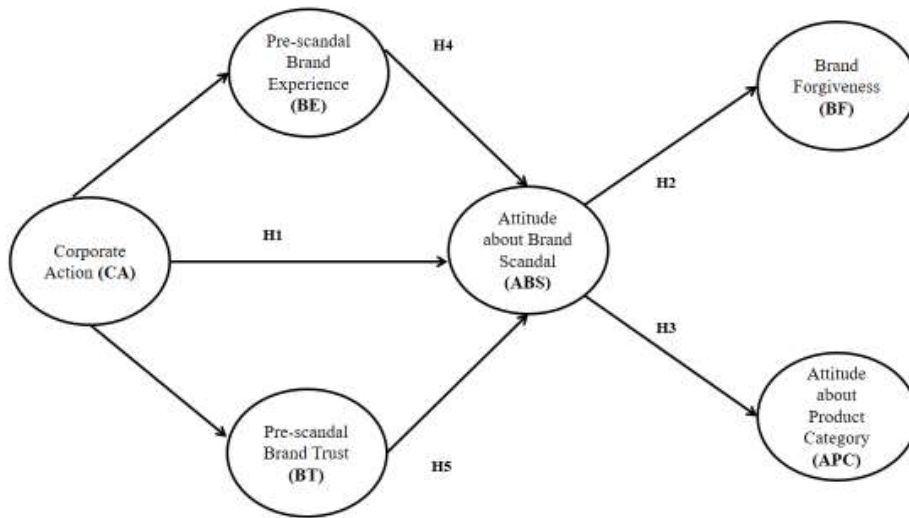
Thus, the main purpose of this confirmatory research is to empirically validate a theoretical model for understanding the mediating role of consumer's pre-scandal brand experience and pre-scandal brand trust in the relationship between corporate actions and their attitude about the brand scandal. This mediating role may ultimately influence the consumer's behavior to forgive a scandalized brand and their attitude toward the product category. To the best of our knowledge, the ultimate effect of brand scandals on product category attitude is not yet well explored. Based on this literature, the research hypotheses are as follows:

### Direct Effects:

- H1.* Effective corporate actions (CA) significantly and favorably influence consumers' brand scandal attitude (ABS).
- H2.* Consumers' favorable attitude toward the brand scandal (ABS) actuates their brand forgiveness (BF).
- H3.* Consumers' favorable attitude toward the brand scandal (ABS) actuates their favourable attitude about the product category (APC).

### Mediation Effects:

- H4.* Consumers' favorable pre-scandal brand experience (BE) mediates the relationship between corporate action (CA) and consumers' attitudes towards brand scandal (ABS).
- H5.* Consumers' high level of pre-scandal brand trust (BT) mediates the relationship between corporate action (CA) and consumers' attitudes towards brand scandal (ABS).



**Fig 1: Conceptual Model**

## METHODOLOGY

### Measures and Instrument Development

The research involves the application of survey methodology and adapted measures from research articles published previously. A three-item scale was adapted to measure attitude toward product category (APC) (Siomkos et al., 2010), BF (Xie & Peng, 2009), and pre-scandal BE (Stokburger-Sauer et al., 2012), while four item scale was adapted to study BT (Chaudhuri & Holbrook, 2002). Corporate action (CA) was measured using a five-item scale (Kiambi & Shafer, 2016), and ABS with an eight-item scale (Banerjee, 2018; Coyle & Thorson, 2001). The questionnaire statements measure. To maintain homogeneity throughout the questionnaire, a seven point Likert scale was used (1= strongly disagree to 7= strongly agree).

### Research Context

The context of this study is the Maggi brand scandal, and each respondent was aware of it. Conversations about the scandal prevail until recent times (India Today, 2021). This research applied structural equation modeling (SEM) to empirically verify the theoretical model using AMOS 24. This study involved a two-step process comprising a measurement model (CFA–Confirmatory factor analysis) followed by a structural model (Anderson & Gerbing, 1988). We circulated the questionnaire within India amongst the consumers of Maggi using a purposive sampling technique. Out of 753 responses received, 717 were qualified for the study (95% response rate). Out of the total respondents, males were 55.2%, and females were 44.8%. The demographic profiles of the respondents comprising different age groups (25-34= 38.1%, 15-24= 36.1%, 35-44= 17%, 45 and above age group= 8.8%)

## RESULTS AND ANALYSIS

Confirmatory factor analysis (CFA) was used for validation and adequacy test of scales and constructs following MacCallum et al. (1992) and Browne & Cudeck (1993). Attaining CMIN/DF=3.443, RMSEA=0.058, CFI=0.993, and Hoelter (0.01) =511 showcased satisfactory model fit was satisfactory.

### Structural model: Direct effects hypothesis testing

The findings of the study capture all the direct effects to be significant (H1,  $\beta=0.196$ ; H2,  $\beta=1.387$ , H3,  $\beta=1.014$ ). Corporate actions in the case of a brand scandal do favourably influence a consumer's attitude about the brand scandal. Consumers believe the scandal news to be false when their expectations of corporate actions are met. Such a favourable attitude about the brand scandal results in consumer forgiving the brand and have a favourable attitude towards the product category because of their addiction and preference for the product category (Kapoor et al., 2022). Significance of direct effect assures the need to go ahead with a mediation analysis. Results of the



mediation test showcase consumers' pre-scandal brand experience and brand trust both partially mediate the relationship between CA and consumers' ABS ( $\beta=0.346$ ,  $CA \rightarrow BE$ ;  $\beta=0.129$ ,  $BE \rightarrow ABS$ ;  $\beta=0.323$ ,  $CA \rightarrow BT$ ;  $\beta=0.447$ ,  $BT \rightarrow ABS$ ). In continuum, corporate actions do favourably influence consumers' ABS especially, for those who possess a pre-scandal brand experience and pre-scandal brand trust.

## DISCUSSION AND CONCLUSION

Brand scandals are complex situations in which products are defective, unsafe, or even dangerous (Vassilikopoulou et al., 2009). This research aims to discuss if corporate actions can influence consumers' attitudes about the brand scandal (ABS), which may further affect brand forgiveness (BF) and attitude about the product category (APC). The study reveals that corporate actions significantly and favourably influence consumer attitudes toward brand scandals. Our results confirm that corporate actions of the brand marketer Nestle have influenced consumers' attitude during Maggi's brand scandal in India. So, we may confirm that corporate actions during a brand scandal play a critical role in possibly mitigating scandal effects (Yuan et al., 2020). We specifically tested the corporate actions as antecedents because we assumed the same could play a fundamental role in scandal management. We further argue that consumers' pre-scandal brand experience and brand trust could mediate between corporate actions and attitude about the brand scandal in the case of a brand scandal.

The findings of this study reveal the non-linearity of consumer's response. Consumers' attitude about a brand scandal are formed based on not only corporate actions but mediated by their pre-scandal brand experience and brand trust together. Thus, marketers must strengthen consumer's pre-scandal brand experience and brand trust to attain a favourable attitude about the brand scandal. Marketers must showcase corporate actions to consumers portraying it cares about them. The study confirms that a favourable attitude about the brand scandal leads to brand forgiveness and a positive attitude about the product category. So, it is very critical to maintain a positive attitude about the scandal through corporate actions. This study brings some important implications for practitioners: marketers should strengthen the consumer's product associations because their attitude about the brand scandal influences both the attitude about the brand's forgiveness and their attitude about the product category being offered, irrespective of the brand.

A limitation of this study is the fact that it was based on the case of a highly loved brand, a leader in a product category that has become part of the nation's life and culture. Perhaps the same corporate actions carried out in different contexts would have led to different effects. Therefore, further studies should explore which specific scandal management actions have certain effects, over what period of time, and at what stage of the scandal life cycle. Indeed, another limitation of this study concerns the fact that, unfortunately, the economic and financial impact of corporate actions taken over time, before-during and after the scandal, could not be measured. In essence, however, as this is a long and thorough research, our findings provide some evidence from the consumer's side that corporate actions play an important role in mitigating brand scandal effects. Customers expect that when companies face a scandal, they should be ready to implement effective scandal management plans with different actions (Kapoor & Banerjee, 2021; Kapoor et al., 2022). Our insights seem to confirm the importance of company reactions during and after a scandal, and the need for scandal management implementation.

## REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Baghi, I. & Gabrielli, V. (2019). The role of crisis typology and cultural belongingness in shaping consumers' negative responses towards a faulty brand. *Journal of Product & Brand Management*, 28 (5), 653-670.
- Banerjee, S. (2018). Impact of food brand controversy on consumers' attitude toward brand and company. *Journal of Food Products Marketing*, 24(4), 413-440.
- Benoit, W. L. (1997). Image repair discourse and crisis communication. *Public Relations Review*, 23(2), 177-187.
- Browne, M.W., & Cudeck, R. (1992). Alternative methods of assessing model fit. *Sociological Methods and Research*, 21, 230-258.
- Chandrasekar, K. & Rehman, V. (2023). Synthesis of forty years of brand crisis literature. *Marketing Intelligence & Planning*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MIP-10-2022-0467>
- Chaudhuri, A., & Holbrook, M. B. (2002). Product-class effects on brand commitment and brand outcomes: The role of brand trust and brand affect. *Journal of Brand Management*, 10(1), 33-58.

- Claeys, A. S., Cauberghe, V., & Vyncke, P. (2010). Restoring reputations in times of crisis: An experimental study of the situational crisis communication theory and the moderating effects of locus of control. *Public Relations Review*, 36(3), 256-262.
- Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163-176.
- Coyle, J. R., & Thorson, E. (2001). The effects of progressive levels of interactivity and vividness in web marketing sites. *Journal of advertising*, 30(3), 65-77.
- Dawar, N., & Pillutla, M. M. (2000). Impact of product-harm crises on brand equity: The moderating role of consumer expectations. *Journal of Marketing Research*, 37(2), 215-226.
- Dean, D. H. (2004). Consumer reaction to negative publicity: Effects of corporate reputation, response, and responsibility for a crisis event. *The Journal of Business Communication* 41(2), 192-211
- Grappi, S., Romani, S., & Bagozzi, R. P. (2013). Consumer response to corporate irresponsible behavior: Moral emotions and virtues. *Journal of Business Research*, 66(10), 1814–1821.
- Grebe, S. K. (2013). Things can get worse. *Corporate Communications: An International Journal*. 18(1), 70-86.
- Heerde, H., Helsen, K., & Dekimpe, M. G. (2007). The impact of a product-harm crisis on marketing effectiveness. *Marketing Science*, 26(2), 230–245.
- Hegner, S. M., Fetscherin, M., & Van Delzen, M. (2017). Determinants and outcomes of brand hate. *Journal of Product & Brand Management*, 26(1), 13-25.
- Hsiao, C. H., Shen, G. C., & Chao, P. J. (2015). How does brand misconduct affect the brand-customer relationship? *Journal of Business Research*, 68(4), 862–866.
- Huber, F., Vollhardt, K., Matthes, I. & Vogel, J. (2010). Brand misconduct: consequences on consumer-brand relationships. *Journal of Business Research*, 63(11), 1113-1120.
- India today. (2021). Nestle 'unhealthy' food controversy: Looking back at the Maggi Noodles crisis in India. Available at <https://www.indiatoday.in/business/story/nestle-unhealthy-food-controversy-looking-back-at-the-maggi-noodles-crisis-in-india-1810003-2021-06-02> (accessed on 5 January 2022).
- Kang, J., Faria, A.A., Lee, J. & Choi, W.J. (2023). Will consumers give us another chance to bounce back? Effects of precrisis commitments to social and product responsibility on brand resilience. *Journal of Product & Brand Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JPBM-03-2022-3899>
- Kapoor, S., & Banerjee, S. (2021). On the relationship between brand scandal and consumer attitudes: A literature review and research agenda. *International Journal of Consumer Studies*, 45(5), 1047-1078.
- Kapoor, S., Banerjee, S., & Signori, P. (2022). The role of retailers during brand scandals: insights from a case study. *International Journal of Retail & Distribution Management*, 50(2), 276-298.
- Kiambi, D. M., & Shafer, A. (2016). Corporate crisis communication: Examining the interplay of reputation and crisis response strategies. *Mass Communication and Society*, 19(2), 127-148.
- Kovoor-Misara, S. (1996). Moving toward crisis preparedness: Factors that motivate organizations. *Technological Forecasting and Social Change*, 53 (2), 169-183.
- Liu, X., Lischka, H. M., & Kenning, P. (2018). Asymmetric cognitive, emotional and behavioural effects of values-related and performance-related negative brand publicity. *Journal of Product and Brand Management*, 27(2), 128–145.
- MacCallum, R. C., M. Roznowski, & L. B. Necowitz. (1992). Model Modifications in Covariance Structure Analysis: The Problem of Capitalization on Chance. *Psychological Bulletin*, 111(3), 490–504.
- Mattila, A. S. (2004). The impact of service failures on customer loyalty: The moderating role of affective commitment. *International Journal of Service Industry Management*, 15(2), 134-149. DOI:10.1108/09564230410532475
- Pearson, C. M., & Mitroff, I. I. (1993). From crisis prone to crisis prepared: A framework for crisis management. *Academy of Management Perspectives*, 7(1), 48-59.

- Romani, S., Grappi, S., & Dalli, D. (2012). Emotions that drive consumers away from brands: Measuring negative emotions toward brands and their behavioral effects. *International Journal of Research in Marketing*, 29(1), 55–67.
- Roy, V., Tata, S. V., & Parsad, C. (2018). Consumer response to brand involved in food safety scandal: An exploratory study based on a recent scandal in India. *Journal of Consumer Behaviour*, 17(1), 25–33.
- Shimul, A.S., Faroque, A.R. & Cheah, I. (2023). Does brand attachment protect consumer–brand relationships after brand misconduct in retail banking?. *International Journal of Bank Marketing*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJBM-10-2022-0453>
- Siomkos, G., Triantafillidou, A., Vassilikopoulou, A., & Tsiamis, I. (2010). Opportunities and threats for competitors in product-harm crises. *Marketing Intelligence & Planning*, 8 (6), 770-791.
- Stokburger-Sauer, N., Ratneshwar, S., & Sen, S. (2012). Drivers of consumer–brand identification. *International journal of research in marketing*, 29(4), 406-418.
- Tong, Z., Feng, J. & Liu, F. (2023). "Understanding damage to and reparation of brand trust: a closer look at image congruity in the context of negative publicity. *Journal of Product & Brand Management*, 32(1), 157-170.
- Trump, R. K. (2014). Connected consumers' responses to negative brand actions: The roles of transgression self-relevance and domain. *Journal of Business Research*, 67(9), 1824-1830.
- Vassilikopoulou, A., Siomkos, G., Chatzipanagiotou, K., & Pantouvakis, A. (2009). Product-harm crisis management: Time heals all wounds?. *Journal of Retailing and Consumer Services*, 16(3), 174–180.
- Wang, S. & Alexander, P. (2018). The factors of consumer confidence recovery after scandals in food supply chain safety. *Asia Pacific Journal of Marketing and Logistics*, 30(5), 1379-1400.
- Xie, Y., & Peng, S. (2009). How to repair customer trust after negative publicity: The roles of competence, integrity, benevolence, and forgiveness. *Psychology & Marketing*, 26(7), 572-589.
- Yuan, D., Lin, Z., Filieri, R., Liu, R. & Zheng, M. (2020). Managing the product-harm crisis in the digital era: the role of consumer online brand community engagement. *Journal of Business Research*, 115, 38-47

## **Gen Zs are real: The mediating role of self-brand connection in the relationship between BeReal usage and brand selfies.**

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### **Extended Abstract:**

#### **Introduction & Purpose of the study**

In the last decade, many studies have highlighted the importance of social media (social media; Mayrhofer et al., 2020; Daniel et al., 2018), the power of the consumer-brand relationship (Hayes et al., 2020), influencers (Kim 2022; Lee and Johnson, 2022), and social media influencers (Shan et al., 2020; Zhu et al., 2022) in the field of marketing. According to a recent survey, over 4.7 billion people use social media, of which only 17 have over 300 million active users (Kepios, 2022). A new and particularly popular in young people such application is BeReal.

BeReal is a simple photo sharing app where users are invited to upload photos from their daily life once a day and share them on their profile which is visible either only by their "friends" or is public. Every day (at a different time) each user takes a photo within 2 minutes. This app was released in 2020 and is promoted as a "real" app (Shelley, 2022) that prioritizes unedited content (i.e., photos without filters), providing an alternative to highly edited content (e.g., staged and filtered photos).

This application is mainly used by young people, and more specifically, Generation Z, which is a very important and dynamic age group, as in America it has a population of about 86 million people, and they have high purchasing power and their lives are identified with the Internet (Fromm and Read, 2018). They are also exposed to a plethora of branded advertising stimuli on a daily basis (e.g., advertisements, banners, suggested posts on the MMS) and their preferences are strongly influenced by the opinion of their peers.

Therefore, the purpose of this paper is to study (a) which psychographic characteristics the users of the BeReal app have and (b) how advertisers could use the BeReal app to reach Generation Z.

### **Literature Review**

#### *The BeReal App*

The BeReal app is a modern dynamic social networking app founded by Alexis Barreyat and Kevin Perreau (former GoPro app employees) in December 2019 in France. BeReal showed an upward trend in 2021 when it reached 500,000 active users (mostly French). In 2022 it expanded to America and England targeting students with a variety of promotions such as using influencers and outdoor advertising (Curry, 2023).

This app is considered to be an anti-Instagram app, as on Instagram and other social media (e.g., Snapchat, Twitter, Tik Tok) users share the best moments of themselves and their daily lives (Lawrence, 2022). In contrast, BeReal asks their users to be authentic and share either to their friends or publicly pictures of what they are doing and what is in front of them once a day every day. The time of day does not depend on the users, as they receive a notification from the app informing them that they are required to share what they are doing at that moment within 2 minutes. The photo (simultaneously from the front and rear camera, image 2 is automatically shared without the user being able to edit it and add filters as is done in other apps. If a user shares a photo outside the time limit, the application "punishes" him/her by sharing the photo with a note indicating the time delay. Furthermore, the app does not allow users to be passive observers as one cannot see other users' BeReal photos until s/he uploads his/her own BeReal photo which is not the case with other social media (e.g., Instagram). The BeReal app does also not allow users to "like", but they can interact with other users' BeReal photos through "RealMojis" which are selfies of users representing emojis (Lawrence, 2022).

#### *Generation Z*

Generation Z are individuals (Gen Zs) born between 1995 and 2012 and are also known as "Digital Natives" and "Me generation" (Feiertag and Berge, 2008). As mentioned by Gaidhani et al. (2019), Generation Z is

considered digital-centric, as individuals have grown up with instant global connectivity using smartphones, tablets, and social media and are content creators (Madden, 2019). Gen Zs use media for approximately 13 hours per day (Ipsos, 2018) and are mainly individuals who have high levels of narcissism (Wood et al, 2021). They also view consumption as a means of expression, have strong knowledge regarding brands as the internet allows them to search extensively and have a greater engagement with brands as brands are associated with their self-perception (self-brand connection; Sprott et al., 2009).

#### *Self-brand connection*

Self-brand connection refers to the extent to which consumers incorporate brands into their self-concepts. In other words, it represents the strength of the link between brand perception and consumer self-concept (Escalas, 2004). When consumers identify brands through which they can communicate their self-perceptions to others, their connection to the brand becomes stronger, resulting in a stronger self-brand connection (Escalas and Bettman, 2009).

One form of self-brand connection is brand-selfies. The brand-selfie in social media may well be one of the newest and most effective ways of communicating brand information and experiences (Presi et al., 2016). Posting selfies with brands and their products by consumers seems to give satisfaction to them. The appearance of logos on selfies is done intentionally for a variety of reasons. This is either to express the true or ideal self, social status or wealth. Furthermore, the possibility of reflecting consumers' intentions to construct and transmit ideal self-identities is realized through eWOM communication via brand-selfies (Mehdizadeh, 2010). Thus, the following research question arises:

RQ: How (a) self-brand connection and (b) the level of sharing brand-selfies are associated with BeReal usage?

#### **Methodology**

An online survey was conducted during two weeks in March of 2023 and the target population for this study were the Cypriot Gen Z users of BeReal. The sample consisted of 111 (85 females) respondents, users of BeReal (use frequency  $M = 3.43$ ,  $SD = 1.7$ ), born between 1995 and 2007 ( $M = 2001$ ,  $SD = 2.28$ ). The participants were asked questions related to their social media use frequency (ranging from (1) "not at all" to (5) "very much"), their selfie behaviours (frequency of sharing brand, beauty, simple and party selfies; ranging from (1) "not at all" to (5) "very much"; Sung et al., 2018), their self-brand connection with brands (ranging from (1) "strongly disagree" to (5) "strongly agree"; Sprott et al., 2009), and their profile (gender, age, level of education, and place of residence).

#### **Results**

According to our findings, BeReal usage had a statistically significant positive effect on Instagram ( $\beta=.336$ ,  $p<.001$ ), Facebook ( $\beta=.235$ ,  $p<.001$ ), Facebook Messenger ( $\beta=.219$ ,  $p<.001$ ), and TikTok ( $\beta=.276$ ,  $p<.001$ ) usage, while it had a statistically significant negative effect on WhatsApp ( $\beta=-.192$ ,  $p=.004$ ) and LinkedIn ( $\beta=-.187$ ,  $p=.005$ ) usage. However, no association was found between BeReal and YouTube ( $\beta=.099$ ,  $p=.142$ ), Twitter ( $\beta=-.011$ ,  $p=.876$ ), and Snapchat ( $\beta=.124$ ,  $p=.066$ ) usage.

In addition, BeReal usage had a positive statistically significant correlation with simple selfies ( $\beta=.439$ ,  $p<.001$ ), beauty selfies ( $\beta=.337$ ,  $p<.001$ ), brand selfies ( $\beta=.247$ ,  $p<.001$ ), party selfies ( $\beta=.323$ ,  $p<.001$ ), but not with food selfies ( $\beta=.102$ ,  $p=.129$ ). Self-brand connection also has a positive statistically significant correlation with all types of selfies, and BeReal ( $\beta=.221$ ,  $p=.001$ ), Instagram ( $\beta=.277$ ,  $p<.001$ ), YouTube ( $\beta=.149$ ,  $p=.026$ ), and TikTok ( $\beta=.32$ ,  $p<.001$ ) usage.

Finally, a mediation analysis (model 4, PROCESS macro) with self-brand connection was used as mediator in the relationship between BeReal usage and brand selfies. The total index of 95% bootstrap sample Confidence Interval of the mediation analysis was statistically significant ( $B=.24$ ,  $SE=.06$ ,  $95\% CI=[.115, .365]$ ).

#### **Discussion**

The study presented here is one of the first pieces of research to focus specifically on a new social media platform, namely BeReal, which is mainly used by Gen Zs. Our findings reveal that BeReal is a social media platform that could be used from brands to communicate with Gen Zs. BeReal users seem to share simple, beauty and brand selfies in their social media. In addition, Gen Zs' self-brand connection seems to be an underlying mechanism in the relationship between BeReal usage and brand selfies. In other words, Gen Zs who have a strong self-brand connection are more likely to use BeReal and subsequently post brand-related selfies on social media. This suggests that individuals who feel a strong connection to a particular brand are more likely to

engage with that brand on social media and promote it to their followers through selfies. However, with a small sample size, caution must be applied, as the findings might not be generalizable.

## Conclusion

Based on the terms of use of BeReal, it is prohibited to use the app for promotional and advertising purposes. Currently, companies cannot create their own account/profile and use this app for advertising (Sklenar, 2022). Nevertheless, the BeReal app is an important tool for companies as many influencers share BeReal photos on their Instagram account as well. Employees, also, could share BeReal photos with promo codes, while many users share photos consuming brands or being in a retailer's store. In other words, some companies have already adapted the text and content of their advertisements to this new app (Ehlers, 2022) and it is possible that in 2023, companies will be allowed to advertise in the app (Edwards, 2022). Therefore, it seems necessary to investigate the effectiveness of advertising in the BeReal app further.

**Keywords::** *BeReal, self-brand connection, generation Z*

## References:

- Curry, D. (2023, February 14). BeReal Revenue and Usage Statistics (2023). Retrieved April 10, 2023, from <https://www.businessofapps.com/data/bereal-statistics/>
- Daniel Jr, E. S., Crawford Jackson, E. C., & Westerman, D. K. (2018). The influence of social media influencers: Understanding online vaping communities and parasocial interaction through the lens of Taylor's six-segment strategy wheel. *Journal of Interactive Advertising*, 18(2), 96-109.
- Edwards, E. L. (2022, October 31). WORKERS OF THE WORLD BEREAL!: BEREAL AND THE PERFORMANCE OF LABOR EMILY LYNELL EDWARDS / ST. FRANCIS COLLEGE. *Flowjournal*. Retrieved April 10, 2023, from <https://www.flowjournal.org/2023/02/workers-bereal-performance-labor/>
- Ehlers, K. (2022, October 31). FOMO: Should Your Brand Hop On New Viral Apps Like BeReal? *Forbes*. Retrieved April 10, 2023, from <https://www.forbes.com/sites/forbesagencycouncil/2022/10/31/fomo-should-your-brand-hop-on-new-viral-apps-like-bereal/?sh=1a253daf1e4b>
- Escalas, J. E. (2004). Imagine yourself in the product: Mental simulation, narrative transportation, and persuasion. *Journal of advertising*, 33(2), 37-48.
- Escalas, J. E., & Bettman, J. R. (2009). Connecting with celebrities: Celebrity endorsement, brand meaning, and self-brand connections. *Journal of Marketing Research*, 13(3), 339-348.
- Feiertag, J., & Berge, Z. L. (2008). Training Generation N: how educators should approach the Net Generation. *Education+ Training*, 50(6), 457-464.
- Fromm, J., & Read, A. (2018). Marketing to Gen Z: The rules for reaching this vast--and very different--generation of influencers. Amacom.
- Gaidhani, S., Arora, L., & Sharma, B. K. (2019). Understanding the attitude of generation Z towards workplace. *International Journal of Management, Technology and Engineering*, 9(1), 2804-2812.
- Hayes, J. L., Golan, G., Britt, B., & Applequist, J. (2020). How advertising relevance and consumer-Brand relationship strength limit disclosure effects of native ads on Twitter. *International Journal of Advertising*, 39(1), 131-165. DOI:10.1080/02650487.2019.1596446
- IPSOS, (2018) Ipsos Thinks Gen Z: Beyond Binary“, <https://thinks.ipsosmori.com/trusting-cynical/> (28.11.2022)
- Kepios (n.d.). Global social media statistics. Datareportal. Retrieved December 20, 2022, from <https://datareportal.com/social-media-users>
- Lawrence, L. (2022, March 19). 'You're not glamorizing anything': Why BeReal is taking over college campuses with an anti-Instagram ethos. *Protocol*. Retrieved April 10, 2023, from <https://www.protocol.com/entertainment/bereal-social-media-app-college>
- Lee, S. S., & Johnson, B. K. (2022). Are they being authentic? The effects of self-disclosure and message sidedness on sponsored post effectiveness. *International Journal of Advertising*, 41(1), 30-53. DOI:10.1080/02650487.2021.1986257
- Madden, C. (2019). *Hello Gen Z: Engaging the Generation of Post-Millennials (Revised Edition)*. Hello Clarity.
- Mayrhofer, M., Matthes, J., Einwiller, S., & Naderer, B. (2020). User generated content presenting brands on social media increases young adults' purchase intention. *International Journal of Advertising*, 39(1), 166-186. DOI:10.1080/02650487.2019.1596447
- Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, behavior, and social networking*, 13(4), 357-364.
- Presi, C., Maehle, N., & Kleppe, I. A. (2016). Brand selfies: consumer experiences and marketplace conversations. *European Journal of Marketing*, 50(9/10), 1814-1834.

- Shan, Y., Chen, K. J., & Lin, J. S. (2020). When social media influencers endorse brands: The effects of self-influencer congruence, parasocial identification, and perceived endorser motive. *International Journal of Advertising*, 39(5), 590-610. DOI:10.1080/02650487.2019.1678322
- Shelley, L. (2022, August 1). "Marketers should take note": BeReal, the 'anti-Instagram' app. Retrieved December 1, 2022, from <https://www.performancemarketingworld.com/article/1794474/%E2%80%9Cmarketers-note%E2%80%9D-bereal-anti-instagram-app>
- Sklencar, A. (2023, April 3). 20 BEREAL STATS YOU NEED TO KNOW. ONLINE OPTIMISM. Retrieved April 10, 2023, from <https://www.onlineoptimism.com/blog/bereal-stats-app-figures-data-be-real-numbers-to-know/>
- Sprott, D., Czellar, S., & Spangenberg, E. (2009). The importance of a general measure of brand engagement on market behavior: Development and validation of a scale. *Journal of Marketing research*, 46(1), 92-104.
- Sung, Y., Kim, E., & Choi, S. M. (2018). # Me and brands: understanding brand-selfie posters on social media. *International Journal of Advertising*, 37(1), 14-28.
- Wood, A. D., Borja, K., & Hoke, L. (2021). Narcissism for fun and profit: an empirical examination of narcissism and its determinants in a sample of Generation Z business college students. *Journal of management education*, 45(6), 916-952.
- Zhu, H., Kim, M., & Choi, Y. K. (2022). Social media advertising endorsement: the role of endorser type, message appeal and brand familiarity. *International Journal of Advertising*, 41(5), 948-969. DOI:10.1080/02650487.2021.1966963

# **Branding and Destination Image**



# **Too hard to die? The evolution of Corfu's destination image through three consecutive crises**

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## **1. INTRODUCTION**

The impact of any type of crisis a tourism destination has faced on the destination's image has been extensively discussed in tourism literature so far (e.g. Avraham and Ketter 2008; Gkritzali 2017; Gkritzali et. al. 2018). What has yet to be discovered, however, is whether all different types of crises that a destination may face throughout the years have the same impact, or whether there are some specific crises that have a more severe, detrimental – and potentially long-term – impact, that can be dangerous and damaging for the destination's reputation and future development.

This study examines the impact of three different crises on the destination image of Corfu, one of the most popular Greek islands, over the past 14 years (2010 – 2023). Corfu, a very popular sea and sun destination with an economy that relies on tourism, was first impacted by the Greek economic recession, a national crisis that hit Greece from 2010 to 2015. In the following years (2016-2019), the island faced a local waste crisis, related mainly to garbage pickup, which has made the news all over the world. Soon after the island's waste crisis recovery, the island was hit by what is now the most severe global crisis in tourism, the Covid-19 pandemic (2020-2021). The study aims, first, to examine, whether the three crises – national, local and global – had an impact on the destination image of Corfu and, second, to compare this impact in three levels; direction, severity and specific attributes. In order to do so, the study will analyse, through sentiment analysis, approximately 9000 comments, posted in Trip Advisor's Corfu Travel Forum, from 2010 to 2023.

This is the first study to compare different crises – in a national, local and global level – and unveil the different dynamics in the way each one of them shapes and changes global perceptions about destinations. Theoretically, the study will contribute to the field of destination management and marketing, by deepening the understanding on how crises influence global perceptions about tourism destinations and identifying whether there is a specific kind of crisis that poses as a severe threat to destination images and reputations. The study will also contribute to the literature on destination image, by showing the micro-dynamics of its evolution throughout different crises and its potential to grow stronger despite them. Practically, this study aims to advice DMOs all over the world on the impact of different crises on their destination images and help them address the challenges each crisis brings, by developing recovery strategies as well as effective crisis communication plans in order to rebuild their image post-crisis and regain tourists' trust.

## **2. LITERATURE REVIEW**

Destination image is a fundamental concept in tourism research (Hunt 1975), referring to the mental representation or perception that individuals hold about a particular destination (Kotler and Gertner 2002). The destination image plays a crucial role in tourists' decision-making processes, as it shapes their expectations, motivations, and attitudes towards visiting a destination. Numerous studies have demonstrated the significant influence of destination image on tourists' behavior. Destination image not only affects tourists' decision to visit a destination but also influences their satisfaction, loyalty, and word-of-mouth recommendations. For instance, a study by Pike and Ryan (2004) found that destination image positively influenced tourists' satisfaction with their visit, which, in turn, affected their intention to revisit the destination and recommend it to others.

The tourism literature on destination image has identified several dimensions that contribute to its formation. These dimensions encompass cognitive, affective and conative attributes (Baloglu and Brinberg 1997; Kaplanidou and Vogt 2007; Lopes 2011; Moon et al. 2011; Russell and Pratt 1980). Cognitive dimensions include attributes such as natural beauty, cultural heritage, infrastructure, and accessibility, which provide factual information about the destination. Affective dimensions, on the other hand, encompass emotions, perceptions, and experiences associated with the destination. Finally, conative dimensions represent the intent of a person to visit a destination in a given period of time (Gkritzali et. al, 2018). Baloglu and McCleary (1999)

proposed a comprehensive framework that includes all cognitive, affective and conative dimensions, highlighting the importance of understanding the multidimensional nature of destination image.

Destination images are not stable but shaped and formed across time and space (Gallarza, Saura, and García 2002), by a complex interplay of factors, including personal experiences, word-of-mouth, marketing communication, media, art and history (Govers, Go, and Kumar 2007; Govers 2011). There are multiple (positive or negative) factors that influence image formation, which are not always related to tourism, such as, *inter alia*, political decisions and riots, civil right violations, and other issues that are widely discussed in the world (Avraham 2004). At the same time, Destination Management Organisations (DMOs) play a crucial role in managing and communicating the destination image, by employing various strategies, such as advertising, public relations, and online promotion, to shape and influence tourists' perceptions of the destination. A study by Beerli and Martin (2004) emphasised the importance of consistent and positive communication efforts in building a strong destination image.

Among others, research has shown that crises can have a profound effect on destination image (Avraham and Ketter 2008; Gkritzali 2017; Gkritzali et. al. 2018). During times of crisis, negative media coverage and perception of risks can create a distorted image of the destination, leading to decreased tourist arrivals and revenue (Gkritzali 2017; Gkritzali et. al. 2018). For instance, following the 2011 earthquake and tsunami in Japan, the country's image suffered greatly, with tourists perceiving it as an unsafe destination. A study by Kim, Li, and Li (2018) found that crisis events significantly influence destination image, and it takes considerable time and effort to recover the image post-crisis. Various strategies have been proposed to mitigate the negative impact of crises on destination image. One common approach is crisis communication and management, which involves timely and transparent information dissemination to address tourists' concerns and restore confidence. For example, after the terrorist attacks in Paris in 2015, the French tourism industry implemented an extensive communication campaign emphasizing safety measures and resilience. Research by Olya, Cai, and Fesenmaier (2018) highlights the importance of effective crisis communication in minimising the long-term damage to destination image.

Especially in the recent years, through the proliferation of social media and review platforms, such as Trip Advisor, the impact of crises on destination image is amplified. Social media platforms serve as a powerful tool for disseminating information, both positive and negative, and can influence tourists' perceptions and decision-making. A study by Neuhofer, Buhalis, and Ladkin (2015) found that social media content related to a crisis can significantly influence tourists' perception of a destination. Therefore, DMOs should actively engage with social media platforms during and after a crisis, providing accurate and up-to-date information to counter negative narratives and rebuild destination image.

Therefore, destination image is a key concept that influences tourists' decision-making processes and is key for a destination's survival and prosperity. It is now well-established that destination images are not stable, but change across time and space and are heavily influenced and distorted by crises. This impact is now being amplified, maybe more than ever, through the proliferation of social media and reviews platforms, which disseminate – often crisis related – information and significantly influence tourists' perceptions. This study is based on all the aforementioned well-established assumptions and aims to understand whether all different types of crises have the same severe and detrimental impact on destination image, whether they affect the same destination attributes, as well as whether their impact is long-term. In order to do so, the study focuses on the affective dimension of destination image, following the example of previous studies in the field. The main reason of using only the affective dimension of destination image is that this dimension has been considered to be evolving during a crisis, as they are unpredictable and animate (Anholt 2010), as well as subsequent to the cognitive components, as people's evaluative responses come from their knowledge of the places (Beerli and Martin 2004; Gkritzali et. al. 2018). The list of affective attributes that are used in the analysis are presented in the next section.

### 3. METHODOLOGY

The study uses semi-automated sentiment analysis, that has been used in multiple destination image studies before (Dickinger et al. 2011; Költringer and Dickinger 2015; Gkritzali 2017; Gkritzali et. al. 2018). The keyword analysis and the dictionaries that the study is using are based in previous destination image studies (Baloglu and Mangalolu 2001; Kim and Richardson 2003; Echtner and Ritchie 2003; Jenkins 1999; Sonmez and Sirakaya 2002; Gkritzali et. al. 2018). The keyword selection, as well as the 5-point Likert scales used in the analysis (adapted by Gkritzali et. al. 2018) are presented in Table 1, below. Overall, five affective attributes are used in the analysis (safe environment, hospitable environment, general mood and atmosphere, relaxing effect, authenticity of experience) that include 110 keywords.

**Table 1:** Keyword selection (adapted by Gkritzali et. al. 2018)

Attributes	Keywords
<b>1. Safe environment</b>	
Risky - Secure	[-2]: Risk, Scary, Danger, Uncertainty, Peril [+2]: Safe, Secure, Protected, Certainty, Reassuring
Undeveloped - Developed	[-2]: Underdevelopment, Undeveloped, Delayed, Decline, Retreat [+2]: Development, Developed, Evolution, Growth, Progress
<b>2. Hospitable environment</b>	
Unhospitable - Hospitable	[-2]: Unhospitable, Hostile, Unwelcoming, Unfriendly [+2]: Hospitality, Friendliness, Courtesy, Warmth, Generosity
Dirty – Clean	[-2]: Dirty, Unclean, Soiled, Foul, Polluted [+2]: Clean, Pure, Unpolluted, Bright, Neat
<b>3. General mood and atmosphere</b>	
Worthless - Valuable	[-2]: Insignificant, Disadvantage, Disappointing, Dispensable [+2]: Value, Merit, Advantage, Benefit, Useful
Unattractive - Attractive	[-2]: Attractive, Interesting, Stimulating, Exciting, Fascinating [+2]: Unattractive, Awkward, Bad, Horrible, Ordinary
<b>4. Relaxing effect</b>	
Stressful - Relaxing	[-2]: Stress, Upset, Worry, Anxiety, Pressure [+2]: Relax, Leisure, Recreation, Amusement, Ease
Terrifying - Comforting	[-2]: Terrifying, Frightening, Alarming, Shocking, Troubled [+2]: Comfortable, Convenience, Relaxed, Pleasure, Relief
<b>5. Authenticity of experience</b>	
Artificial - Authentic	[-2]: Artificial, Unreal, Faked, False, Unnatural [+2]: Authentic, Convincing, Original, Pure, True
Boring - Exciting	[-2]: Boring, Uninteresting, Tiresome, Dull, Mundane [+2]: Exciting, Interesting, Fun, Eventful, Bright
Unpleasurable - Pleasurable	[-2]: Unpleasure, Nasty, Troublesome, Undesirable, Disagreeable [+2]: Pleasure, Amusement, Joy, Comfort, Satisfaction

The sentiment analysis of the data is performed using SentiStrength software. The data used is 9000 comments and replies from conversations posted on Trip Advisor's Corfu Travel Forum, from January 2010 to May 2023. TripAdvisor was chosen as the only data source because, it is the largest social online network of travel consumers worldwide and provides a sharing platform for reviews and experiences. TripAdvisor Forums are online discussion boards hosted by TripAdvisor that provide a platform for travelers to seek advice, share experiences, and ask questions related to various destinations, accommodations, attractions, and more. Users can browse through different categories, such as destination-specific forums or topic-based discussions, and interact with a community of fellow travelers, locals, and experts. TripAdvisor Forums are a valuable resource for gathering insights, recommendations, and tips from people with firsthand travel experiences. Finally, the data is analysed using independent t-tests, in order to perform comparisons among 4 distinct periods of times, which are categorised as follows:

1. 2010 – 2014 (Greek economic recession - national)
2. 2015 – 2019 (waste crisis – local)
3. 2020 – 2021 (Covid-19 pandemic - global)
4. 2022 – 2023 (post-covid recovery)

The results are presented in the following section.

**4. RESULTS**

Overall, the results show that all three crises have had an impact on Corfu’s destination image, which differs on all the three selected levels (direction, severity and specific attributes). According to the results, the crisis with the most severe impact overall was the global Covid-19 pandemic crisis. However, the destination image of Corfu seems to have already recovered and is now more positive than ever. Therefore, although all crises had a significant impact on the destination image of the island, no one of them was long-term or harmed the overall reputation of Corfu, which is strong, consistent and positive.

During the first, national, crisis (2010 - 2015), all affective attributes of Corfu’s destination image were positive, and the destination was viewed as a hospitable, exciting and comforting destination overall. Therefore, although at the time Greece was depicted in a very negative way by global media, Corfu’s image remained strong and positive in all different attributes. The local waste crisis (2016 – 2019), however, did have a significant effect on the island’s affective image in several components. First, the island, during the waste crisis, was viewed as less clean ( $\mu_1=0.4$ ,  $\mu_2=0.284$ ,  $p1-2= 0.002$ ) and less attractive ( $\mu_1=0.312$ ,  $\mu_2=0.205$   $p1-2= 0.00$ ), and the change in these two components was highly significant. The island was also viewed as significantly less secure ( $\mu_1=0.262$ ,  $\mu_2=0.204$ ,  $p1-2= 0.054$ ) and less exciting ( $\mu_1=0.519$ ,  $\mu_2=0.462$ ,  $p1-2= 0.015$ ).

The Covid-19 pandemic (2020 - 2021) has also significantly affected Corfu’s image, as the island was viewed as less valuable ( $\mu_1=0.362$ ,  $\mu_3=0.176$ ,  $p1-3= 0.001$ ) ( $\mu_2=0.320$ ,  $\mu_3=0.176$ ,  $p2-3= 0.009$ ), less exciting ( $\mu_1=0.519$ ,  $\mu_3=0.310$ ,  $p1-3= 0.000$ ) ( $\mu_2=0.462$ ,  $\mu_3=0.310$ ,  $p2-3= 0.002$ ) and more stressful ( $\mu_1=0.157$ ,  $\mu_3=-0.053$ ,  $p1-3= 0.000$ ) ( $\mu_2=0.191$ ,  $\mu_3=-0.053$ ,  $p2-3= 0.002$ ), compared to the local waste crisis, as well as the national economic crisis. All these changes in affective attributes were highly significant. During the Covid-19 pandemic, Corfu was also viewed as significantly less attractive ( $\mu_1=0.312$ ,  $\mu_3=0.126$ ,  $p1-3= 0.000$ ) and comforting ( $\mu_1=0.490$ ,  $\mu_3=0.338$ ,  $p1-3= 0.000$ ) than during the national economic crisis, and these changes were also highly significant. Overall, the global Covid-19 pandemic has had a severe impact on most of the affective attributes of the destination image of Corfu, which, during the pandemic, was viewed as stressful for the first time since 2010 and among three different crises.

Although the impact of the Covid-19 pandemic was severe, it also seemed to be short-term, as many of the affected attributes recovered after the crisis (2022 – 2023), and Corfu was viewed again as significantly more valuable ( $\mu_3=0.176$ ,  $\mu_4=0.344$ ,  $p3-4= 0.016$ ), attractive ( $\mu_3=0.126$ ,  $\mu_4=0.292$ ,  $p3-4= 0.004$ ), exciting ( $\mu_3=0.310$ ,  $\mu_4=0.456$ ,  $p3-4= 0.020$ ), relaxing ( $\mu_3=-0.053$ ,  $\mu_4=0.203$ ,  $p3-4= 0.009$ ) and comforting ( $\mu_3=0.338$ ,  $\mu_4=0.495$ ,  $p3-4= 0.069$ ) than during the pandemic. Overall, the destination image of Corfu has fully recovered after the global crisis and has now reached the 2010 – 2015 level, as there are no significant differences between the 2010 – 2015 and the 2022 – 2023 periods.

**Table 2:** Affective attribute sentiment and evolution – part 1

	2010- 2015 $\mu_1$	2016- 2019 $\mu_2$	p1-2	2016- 2019 $\mu_2$	2020- 2021 $\mu_3$	p2-3	2020- 2021 $\mu_3$	2022- 2023 $\mu_4$	p3-4
Risky–Secure	<b>0.262</b>	<b>0.204</b>	<b>0.054**</b>	0.204	0.175	0.469	0.175	0.263	0.160
Undeveloped- Developed	0.245	0.216	0.678	0.216	0.179	0.678	0.179	0.345	0.157
Unhospitable– Hospitable	0.446	0.378	0.381	0.378	0.308	0.779	0.308	0.714	0.193
Dirty–Clean	<b>0.400</b>	<b>0.284</b>	<b>0.002***</b>	0.284	0.293	0.895	0.293	0.324	0.790
Worthless– Valuable	0.362	0.320	0.128	<b>0.320</b>	<b>0.176</b>	<b>0.009***</b>	<b>0.176</b>	<b>0.344</b>	<b>0.016**</b>
Unattractive– Attractive	<b>0.312</b>	<b>0.205</b>	<b>0.000***</b>	0.205	0.126	0.055	<b>0.126</b>	<b>0.292</b>	<b>0.004***</b>
Artificial– Authentic	0.166	0.138	0.238	0.138	0.121	0.721	0.121	0.189	0.323
Boring–Exciting	<b>0.519</b>	<b>0.462</b>	<b>0.015**</b>	<b>0.462</b>	<b>0.310</b>	<b>0.002***</b>	<b>0.310</b>	<b>0.456</b>	<b>0.020**</b>
Unpleasurable– Pleasurable	0.288	0.324	0.619	0.324	0.167	0.269	0.167	0.300	0.429
Stressful–Relaxing	0.187	0.191	0.917	<b>0.191</b>	<b>-0.053</b>	<b>0.000***</b>	<b>-0.053</b>	<b>0.203</b>	<b>0.009***</b>
Terrifying– Comforting	0.490	0.446	0.165	0.446	0.338	0.103	<b>0.338</b>	<b>0.495</b>	<b>0.069**</b>

**Table 3:** Affective attribute sentiment and evolution – part 2

	2010- 2015	2020- 2021	p1-3	2010- 2015	2022- 2023	p1-4	2016- 2019	2022- 2023	p2-4
	$\mu_1$	$\mu_3$		$\mu_1$	$\mu_4$		$\mu_2$	$\mu_4$	
Risky–Secure	<b>0.262</b>	<b>0.175</b>	<b>0.019**</b>	0.262	0.263	0.984	0.204	0.263	0.318
Undeveloped- Developed	0.245	0.179	0.451	0.245	0.345	0.328	0.216	0.345	0.218
Unhospitable– Hospitable	0.446	0.308	0.575	0.446	0.714	0.201	0.378	0.714	0.126
Dirty–Clean	0.400	0.293	0.120	0.400	0.324	0.445	0.284	0.324	0.689
Worthless–Valuable	<b>0.362</b>	<b>0.176</b>	<b>0.001***</b>	0.362	0.344	0.729	0.320	0.344	0.646
Unattractive– Attractive	<b>0.312</b>	<b>0.126</b>	<b>0.000***</b>	0.312	0.292	0.654	<b>0.205</b>	<b>0.292</b>	<b>0.068**</b>
Artificial–Authentic	0.166	0.121	0.336	0.166	0.189	0.681	0.138	0.189	0.359
Boring–Exciting	<b>0.519</b>	<b>0.310</b>	<b>0.000***</b>	0.519	0.456	0.184	0.462	0.456	0.911
Unpleasurable– Pleasurable	0.288	0.167	0.376	0.288	0.300	0.917	0.324	0.300	0.846
Stressful–Relaxing	<b>0.187</b>	<b>-0.053</b>	<b>0.000***</b>	0.187	0.203	0.846	0.191	0.203	0.887
Terrifying– Comforting	<b>0.490</b>	<b>0.338</b>	<b>0.017**</b>	0.490	0.495	0.945	0.446	0.495	0.461

## 5. CONCLUSION

This is the first study that looks into the effect that different crises (in level and nature) have on the affective attributes of the destination image. The study uses the example of the Greek island of Corfu, which faced three consecutive crises from 2010 to 2022 and shows that all crises have affected the destination image of the island, but in a different way. That is, during the local waste crisis, the main attributes that were affected were those related to cleanliness, attraction (highly significant impact), as well as security and excitement (significant impact). During the global Covid-19 pandemic crises, most of the attributed of Corfu's destination image were highly significantly affected, compared to both other crises. Especially, although all attributes of Corfu's destination image were positive from 2010 to 2023, the destination was viewed as risky ( $\mu_3=-0.053$ ) for the first and only time, during the years of the pandemic. This severe impact was, however, very short term, as it has fully recovered in the years after the pandemic (2022 - 2023) and some attributes are now more positive than ever. It is, therefore, obvious from the results that Corfu's destination image was affected by all crises that the island faced, but is, indeed, too hard to die.

## REFERENCES

- Anholt, S. 2010. "Definitions of place branding – Working towards a resolution." *Journal of Place Branding and Public Diplomacy*, 6(1), 1–10.
- Avraham, E. (2004). Media strategies for improving an unfavorable city image. *Cities*, 21(6), 471-479.
- Avraham, E. and Ketter, E. 2006. "Media strategies for improving national images during tourism crises." *Progress in tourism marketing*, 115-125.
- Baloglu, S., & McCleary, K. W. (1999). A model of destination image formation. *Annals of tourism research*, 26(4), 868-897.
- Baloglu, S. and Brinberg, D. 1997. "Affective Images of Tourism Destinations." *Journal of Travel Research*, 35(4), 11-15.
- Beerli, A., & Martin, J. D. (2004). Factors influencing destination image. *Annals of tourism research*, 31(3), 657-681.
- Dickinger, A., Költringer, C. and Körbitz, W. 2011. Comparing online destination image with conventional image measurement–The case of Tallinn. In *ENTER*, 165-177.
- Echtner, C. and Ritchie, J.R. 2003. "The Meaning and Measurement of Destination Image." *The Journal of Tourism Studies*, 14(1), 38-48.
- Gallarza, M.G., Saura, I.G. and García, H C. 2002. "Destination image: Towards a conceptual framework." *Annals of Tourism Research*, 29(1), 56-78.
- Gkritzali, A. (2017). Online destination sentiment recovery during a sustained crisis. *Annals of Tourism Research*, 66(C), 183-185.
- Gkritzali, A., Gritzalis, D., & Stavrou, V. (2018). Is Xenios Zeus still alive? Destination image of Athens in the years of recession. *Journal of Travel Research*, 57(4), 540-554.

- Govers, R., Go, F. M., & Kumar, K. (2007). Promoting tourism destination image. *Journal of travel research*, 46(1), 15-23.
- Govers, R. (2011). From place marketing to place branding and back. *Place Branding and Public Diplomacy*, 7(4), 227-231.
- Hunt, J. 1975. "Image: A factor in Tourism Development." *Journal of Travel Research*, 13(3), 1-7.
- Jenkins, O.A. 1999. "Understanding and Measuring Tourist Destination Images." *International Journal of Tourism Research*, 1(1), 1-15.
- Kaplanidou, K. and Vogt, C. 2007. "The interrelationship between sport event and destination image and sport tourists' behaviours." *Journal of Sport and Tourism*, 12(3-4), 183-206.
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of tourism research*, 30(1), 216-237.
- Költringer, C. and Dickinger, A. 2015. Analyzing destination branding and image from online sources: A web content mining approach. *Journal of Business Research*, 68(9), 1836-1843.
- Kotler, P. and Gertner, D. 2002. "Country as a brand, product, and beyond: A place marketing and brand management perspective." *Journal of Brand Management*, 9(4-5), 249-261.
- Li, F., Wen, J., & Ying, T. (2018). The influence of crisis on tourists' perceived destination image and revisit intention: An exploratory study of Chinese tourists to North Korea. *Journal of Destination Marketing & Management*, 9, 104-111.
- Lopes, S.D.F. 2011. "Destination image: Origins, developments and implications." *Pasos*, 9(2), 305-315.
- Moon, K., Kim, M., Jae Ko, Y., Connaughton, D.P. and Hak Lee, J. 2011. "The influence of consumer's event quality perception on destination image." *Managing Service Quality: An International Journal*, 21(3), 287-303.
- Neuhofer, B., Buhalis, D., & Ladkin, A. (2015). Technology as a catalyst of change: Enablers and barriers of the tourist experience and their consequences. In *Information and Communication Technologies in Tourism 2015: Proceedings of the International Conference in Lugano, Switzerland, February 3-6, 2015* (pp. 789-802). Springer International Publishing.
- Pike, S., & Ryan, C. (2004). Destination positioning analysis through a comparison of cognitive, affective, and conative perceptions. *Journal of travel research*, 42(4), 333-342.
- Russell, J. A. and G. Pratt 1980. "A Description of Affective Quality Attributed to Environment." *Journal of Personality and Social Psychology*, 38, 311-322.
- Sönmez, S. and Sirakaya, E. 2002. "A distorted destination image? The case of Turkey." *Journal of Travel Research*, 41(2), 185-196.

# Consumer Behaviour

## Navigating the consumer crisis: brand management perspectives

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### **Abstract:**

The study explores the responses of brand leaders, retailers, and communication agencies in Bulgaria to an extended period of instability and consumer challenges, stemming from the Covid-19 pandemic and subsequent global economic downturn. Through in-depth interviews with industry experts, the paper investigates key issues including adaptation of marketing strategy in response to evolving consumer behavior, price increases and supply chain disruptions and the role of communication agencies in assisting clients in building brand resilience during economic hardships and constrained marketing budgets.

**Keywords:** *consumer crisis, brand response, marketing strategy, brand communications*

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### **Introduction**

The COVID-19 crisis has had far-reaching effects on consumer behavior, leading to changes in preferences, decision-making, online shopping, product demand, and brand perceptions. Marketers and businesses needed to adapt their strategies to align with these changes and effectively address the evolving needs and concerns of consumers. Economic crises and pandemics significantly influence consumer behavior and demand patterns, often disrupt global and local supply chains, posing significant challenges for businesses reliant on timely and reliable sourcing. The global supply chains were confronted with vulnerabilities that were brought to light during the COVID-19 pandemic, leading to extensive disruptions in sourcing, production, transportation, and logistics. (Ivanov, 2020). Economic crises and pandemics can have long-term implications for businesses. These implications can include changes in industry structure, market dynamics, consumer behavior, and business strategies. This study aims to provide insights into the effects of the COVID-19 pandemic on big brands, retailers and communication agencies in Bulgaria by examining the challenges they faced and their responses to the crisis. Understanding these perspectives can contribute to the development of effective strategies for brands, retailers, and communication agencies to thrive in the ever-changing business landscape shaped by the ongoing crisis.

### **Background**

The COVID-19 pandemic has been described as one of the most significant environmental challenges in modern history (Kamel, 2021), and had a dramatic affect on businesses across the world (Jamal et al, 2021), leaving no country unaffected (Donthu & Gustafsson, 2020). The retail industry has experienced profound impacts as a result of the pandemic (Chiguvi & Sepepe, 2023). Retailers and brands were faced with numerous short-term challenges related to health and safety, shifting consumer behavior (Donthu & Gustafsson, 2020), demand-supply mismatch, disrupted supply chains and technological challenges (Sharma et al., 2020). The prevalence of COVID-19 has prompted a reassessment of critical marketing strategies and policies, including those related to product assortment, advertising expenditure, private labels, and the utilization of price promotions (Hoekstra & Leeflang, 2020). Firms spanning various industries have adopted digital technologies and platforms as a means to ensure business continuity, engage with customers, and sustain their operations, accelerating a digital transformation that was already on its way (Michael Mncedisi Willie, 2023). Widespread disruptions in sourcing, production, transportation, and logistics took place (Ivanov, 2020). The pandemic has led to changes in consumer behavior, shopping patterns, and post-purchase satisfaction levels (Chiguvi & Sepepe, 2023),



prompting businesses to question the permanence of these changes (Sheth, 2020). Companies have responded by employing unconventional marketing strategies to adapt to the challenges imposed by the pandemic (Nikbin et al., 2021). Brands acted as an external source of reassurance, offering support in alleviating consumer worries and anxieties (Verlegh et al., 2021). In times of uncertainty, such as during the Covid-19 pandemic, both the functional and symbolic aspects of brands gained increased significance (Verlegh et al., 2021). Consumers sought ways to mitigate stress and manage their anxieties, turning to familiar brands for support (Balis, 2020). Acknowledging their role in alleviating anxiety, successful brands provided support (Hess 2020) to consumers during times of rapid change when their familiar world was undergoing significant transformations. According to the findings of Verlegh et al. (2021), consumers who express concerns about the Covid-19 pandemic not only perceive brands as more significant in their purchase decisions but also incorporate them more prominently within their self-concept.

Gerrath et al. (2022) established that during the initial phase of the pandemic, both stronger and weaker brands faced negative responses from consumers, indicating that the unexpected nature of the crisis did not significantly impact consumer reactions. The same study found that stronger brands exhibited greater resilience in navigating consumers' negative sentiments during an external shock, while weaker brands experienced more severe repercussions from consumer negativity (Gerrath et al., 2022). Anderson and Anderson (2020) proposed the notion of consumer-centric socially responsible consumption, highlighting the importance for marketers to adopt a consumer-centric approach in their signage and communications during times of crisis. They argue that such an approach can encourage individuals to perceive socially responsible consumption as a moral obligation (Anderson and Anderson, 2020). A specific stream of research has been directed towards examining the impact of brand communications and brands' response to changes in consumer behavior during the pandemic. It is evident that the overall impact is generally perceived as negative, and the discussions revolve around the extent and nature of these effects. Nagpal and Gupta (2022) establish that maintaining communication with the target market during this challenging time serves to enhance the brand-customer relationship and Doumouchel et al. (2020) argue that prioritizing the development of stronger emotional engagement has a higher likelihood of enhancing brand equity compared to emphasizing product superiority, as the latter approach carries the risk of disconnecting from people's thoughts and emotions. According to Mitchel (2021), retaining new consumers and encouraging lapsed ones to return also requires range adaptation, investment in strengthening brand equity, and innovation on new consumption habits aligned with new divergent consumer patterns.

The COVID-19 pandemic has had far-reaching effects on businesses and consumer behavior. It has necessitated significant adaptations in marketing strategies, with a focus on digital transformation, agility, and flexibility. The pandemic has fundamentally changed consumer behavior, prompting businesses to rethink their approaches and adapt to the new landscape. Understanding these effects and trends is crucial for businesses to navigate the challenges imposed by the crisis effectively. Further research is needed to explore the long-term implications and potential strategies for resilience in the post-pandemic era. The objectives of this research are:

- To identify the key challenges leader brands faced during the last three years.
- To identify the key marketing strategies leader brands adopted as a response to the challenges.
- To identify which changes in consumer behaviour marketing executives expect to persist.

## **Method**

This study adopts a qualitative research approach to gain a comprehensive understanding of the long-term effects of the evolving crisis on brands, retailers and communication agencies. Qualitative research allows for an in-depth exploration of complex phenomena and provides rich insights from participants (Creswell, 2013). In-depth interviews with respondents occupying managerial positions served as the primary method of data collection. In-depth interviews allow participants to share their insights, experiences, and perspectives in a detailed and contextual manner (Seidman, 2013). A purposive sampling technique was employed to select respondents from three distinct groups of companies: 1) brand leaders in FMCG categories with high total market penetration, 2) large supermarket chains and 3) leading communication agencies in Bulgaria. These three groups were selected, as they possess valuable knowledge related to marketing strategies and the impact of the crisis. This approach ensures capturing a broad range of perspectives and experiences related to the effects of the crisis on different types of organizations. The interview guide included open-ended questions that explore various aspects, such as changes in consumer behavior, marketing strategies, supply chain management, competitive dynamics, the effects of inflation and price increases, and the long-term implications of the crisis on the three business branches. The collected interview data was transcribed verbatim, ensuring a detailed and accurate record of participants' responses. The analysis followed a thematic analysis approach, which involves identifying, organizing, and interpreting patterns and themes within the data (Braun & Clarke, 2019). Both

deductive coding (based on pre-defined themes from the interview guide) and inductive coding (emerging themes from the data) was employed. The emerging themes were interpreted in relation to the research objectives, exploring connections and relationships among the identified patterns. Some of the participants were later introduced to the identified patterns for their feedback and validation.

## **Results and Discussion**

### **Key Challenges Faced by Brands During the COVID-19 Crisis**

One of the primary and most consequential obstacles encountered by brands amidst the COVID-19 pandemic and the following transportation crisis was the disruption of their supply chains. This disruption led to difficulties in sourcing essential raw materials and packaging, as well as impeding the continuity of operations. Moreover, the disruption in the supply chain hampered the regular procurement of machinery and parts, as well as ongoing modernization efforts by companies. In response to the issue, companies have implemented various key measures, including supplier diversification, adjustments to the product portfolio, restructuring of logistics chains, and the establishment of self-reliant transportation solutions, surpassing the dependency on previous methods. All participants unanimously expressed that the actions taken by companies in response to the crisis enhanced the resilience of their organizations, effectively equipping them to tackle unforeseen adverse circumstances arising from the subsequent crisis, specifically the war-related crisis. An overarching theme that surfaced during the interviews was the rapid shift towards adopting more sustainable business practices. The companies that had already been in the process of transitioning towards sustainability acknowledged that this proactive move granted them a clear advantage when the unprecedented crisis unfolded.

*“We had already started moving to more nature friendly processes and production lines, natural processing... COVID and the crisis have accelerated these processes.”*

Respondent 6

A number of participants observed that well-established Bulgarian businesses have encountered numerous challenges in the past and have consistently overcome various hurdles associated with market and political instability. As a result, operating in a crisis mode was not unfamiliar to them.

*“We are quite flexible to meet shocks, we have started our business when the economic situation was much more difficult, we have faced all kinds of challenges when the COVID crisis happened, we have reacted based on the years of experience we have in economic transition. We made good decisions. We have the base to step on to deal with a crisis situation, it is not the first one we have experienced.”*

Respondent 9

### **COVID-19's Impact on Consumer Behavior**

During the pandemic, the predominant consumer behavior patterns that were observed included the familiar trend of panic buying essential items and products with longer shelf life. A leading brand offering grains and legumes, experienced an unprecedented spike in demand during the early months of the pandemic, posing a significant challenge for meeting the increased requirements. To avoid further exacerbating the excessive demand, the company had to significantly reduce its advertising efforts. Another notable pattern in consumer behavior was the decrease in physical store visits, accompanied by an increase in bulk purchases and a shift towards online shopping. The majority of respondents note that these changes were temporary and their companies saw a reversal of this trend once the pandemic-related restrictions and crisis subsided. The interviewed experts anticipate that the trend towards healthier living and the demand for products with additional health benefits, such as added vitamins and minerals, will continue to evolve even after the pandemic.

*“People were looking for immunity. If in previous years health, beauty, comfort of the stomach were relevant, then during the Covid crisis, it was more about how to help my body to be healthier, because this is the only way to protect myself”*

Respondent 6

Several respondents observe that mental health gained prominence during the pandemics and is also expected to remain an important issue to consumers who have suffered various losses during the last three years. The pandemic's impact on health and well-being, along with the subsequent economic crisis leading to job and

income loss, has heightened stress levels among consumers. Brands have recognized this issue and responded by adapting their communication strategies and developing new products aimed at uplifting consumer moods. Other companies chose to temporarily halt the introduction of new products in response to the situation, perceiving that consumers were not receptive to new offerings at that time.

*“What we froze for a long period were some new product projects. It wasn't the time, a new product needs visibility...the whole communication campaign, to the launch. Roughly speaking, people weren't into it at the time, it's the last thing you think about and get excited about a new product.”*

Respondent

10

### **The Role of Brands in Times of Stress and Uncertainty**

During the interviews, a pronounced commonality emerged among all the brand leaders that were researched. Marketing managers recognized the profound symbolic significance that big established hold in consumers' lives and the role they play in alleviating consumer anxiety during times of upheaval and uncertainty. Consistent with prior research, our findings align with the understanding that brand managers possess a strong awareness of the significance of brands and actively seek ways to support consumers in navigating their anxieties (Balis, 2020; Hess 2020) and regaining their sense of control (Verlegh et al., 2021). In response to these insights, brand managers have adapted their advertising strategies to acknowledge consumer anxiety and position their brands as sources of emotional support. All the brands examined in this study are industry leaders in their respective product categories, and none of them reduced their advertising expenditure during the pandemic. On the contrary, all these companies proactively sought to maintain their brands' salience and consumer trust by employing emotionally driven advertising campaigns. These efforts aimed to reassure customers that, amidst the turmoil and uncertainty, their favourite brands remained steadfast and reliable, providing a sense of stability in an ever-changing world.

*“When people came out of their house after Covid, when they went to the small store and saw everything lined up on the shelves, their favourite brand available, they say "life goes on" and I can trust the one who wants to keep talking to me and reassures me...When you don't refuse communication, consumers have more trust in you.”*

Respondent 7

According to all the managers interviewed, sustaining advertising efforts played a pivotal role in ensuring the success of their brands during the pandemic. Interestingly, they noted that their brands achieved a larger share of voice within the market, despite keeping their advertising budgets unchanged. This advantage stemmed from the fact that many of their competitors either went silent or significantly reduced their advertising activities. TV advertising emerged as particularly crucial for leading brands during the pandemic.

*„We had a record share of voice because others dropped out, consumers are standing in front of the TV, it was a golden age of TV because everyone was glued to the TV.”*

Respondent 8

### **Price Shock**

The consensus among all respondents is that the inflation crisis had a profound impact on their businesses and their relationships with trade partners and clients. The sharp rise in energy and raw material prices created a turbulent and unpredictable market environment.

*“We faced something super unpredictable, we have never had such a huge increase in raw materials and packaging, everything involved in the cost, with a total lack of predictability, with a 50% increase, there is a huge impact. The most challenging thing was that there was no predictability, our suppliers were unable to commit to prices and volumes for more than a month or two. It was dramatic for our business, you couldn't plan your promotions, nor your production volumes, nor your delivery performance.”*

Respondent

14

Brand leaders encountered a particularly challenging situation where their every move was closely scrutinized by smaller competitors, who then adjusted their strategies accordingly. Marketing managers were keenly aware of the potential long-term impact of their price decisions, understanding that these choices could influence

reference prices for the entire category. Furthermore, they recognized that their companies would be the first to bear the brunt of retailers' and customers' anger and dissatisfaction.

*“Our strategy is to think not only about us, but also about the whole category. We will hold the prices as much as we can, because if all the representatives of one category raise the prices, it can negatively and permanently affect the category. When you are a market leader, you have to think about the whole category that you are developing and it is not useful to think only at the brand level.”*

Respondent  
11

*“Very often we had to lead the parade of price increases, smaller competitors were looking around. We were the first to raise prices and take the backlash from retailers, even though everyone in the chain was aware what has provoked this.”*

Respondent 7

Despite the significant inflationary pressures, the majority of interviewed managers indicated that they did not fully pass on the increased costs of goods to retail prices as this approach would have been deemed unacceptable by retailers and clients. Instead, certain brands made efforts to sustain their sales levels by sacrificing part of their profit margins.

*“At no time and to this day have we allowed ourselves to raise prices so as to fully cover the increase in the prices of raw materials in the cost of goods, but a part of this increase we have been forced to cover, to pass on to consumers. We have been able to keep our sales levels stable, but our margins have decreased.”*

Respondent 9

The price increases inevitably strained the relationships between retailers and manufacturers. Retailers responded unfavorably to the constant price fluctuations of the products they received from manufacturers, and some even imposed price caps on frequently purchased items, presenting an unforeseen challenge for suppliers. Paradoxical situations occurred at certain moments when suppliers requested that the retailer correct the price of their products but the retailer refused to accept the new price and it became more inexpensive for small retailers to buy certain good from the big chains than from the manufacturers themselves. This occurred because large retailers procured the product at a wholesale price, enabling them to offer it below the manufacturer's new price but with a narrower profit margin. During ongoing negotiations, there were instances where certain retailers temporarily halted promotional activities for the brand in question. As a result, the brand experienced a temporary decline in market share, as promotions play a crucial role in influencing consumer purchasing decisions, particularly when their purchasing power is diminishing.

*“It was difficult, after the first months of not accepting the prices by the chains, there was one two to three months in which participation in the brochures and promotions was stopped until the fellow traders understood...The retailer did not accept the new price, and they were quite persistent, you don't have any promos, and that was the period where promotions were the main driving force, we had a period where our volumes went down, which quickly recovered after they accepted the price.”*

Respondent  
15

The sudden price shock had an immediate impact on consumer behavior, leading to a situation where consumers could afford to purchase fewer goods. Retailer representatives in our study identified significant shifts in consumer behavior in response to the inflation crisis. Consumers started reducing the size of their shopping baskets and postponing non-food purchases until they became absolutely necessary. Another notable pattern observed was the growing inclination towards store brands, which were seen as the more practical choice by a growing segment of customers. Discount stores are experiencing a surge in popularity across various income groups, including customers with higher income levels.

*“After the crisis, people will continue to buy store brands, more and more high-income customers shop with us. Spending money is no longer a symbol of prestige. The polarization between high and low income groups have decreased....As a smart discounter in Bulgaria, we are in the perfect storm.”*

Respondent  
13

Retailers experienced a significant increase in customer participation in their loyalty programs, prompting them to continuously enhance and tailor these programs. Promotions, which were already highly favored by Bulgarian customers, accounting for 46% of their FMCG purchases (ACNielsen, 2021), became even more crucial for shoppers during this period.

### Communication Agencies' Perspective

During the interviews with managers of leading communication agencies, a prominent theme that surfaced was the notable surge in digital communication channels during the pandemic. As expected, the respondents emphasized that the adoption of digital platforms had amplified the efficacy of brand communications. Moreover, they highlighted that companies reaping the most benefits were those capable of aligning their entire ecosystem with the digitization efforts, thereby gaining added value from these investments. Managers also note another trend, namely the redefinition of loyalty by their clients. While the pre-crisis understanding of loyalty primarily revolved around consumer incentives, the new paradigm emphasizes treating customers as individuals with a need for personalized suggestions. According to the respondents, loyalty to established brands witnessed improvement during the pandemic due to their exceptional efforts in navigating the unprecedented crisis.

*“Customer loyalty is increasing, because every brand tried harder. Those that remain close to their customers, continued to grow together with them.”*

Respondent 2

The representatives of communication agencies echoed the findings from our interviews with marketing managers of leading brands, emphasizing the significance of playing the long game when it comes to brand strategy and not succumbing to immediate pressures resulting from the crisis.

*“Bigger brands have realized that it is not possible to meet all fluctuations in demands of consumers, so the stable ones are those which follow their long-term strategy”*

Respondent 3

*“The quality of communications has fallen, but this is a consequence of reduced funding. They are only focusing on the promotions for today and tomorrow so the companies with bigger investments win”*

Respondent 4

Managers also noted that during the pandemic and subsequent economic downturn, communication agencies in Bulgaria had to rapidly enhance their capabilities as they were facing uncertainty and resource constraints. One respondent described this as a phenomenon of "forced professionalization," whereby agencies were compelled by the crisis to accelerate their professional expertise and growth in these exceptional circumstances. Respondents highlight that emotional messaging is currently prevailing over purely corporate messages, which were popular in the past. This observation aligns with the insights we gathered from the interviews with marketing managers who also emphasized the role of brands in providing emotional support to consumers. All the interviewed managers unanimously agreed on the critical importance of maintaining continuous communication with customers and delivering a consistent message during times of crisis.

*“Brand communication will last longer – this means having a specific message and maintaining it for the long term. Companies, which do not follow the mass trend, will win”*

Respondent 3

The emergence of Covid-19 and the subsequent economic crises presented companies with unprecedented challenges of unparalleled severity and far-reaching repercussions. Through an exploration of the perspectives of key players in consumer markets, our aim was to provide a comprehensive understanding of the consumer market during times of turmoil, while illuminating the key strategic responses adopted by brands amidst these turbulent circumstances. The crises served as a catalyst for strong brands to not only weather the storm but also to thrive. This presented them with a unique opportunity to forge deeper connections with their clients and to enhance their sustainability and resilience. Maintaining open and transparent communication with customers, addressing concerns and finding mutually beneficial solutions with their retailer partners proved crucial for brands. Established brands were compelled to take a responsible leadership role within their respective categories, necessitating them to balance profitability with maintaining consumer trust and loyalty. Brand leaders took a proactive role in leading by example and being responsible for the development of the entire

category. This involved making strategic decisions that prioritize the interests of consumers and the industry as a whole, even if it meant sacrificing some profits in the short term. By demonstrating responsibility and accountability, brands managed to retain consumer confidence and to affirm their relationships with retail partners. During the crisis, consumers sought assurance and familiarity from their favourite brands, which played a vital role in providing them with a sense of security when their world was in turmoil. This highlights the importance of establishing and nurturing emotional connections with consumers, particularly during challenging times. Moreover, as the inflation crisis unfolded, consumers returned to physical stores with diminished buying capacity and a shifted mindset. Regardless of their socioeconomic status, individuals looked for enhanced value for their money and adopted a more discerning and strategic approach to shopping. Retailers introduced continuous improvements and adaptations to meet evolving consumer needs and expectations. During the crises, communication agencies acquired valuable knowledge and underwent transformative growth, emerging as more skilled in assisting brands to communicate effectively and authentically with their customers. The general conclusion from our study is that embracing sustainability, fostering responsible actions, and prioritizing consumer trust and loyalty will be crucial for long-term success in a post-pandemic and inflation-affected landscape.

### Limitations of the Study

This study has certain limitations that should be taken into consideration when interpreting the findings. Firstly, the study's scope was limited in terms of the number of brands included. Secondly, the focus of this study was primarily on brand leaders, which may not fully capture other experiences and strategies. Smaller brands, which constitute a significant portion of the market, might have encountered different dynamics and approaches to navigate the crisis. Examining the experiences of these smaller brands could provide valuable insights and a more comprehensive understanding of the overall impact of the crisis on the industry.

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### References

- Anderson, S., & Anderson, J. (2020). Leave some for me! The role of marketing in influencing responsible consumption during times of crisis. *Journal of Strategic Marketing*, 30(7), 703–721. <https://doi.org/10.1080/0965254x.2020.1833075>
- Brand marketing through the Coronavirus Crisis*. Harvard Business Review. (2021, February 1). <https://hbr.org/2020/04/brand-marketing-through-the-coronavirus-crisis>
- Braun, V. and Clarke, V. (2019) 'Reflecting on reflexive thematic analysis', *Qualitative Research in Sport, Exercise and Health*, 11(4), pp. 589–597. doi:10.1080/2159676x.2019.1628806.
- Chiguvi, D., & Sepepe, T. (2023). Emergent marketing strategies and their influence on the customer value proposition of fast-moving consumer goods (FMCG) businesses during Covid 19 pandemic in Botswana. *International Journal of Research in Business and Social Science (2147- 4478)*, 12(2), 40–53. <https://doi.org/10.20525/ijrbs.v12i2.2347>
- Creswell, J. W., & Creswell, J. W. (2013). *Qualitative Inquiry & Research Design: Choosing among Five approaches*. SAGE Publications.
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117, 284–289. <https://doi.org/10.1016/j.jbusres.2020.06.008>
- Gerrath, M. H. E. E., Mafael, A., Ulqinaku, A., & Biraglia, A. (2023). Service failures in times of crisis: An analysis of EWOM emotionality. *Journal of Business Research*, 154, 113349. <https://doi.org/10.1016/j.jbusres.2022.113349>
- Hess, C. 2020. It's a crisis, but don't forget to spend. *New York Times*, May 23, Section C, p. 1.
- Hoekstra, J. C., & Leeftang, P. S. (2020). Marketing in the era of COVID-19. *Italian Journal of Marketing*, 2020(4), 249–260. <https://doi.org/10.1007/s43039-020-00016-3>
- Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-COV-2) case. *Transportation Research Part E: Logistics and Transportation Review*, 136, 101922. <https://doi.org/10.1016/j.tre.2020.101922>
- Kamel, A. (2021). The impact of COVID-19 pandemic on Marketing Philosophy. *Delta University Scientific Journal*, 4(1), 36–43. <https://doi.org/10.21608/dusj.2021.205892>
- Lwin, M. O., Lu, J., Sheldenkar, A., Schulz, P. J., Shin, W., Gupta, R., & Yang, Y. (2020). Global sentiments surrounding the COVID-19 pandemic on Twitter: Analysis of twitter trends. *JMIR Public Health and Surveillance*, 6(2). <https://doi.org/10.2196/19447>
- Mitchell, A. (n.d.). *Managing consumer demand in a recession – and the need for value: WARC*. WARC An Ascential Company. <https://www.warc.com/content/article/warc-exclusive/managing-consumer-demand-in-a-recession--and-the-need-for-value/en-gb/135634>

- Nagpal, S., & Gupta, G. (2022). Impact of pandemic communication on brand-specific outcomes: Testing the moderating role of Brand Attitude and Product category. *Journal of Creative Communications*, 097325862110678. <https://doi.org/10.1177/09732586211067840>
- Nikbin, D., Iranmanesh, M., Ghobakhloo, M., & Foroughi, B. (2021). Marketing mix strategies during and after Covid-19 pandemic and recession: A systematic review. *Asia-Pacific Journal of Business Administration*, 14(4), 405–420. <https://doi.org/10.1108/apjba-06-2021-0243>
- Seidman, I. (2019). *Interviewing as qualitative research: A guide for researchers in education and the Social Sciences*. Teachers College Press.
- Shafi, M., Liu, J., & Ren, W. (2020). Impact of COVID-19 pandemic on Micro, small, and medium-sized enterprises operating in Pakistan. *Research in Globalization*, 2, 100018. <https://doi.org/10.1016/j.resglo.2020.100018>
- Sharma, A., Adhikary, A., & Borah, S. B. (2020). Covid-19's impact on supply chain decisions: Strategic insights from NASDAQ 100 firms using Twitter Data. *Journal of Business Research*, 117, 443–449. <https://doi.org/10.1016/j.jbusres.2020.05.035>
- Sheth, J. (2020). Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*, 117, 280–283. <https://doi.org/10.1016/j.jbusres.2020.05.059>
- Verlegh, P. W., Bernritter, S. F., Gruber, V., Schartman, N., & Sotgiu, F. (2021). “don’t worry, we are here for you”: Brands as external source of control during the COVID-19 pandemic. *Journal of Advertising*, 50(3), 262–270. <https://doi.org/10.1080/00913367.2021.1927913>

# **Entomophagy: The effect of communication stimuli on consumers' perceptions and attitudes towards insect proteins**

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## **1.Introduction.**

Insects have gained a broad interest as a potential source of proteins for human food and animal feed. The reported advantages of insect consumption on humans are significant in number, including high levels of protein and nutrients (House 2016), higher food provision security because of the less required production land (Chang, Ma & Chen 2019), and lower impact on the environment because of the lower emissions of greenhouse gases (Huis & Arnold 2013), the exploitation of food-wasted biomass in the frame of circular economies (Coderoni and Perito, 2020) and the improvement in the sustainability of fish and meat farming (Verbeke et al., 2015). Admittedly, there is considerable interest among industries and scientists who pressured towards EU level regulations to permit the use of insects for both human and livestock and define the rules on safety, health, marketing and animal welfare (Lähteenmäki-Uutela et al. 2017). The new EU Regulation 1372/2021, as well as the characterization of insects as a novel food safe for human consumption by the European Food Safety Authority (EFSA) opened new avenues for the commercial exploitation of insect proteins.

Early surveys on EU consumer acceptance of insect proteins as animal feed showed encouraging results, with sizeable consumer segments in Italy (Mancuso et al., 2016), Belgium (Verbeke et al., 2015) or Germany (Ankamah-Yeboah, Jacobsen & Olsen 2018) holding positive attitude towards fish products fed with insect proteins. However, there surveys also showed a clear need for more information to engage the public, raise awareness and eventually lead to positive preferences towards insect-based feed. Moreover, little is known about the attitude consumers hold towards this special protein source and their willingness-to-purchase and consumer insect-based foods in societies where there is skepticism or even phobia towards novel food products, and insect consumption is considered a questionable behavior from a social standpoint.

The objective of this study is to explore the attitude and purchase intention of the Greek consumers towards farmed fish fed on insect proteins. The conceptual basis of this study is centered upon the concept of food neophobia that is used to comprehend the role this attitudinal situation plays in shaping consumers' attitude and purchase intentions towards food-related innovations and novel foods such as insect protein-fed farmed-fish. Accordingly, the study aims to test whether specific communication stimuli, such as: a) scientific facts about the benefits of insect protein consumption by animals or humans, shown in the form of textual or visual information, as well as: b) influencers such as a world-known celebrity endorsing the specific protein source would have a positive effect on enhancing consumers' acceptance of animal proteins either as animal feed or as a direct substitute of animal protein for human consumption. The study applies an in-between subjects' experimental methodology on a purposive random sample of N=254 farmed fish consumers to collect data via an online survey.

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## 2. Conceptual framework

“Humans, along with other omnivorous animals, have been characterized as being neophobic concerning food” (Pliner & Hobden, 1992a, pp 52). One predictor of the lack of acceptance of novel food products is likely to refer to a neophobic personality trait (Cox and Evans, 2008). Relevant surveys have introduced neophobia as a reason for rejecting anything new or beyond our understanding and conventional reality. Food neophobia, an aversion towards novel food, is a natural reaction in individuals that protects them from the risk of being in “health danger”, like poisoning by consuming a potentially harmful food (Al-shawaf et al. 2015). In-depth, it accounts for a human’s unwillingness or avoidance to eat either new or unusual food, based on one’s culture, habit, and current diet (Perrea et al., 2015). People are among the several species that present food neophobia and although there is availability of unfamiliar foods in modern society, uncertainty about these food items continues to have a crucial effect on dietary intake (Alley & Potter 2011).

Humans may perceive and expect how foods should smell and taste according to their culture and dietary habits. As a result, a food that is not familiar to an individual and falls out of their acceptable category, as a matter of fact, is being rejected. There are individual differences in willingness to try new food products, and three segments related to willingness have been identified: Neophobics, Ambiguous, Neophilics (those who are willing to consume novel food products) (Helland et al., 2017). Moreover, it is important to highlight that the willingness to consume novel or unfamiliar food products also has a potential cost. People should weigh the risk of rejecting an item (possibly missing out of a good food source) with the risk of incepting something dangerous, or that will offer a lack of sensory experience every time they have presented food with which they are little familiar (Alley & Potter 2011). Thus, it is possible to perceive food neophobia as both a behavioral and a personality trait.

Tuorila et al. (1994) explain that three main factors play a vital role in the acceptance and the adoption of a novel or foreign food: sensory quality, available information concerning the product (or lack of it), and attitude of potential consumers. More recent studies have shown that even though about two-thirds of the variation of food neophobia is because of genetics, repeated exposure to novel foods could increase one’s propensity to accept and adopt a novel food (Alley & Potter 2011). People with higher levels of food neophobia tend to consume some types of food (e.g., poultry and fish) more frequently (Siegrist, Hartmann & Keller 2013). Food neophobia tends to decline as education (Tuorila et al. 2001) income (Siegrist, Hartmann & Keller 2013) and socio-economic status increase (Flight, Leppard & Cox, 2003). Men tend to be more food neophobic (Nordin et al., 2005; Tuorila et al., 1994), though other studies (Pliner & Melo 1997; Hobden 2018) show that there is no gender-related difference. Food neophobia is common among children, it affects food choice and limits dietary variety (Dovey et al. 2008).

As far as insects for human consumption is concerned, although they are acceptable as common food in eastern, i.e. Asian cultures, there are still taboos in the Western world, making acceptance of insect-based foods and food ingredients a crucial barrier. Thus, the need to find alternative feeding sources that are acceptable and of course sustainable, demand broad public debate (Huis & Arnold 2013). Many studies have indicated that food neophobia as an individual trait is one of the most crucial predictors in understanding the willingness of consumers to try insect-based foods. It has been found that the degree of insect-based food consumption was influenced by a number of factors that one would expect to be associated with the consumption of conventional food products or an aversion towards novel ones, as explained above, such as availability, taste and current eating habits and culinary cultures (House 2016). Moreover, insect-based food consumption and purchase intention would be positively affected by general interest or curiosity, and a feeling that insect proteins are more sustainable and may offer more benefits to human health and nature (House 2016; Halloran et al., 2018).

## 3. Methodology

According to Pliner & Hobden (1992b) and Pliner et al. (1993), provision of information about (as well as food exposure to) novel food tend to decrease food neophobia levels, since personal experience and knowledge are influential variables in trying unfamiliar food and making people less neophobic. To test whether specific communication stimuli have a positive effect on enhancing consumer acceptance of animal proteins either as animal feed or for direct human consumption, an experiment was designed with consumers in a South European country with a moderately low level of novel food product acceptance (i.e. Greece). Specifically, a sample of N=254 consumers was recruited and assigned into four groups of A=61, B=72, C=61 and D=60 participants respectively. The four groups were compatible (non-significant differences at  $p<0.001$ ) in terms of gender (50-50 split) and age (mean sample age 39.5y.), across several other socio-demographic characteristics (mean household size 2.91 members, 50% married, 50% university graduates) and monthly household income, as well as in terms of farmed fish consumption (at least once a month). Each group was exposed to a different communication stimulus, as follows: Group A to a 1.5-page long scientific text that explains in a simple manner: a) the principles of insect protein production in the frame of the circular economy and the issue of food waste, b)

the environmental issues of fish farming that can be addressed with the use of insect proteins as fish feed, and c) the benefits from using insect proteins in human consumption; Group B to an 8'34'' long informative video (in English with subtitles in the local language) on the same topics (a) and (b) as above; Group C to a 3'15'' long video showing a global celebrity (famous Hollywood actress) cooking and eating insects, without other information. Lastly, group D was not exposed to any stimulus.

The questionnaire used for data collection comprised as its Part A four test variables, namely: a) perception of fish being fed on insects (“*Fish being fed on insects is something natural*”), b) intention to buy fish / farmed-fish fed on insects and eat insects/insect traces-containing recipes (“*How probable it is that you ...*”), c) barriers towards eating insects (“*I won't eat insects because of their appearance / taste / texture*”), and attitudes towards the action of eating insects (Insect Phobia Scale; Menozzi et al. (2017) i.e. “*eating insects is not a socially acceptable action / not compatible with our culinary habits / not safe for consumption/will soon be a “necessary evil” / a behavior that shows our respect to the environment*”), and d) emotions about eating insects (“*eating insects make me feel curiosity / interest / disgust / fear / indifference*”, 7-point agreement scales, intention questions on a 10-point probability scale). Moreover, Part A comprised the stimulus described above (assigned per group). All variables were measured before and after the exposure of each group to the respective stimulus.

Then, Part B of the questionnaire included a simple, lay description of the idea of a locally popular farmed fish species fed on insect protein meal (product concept), stressing the benefits from eating such a fish for consumers. Besides the product concept, Part B also included a) product-related perceptions (“*This product is different/novel/ compatible with the idea of healthy eating / compatible with sustainable eating / compatible with my personality/interests me personally*”), and b) product-related attitudes (“*This product contributes to maintaining the planet's environment balance / is a product of a new era / is typical of food production in the 21<sup>st</sup> Century*”, 7-point agreement scales). Part B was presented to groups A, B and C after Part A, and to group D as a stand-alone questionnaire.

The questionnaire in its Part C included as a manipulation check the Food Neophobia Scale (Pliner and Melo, 1997), i.e. “*I try frequently new and different food*”. In an effort to understand and address neophobia, Pliner and Melo (1997) developed a multi-item instrument which is used to measure food behaviors and the degree of food neophobia on individuals, segmenting them accordingly. This validated instrument, the most widely used in measuring food neophobia, comprises ten statements on a seven-point Likert scale ranging from 1 (“*totally disagree*”) to 7 (“*totally agree*”). In this questionnaire, a high mean score indicates a lower willingness to try novel or unfamiliar foods (neophobia), while a lower mean score represents more willingness to try something new (neophilia). The Food Neophobia Scale (FNS) instrument was originally used and validated using a Canadian sample of graduated students; then used in cross-cultural studies after translated in different languages, such as Finnish, Swedish, Spanish, German, French and European Portuguese, in order to reflect cultural differences. In all, these attempts have led to several adaptations to make FNS comprehensive and applicable to other languages (Tuorila et al. 2001; Vidigal et al. 2015). In the current study, the Greek-translated 10 item FNS was used, each item measured on 7-point agreement scales (mean=4.53(1.62), non-significant differences at  $p < 0.001$ ).

Lastly, Part C of the questionnaire included additional manipulation checks, such as: one item on marine sustainability attitude (“*To me, it is important to avoid overfishing the oceans by means of fish farming*” (mean=5.23(1.46), 7-point agreement scale), and past insect eating behavior (about one in ten participants or 13% of the sample ( $p < 0.001$ ) had consumed insects in the past, for 65% of which it was a positive experience). Lastly, the 2 scientific stimuli have been evaluated for their credibility (mean=4.55(1.75)), trustworthiness (mean=4.47(1.78)), and self-relevance (3.81(1.90)), 7-point agreement scales (non-significant differences at  $p < 0.001$ ); while the celebrity for her credibility and trustworthiness as far as eating insects is concerned (mean=3.03(2.14) and 2.41(1.91) respectively), the degree to which her behavior of eating insects is acceptable and “worth to imitate” one (mean=2.56(2.01) and 1.93(1.69) respectively), as well as the level of congruence between her and the participants (“*I believe [the celebrity] and I have many things in common*”, mean=2.00(1.63), 7-point agreement scales).

The study was approved by the ethics committee of the authors' institutions (not disclosed for review purposes).

#### 4. Results

As indicated from the descriptive statistics reported above, the manipulation checks showed that the sample of South European consumers in this study hold mildly phobic attitude towards novel foods, a strongly positive attitude towards marine sustainability, and very limited past insect eating behavior (about one in ten participants had consumed insects in the past). The two scientific stimuli have been evaluated as generally credible and trustworthy, but rather little self-relevant. On the other hand, the celebrity was found less credible and trustworthy as far as her eating insects is concerned, her behavior of eating insects as much less acceptable and

“worth to imitate” one, while the level of congruence between her and the participants was also too low. All the above results showed non-significant differences across groups A-C at  $p < 0.001$ .

Then, ANOVA tests have been applied to explore the significance and direction of the main effects of the stimuli on the four test variables in the three experimental groups A to C.

Regarding the perception of fish fed on insects being “... *something natural*”, results revealed that all mean scores after the exposure to the scientific stimuli (i.e. the text and the video) changed in the intended direction, increasing the perception of naturalness ( $\Delta$ mean A=+0.48 and B=+0.07), while for the celebrity stimulus the direction of change was the opposite ( $\Delta$ mean C=-0.59). However, all changes across groups have been non-significant ( $p > 0.05$ ). The same trend of the scientific stimuli increasing the mean score and the celebrity stimulus decreasing it, but at a non-significant level ( $p > 0.05$ ) appears for the intention to buy fish fed on insects ( $\Delta$ mean A=+0.43, B=+0.18, C=-0.68) and farmed-fish fed on insects ( $\Delta$ mean A=+0.33, B=+0.23, C=-0.65), as well as the intention to eat insects ( $\Delta$ mean A=+0.05, B=+0.18, C=-0.09) and insect traces-containing recipes ( $\Delta$ mean A=+0.31, B=+0.67, C=-0.05) respectively (Figure 1).

Moreover, the scientific stimuli soothe the perceived barriers towards eating insects, whereas the celebrity stimulus aggravated them, albeit always at a non-significant level ( $p > 0.05$ ): appearance:  $\Delta$ mean A=0.00, B=-0.07, C=+0.31; taste:  $\Delta$ mean A=0.00, B=-0.06, C=+0.40; texture:  $\Delta$ mean A=-0.04, B=-0.21, C=+0.41), as well as worsen the perceived culinary compatibility of eating insects (“*eating insects is not compatible with our culinary habits*”:  $\Delta$ mean A=-0.49, B=-0.29, C=+0.10). On the other hand, all stimuli aggravated the social rejection of eating insects (“*eating insects is not a socially acceptable action*”:  $\Delta$ mean A=+0.51, B=+0.26, C=+0.23).

However, the scientific stimuli increased at a statistically significant level the environmental friendly attitude towards eating insects (“*eating insects is a behavior that shows our respect to the environment*”:  $\Delta$ mean A=+0.41,  $p < 0.05$ ; B=+1.02,  $p < 0.001$ ; C=-0.31,  $p > 0.05$ ), as well as induces a fatalistic attitude on eating insects (“*eating insects will soon be a “necessary evil”*”:  $\Delta$ mean A=+0.69,  $p < 0.05$ ; B=+0.68,  $p < 0.05$ ; C=-0.13,  $p > 0.05$ ). Lastly, all stimuli had no significant effect on the emotions eating insects evokes (*curiosity / interest / disgust / fear / indifference*, all  $\Delta$ means  $p > 0.05$ ) (Figure 2).

In addition, the presence of stimuli, irrespective of their type, decreased the strength of perceptions of and attitudes towards the concept product, since the scores assigned to it by group D members who were not exposed to any stimulus are significantly higher than the relevant scores given by participants in groups A-C, for instance: “*This product is compatible with the idea of healthy eating*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.60,  $p < 0.001$ ; “*...is compatible with my personality*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.92,  $p < 0.001$ ; “*...interests me personally*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.69,  $p < 0.001$ ; “*...contributes to maintaining the planet’s environment balance*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.45,  $p < 0.05$ ; “*...is a product of a new era*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.36,  $p < 0.05$ ; “*...is typical of food production in the 21<sup>st</sup> Century*”,  $\Delta$ mean<sub>D from A-C</sub>=+0.59,  $p < 0.05$ .

Lastly, it is interesting to note that the presence of stimuli, irrespective of their type did not cause a significant change in either the Food Neophobia Scale, or in the marine sustainability attitude (“*...it is important to avoid overfishing the oceans by means of fish farming*”).

## 5. Discussion

A key finding from this experiment is that the scientific stimuli enhanced the positive perception and the intention to buy (farmed) fish fed on insects, as well as the intention to eat insects and (mainly) insect traces-containing recipes; moreover, the scientific stimuli soothed the perceived barriers towards eating insects, as well as the perceived culinary compatibility of eating insects. The changes are non-significant, yet in the intended direction, revealing that factual scientific information, perceived as credible and trustworthy, can be effective as communication stimulus in an intervention campaign aiming at improving consumer acceptance of insect proteins. However, the level of low perceived self-relevance of the scientific stimuli selected for this experiment may explain the lack of statistical significance of the changes appeared.

On the other hand, the non-scientific stimulus selected in the form of the specific celebrity persona created reversed main effects: the positive perception and the intention to buy (farmed) fish fed on insects decreased further against their already low levels, and the same was the case for the intention to eat insects and insect traces-containing recipes; moreover, the non-scientific stimulus made the perceived barriers of eating insects even higher, and its perceived culinary incompatibility even larger.

Figure 1: Main effect of stimuli on naturalness perceptions and intention to eat ( $p>0.05$ )

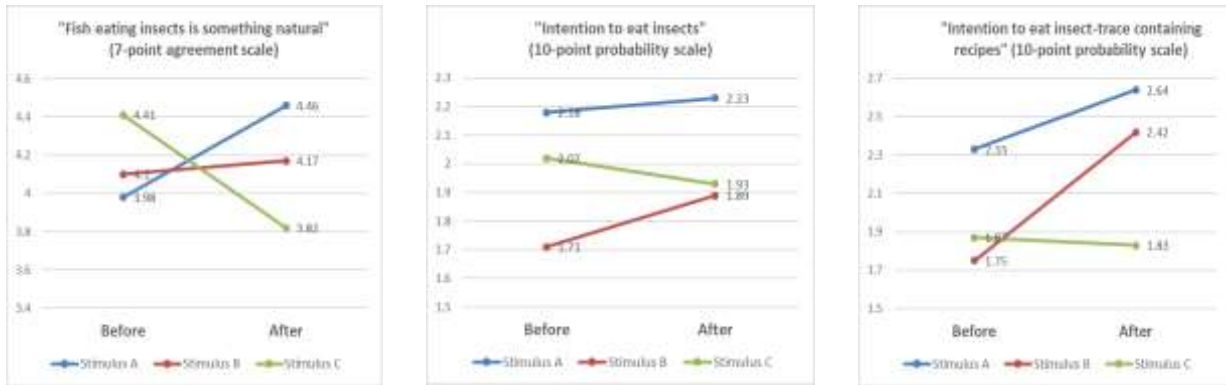
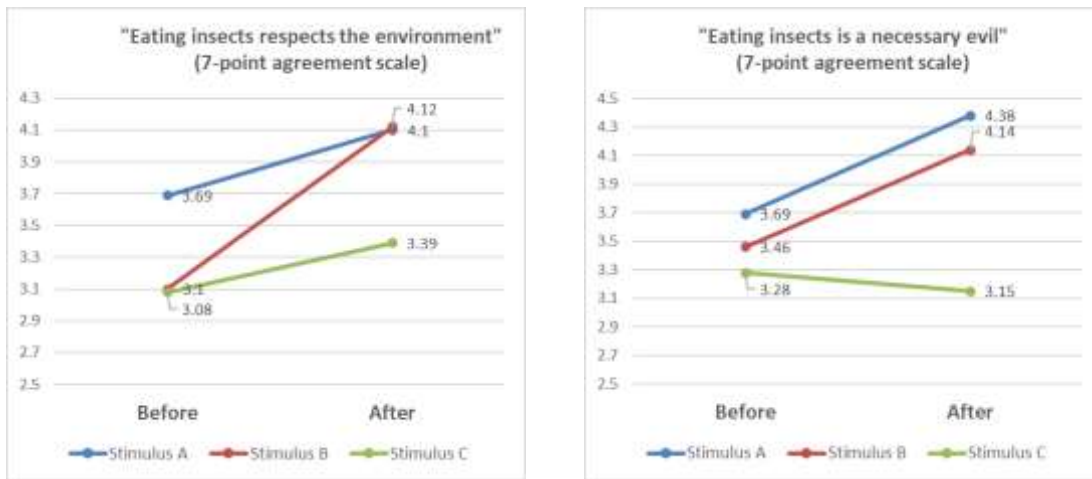


Figure 2: Main effect of stimuli on sustainability of eating insects (Stimulus A:  $p<0.05$ ; Stimulus B:  $p<0.001$ ) and fatalistic attitude towards eating insects (Stimuli A and B:  $p<0.05$ )



Like the low perceived self-relevance of the scientific stimuli for consumers potentially being the cause of lack of statistical significance in the changes provoked by this type of stimuli, low perceived congruence between the celebrity and the consumers, aggravated by the low perceived credibility, trustworthiness and overall acceptance of the celebrity's insects' eating behavior may explain the appearance of reverse effects.

The most important finding of the experiment, however, is the strongly positive and statistically significant improvement in the perceived environmental friendliness of eating insects on the one hand, as well as the sense of unavoidable that surrounds this type of behavior on the other, induced by the scientific stimuli. The variation within Western societies in the attitudinal construct underlying the above finding, i.e. environmental concern, may indicate the controversies that eating insects involve for the contemporary Western consumer between cultural incompatibility and a sense of responsible eating behavior. The attitude of consumers on new technologies will determine their success or failure in the marketplace. For that reason, it is crucial to evaluate the consumers' acceptance of new technologies rather than risk on negative reactions (Frewer et al. 2011).

Consumers' acceptance of using insects as the main food source or for animal feed remains a concern. Despite the nutritional, environmental and economic benefits of insect-based food consumption, the growth potential of insect-based foods as part of consumers' everyday diet is still no clear (Srivastava, Babu & Pandey 2009). Compared with non-insect foods, the development of insect-based foods is really slow due to the low public demand. Perhaps the biggest push towards insect-based food consumption will be the urgent need for societies to reduce the environmental footprint. Information availability and use can enhance positive general and sustainability-related perceptions and intention to buy, yet further research is needed to uncover the exact effect of scientific and factual information in the form of text or image. Besides the clear need for the selection of endorsers congruent with the audience they are supposed to communicate with, the results of the current, exploratory experiment show that provision of more information can actually backfire in cases where this

information clashes with deeply routed cultural stereotypes and misconceptions, as in the case of entomophagy in Western societies.

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## → References

→ Al-shawaf, L, Lewis, DMG, Alley, TR & Buss, DM 2015, 'Mating strategy , disgust, and food neophobia', *Appetite*, vol. 85, pp. 30–35.

Alley, TR & Potter, KA 2011, 'Food Neophobia and Sensation Seeking', *Handbook of Behavior, Food and Nutrition*, no. January 2011.

Ankamah-Yeboah, I, Jacobsen, JB & Olsen, SB 2018, 'Innovating out of the fishmeal trap: The role of insect-based fish feed in consumers' preferences for fish attributes', *British Food Journal*, vol. 120, no. 10, pp. 2395–2410.

Chang, HP, Ma, CC & Chen, HS 2019, 'Climate change and consumer's attitude toward insect food', *International Journal of Environmental Research and Public Health*, vol. 16, no. 9.

Coderoni and Perito 2020, 'Sustainable consumption in the circular economy. An analysis of consumers' purchase intentions for waste-to-value food', *Journal of Cleaner Production*, vol. 252, 119870

Cox, DN & Evans, G 2008, 'Construction and validation of a psychometric scale to measure consumers' fears of novel food technologies: The food technology neophobia scale', *Food Quality and Preference*, vol. 19, no. 8, pp. 704–710.

Flight, I, Leppard, P & Cox, DN 2003, 'Food neophobia and associations with cultural diversity and socio-economic status amongst rural and urban Australian adolescents', vol. 41, pp. 51–59.

Frewer, LJ, Bergmann, K, Brennan, M, Lion, R, Meertens, R, Rowe, G, Siegrist, M & Vereijken, C 2011, 'Consumer response to novel agri-food technologies: Implications for predicting consumer acceptance of emerging food technologies', *Trends in Food Science and Technology*, vol. 22, no. 8, pp. 442–456.

Halloran, A, Flore, R, Vantomme, P & Roos, N 2018, *Edible Insects in Sustainable Food Systems*, Springer.

Helland, SH, Bere, E, Bjørnå, HB & Øverby, NC 2017, 'Food neophobia and its association with intake of fish and other selected foods in a Norwegian sample of toddlers: A cross-sectional study', *Appetite*.

House, J 2016, 'Consumer acceptance of insect-based foods in the Netherlands : Academic and commercial implications', *Appetite*, vol. 107, no. September 2015, pp. 47–58.

Huis & Arnold, V 2013, 'Potential of Insects as Food and Feed in Assuring Food Security'.

Lähteenmäki-Uutela, A, Grmelová, N, Hénault-Ethier, L, Deschamps, MH, Vandenberg, GW, Zhao, A, Zhang, Y, Yang, B & Nemane, V 2017, 'Insects as food and feed: Laws of the European Union, United States, Canada, Mexico, Australia, and China', *European Food and Feed Law Review*, vol. 12, no. 1, pp. 22–36.

Mancuso, T, Baldi, L & Gasco, L 2016, 'An empirical study on consumer acceptance of farmed fish fed on insect meals : the Italian case 1', vol. 24, no. 5, pp. 1489–1507.

Menozi, D.; Sogari, G.; Veneziani, M.; Simoni, E.; Mora, C. 2017. 'Eating novel foods: An application of the Theory of Planned Behaviour to predict the consumption of an insect-based product'. *Food Qual. Prefer.* vol. 59, pp. 27–34.

Nordin, S, Broman, DA, Garvill, G, & Nyroon, G, 2005. ' Gender differences in factors affecting rejection of food in healthy young Swedish adults'. *Appetite* vol. 43, pp. 295-301.

Perrea, T, Grunert, KG & Krystallis, 2015, 'Consumer value perceptions of food products from emerging Processing technologies: A cross-cultural exploration', *Food Quality and Preference*, vol. 39, pp. 95–108.

Pliner, P & Hobden, K 1992a, 'Development of a scale to measure the trait of food neophobia in humans', vol. 6663, no. November 1992, pp. 105–120.

— 1992b, 'Development of a scale to measure the trait of food neophobia in humans', *Appetite*, vol. 19, no. 2, pp. 105–120.

Pliner, P & Melo, N 1997, 'Food Neophobia in Humans : Effects of Manipulated Arousal and Individual

Differences in Sensation Seeking', vol. 61, no. 2, pp. 331–335.

Pliner, P, Pelchat, M & Grabski, M 1993, *Reduction of neophobia in humans by exposure to novel foods*, *Appetite*, vol. 20, no. 2, pp. 111–123.

Siegrist, M, Hartmann, C & Keller, C 2013, 'Antecedents of food neophobia and its association with eating behaviour and food choices', *Food Quality and Preference*, vol. 30, no. 2, pp. 293–298.

Srivastava, SK, Babu, N & Pandey, H 2009, 'Traditional insect bioprospecting - As human food and medicine', *Indian Journal of Traditional Knowledge*, vol. 8, no. 4, pp. 485–494.

Tuorila, H, La, L, Pohjalainen, L & Lotti, L 2001, 'Food neophobia among the Finns and related responses to familiar and unfamiliar foods', vol. 12.

Tuorila, H, Meiselman, H., Bell, R, Cardello, A. & Johnson, W 1994, 'Role of Sensory and Cognitive Information in the Enhancement of Certainty and Liking for Novel and Familiar Foods', vol. 23, pp. 231–246.

Verbeke, W, Sprangers, T, Clercq, P De, Smet, S De, Sas, B & Eeckhout, M 2015, 'Insects in animal feed : Acceptance and its determinants among farmers, agriculture sector stakeholders and citizens', *Animal Feed Science and Technology*, vol. 204, pp. 72–87.

Vidigal, MCTR, Minim, VPR, Simiqueli, AA, Souza, PHP, Balbino, DF & Minim, LA 2015, 'Food technology neophobia and consumer attitudes toward foods produced by new and conventional technologies: A case study in Brazil', *LWT - Food Science and Technology*, vol. 60, no. 2, pp. 832–840.

# The role of political ideology on consumer perceptions of sustainable food: the moderating effect of green consumption values

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*Keywords: Political ideology, sustainable food, conservatism, green values, perceptions*

## 1. Introduction

Sustainable consumption is an important contemporary discourse for many economic and political agents. Policy initiatives, such as the European Green Deal (European Commission, 2019), the United Nations Sustainable Development Goals (United Nations, 2016), and the FAO Sustainability Assessment of Food and Agriculture (FAO, 2012), prioritize the shift to a more sustainable production and consumption. Besides, pro-environmental and pro-social activist movements have emerged (Van den Berg et al., 2022), while public figures like Greta Thunberg took the lead in this heated political debate (Nässén & Rambaree, 2021). Sustainable food consumption is related to consumer preferences for ecolabels, direct purchases from the producers, support towards family business, fair labor, reduction of food waste and food package waste (Aschemann-Witzel et al., 2015; Drichoutis et al., 2017; Mas et al., 2022; Thøgersen et al., 2010; Wang et al., 2021).

Political ideology is a critical consumer trait as it can explain various market phenomena such as brand choice, sustainable consumption, customer dissatisfaction and complaints, and hedonic consumption (Farmer et al., 2020, 2021; Jasinenko et al., 2020; Jung & Mittal, 2020). Political ideology is linked to lifestyle, values, and culture, and therefore provides a suitable measure for market segmentation (Jung & Mittal, 2020). However, there is still scarce evidence (Mas et al., 2022; Witzling & Shaw, 2019) on the relationship between political ideology and consumers' perceptions of sustainable food. In this study, we explore the relationship between political ideology and sustainable food perceptions. We further test whether this relationship is moderated by green consumption values. Green consumption values is a strong predictor of pro-environmental behaviour, which has been utilized in several studies. We contribute to the literature by uncovering potential differences among liberal and conservative consumers towards what constitutes sustainable food.

## 2. Methods

The study was approved by the ethics committee of the authors' institutions (not disclosed for review purposes).

We assessed political ideology by adapting the index scale of conservatism (Kidwell et al., 2013). We asked consumers to state their level of agreement with a 7-item scale index (anchored from 1= Totally disagree to 7= Totally agree): 1) *Capital punishment for severe crimes*, 2) *Abortion should be a criminal offence*, 3) *Socio-political activism is an important part of democracy* (R), 4) *Education should be public and free* (R), 5) *Same-sex marriage should be legal* (R), 6) *Illegal immigration should be stopped*, 7) *Leftist activism is a problem*. The conservatism index scale (coded as Conservatism) takes values in the interval [7, 49].

Further, We measure green consumption values (coded as green) by using the Haws et al. (2014) scale, asking respondents to state their level of agreement with a 7-item scale (anchored from 1= Totally disagree to 7= Totally agree): 1) *It is important to me that the products I use do not harm the environment*, 2) *I consider the*

potential environmental impact of my actions when making many of my decisions, 3) My purchase habits are affected by my concern for our environment, 4) I am concerned about wasting the resources of our planet, 5) I would describe myself as environmentally responsible, 6) I am willing to be inconvenienced in order to take actions that are more environmentally friendly.

Then, we measure consumers' perception for sustainable food perceptions, asking respondents to answer (yes or no) whether they consider sustainable the following: *to purchase food from local brands or local suppliers* (coded as sb1), *to purchase food from small family agri-business* (coded as sb2), *to purchase organic food* (coded as sb3), *to avoid food waste* (coded as sb4), *to recycle or re-use food package* (coded as sb5), *to purchase food from brands or suppliers that treat good their employees* (coded as sb6).

We gathered data through a survey administrated by Qualtrics online panels in Greece. Our sample consists of N=637 respondents (male = 50.1%; university degree = 66.7%;  $M_{age} = 45.0$ ,  $SD = 15.0$ ). The mean score of conservatism is 24.9 ( $SD = 7.0$ ) and of green values is 3.6 ( $SD = 0.8$ ). Conservatism and green values are negatively correlated ( $r = -0.187$ ,  $p < 0.05$ ). We use six Probit regression models to investigate the relationship between conservatism and each perception of sustainable food. In our models, we include conservatism, green consumption values, the interaction between conservatism and green consumption values. We also include gender, education, and income as control variables.

### 3. Results

Table 1 presents the results of the six Probit models. All models are statistically significant ( $p < 0.05$ ). Conservatism is negatively related to perceiving avoiding food waste ( $\beta = -0.082$ ,  $p < 0.1$ ), and, reusing or recycling food package as sustainable ( $\beta = -0.096$ ,  $p < 0.05$ ). The interaction between conservatism and green values has a positive effect on perceiving avoiding food waste ( $\beta = 0.022$ ,  $p < 0.1$ ), and, reusing or recycling food package as sustainable ( $\beta = 0.028$ ,  $p < 0.05$ ). Older age is positively related to perceiving avoiding food waste ( $\beta = 0.011$ ,  $p < 0.1$ ), and, reusing or recycling food package as sustainable ( $\beta = 0.013$ ,  $p < 0.05$ ). For these two models the  $R^2$  is 0.075 and 0.140, accordingly.

Table 1. Probit regression models results.

	Local food brands and local suppliers	Small family agri-business	Organic food	Avoid food waste	Recycling/reusing food package	Fair treatment of employees
Conservatism	-0.018 (0.046)	0.012 (0.047)	-0.007 (0.035)	<b>-0.082</b> <b>(0.048) *</b>	<b>-0.096</b> <b>(0.048) **</b>	-0.012 (0.044)
Green values	0.191 (0.367)	0.542 (0.388)	0.425 (0.268)	-0.256 (0.378)	-0.268 (0.385)	0.287 (0.359)
Conservatism x Green values	0.006 (0.013)	-0.003 (0.014)	0.003 (0.009)	<b>0.022</b> <b>(0.013) *</b>	<b>0.028</b> <b>(0.014) **</b>	-0.000 (0.012)
Female	0.060 (0.179)	0.001 (0.174)	-0.002 (0.118)	-0.046 (0.183)	0.078 (0.199)	-0.080 (0.155)
University	-0.094 (0.193)	-0.055 (0.186)	-0.039 (0.126)	0.104 (0.188)	0.320 (0.197)	0.142 (0.158)
Age	-0.007 (0.006)	0.008 (0.006)	-0.003 (0.004)	<b>0.011</b> <b>(0.006) *</b>	<b>0.013</b> <b>(0.006) **</b>	-0.008 (0.005)
Intercept	1.276 (1.329)	-0.630 (1.348)	-0.624 (0.991)	2.150 (1.407)	1.911 (1.390)	1.132 (1.323)
Pseudo R <sup>2</sup>	0.0540	0.0859	0.0741	0.0748	0.1401	0.0484

Note: Numbers in parentheses are sd. errors.

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



To interpret the interaction effects, we use a spotlight analysis (See Figures 1 and 2). We estimate the slope of

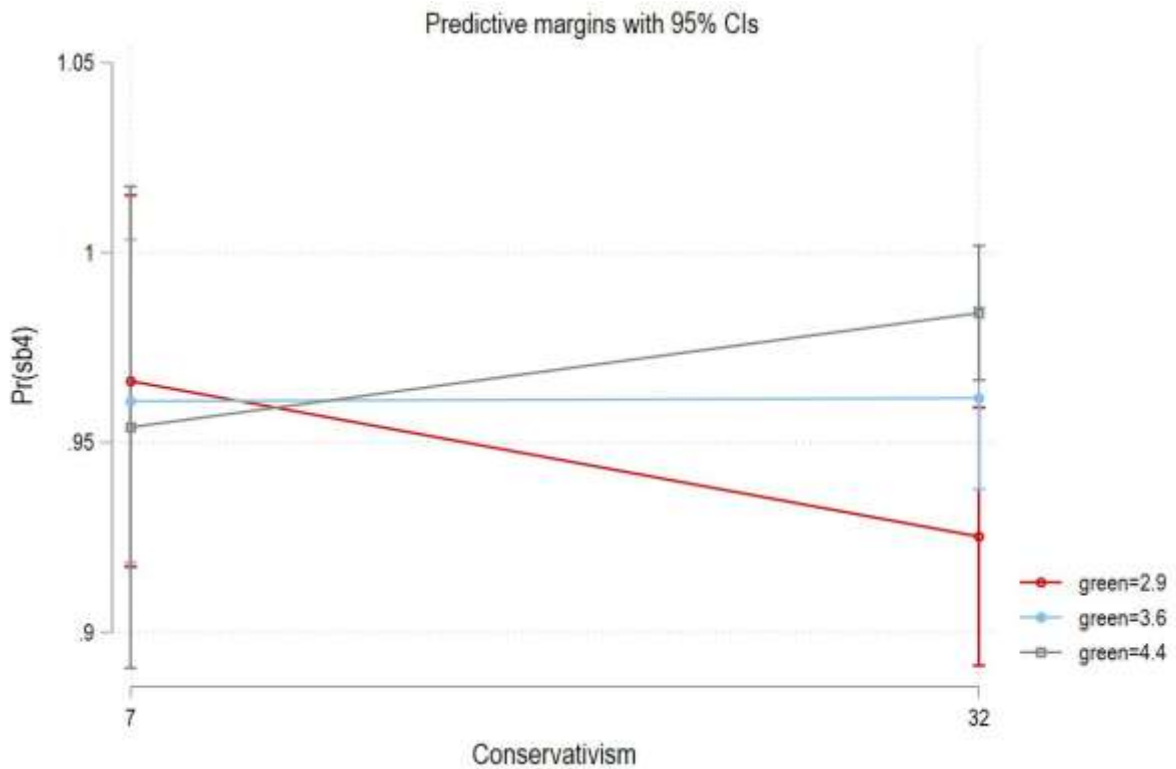


Figure 1. Interaction effects (food waste avoidance).

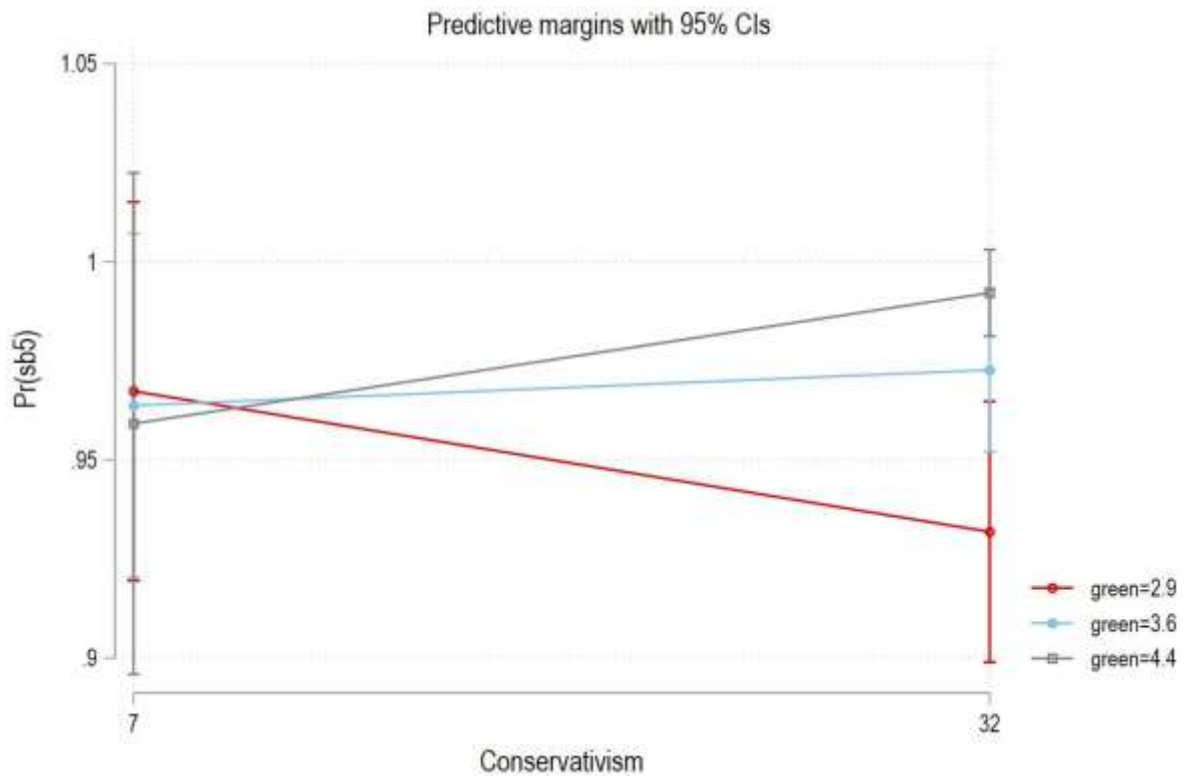


Figure. 2 Interaction effects (reusing/ recycling the food package).

green values at the mean level (blue line), one SD below (red line) and one SD above the mean (grey line). Specifically, the negative relation between conservatism and avoiding food waste and recycling/reusing food packages only holds true for consumers that score low on green values. On the opposite, this relationship is positive for consumers that score high on green values.

#### 4. Discussion and implications

Our study is the first to show that there are differences among conservatives and liberals regarding the perceptions of sustainable food. Previous studies show that both sides of the political spectrum are related to sustainable consumption (Kidwell et al., 2013; Watkins et al., 2016). Our results indicate that conservatives have a more limited perception of sustainable food. Conservatives consider avoiding food waste and recycling/reusing food packages as less sustainable, compared to liberals. Previous studies showed that liberals are trying to reduce food waste (Mas et al., 2022), and that conservatives are indifferent towards pro-environmental labeling of food (Lin & Nayga, 2022). On the other hand, another study showed that they are not different regarding their intentions for recycling (Kidwell et al., 2013). Therefore, liberals would be more willing to reduce their consumption.

Our study further expands the literature on green values (Haws et al., 2014). Green values can reverse the previous negative relationships, confirming previous studies that emphasized the importance of green values for pro-environmental consumer behavior (Bailey et al., 2016; Haws et al., 2014).

Our findings can be utilized by brands that market sustainable food products or policy makers that design behavioral interventions towards sustainable food consumption. While local and organic food, or a fair labor certificate can appeal to both conservatives and liberals, campaigns that are related to avoiding food waste or recycling and reusing food packages should be tailored to liberals.

Our study provides exploratory results and therefore we cannot claim causality. While our study finds that political ideology is related to sustainable food perceptions, future studies could try to investigate the reasons behind such differences occur. Future research should further utilize our findings into developing communication or packaging strategies that appeal to left or right-wing consumers with different messages, characteristics or metaphors.

#### References

- Aschemann-Witzel, J., de Hooge, I., Amani, P., Bech-Larsen, T., & Oostindjer, M. (2015). Consumer-Related Food Waste: Causes and Potential for Action. *Sustainability*, 7(6), Article 6. <https://doi.org/10.3390/su7066457>
- Bailey, A. A., Mishra, A., & Tiarniyu, M. F. (2016). GREEN consumption values and Indian consumers' response to marketing communications. *Journal of Consumer Marketing*, 33(7), 562–573. <https://doi.org/10.1108/JCM-12-2015-1632>
- Drichoutis, A. C., Vassilopoulos, A., Lusk, J. L., & Nayga, R. M. (2017). Consumer preferences for fair labour certification. *European Review of Agricultural Economics*, 44(3), Article 3. <https://doi.org/10.1093/erae/jbx002>
- European Commission. (2019). *The European Green Deal*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>
- FAO. (2012). *Sustainability Assessment of Food and Agriculture systems (SAFA)*. <http://www.fao.org/nr/sustainability/sustainability-assessments-safa/en/>
- Farmer, A., Kidwell, B., & Hardesty, D. M. (2020). Helping a Few a Lot or Many a Little: Political Ideology and Charitable Giving. *Journal of Consumer Psychology*, 30(4), Article 4. <https://doi.org/10.1002/jcpy.1164>
- Farmer, A., Kidwell, B., & Hardesty, D. M. (2021). The Politics of Choice: Political Ideology and Intolerance of Ambiguity. *Journal of Consumer Psychology*, 31(1), Article 1. <https://doi.org/10.1002/jcpy.1176>

Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354.

<https://doi.org/10.1016/j.jcps.2013.11.002>

Jasinenko, A., Christandl, F., & Meynhardt, T. (2020). Justified by ideology: Why conservatives care less about corporate social irresponsibility. *Journal of Business Research*, 114, 290–303.

<https://doi.org/10.1016/j.jbusres.2020.04.006>

Jung, J., & Mittal, V. (2020). Political Identity and the Consumer Journey: A Research Review. *Journal of Retailing*, 96(1), Article 1.

<https://doi.org/10.1016/j.jretai.2019.09.003>

Kidwell, B., Farmer, A., & Hardesty, D. M. (2013). Getting Liberals and Conservatives to Go Green: Political Ideology and Congruent Appeals. *Journal of Consumer Research*, 40(2), Article 2.

<https://doi.org/10.1086/670610>

Lin, W., & Nayga, R. M. (2022). Green identity labeling, environmental information, and pro-environmental food choices. *Food Policy*, 106, 102187.

<https://doi.org/10.1016/j.foodpol.2021.102187>

Mas, E. M., Haws, K. L., & Goldsmith, K. (2022). Bringing Our Values to the Table: Political Ideology, Food Waste, and Overconsumption. *Journal of the Association for Consumer Research*, 7(3), Article 3.

<https://doi.org/10.1086/719583>

Nässén, N., & Rambaree, K. (2021). Greta Thunberg and the Generation of Moral Authority: A Systematic Literature Review on the Characteristics of Thunberg's Leadership. *Sustainability*, 13(20), Article 20.

<https://doi.org/10.3390/su132011326>

Thøgersen, J., Haugaard, P., & Olesen, A. (2010). Consumer responses to ecolabels. *European Journal of Marketing*, 44(11/12), Article 11/12.

<https://doi.org/10.1108/03090561011079882>

United Nations. (2016). *Sustainable development goals*.

<https://www.un.org/sustainabledevelopment/news/communications-material/>

Van den Berg, L., Behagel, J. H., Verschoor, G., Petersen, P., & Gomes da Silva, M. (2022). Between institutional reform and building popular movements: The political articulation of agroecology in Brazil. *Journal of Rural Studies*, 89, 140–148.

<https://doi.org/10.1016/j.jrurstud.2021.11.016>

Wang, M., Kumar, V., Ruan, X., Saad, M., Garza-Reyes, J. A., & Kumar, A. (2021). Sustainability concerns on consumers' attitude towards short food supply chains: An empirical investigation. *Operations Management Research*.

<https://doi.org/10.1007/s12063-021-00188-x>

Watkins, L., Aitken, R., & Mather, D. (2016). Conscientious consumers: A relationship between moral foundations, political orientation and sustainable consumption. *Journal of Cleaner Production*, 134, 137–146.

<https://doi.org/10.1016/j.jclepro.2015.06.009>

Witzling, L., & Shaw, B. R. (2019). Lifestyle segmentation and political ideology: Toward understanding beliefs and behavior about local food. *Appetite*, 132, 106–113. <https://doi.org/10.1016/j.appet.2018.10.003>

## **Do wine consumers know the meaning of wine terroir? Preliminary results from ongoing research in Greece**

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### **Abstract:**

This paper presents the initial results of an ongoing research that explores whether consumers are aware (self-assessed knowledge) of the concept of wine terroir and the elements that are incorporated in this term. It also explores if gender affects this knowledge. An online questionnaire based on previous literature was developed and through a three-week period 366 questionnaires are gathered. The results show that only a small percentage of wine consumers are aware of the term wine terroir (7.6%). It additionally reveals that when presented with the definition of the term and afterwards requested which elements they consider that wine terroir includes, the participants stated the majority of the presented elements as part of the “wine terroir” concept. Though, the highest percentage obtained the element “grape production land (terrain)” and the lowest the “connection with gastronomy”. The chi-square test of independence explored 18 statistical differences between gender and wine terroir knowledge (one test) and perceived elements of wine terroir after the definition of the term (17 tests). The chi-square test of independence revealed four statistically significant differences. The results indicate that consumers need to be educated about wine attributes and elements of wine terroir and their significance.

**Keywords:** *wine terroir, consumer knowledge, consumer perception, wine terroir marketing*

### **Introduction**

Intense competition in the wine market has led wineries to align their marketing tactics with consumer demands by introducing regulations (e.g., appellation of origin), or showcasing their wine product with its wine terroir characteristics (e.g., Charters et al., 2017; Giacomarra et al., 2020; Riviezzo et al., 2017; Warman & Lewis, 2019).

The International Organization of Vine and Wine (OIV, 2010), defines Vitivinicultural terroir as “a concept which refers to an area in which collective knowledge of the interactions between the identifiable physical and biological environment and applied vitivinicultural practices develops, providing distinctive characteristics for the products originating from this area. “Terroir” includes specific soil, topography, climate, landscape characteristics and biodiversity features” (OIV, 2010 p.1). The wine terroir term originated from France. Though, wineries today use or are beginning to use this term pointing out its facets to communicate to their potential customer. Among the wine-producing countries of the European Union, the Greek wineries seem to be “behind” in marketing their wine terroir, and it is questionable whether Greek wine consumers have knowledge or understand what wine terroir is.

Upon the above background, this research emphasizes on exploring if Greek consumers have knowledge (self-assessed subjective knowledge) of “wine terroir” which is extensively used in wine marketing. Additionally, it explores:

1. The wine consumption behavior of the Greek participants
2. Their perception of the elements included in “wine terroir” after the definition of “wine terroir” is provided.
3. Gender differences in wine terroir subjective knowledge and perceived elements of wine terroir.

This work makes a theoretical contribution to academia because it provides insight from the consumers standpoint, and specifically, about the Greek wine consumers knowledge of a concept used in marketing communication, while on the practical side it provides with information and the basis to build upon consumer wine marketing communication and education where needed.

### **Literature review**

Wine terroir is a widely used term in wine marketing and it associates the production territory with the product outcome (wine). This being the general concept, many definitions are provided by researchers that explain the meaning of wine terroir (e.g., Capitello et al., 2021; Charters et al., 2017; Dubos, 1984; Morlat, 2001). Among these definitions, some researchers have focused on the natural elements that the territory offers and produces the specific quality of wine, such as soil structure, climate, terrain, and the biodiversity features (Dubos, 1984; Laville, 1990, 1993). Opposite to these researchers, many add to the above elements, the human factor in the concept of wine terroir (e.g., Capitello et al., 2021; Castelló, 2021; Charters et al., 2017; Van Leeuwen & Seguin, 2006). In this case, the human factor may involve the human interference in the production process up to a much broader understanding of the “human factor”, among which are its history, tradition, cultural identity, communication, and commercial aspects (Capitello et al., 2021). Additionally, previous research accepts that wine terroir is not a single factor, but a complex structure, with more than one facet (e.g., Patterson & Buechsenstein, 2018).

Even though “wine terroir” is a very important issue for the stakeholders in the wine marketing sector, and studies are steadily increasing, there are only a handful of studies that focus on consumers and their understanding of the concept of wine terroir. Specifically, a search of scholar.google.com, with the terms “consumers knowledge” of “wine terroir” on the 3<sup>rd</sup> of May 2023, returned five articles, while with the terms “consumers understanding” of “wine terroir” returned two (on the same day). Additionally, the terms “consumers understand” of “wine terroir” returned six articles, indicating that additional research is needed.

Wine terroir incorporates the concept of area, and thus geographical identification schemes are part of it, but this is only one of the variables that can be associated with terroir. Consumers’ willingness to pay and understanding/ knowledge studied under country of origin and/ or wine geographical identification schemes are the most extensive elements studied from a consumer perspective (e.g., Bruwer & Buller, 2012), but without referring to the term “terroir” (Lanfranchi et al., 2019; Palmieri & Perito, 2020; Skuras & Vakrou, 1999, 2002; Yeh & Hirsch, 2023). Wine terroir is also studied in depth under the terms winescape and wine tourism (Alebaki et al., 2022; Marlowe & Bauman, 2019; Sigala, 2019).

As regards the studies that were returned in searching consumer understanding of wine terroir, at the end, these studies dealt with specific facets, such as the wine’s label information (Carsana & Jolibert, 2017), the wine brand attached to the territory of production (Bellia et al., 2022), or wine advertisements (Tiefenbacher, 2013). Though, a closer investigation reveals that these are not focused on consumer knowledge. For example, Tiefenbacher (2013) explored the “use of representations of place” in wine advertising in the retail wine market magazine “The Wine Spectator”, by analyzing a two-year range of wine ads in 30 issues of the magazine (N=873 separate advertisements, N=398 ads duplicated at least once, N= 475 yielded distinctly different ads from 234 different advertisers). Tiefenbacher (2013) found that in this two-year period of ads, terroir appeared in about 13% of them (implicitly or explicitly).

Bellia et al. (2022) assessed the “existence of a relationship between the wine brand and the territory of origin for wines” in Sicily Italy, and specifically those produced in the Etna valley. They also measured “awareness among producers and stakeholders of the recognizability of local wines by the market”. For the purpose of the study, they used the Policy Delphi methodology and found that “the brand-land link” for the wines of the study area is underutilized by wineries. They also found that the “knowledge of consistency between wine and brand and between land and image is missing among consumers, as is knowledge of its value”.

## Research methodology

A questionnaire was developed based on previous literature (e.g., Capitello et al., 2021; Castelló, 2021; Charters et al., 2017) and was validated with a small-scale qualitative research in the form of personal interviews (N=12) through zoom. Content validity of the questionnaire was gained by academics specialized in wine research. Face validity (Kent, 1993) was obtained through the pilot test (N=135). Participants from the pilot test were excluded from the analysis and results presented here. Few changes mainly wording were done and the final form was circulated online and is at the moment ongoing research. During a three-week period 366 valid questionnaires were obtained and analyzed. The participation in the research process had criteria that an adult person had to fulfill, i.e., Greek, adult, (over 18 years of age), access to the internet, consume wine, and provides consent to use the questionnaire for data analysis (first question of the questionnaire).

## Results

### Participants profile

Males account for 59.0% of the sample and females 41.0%. Age distribution is 18-72 years old with mean age 42.9. Married participants are overrepresented (50.5%) compared to single (41.8%), while divorced or widowed account for 7.7%. The majority of participants live in the cities (63.9%) and 36.1% live in towns or villages. In terms of education level, 44.4% have secondary education, 10.7% postsecondary, and 46.2% have at least a bachelor's degree. Concerning profession, 58.8% are on a salary (federal/private employee, on pension, one-year unemployment fund), 16.4% businesspeople, 2.2% skilled/unskilled workers, and 22.7% dependent on others. Lastly, their net monthly family income in euros is up to 1000.00€ for the 35.2%; 1000,01-2000,00€ for the 38.0%, and 26.8% have a net monthly family income of more than 2000,00 €.

### Wine consumption, knowledge of wine and terroir knowledge

Fifteen percent of the participants drink wine on special occasions and 42.1% drink wine 1-3 times per month, both accounting totally to 57.1%. In addition, 30.1% drink wine 1-3 times a week, 8.2% 4-6 times a week, 4.4% daily and lastly, 0.3% more than once per day. Wine consumers were not knowledgeable about wines since the 69.4% reported having very limited or limited knowledge, and 7.1% no knowledge whatsoever. Therefore, overall, 76.5% have limited knowledge and one-fourth of the respondents assessed their knowledge of wine terroir, as advanced (20.2%) or are expertise on wine terroir (3.3%).

### Wine terroir facets

After a self-assessment of knowledge about the concept of wine terroir, a definition of wine terroir was provided. Continuously, 17 variables-items were presented to the participants and were requested to check which were perceived by them as elements of wine terroir. As Table 1 presents (in descending order of the "yes" percentage), the highest percentage has the element "winery terrain" (88.5%), followed by "climate of the area" (88.0%), and "production area (area of origin)" (84.4%). The lowest percentage have the elements "connection with gastronomy" (43.7%), "production rituals" (50.8%), and "landscape architecture" (53.3%).

**Table 1:** Perception of elements forming wine terroir (%)

Elements- variables of wine terroir	Perception (%)	
	Yes	No
1. Winery terrain	88.5	11.5
2. Climate of the area	88.0	12.0
3. Production area (area of origin)	84.4	15.6
4. Geology of terrain	80.3	19.7
5. Production Know-how (including processing, storage, etc)	75.7	24.3
6. Traditional wine either in terms of varieties, production, region, etc.	71.9	28.1
7. Geographical indication: PGI/ PDO/ TSG	71.9	28.1
8. Place attachment	69.9	30.1
9. Wine varieties	69.4	30.6

10. Method of harvesting and wine pressing in tanks	68.9	31.1
11. History of the region in the cultivation of grapes and the production of wine (Historical aspects)	66.9	33.1
12. Authenticity	66.4	33.6
13. Method of production-processing	64.5	35.5
14. Cultural identity	57.9	42.1
15. Landscape architecture	53.3	46.7
16. Production ritual	50.8	49.2
17. Connection with gastronomy	43.7	56.3

### Gender differences-Hypothesis testing

The gender issue, i.e., gender differences of respondents was analyzed through statistical tests. In order to determine the gender differences, two main hypotheses were developed and tested:

#### *Hypothesis No.1:*

Null Hypothesis No.1: There is no relationship between participants gender and their self-assessed knowledge of wine terroir ( $\alpha=0.05$ ).

Alternative Hypothesis No.1: There is a relationship between participants gender and their self-assessed knowledge of wine terroir ( $\alpha=0.05$ ).

#### *Hypothesis No.2*

Null Hypothesis No.2: There is no relationship between participants gender and their perception of the elements that form wine terroir ( $\alpha=0.05$ ).

Alternative Hypothesis No.2: There is a relationship between participants gender and their perception of the elements that form wine terroir ( $\alpha=0.05$ ).

The hypothesis No.2 is based on the 17 above elements of the wine terroir. Therefore, in total 17 sub hypotheses are formed and examined. Thus, overall, the hypothesis that this paper examines is 18, i.e., the initial hypothesis of consumer knowledge (Hypothesis No.1) plus the 17 sub hypotheses (from Hypothesis No.2).

In order to examine if gender differences exist, the chi-square test of independence was used, and crosstabs were examined in the cases where statistically significant differences were revealed. The chi-squared tests were used since the data obtained was categorical variables (Greenwood & Nikulin, 1996).

#### Hypothesis No.1:

As to Hypothesis No.1, the chi-square test revealed that there is no relationship between participants gender and their self-assessed knowledge of wine terroir ( $\alpha =0.05$ ), whereas  $\chi^2=3.618$ , and  $p=0.470$ . Therefore, the null hypothesis cannot be rejected.

As to Hypothesis No.2 and the 17 sub hypotheses, the results of the chi-square tests of independence between participants' gender and perceived elements of wine terroir, are presented in Table 2. It is pointed out that Table 1 displays only the cases where  $p < 0.05$ , and also in all cases degree of freedom,  $df=1$ .

**Table 2:** Pearson chi-square test of independence between participants' gender and perceived elements of wine terroir.

Elements -items of wine terroir	Chi-square Pearson statistics		
	$\chi^2$	df	Sign. (p)
1. Winery terrain	4.293	1	0.045*
2. Geology of terrain	4.030	1	0.046*
3. Climate of the area	8.714	1	0.003*
4. Place attachment	7.844	1	0.005*

As Table 2 shows, statistically significant differences were found with respect to hypothesis No.2 and its 17 sub-hypotheses in four cases. Specifically, gender affects wine consumers perception that the following elements are part of wine terroir (i.e., the relation between these variables is significant): winery terrain ( $\chi_1^2=4.293$ ,  $p=0.045$ ), geology of terrain ( $\chi_1^2=4.030$ ,  $p=0.046$ ), climate of the area ( $\chi_1^2=8.714$ ,  $p=0.003$ ), and place attachment ( $\chi_1^2=7.844$ ,  $p=0.005$ ). For the rest of the hypotheses tested, in all cases significance  $p>0.05$ , and therefore the null hypothesis cannot be rejected. In all cases where there were significant differences between genders, the proportion of men was higher than that of women. Specifically, for the wine terroir element “winery terrain”, “geology of terrain”, “climate of the area”, and “place attachment” significantly more men (85.6%; 76.9%; 83.8%; and 64.4% respectively) considered each one respectively was an element of wine terroir.

### Discussion

From the results of this study, it appears that Greek wine consumers are not “heavy users” but rather moderate consumers of the product. Also, that the average wine consumer does not have knowledge of what wine terroir is as a concept. As elements that wine consumers perceive that shape the concept of wine terroir, after they were provided by its definition, the majority of the consumers (>84.0%) perceived that the elements “winery terrain”, “climate of the area”, and “production area (area of origin)” are part of wine terroir. The elements with the lowest percentages given by the wine consumers were “connection with gastronomy”, “rituals in production”, and “landscape architecture”. These results cannot be compared directly with other studies, since we did not find studies that examined wine consumers knowledge of wine terroir and its elements as well as gender differences in this context. Therefore, to the best of our knowledge, there are no other studies that address consumer knowledge of wine terroir elements in detail. No significant differences were found with respect to gender differences in knowledge about the concept of wine terroir.

Regarding the perceived elements of wine terroir, and the four cases that statistically significant differences were found (i.e., for winery terrain, geology of terrain, climate of the area, and place attachment), we did not find a published article that deals with consumers knowledge, these wine terroir elements, and gender differences in order to make comparisons. The few studies we found, did not address this issue or these terms were in the reference section. We also faced the same obstacle with gender differences and perceptions of the four elements of wine terroir mentioned above. Though, we did find studies that examine place attachment associated to wine tourism and gender differences, but they were outside the context of this study and therefore not mentioned.

The above results show that the concept of wine terroir is not known by the majority of wine consumers. This indicates that Greek wine consumers need to be educated on first of all on wine characteristics, the environment (natural and human) that impacts on the final product, therefore, educated on the core terroir elements. They need to be informed about the concept of wine terroir and its elements, which combined are important for the consumer and his/her choices of a wine. Additionally, they should be informed on the marketing aspect of wine terroir and its significance in wine marketing, from the customer point of view. For example, consumers should be educated on the basis of the wine production and the elements that shape a good-quality wine. These are considered essential steps towards Greek wine consumers since wine production is an important element of Greek agriculture, wineries revenues, and the country’s export power. For example, the wineries can promote excursions especially organized targeting students of different disciplines (agriculture, medicine, economics, etc.) and at a discount price. In this way, the wineries have the advantage of informing students about the characteristics of wine attributes, the quality of wines and the health, economic, etc. benefits. They can also inform them of the advantages of wine consumption in comparison with the consumption of other alcoholic based domestic or imported drinks. On the other hand, for older consumers, apart from organized wine trips, cook shows sponsored by wineries can promote their wine and the terroir related to it. They can also promote gastronomy and wine-related tips.

### Conclusion, limitations, and directions for future research

This study adds to previous literature on consumer behavior and wine terroir shedding light on their self-assessed knowledge and perceived by them elements of wine terroir. However, this study displays some weaknesses that were unavoidable, such as being online research, employing a nonprobability sampling frame, one country studied, and being exploratory in nature since these are the first results of an ongoing research. Therefore, the sample size, which is considered small, is only appropriate for the research objectives and data analysis. These limitations can be used as a suggestion for future research.

Despite the above limitations, the study is considered important for stakeholders, such as wineries and wine production communities, since it provides insight into wine terroir self-assessed knowledge by wine consumers,



as well as their self-assessed knowledge about wine in general, leaving them space to design and implement a marketing communication strategy.

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**Ethical approval.** “There are no ethical issues involved in the processing of the questionnaire data used in the study. The necessary consents have been obtained by the persons involved, and the anonymity of the participants has been secured. All procedures performed in studies involving human participants were in accordance with the ethical standards of the International Hellenic University research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards”.

## References

- Alebaki, M., Psimouli, M., Kladou, S., & Anastasiadis, F. (2022). Digital winescape and online wine tourism: Comparative insights from Crete and Santorini. *Sustainability*, *14*(14), 8396.
- Bellia, C., Columba, P., & Ingrassia, M. (2022). The Brand–Land Identity of Etna Volcano Valley Wines: A Policy Delphi Study. *Agriculture*, *12*(6), 811.
- Bruwer, J., & Buller, C. (2012). Country-of-origin (COO) brand preferences and associated knowledge levels of Japanese wine consumers. *Journal of Product & Brand Management*, *21*(5), 307–316. <https://doi.org/10.1108/10610421211253605>
- Capitello, R., Agnoli, L., Charters, S., & Begalli, D. (2021). Labelling environmental and terroir attributes: Young Italian consumers’ wine preferences. *Journal of Cleaner Production*, *304*, 126991. <https://doi.org/10.1016/j.jclepro.2021.126991>
- Carsana, L., & Jolibert, A. (2017). The effects of expertise and brand schematicity on the perceived importance of choice criteria: A Bordeaux wine investigation. *Journal of Product & Brand Management*, *26*(1), 80–90. <https://doi.org/10.1108/JPBM-11-2015-1030>
- Castelló, E. (2021). The will for terroir: A communicative approach. *Journal of Rural Studies*, *86*, 386–397. <https://doi.org/10.1016/j.jrurstud.2021.06.007>
- Charters, S., Spielmann, N., & Babin, B. J. (2017). The nature and value of terroir products. *European Journal of Marketing*, *51*(4), 748–771. <https://doi.org/10.1108/EJM-06-2015-0330>
- Dubos, J. (1984). [Importance of " terroir" as a factor of the qualitative differentiation of wines [climate, soil; agronomical, psychosociological and economic aspects]]. *Bulletin de l'OIV (France)*.
- Giacomarra, M., Galati, A., Crescimanno, M., & Vrontis, D. (2020). Geographical cues: Evidences from New and Old World countries’ wine consumers. *British Food Journal*, *122*(4), 1252–1267. <https://doi.org/10.1108/BFJ-08-2019-0580>
- Kent, R. (1993). *Marketing Research in Action*. Routledge.
- Lanfranchi, M., Schimmenti, E., Campolo, M. G., & Giannetto, C. (2019). The willingness to pay of Sicilian consumers for a wine obtained with sustainable production method: An estimate through an ordered probit sample-selection model. *Wine Economics and Policy*, *8*(2), 203–215.
- Laville, P. (1990). Le terroir, un concept indispensable a l’elaboration et á la protection des appellations d’origine comme a la gestation des vignobles: Le cas de la France. *Le Bulletin de l'OIV*, *709*(710), 217–241.
- Laville, P. (1993). Unités de terroir naturel et terroir. Une distinction nécessaire pour redonner plus de cohérence au système d’appellation d’origine. *Bull. OIV*, *745*(746), 227–251.

- Marlowe, B., & Bauman, M. (2019). Terroir Tourism: Experiences in Organic Vineyards. *Beverages*, 5(2), 30. <https://doi.org/10.3390/beverages5020030>
- Morlat, R. R. (2001). Sur la notion de terroir et son usage en viticulture. *Revue Des Oenologues et Des Techniques Vitivinicoles et Oenologiques*, 101s, 29–34.
- OIV. (2010). *Definition of Vitivinicultural "Terroir". Resolution OIV/VITI 333/2010*. <https://www.oiv.int/public/medias/379/viti-2010-1-en.pdf>
- Palmieri, N., & Perito, M. A. (2020). Consumers' willingness to Consume Sustainable and Local Wine in Italy. *Italian Journal of Food Science*, 32(1). <https://doi.org/10.14674/IJFS-1648>
- Patterson, T., & Buechsenstein, J. (2018). *Wine and place: A terroir reader*. Univ of California Press.
- Riviezzo, A., Garofano, A., Granata, J., & Kakavand, S. (2017). Using terroir to exploit local identity and cultural heritage in marketing strategies: An exploratory study among Italian and French wine producers. *Place Branding and Public Diplomacy*, 13(2), 136–149. <https://doi.org/10.1057/s41254-016-0036-4>
- Sigala, M. (2019). The Synergy of Wine and Culture: The Case of Ariousios Wine, Greece. In M. Sigala & R. N. S. Robinson (Eds.), *Management and Marketing of Wine Tourism Business* (pp. 295–312). Springer International Publishing. [https://doi.org/10.1007/978-3-319-75462-8\\_15](https://doi.org/10.1007/978-3-319-75462-8_15)
- Skuras, D., & Vakrou, A. (1999). *Willingness to pay for origin-labelled products: A case study of Greek wine consumers*. 28, 30.
- Skuras, D., & Vakrou, A. (2002). Consumers' willingness to pay for origin labelled wine: A Greek case study. *British Food Journal*, 104(11), 898–912. <https://doi.org/10.1108/00070700210454622>
- Tiefenbacher, J. P. (2013). Themes of U.S. Wine Advertising and the Use of Geography and Place to Market Wine. *EchoGéo*, 23. <https://doi.org/10.4000/echogeo.13378>
- Van Leeuwen, C., & Seguin, G. (2006). The concept of terroir in viticulture. *Journal of Wine Research*, 17(1), 1–10.
- Warman, R. D., & Lewis, G. K. (2019). Wine place research: Getting value from terroir and provenance in premium wine value chain interventions. *International Journal of Wine Business Research*, 31(4), 493–508. <https://doi.org/10.1108/IJWBR-09-2018-0052>
- Yeh, C., & Hirsch, S. (2023). A meta-regression analysis on the willingness-to-pay for country-of-origin labelling. *Journal of Agricultural Economics*, 1477-9552.12528. <https://doi.org/10.1111/1477-9552.12528>

## **Greek consumers' intentions regarding green hotels. An application of an extended values-beliefs-norms model.**

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### **Abstract**

This study presents the results of a research study investigating Greeks' intentions toward green hotels. Two types were examined: intentions to visit and willingness to pay a premium price when staying at green hotels. The conceptual framework of the research was based on the Values-Beliefs-Norms theory, which was extended with the incorporation of consumers' Green Trust to green practices of hotels. An online survey of a quota sample with 201 adult residents of the Thessaloniki urban area was conducted. The results of the study indicated that Greek consumers' intentions to visit green hotels are influenced by their personal norms, which in turn is a product of a sequential impact of their trust in green hotel practices and their feelings of personal responsibility, their awareness of consequences, and their biospheric values. Consumers' willingness to pay a premium is directly affected by their green trust and personal norms.

**Keywords:** *Green Hotels, Values-Beliefs-Norms Theory, Green Trust, Willingness to Pay Premium Price*

### **Introduction**

Over the last few decades, the tourism industry has been characterized as a non-sustainable sector because it causes the destruction of the natural, human, and cultural environment. Especially hospitality industry is accused of overconsumption of vast amounts of water, energy, raw materials (Abdou et al., 2020) and contributes to emissions of greenhouse gases (Verma and Chandra, 2017). In an effort to contribute to environmental protection, hotel management initiatives include smart energy systems related to temperature and lightening, construction by recycled materials (Ioannidis et al., 2021; Kularatne et al., 2019), linen reuse (Milar and Baloglu, 2009), solar energy collectors, recycling, low flow showers (Kang et al., 2012). These practices help in building a "green image" and targeting the eco-minded customers' who turn to green products and services. In this way, lodgings are converting into green hotels, which are defined as: «*environmentally friendly properties whose managers are willing to implement programs that conserve water, energy and reduce solid waste to help protect our one and only earth*» (GHA, 2022) in order to attract ecological conscious customers (Quoquab et al., 2018).

However, prospective customers think that certified green hotels are more expensive than conventional ones, and they expect to pay more when choosing them (Han et al., 2009; Manaktola and Jauhari, 2007). Consumers should be assured that the green hotels indeed apply honest pro-environmental practices (Yadav et al., 2019), which are designed to emphasize the eco-friendliness of their offerings or "green attributes" (Slevitch et al., 2013), and they should inform their visitors accordingly in order to gain their trust (Yadav et al., 2019). Nevertheless, green certifications increase customers' satisfaction and loyalty and consequently their willingness to revisit or pay extra money to stay in certified green hotels (Rahman and Reynolds, 2016).

Academic research regarding consumers' intentions and behavior toward environmentally friendly lodgings has risen during the past decade (Eid et al., 2021). The literature review revealed two theoretical models which are used to ground the relevant research efforts: Ajzen's (1991) "Theory of Planned Behavior" (TPB) and Stern's (2000) "Values Beliefs Norms" Theory (VBN). TPB has been adopted in the majority of academic studies. Scientists have either adopted the original TPB or modified it by adding other variables as direct predictors of intentions (Delistavrou and Tilikidou, 2022; Nimri et al., 2022; Yarimoglu and Gunay, 2020; Wang et al., 2020; Han et al., 2010) or in combination with other models (Agag and Colmekcioglu, 2020; Yadav et al., 2019), such as the VBN model (Fauzi et al., 2022; Eid et al., 2021; Han, 2015). On the other hand, VBN has

been utilized just in combination with TPB (Choi et al., 2015) and to the best of our knowledge, never as the base of the research framework.

Therefore, the aim of this study is to investigate Greek consumers' intentions to visit as well as their willingness to pay a premium price for green hotels by utilizing the VBN as the basis of the research framework aided with the addition of consumers' Green Trust to green hotels' ecological practices.

### **Theoretical framework and hypotheses development**

VBN (Stern, 2000) links the theory of values (Schwartz, 1972), the New Environmental Paradigm/ NEP (Dunlap and Van Liere, 1978), and the Norm Activation Theory/ NAM (Schwartz, 1977). The VBN model was introduced by Stern (2000), aiming to explain behaviors related to environmental protection from the side of personal motive and altruism (Henry and Dietz, 2012). VBN examines the relationships between values, beliefs, and norms in a form of a causal chain e.g., each variable has an impact on the next variable, and by this chain, an effort is made to predict pro-environmental behaviors (Stern, 2000). More specifically, altruistic, egoistic, and biospheric values are suggested to influence consumers' beliefs about the environment in general, about the consequences of environmental destruction, and about their personal responsibility to act in favor of environmental protection, which in turn influence their personal norms. Finally, consumers' personal norms are able to influence their ecological behaviors.

#### **Values**

VBN includes Altruistic, Egoistic, and Biospheric Values (Stern, 2000). Altruistic Values are related to people's concern regarding the welfare of the whole society (Yadav et al., 2016). Egoistic Values concern people's focus on their personal welfare (Eid et al., 2021), and Biospheric Values (BV) concern people's interests in the welfare of the natural environment (Eid et al., 2021). Among the three types of values, biospheric values were found to have a stronger effect on consumers' pro-environmental attitudes (Jakovcovic and Steg, 2013), behaviors, and decisions (De Groot et al., 2007; Klockner, 2013). Biospheric values were found to positively affect beliefs (awareness of consequences) about green hotels (Choi et al., 2015, Han, 2015). Based on the causal chain of the VBN theory and the results of the literature review, the following hypothesis was set:  
H<sub>1</sub>: Consumers' Biospheric Values positively affect their Awareness of Consequences.

#### **Beliefs**

Consumers' beliefs concern the thoughts of individuals towards environmental and human problems (Ture and Ganesh, 2014). VBN beliefs include Awareness of Consequences (AC), defined as "*one's awareness of adverse environmental consequences to something it values*" (Choi et al., 2015, p. 89), and Ascription of Responsibility (AR), which refers to "*individual's responsibility to reduce the consequences that are raised by his/her actions*" (Choi et al., 2015, p. 89). In the relevant literature (Choi et al., 2015, Han, 2015) AC has been found to affect AR, and AR has been found to positively affect Personal Norms (Fauzi et al., 2022, Choi et al., 2015, Han, 2015). Thus, the following hypotheses were set:

H<sub>2</sub>: Consumers' Awareness of Consequences positively affects their Ascription of Responsibility

H<sub>3</sub>: Consumers' Ascription of Responsibility positively affects their Personal Norms.

#### **Norms**

Personal Norms (PN) concern consumers' feelings of moral obligation to perform behaviors friendlier towards the environment and motivate their engagement in practices and behaviors friendlier towards the environment (Stern, 2000). PN is the key predictor of several types of pro-environmental behaviors (Wang et al., 2023).

Intentions to perform a specific behavior are predispositions of actual behavior (Ajzen, 1991). It is claimed that stronger intentions increase the probability of the performance of the behavior (Kim and Han, 2010). Regarding green hotels, Eid et al. (2021), Choi et al. (2015), and Han (2015) found that PNs positively influence consumers' intentions. Accordingly, the following hypothesis was set:

H<sub>4</sub>: Consumers' Personal Norms positively affect their Intentions to Visit green hotels.

#### **Willingness to pay a premium price**

Willingness to Pay (WP) a premium price refers to consumers' intentions to pay extra money when staying at a green hotel. Han and Kim (2010) found that attitudes and norms affect positively intentions to pay more in order to stay in green hotels. Thus, it is hypothesized that strong feelings of ethical obligation (PN) to prefer green hotels may increase willingness to pay extra money in order to visit a green lodging. Accordingly, the following hypotheses was set:

H<sub>5</sub>: Consumers' Personal Norms positively affect their Willingness to Pay a premium price.

### Green Trust

Green Trust (GT) is defined as “relying on a product, service or brand based on trustworthiness, kindness, and ability to protect the environment” (Chen, 2010). Some studies have found that GT has a positive influence on consumers’ intentions to visit green hotels (Choi et al., 2015; Yadav et al., 2019), while recently Fauzi et al. (2022) found that the two variables were unrelated. Nevertheless, GT has been found to influence positively consumers’ WP a premium price for green hotels (Yadav et al., 2019). In this study, it is hypothesized that the higher the trust in hotels’ environmental practices, the higher consumers’ feelings of moral obligation to stay in green hotels and the higher their willingness to pay a premium price. Hence, the following hypotheses were set:

H<sub>6</sub>: Consumers’ Green Trust positively affects their Personal Norms

H<sub>7</sub>: Consumers’ Green Trust positively affects their Willingness to Pay a Premium Price

### Methodology

#### Sampling

A survey was conducted in February 2022 with adult residents of the Thessaloniki urban area. A structured questionnaire was administered online due to covid-19 pandemic restrictions. The population distribution in terms of gender and age served to design a quota sample which resulted in 201 usable responses.

#### Variables Measurement

The questionnaire included the following variables, which were all adopted from the literature: Biospheric values of 4 items were adopted from Steg et al. (2005), measured from 1=extremely unimportant to 5=extremely important. Awareness of Consequences with 6 items, Ascription of Responsibility with 4 items, and Personal Norms with 6 items, were all adopted from Chet al. (2015). Visit Intention, with 3 items, was adopted from Tilikidou et al. (2014). Green Trust consists of 5 items, and it was adopted from Choi et al (2015). Willingness to Pay a premium price consists of 2 items, and it was adopted from Yadav et al. (2019). The above variables were all measured on a 5-point Likert scale from 1=absolutely disagree to 5=absolutely agree. In addition, five demographics were included in the questionnaire, namely gender, age, occupation, income, and education. The relevant scales were adopted from the Hellenic Statistical Authority (EL.STAT, 2020).

### Results

SPPS (v.17) and IBM AMOS (v.20) were used for the analyses of the research data. Data screening did not indicate any outliers or missing values. The internal consistency of all variables was examined by Cronbach’s alpha calculations, and the results indicated extensive reliability (Hair et al., 2010) for all measures (Table 1).

#### Measurement Model

The measurement model was utilized for the Confirmatory Factor Analysis (CFI). The Goodness of Fit (GOF) values (Table 1) indicated that the model fits the data very well. Construct reliability ranged from 0.849 to 0.964 providing evidence of composite reliability for all constructs. The factor loadings of all items to their theoretical constructs exceeded the recommended value of 0.50 (Hair et al., 2010) with the exception of PN3 and PN4, which were eliminated. The values of the Average Variance Extracted (AVE) in each construct were greater than 0.50 (Fornell and Larcker, 1981), indicating convergent validity of all variables. In addition, the square root of each construct’s AVE value was greater than its correlation with all other variables of the model, indicating discriminant validity of all constructs. Finally, nomological validity was also assessed as statistically significant correlations ( $p < 0.001$  or  $p < 0.05$ ) in the hypothesized direction were found for all pairs of constructs (Table 1).

**Table 1: Measurement Model**

GOF: $\chi^2 = 440.272$ , $df = 296$ , $p < 0.000$ , $\chi^2/df = 1.595$ , RMSEA = 0.055, CFI = 0.969, TLI = 0.963					
	Range	Mean	Alpha values	Factor Loadings	CR
<b>Biospheric Values (BV)</b>	4 – 20	16.47	0.963		0.958
Bio 1 Protecting the environment: preventing nature				0.975	
Bio 2 Preventing pollution				0.952	
Bio 3 Respecting the earth: live in harmony with other species				0.919	
Bio 4 Unity with nature: fitting into nature				0.835	
<b>Awareness of Consequences (AC)</b>	5 – 25	20.42	0.857		0.849
AC 1 Global warming is a problem for the society				0.705	
AC Energy savings help reduce global warming				0.922	

2								
AC	The exhaustion of fossil fuels is a problem					0.646		
3								
AC	The exhaustion of energy sources is a problem					0.643		
4								
AC	Environmental quality will improve if we use less energy					0.704		
5								
<b>Ascription of Responsibility (AR)</b>		3 – 15	9.32	0.937			0.938	
AR	I feel jointly responsible for the energy problems					0.878		
1								
AR	I feel jointly responsible for the exhaustion of energy sources					0.958		
2								
AR	I feel jointly responsible for global warming					0.903		
3								
<b>Personal Norms (PN)</b>		6 – 30	21.65	0.885			0.904	
PN1	I would be a better person if I stay in a green hotel and use environmentally friendly products and services					0.781		
PN2	I feel morally obliged to use green hotel instead of regular hotel					0.937		
PN3	People like me should do everything they can to save the environment	<i>Eliminated in MM</i>						
PN4	I feel obliged to bare the environment and nature in my mind in my travel behaviors	<i>Eliminated in MM</i>						
PN5	I feel morally obliged to use green hotels, regardless of what others do					0.897		
PN6	I feel personally obliged to save as much energy as possible					0.725		
<b>Green Trust (GT)</b>		5 – 25	15.99	0.959			0.959	
GT	I feel that the green hotel's environmental commitments are generally reliable					0.892		
1								
GT	I feel that the green hotel's environmental performance is generally dependable					0.929		
2								
GT	I feel that the green hotel's environmental argument is generally trustworthy					0.947		
3								
GT	I feel that the green hotel's environmental concern meets my expectation					0.850		
4								
GT	I feel that the green hotel keeps promises and commitment for environmental protection					0.921		
5								
<b>Visit Intentions (VI)</b>		3 – 12	9.31	0.919			0.922	
VI1	I am willing to stay at a green hotel when travelling					0.851		
VI2	I plan to stay at a green hotel when travelling					0.919		
VI3	I will make an effort to stay at a green hotel when travelling					0.908		
<b>Willingness to Pay (WP)</b>		2 – 10	7.59	0.824			0.964	
WP	I am willing to pay more for a green hotel					0.965		
1								
WP	I am willing to spend an extra amount of money in order to stay at a green hotel					0.964		
2								
		$\sqrt{AVE}$	<i>BV</i>	<i>AC</i>	<i>AR</i>	<i>PN</i>	<i>GT</i>	<i>VI</i>
<b>Biospheric Values (BV)</b>		0.922						
<b>Awareness of Consequences (AC)</b>		0.731	0.335					
<b>Ascription of Responsibility (AR)</b>		0.914	0.077	0.432				
<b>Personal Norms (PN)</b>		0.804	0.103	0.419	0.664			
<b>Green Trust (GT)</b>		0.908	0.047	0.229	0.482	0.602		
<b>Visit Intentions (VI)</b>		0.893	0.087	0.211	0.386	0.744	0.533	
<b>Willingness to Pay (WP)</b>		0.946	0.151	0.278	0.582	0.530	0.516	0.533

CR: Construct Reliability, AVE: Average Variance Extracted, MM: Measurement Model

### Structural model and hypotheses testing

The GOF values obtained by the structural model (Table 2) exceeded the recommended thresholds (Hair et al., 2010). The standardized regression weights (beta values) indicate that there are statistically significant positive effects of BV on AC, AC on AR, AR on PN and PN on Visit Intentions and Willingness to Pay a price premium in order to stay at a green hotel. Therefore, Hypotheses 1, 2, 3, 4, and 5 were supported. Further, statistically significant positive effects were detected of GT on PN and WP. Thus, Hypotheses 6 and 7 were also accepted. These results indicate that VBN model was successfully expanded with GT. The conceptual model of this study was found able to predict VI and WP and explain a considerable portion of their variance (51% in VI and 30.8% in WP).

**Table 2: Structural model and hypotheses testing**

GOF: $\chi^2=196.193$ , $df=67$ , $p<0.000$ , $\chi^2/df=1.887$ , RMSEA=0.067, CFI=0.951, TLI=0.945		
Paths	Std. Regression weights ( $\beta$ )	Hypotheses
<i>BV</i> → <i>Awareness of Consequences</i>	0.328***	H <sub>1</sub> : supported
<i>AC</i> → <i>Ascription of Responsibility</i>	0.431***	H <sub>2</sub> : supported
<i>AR</i> → <i>Personal Norms</i>	0.527***	H <sub>3</sub> : supported
<i>PN</i> → <i>Visit Intentions</i>	0.714***	H <sub>4</sub> : supported
<i>PN</i> → <i>Willingness to Pay</i>	0.366***	H <sub>5</sub> : supported
<i>Green Trust</i> → <i>PN</i>	0.424***	H <sub>6</sub> : supported
<i>Green Trust</i> → <i>WP</i>	0.290***	H <sub>7</sub> : supported
<b>R<sup>2</sup></b> Visit Intentions: 0.510, Willingness to Pay: 0.308		

\*\*  $p<0.05$ , \*\*\*  $p<0.001$

### Discussion and conclusions

The results of this study indicated that Greek consumers' intentions to visit green hotels are influenced by their personal norms, which in turn is a product of a sequential impact of their feelings of personal responsibility, their awareness of consequences and their biospheric values. These results are in line with Choi's et al. (2015) and Han (2015) studies who applied VBN model with the addition of green trust (Choi et al., 2015), or in a combination with TPB model (Han, 2015). In addition, this study found that consumers' willingness to pay a premium price is affected by their trust in green hotels' environmental practices which is in line with Yadav's results (2019). Further, consumers' who feel higher moral obligation to visit green hotels, are those who are more willing to pay a premium price for green hotels. It is important also to mention that understanding of the formulation of intentions through an extended VBN theory by the addition of green trust successfully explained (51% of VI and 30,8% of WP consumers' intentions towards green hotels).

The conclusion of this study imply that hotel managers interested in designing and implementing ecological practices should increase consumers' biospheric values, emphasize on the consequences of environmental degradation and their responsibility to mitigate it, in order to increase their feelings of moral obligation to choose green hotels and to pay a premium price for them. In addition, their communication strategies should include green certifications to increase clients' trust on their environmental practices to enhance consumers' willingness to pay more for green hotels.

### Limitations and future research suggestions

Generalization of the results is not applicable as the research was conducted just in Thessaloniki urban area by implementing non-probability sampling method (quota sampling). With regards to measurement, the variables were all adopted by previous literature and as not all of them were adapted into the specific research subject.

Future research should try to develop specific VBN measures appropriate for green hotels in the context of Greece. Larger national samples selected with a probability sampling method could facilitate generalizability. Although the extended VBN model of this study was found able to explain consumers' intentions towards green hotels, the variance which remained unexplained calls for further research for more additional factors able to understand better travelers' intentions. For example, it is suggested to add variables such as "green hotel knowledge", "media influences" "influence from advertisements" etc.

### References

- Abdou, A. H., Hassan, T. H., El Dief, M.M. (2020), "A description of green hotel practices and their role in achieving sustainable development", *Sustainability*, vol 12, (2020), article 9624.
- Agag, G. and Colmekcioglu, N. (2020), Understanding guests' behavior to visit green hotels: The role of ethical ideology and religiosity, *International Journal of Hospitality Management*, vol 91(10), pp. 1-14.
- Ajzen, I. (1991), The theory of planned behaviour, *Organizational Behaviour and Human Decision Processes*, vol 50(2), pp. 179-211.
- Chen, Y. (2010), The drivers of green brand equity: green brand image, green satisfaction, and green trust, *J. Bus. Ethics*, vol 93(2), pp. 307-319.
- Choi, H., Jang, J., Kandampully, J. (2015), Application of the extended VBN theory to understand consumers decisions about green hotels, *International Journal of Hospitality Management*, vol 51(10), pp. 87-95.
- De Groot, J. I. M., Steg, L., Dicke, M. (2007), Morality and reducing car use: testing the norm activation model of prosocial behavior, In F. Colombus, *Transportation research trends*, New York, NY: Nova Publishers.
- Delistavrou, A., Tilikidou, I. (2022), Greeks intentions to visit a green hotel: the role of perceived means and past experience, *Enlightening Tourism: A Pathmaking Journal*, vol 12-Special Issue, pp. 79-104.

- Dunlap, R. E., Van Liere, K. D. (1978). The “new environmental paradigm”. *The journal of environmental education*, 9(4), 10-19.
- Eid, R., Agag, G., Shehawy, M. Y. (2021), UNDERSTANDING GUESTS’ INTENTION TO VISIT GREEN HOTELS, *Journal of Hospitality & Tourism Research*, vol 45(3), pp. 494-528.
- Fauzi, M. A., Hanafiah, M. H., Kunjuraman, V. (2022), Tourists’ intention to visit green hotels: building on the theory of planned behavior and the value-belief-norm theory, *JOURNAL OF TOURISM FUTURES*, pp. 1-23.
- Fornell, C., Larcker, D. F. (1981), “Evaluating structural equation models with unobservable variables and measurement error”, *Journal of Marketing Research*, vol 18(1), pp. 39-50.
- Hair, J. F., Black, W. C., Balin, B. J., Anderson, R. E. (2010), “Multivariate data analysis”, Maxwell Macmillan International Editions.
- Han, H. (2015), Travelers' pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior, *Tourism Management*, vol 47(4), pp. 164-177.
- Han, H., Hsu, L. T. Lee, J. S. (2009), “Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers’ eco-friendly decision-making process”, *International Journal of Hospitality Management*, vol 28 (2009), pp. 519-528.
- Han, H., Hsu, J., Sheu, C. (2010), Application of the Theory of Planned Behavior to green hotel choice: Testing the effect of environmental friendly activities, *Tourism Management*, vol 31(6), pp. 325-334.
- Han, H. and Kim, Y. (2010), Intention to pay conventional-hotel prices at a green hotel –a modification of the theory of planned behavior, *Journal of Sustainable Tourism*, vol 18(8), pp. 997-1014.
- Henry, A.D. and Dietz, T. (2012), Understanding environmental cognition. *Organ. Environ*, vol 25(3), pp. 238-258.
- Ioannidis, A., Chalvatzis, K. J., Leonidou, L. C., Feng, Z. (2021), “Applying the reduce, reuse, and recycle principle in the hospitality sector: Its antecedents and performance implications”, *Business Strategy and the Environment*, vol 30(7), pp. 3394-3410.
- Jakovcevic, A., Steg, L. (2013), Sustainable transportation in Argentina: values, beliefs, norms and car use reduction. *Transp. Res. Part F: Traffic Psychol. Behav.* 20, 70–79.
- Kang, K. J., Stein, L., Yoonjoung, C. H., L, S. (2012), Consumers’ willingness to pay for green initiatives of the hotel industry, *International Journal of Hospitality Management*, vol 31(2), pp. 564-572.
- Klockner, C. A. (2013), A comprehensive model of the psychology of environmental behavior- a meta analysis, *Global Environmental Change*, vol 23, pp. 1028-1038.
- Kularatne, T., Wilson, C., Mansson, J., Hoang, V., Lee, B. (2019), Do environmentally sustainable practices make hotels more efficient? A study of major hotels in Sri Lanka, *Tourism Management*, vol 71(4), pp. 213-225.
- Manaktola, K., Jauhari, V. (2007), Exploring consumer attitude and behavior towards green practices in the lodging industry in India, *Int. J. Contemp. Hosp. Manage*, vol 19(5), pp. 364–377.
- Millar, M. and Baloglu, S. (2009), A Green Room Experience: A Comparison of Business & Leisure Travelers’ Preferences, *Hospitality Management of School of Management*, San Francisco, Paper 10.
- Nimri, R., Patiar, A., Jin, X. (2022), The impact of message framing on travellers’ behavioral intentions towards green hotels, *CONSUMER BEHAVIOR IN TOURISM AND HOSPITALITY*, vol 17(3), pp. 249-263.
- Quoquab, F., Thurasamy, R. Mohammad, J. (2018), “Driving Green Consumerism Through Strategic Sustainability Marketing”, *IGI Global*, United States.
- Rahman, I. and Reynolds, D. (2016), “Predicting green hotel behavioral intentions using a theory of environmental commitment and sacrifice for the environment”, *International Journal of Hospitality Management*, Vol. 52, pp. 107-116.
- Slevitch, L., Mathe, K., Karpova, E., Scott-Halsell, S. (2013), “Green” attributes and customer satisfaction: optimization of resource allocation and performance. *Int. J. Contemp. Hosp. Manage.* 25 (6), 802–822.
- Steg, L., Dreijerink, L., Abrahamse, W. (2005), Factors influencing the acceptability of energy policies: a test of VBN theory, *Journal of Environmental Psychology*, vol 25(4), pp. 415–425.
- Stern, P. C. (2000), Toward a Coherent Theory of Environmentally Significant Behavior, *Journal of Social Issues*, vol 56(3), pp. 407-424.
- Schwartz, S. H. (1977), “Normative Influences on Altruism” In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*, vol 10, pp. 221-279, New York: Academic Press.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In *Advances in experimental social psychology* (Vol. 25, pp. 1-65). Academic Press.
- Tilikidou, I., Delistavrou, A., Sapountzis, N. (2014), Customers’ Ethical Behavior towards Hotels, *Procedia Economics and Finance*, vol 9, pp. 425-432.
- Ture, R. S. and Ganesh, M. (2014), Understanding pro-environmental behaviours at workplace: proposal of a model, *Asia Pasific Journal of Management Research and Innovation*, vol 10(2), pp. 137-145.
- Verma, V. K. and Chandra, B. (2017), “An application of Theory of Planned Behavior to Predict Young Indian Consumers’ Green Hotel Visit Intention”, *Journal of Cleaner Production*.



Wang, L., Weng Wong, P. P., Elangkovan, A. (2020), The Influence of Religiosity on Consumer's Green Purchase Intention Towards Green Hotel Selection in China, *JOURNAL OF CHINA TOURISM RESEARCH*, vol 16(3), pp. 319-345.

Wang C. P., Zhang, Q., Wong P. P. W., Wang, L. (2023) Consumers' green purchase intention to visit green hotels: A value-beliefnorm theory perspective. *Front. Psychol.*

Yadav, R., Balaji, M. S., Jebarajakirthy, C. (2019), "How psychological and contextual factors contribute to travelers' propensity to choose green hotels?", *International Journal of Hospitality Management*, 77(1), pp. 385-395.

Yadav, R., Dokania, A. K., Pathak, G. S. (2016). The influence of green marketing functions in building corporate image. *International Journal of Contemporary Hospitality Management*, 28(10), 2178-2196.

Yarimoglu, E. and Gunay, T. (2020), "The extended theory of planned behavior in Turkish customers' intentions to visit green hotels", *Business Strategy and the Environment*, (11), pp. 1-12.

**Webpages**

Green Hotels Association (2022), "What is a Green Hotel?", <http://greenhotels.com/index.php>, [retrieved at 15-01-2022]

Green Key (2021), "MAP OF ALL THE GREEN KEY SITES IN THE WORLD", <https://www.greenkey.global/>, [retrieved at 15-01-23]

## Teaching e-consumer behaviour deploying Facebook page interactions among students

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### Abstract:

Social media are used by students and by universities for a variety of reasons including social connectivity, community discussions, participation and learning. Higher education students who are often disappointed by their learning experience, may welcome social media as a way to improve their experience and reach their learning goals. By deploying exploratory qualitative research followed by a quantitative study to validate the connection between student learning inputs and outputs, this paper aims to demonstrate how the use of Facebook as a learning tool in an e-consumer behaviour assignment achieved reaching course learning outcomes. The research sample will consist of MSc in Digital Marketing graduates and undertook an assignment based on a Facebook page management. For the purposes of the assignment students assumed the role of a digital marketer, while some of their classmates were assigned the roles of customers and/or Facebook community members.

**Keywords:** *Marketing education, distance learning, social media*

### • 1. Introduction

Teaching Consumer Behaviour in a distance learning program (MSc in Digital Marketing) is very challenging, as it requires a lot of commitment and interaction, to sustain the engagement of students and keep them active and interested. To teach digital consumer behaviour we have created a peer-learning role-play exercise where students have to create and update a Facebook page, improving and enhancing the content, as per the mandates of theory. The assignment includes interaction with classmates where students take both the roles of consumers and Facebook page owners/ digital marketing executives. Upon the completion of the interaction, in the end of the semester, all students have to submit a journal/ reflective report that was informed every 2 weeks during the course of the assignment for a period of three months. In the report students presented and justified their decisions regarding the content generation of the Facebook page and explained the subsequent “audience” reactions along with their responses to them.

Despite the fact that social media are integrated in the higher education setting, their effect on achieving learning outcomes has not been empirically verified yet (Lacka et al., 2021). By deploying exploratory in-depth interviews and subsequently by connecting higher education inputs and outputs, we are aiming to demonstrate the suitability of social media usage in teaching social media related courses, such as e- consumer behaviour. More specifically, in this paper we discuss the education effectiveness of using a role-play based social media assignment, to generate learning, knowledge transfer, cognition, digital marketing skill and to achieve psychological objectives.

- **2. Literature review**

Social media were not created for educational purposes and therefore some argue that they have little educational use (Hew, 2011). Hew (2011) maintains that students mainly use social media for social purposes rather than for joint studying. Moreover, social media are not deployed by students for peer interaction and group learning (Manca & Ranieri, 2016) and they may lead to information surplus, that is difficult to be processed due to the time needed to engage with them (Gao et al., 2012). Lau (2017) supports that social media application in higher education may create unwanted results on student performance. Such an outcome, along with ethical issues connected to social media deployment, including social exclusion, digital dividedness, and privacy, challenge the appropriateness of social media deployment in the higher education setting (Meier et al., 2016; Timmis et al., 2015; Hew, 2011).

- **2.1. Social Media in Higher Education**

Currently, the vast majority of students are digital natives and never experienced a world without access to the internet. Additionally, social media are utilized by universities especially as a way of maintaining the connection with students and alumni. For that reason, several universities, schools and departments have profiles/accounts on several social networks encouraging and enabling interactions among students and faculty. Mason and Rennie (2007) suggest that young people are excited to communicate with their university communities and such communication enhances their persistence and motivation to learn. Taking into consideration a recent Student Academic Experience Survey (2019), documenting that most of the students have mixed feelings or disappointments from their university experience there is a need for improving the student experience, possibly by adopting social media to support students achieve their educational goals (Waheed et al., 2020).

- **2.2. Teaching social media, the benefits of simulations**

The Facebook platform is one of the media used by students, affecting their social trust, participation, and engagement with politics (Valenzuela et al., 2008). Additionally, research underlines the importance of social media as enablers of college adjustment, especially for the period that starts right before the enrolment and lasts till the end of the first semester (DeAndrea et al., 2012). As far as learning objectives are concerned, Nkhoma et al. (2016), developed a model regarding student motivation in learning that is founded upon the four most prominent Facebook platform characteristics, namely, interaction, communication, social relationships and participation in groups and community, which presents the benefits a university class could earn by using the platform.

The moderate usage of digital technologies in teaching digital natives seems to be well grounded in the literature (Margaryan et al., 2011). In an earlier attempt to approach real business life examples through digital means, McEvoy (1998), asked students to create videos presenting optimum organizational behaviour skills. Lyons (2008) moved one step forward, encouraging students to go beyond case study analysis, and work on writing scripts and participate in role-plays, to demonstrate sales related skills. Humans are social animals that enjoy forming communities with peers with similar interests (Homans, 1974). Teams of university students, motivate them to put more effort in their work especially when the team dynamic is harmonious. When teams are not harmonious, they could exhibit a number of problems, including free riding (where some students invest far less work than others), or on occasions competent students reducing their efforts to block their colleagues' free riding (Comer, 1995). Unavoidably, in some cases the high-achieving students may find ways to reject less skilful or driven colleagues, to stop free riding (Freeman & Greenacre, 2011).

- **2.3. Technology acceptance in education**

A teaching activity is considered to be effective and targeted, when it requires student concentration and engagement (Bacon & Stewart, 2021), an effective teaching activity leads to the achievement of specific learning outcomes since it is widely acknowledged that students engaging in learning activities achieve learning. Chickering and Gamson (1987) explain, that there is no substitute for time on task. McKeachie et al. (1990) confirm and develop this viewpoint, suggesting that time spend on tasks is an important learning parameter, but also the task content as well as the task complication are also critical learning parameters. Learning tasks should include student engagement on learning objectives, similar to those used in the assessment of their performance. In cases where student performance is solely assessed with tests and writing exams, student engagement is not strong enough to create learning student engagement is necessary but not sufficient for learning to occur (McIntyre & Munson, 1986). Such engagement must be focused on desired cognitive and behavioural learning outcomes (Naumes, 1993).

To analyse how social media adoption by university students can help the achievement of the course learning outcomes, the work by of Davis (1989) and Davis et al. (1989) can be found very useful. Especially their Technology Acceptance Model (TAM), based on the theory of reasoned action (Fishbein and Ajzen, 1975),

examines technology from the user viewpoint, and in terms of user easiness and perceived usefulness. In our study, social media deployment will be analysed as a way students can reach their goals since the TAM has already been used in many similar studies, as a predictor of users' intentions towards technology (Chen et al., 2010, 2011). Hence, the current research focus is on how and to what extent, the experience of the assignment based on a Facebook page interaction among students, can be found suitable in reaching the e-consumer behaviour class learning outcomes from an input-output perspective.

### • 3. Methodology

We aim to explore whether peer-learning and role-play improve social media communication education. By default, social media communication through Facebook pages, includes a dialectical process where the interaction among students is facilitates: a) the understanding of the topic of two-way communication operationalized via social media; and b) meeting the learning goals of students. We propose that the peer-learning Facebook assignment that includes a role-play is suitable to enable:

1. Student satisfaction,
2. Ability to promote products through social media in real-life
3. Achieving the consumer behaviour course learning objectives

To fulfil the research objectives a two-phase study will be implemented. In the first part, the study explores student inputs and outputs, in an effort to measure student efficacy (Xue & Harker, 2002). In this phase we will deploy semi-structured in-depth interviews to acquire a holistic understanding of students' inputs and outputs from the interactive assignment used in an e-consumer behaviour course, at Masters level.

In the second phase of the study, we will classify the main inputs and outputs into specific constructs proceeding to quantitative using a questionnaire. The questionnaire will be sent to the students who completed the role-playing Facebook assignment aiming to populate a sample sufficient to run structural equation modelling, to connect inputs with outputs.

### • 4. Expected findings

Students that participate in distance learning programs, have fewer opportunities to interact with their peers. The diminished levels of interactions and lack of opportunities for integration interaction undermines the educational process. Giving them the opportunity to interact in the setting of a social medium, excited them as it combines educational processes with opportunities of anticipated social interaction.

Especially, when it comes to a role play of commercial social media usage, such interaction including creating campaigns and interacting with customers, is positioned in the centre of digital media deployment. Social media education, can prepare students to be ready to create marketing content and to engage in online conversations with their audience. The role-play assignment created, gives students the opportunity to engage in online correspondence with their peers acting as digital communication experts and customers at the same time, providing them with a valuable, hands-on experience.

This learning activity has the potential to facilitate students to better understand the competencies they need to improve since they apply consumer behaviour theory on Facebook having the roles of digital marketing executives/ Facebook page owners and Facebook users' customers at the same time. By deploying social media, (in our case Facebook), students can better understand the theory and the study the course material. This assignment requires less inputs producing enhanced outputs, better preparing master students for exams and the current real world.

### • References

- Bacon, D. R., & Stewart, K. A. (2022). What Works Best: A Systematic Review of Actual Learning in Marketing and Management Education Research. *Journal of Marketing Education*, 44(1), 6-24.
- Chen, J., Park, Y., & Putzer, G. J. (2010). An examination of the components that increase acceptance of smartphones among healthcare professionals. *Electronic journal of health informatics*, 5(2), 1-12.
- Chen, K., Chen, J. V., & Yen, D. C. (2011). Dimensions of self-efficacy in the study of smart phone acceptance. *Computer Standards & Interfaces*, 33(4), 422-431.
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE bulletin*, 3, 7.
- Comer, D. R. (1995). A model of social loafing in real work groups. *Human relations*, 48(6), 647-667.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Q* 13 (3): 319.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, 35(8), 982-1003.

- DeAndrea, D. C., Ellison, N. B., LaRose, R., Steinfield, C., & Fiore, A. (2012). Serious social media: On the use of social media for improving students' adjustment to college. *The Internet and higher education*, 15(1), 15-23.
- Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.
- Freeman, L., & Greenacre, L. (2011). An examination of socially destructive behaviors in group work. *Journal of Marketing Education*, 33(1), 5-17.
- Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008–2011. *British Journal of Educational Technology*, 43(5), 783-801.
- Hew, K. F. (2011). Students' and teachers' use of Facebook. *Computers in human behavior*, 27(2), 662-676.
- Homans, G. C. (1974). Social behavior: Its elementary forms.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, 53(1), 59-68.
- Lacka, E., Wong, T. C., & Haddoud, M. Y. (2021). Can digital technologies improve students' efficiency? Exploring the role of Virtual Learning Environment and Social Media use in Higher Education. *Computers & Education*, 163, 104099.
- Lau, W. W. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in human behavior*, 68, 286-291.
- Manca, S., & Ranieri, M. (2013). Is it a tool suitable for learning? A critical review of the literature on Facebook as a technology-enhanced learning environment. *Journal of Computer Assisted Learning*, 29(6), 487-504.
- Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & education*, 56(2), 429-440.
- Mason, R., & Rennie, F. (2007). Using Web 2.0 for learning in the community. *The Internet and higher education*, 10(3), 196-203.
- McEvoy, G. M. (1998). Answering the challenge: Developing the management action skills of business students. *Journal of Management Education*, 22(5), 655-670.
- McEvoy, G. M., & Cragun, J. R. (1987). Management skill-building in an organizational behavior course. *Organizational Behavior Teaching Review*, 11(4), 60-73.
- McKeachie, W. J., Pintrich, P. R., Lin, Y., Smith, D. A. F., & Sharma, R. (1990). Teaching and learning in the college classroom: A review of the research literature (2nd ed.). *National Center for Research to Improve Post-Secondary Teaching and Learning*.
- McIntyre, S. H., & Munson, J. M. (2008). Exploring cramming: Student behaviors, beliefs, and learning retention in the principles of marketing course. *Journal of Marketing Education*, 30(3), 226-243.
- Meier, A., Reinecke, L., & Meltzer, C. E. (2016). "Facebocrastination"? Predictors of using Facebook for procrastination and its effects on students' well-being. *Computers in Human Behavior*, 64, 65-76.
- Naumes, M. J. (1993). A comparison of two teaching designs using The Organization Game as a measure of outcome performance. *Journal of Management Education*, 17(3), 360-373.
- Lyons, P. (2008). Case-based modeling for learning management and interpersonal skills. *Journal of Management Education*, 32(4), 420-443.
- Nkhoma, M., Lam, T., Richardson, J., Kam, K., & Lau, K. H. (2016, May). Developing case-based learning activities based on the revised Bloom's Taxonomy. In *Informing Science & IT Education Conference (In SITE)* (pp. 85-93).
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *Cyberpsychology & behavior*, 12(6), 729-733.
- Saber, J. L., & Johnson, R. D. (2008). Don't throw out the baby with the bathwater: Verbal repetition, mnemonics, and active learning. *Journal of Marketing Education*, 30(3), 207-216.
- Student Academic Experience Survey. (2019) accessed 16th April 2023 <https://www.hepi.ac.uk/wp-content/uploads/2019/06/Student-Academic-Experience-Survey-2019.pdf>.
- Timmis, S., Broadfoot, P., Sutherland, R., & Oldfield, A. (2016). Rethinking assessment in a digital age: Opportunities, challenges and risks. *British Educational Research Journal*, 42(3), 454-476.
- Valenzuela, S., Park, N., & Kee, K. F. (2008, April). Lessons from Facebook: The effect of social network sites on college students' social capital. In *9th International Symposium on Online Journalism* (pp. 4-5).
- Waheed, H., Hassan, S. U., Aljohani, N. R., Hardman, J., Alelyani, S., & Nawaz, R. (2020). Predicting academic performance of students from VLE big data using deep learning models. *Computers in Human behavior*, 104, 106189.
- Xue, M., & Harker, P. T. (2002). Customer efficiency: Concept and its impact on e-business management. *Journal of Service Research*, 4(4), 253-267.

## Consumer behavior in the metaverse: a review, synthesis and research agenda

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### Abstract:

Statista (2022) estimated that 25% of the world's population will spend at least an hour a day on the metaverse by 2026. By then, approximately 30% of organizations would be products/services-ready for the metaverse (Statista, 2022). This predicted surge in the adoption of the metaverse by consumers and organizations began attracting investments from the business and academic fraternity in attempting to understand the nuances of this parallel virtual universe. While large firms such as Meta, Microsoft, and Nvidia continue investing in this virtual, digital, and three-dimensional universe (Barrera & Shah, 2022), academically too, 2022 has been a windfall for academic contributions. Significant research continues to be undertaken to decipher the metaverse ecosystem, with journals rolling out calls for papers focused on metaverse and its possibilities.

Our study of the emerging metaverse literature finds it still fairly broad-based, fragmented, and leaning predominantly towards a technology focus. AR (Augmented Reality) & VR (Virtual Reality) dominate research, and most of the discourse advocates progress of technology and its adoption. With the metaverse heralding newer avenues for social interaction, entertainment, and commerce, it has become critical to develop a sharper understanding of evolving consumers, their motivations, differences in individual self-concept, need to self-project differently, their purchase journey and other such consumer dimensions.

Since the metaverse is still an emerging arena, we start this paper by first examining its various conceptualizations and the primary building blocks that are likely to facilitate its evolution. Given the unique characteristics of metaverse, there have been calls for research to examine the differential impact of this parallel virtual universe on consumers' decision-making process (Gursoy et al., 2022). Responding to these calls, we contribute towards the need for understanding how consumers are likely to engage differently with marketing stimuli in the metaverse by conducting an elaborate review of literature on consumer behavior in the metaverse. We address the following 3 research questions (RQs):

- 1) What factors drive consumers to the metaverse and hence which marketing/metaverse environmental stimuli are likely to impact consumer decision-making?
- 2) How will the above impact of different stimuli on consumer decision-making vary with different consumer types/ personalities? and
- 3) What potential areas of research need addressing from a consumers' decision-making perspective as the metaverse evolves?

We use the lens of stimulus-organism-response (S-O-R) framework (Mehrabian & Russell, 1974) to address the first two questions. We believe our summarized frameworks will be useful to scholars for further studying consumer behavior in the metaverse. We then analyse various theoretical lenses through which consumer behavior can be explored in the metaverse and finally propose a detailed research agenda that researchers may want to explore.

### Decoding the Metaverse

Metaverse comes from the combination of the words meta and universe (Jeong et al., 2022). While earlier conceptualizations of metaverse look at it primarily from a three-dimensional virtual world perspective, our review of recent metaverse literature conceptualizes metaverse as having four key components a) **user inhabitation** (Belk et al., 2022) b) **interconnectedness** of multiple virtual worlds (Dionisio, 2013) c) **immersiveness** (Aloqaily, 2022) and d) a **socially interactive and co-created world** (Gursoy et al., 2022). We

provide an explanation and summarize our conceptualization of metaverse (Figure 1), along with detailing each of these four components.

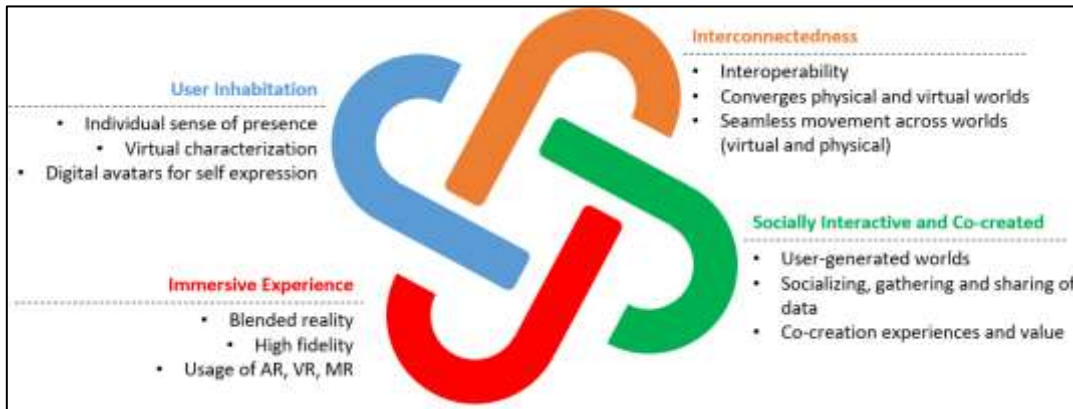


Figure 1: Metaverse conceptualization

**User inhabitation:** Metaverse allows individuals to express themselves through pre-formed characters and/ or by creating digital avatars different from their real selves (Belk et al., 2022). It gives consumers a feeling of tenancy and an individualistic power unknown in the real world. **Interconnectedness:** Allows consumers to seamlessly move from one world to another, carrying their identities, characteristics, and belongings with them (Dionisio, 2013). It unites both the real and virtual worlds with seamless transportability of data. **Immersive Experience:** The use of AR, VR, and MR (Mixed Reality) heightens the blending of worlds, helped by the fidelity of these technologies (Aloqaily, 2022). **Socially Interactive and Co-created:** Mingling, socially communicating, and sharing are essential to human beings. Metaverse provides opportunities for consumers to socialize and co-create content and experiences (Gursoy et al., 2022).

These 4 components, important from the consumer behavior perspective in the metaverse need fundamental building blocks in place for subsistence and growth. The metaverse layers that form this foundation are discussed next.

**Layers that build the Metaverse**

Our review of the literature reveals three key layers (Figure 2) serving as building blocks of the metaverse. 8 components within these 3 layers play an instrumental role in the full realization of metaverse. Layer 1, which we label **Capability**, includes robust networks, hardware advancements, and increasing processing power, forming the bedrock of metaverse growth (Hollensen et al., 2022). These need to be supported by Layer 2 of **Enablers**, a set of standard protocols, enhancements in security features, and decentralization of authority (Barrera & Shah, 2023). The topmost Layer 3, of **Applications**, comprises engaging content and user-friendly design capability of marketers and platform providers (Hollensen et al., 2022). Achieving maturity across all three layers will be a prerequisite to support metaverse adoption.

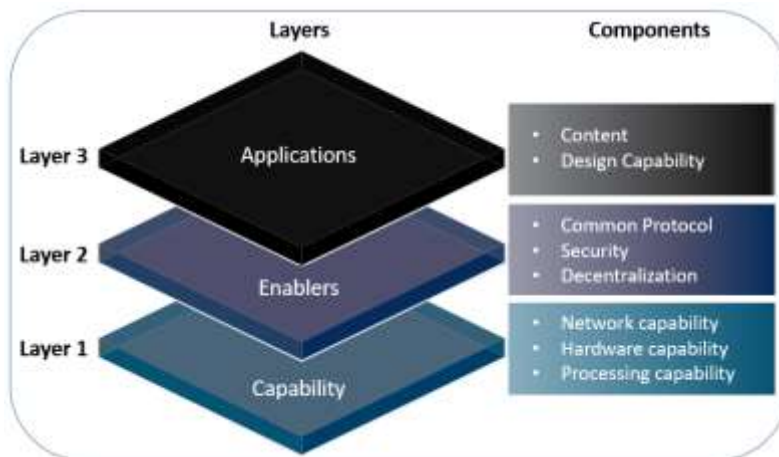


Figure 2: Metaverse layers

This conceptualization of metaverse layers led us to the review of literature with the objective of addressing our RQs related to consumer behavior in the metaverse.

### Method: Literature identification

Following the approach by Melacini et al. (2018), a systematic review of studies (Figure 3) was conducted with the words "Metaverse" and "Consumer" in either the title or abstract of the papers (from Scopus listed journals), to ensure focus. Out of the 42 articles that emerged, 5 articles that were not relevant to consumer behavior in the metaverse were dropped. The balance 37 studies were manually reviewed and thematized by 2 researchers. All articles were reviewed by two researchers, and the factors impacting consumer behavior were classified under 11 primary themes. These primary themes and their sub-themes were discussed next.

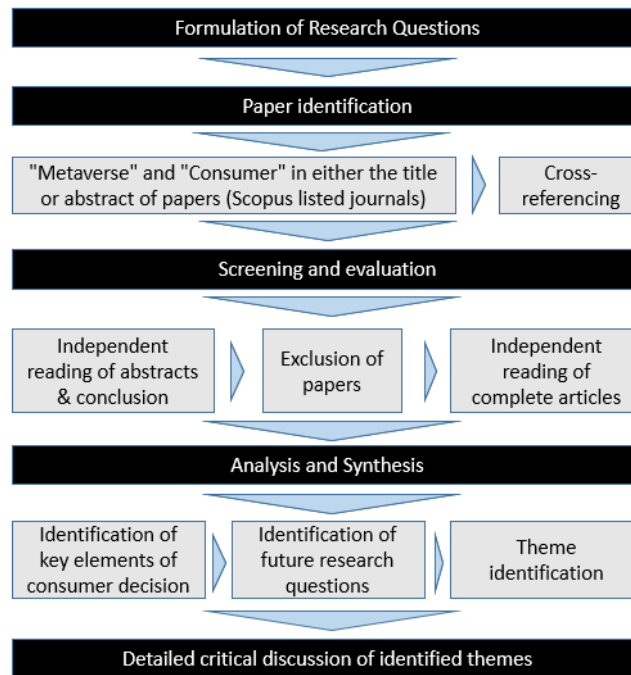


Figure 3: Review and classification process

### An integrative framework for enhanced understanding of consumer behavior in Metaverse

The factors impacting consumer behavior were studied through the lens of S-O-R framework (Mehrabian & Russell, 1974). Zhang et al. (2016) established S-O-R as a useful framework for understanding consumers' intent and behavior on a computer-mediated environment. The 11 Themes and 32 Sub-themes that emerged from our study were classified into Stimulus or Organism or a Response from the consumer (Figure 4). A detailed discussion on each primary theme and sub-theme revealed the potential implications for progress in academic understanding and managerial implications.

Stimuli (S) that were identified as potentially impacting behavior were grouped under the themes of 'Experiential', 'Participative', 'Ownership', 'Communique', and 'Assurance'. The elements included here focussed on different components of consumer value, including Experiential value (engagement and realism related), Social value (social residency), Perceived control (co-creation of experience, personalization), Functional value (ownership) and the reduced Perceived risk (security and well-being). Stimuli also included how the delivery of the message (messenger, media, mechanism) may be influencing consumer decision-making in the metaverse.

Organism (O) factors that relate to cognitive and affective states of consumers were clubbed under the themes of 'Characteristics', 'Inducement', and 'Persuasion'. While consumers' individualities like traits and capabilities play a role in how their minds cogitate the Metaverse experience, the degree of aspirations and motivation induce the push towards self-expression and self-identity.

Finally, Response (R) was thematized as 'Thinking', 'Acting', and 'Reflecting'. These themes included reactions by consumers to different marketing/metaverse stimuli depending on their individual characteristics,



traits, and motivations. Responses include consumers’ mental formation of views (awareness, attitude, evaluation, intention), manifestation into actions (coping through adoption/avoidance, engagement), and post-engagement reflections (loyalty/advocacy).

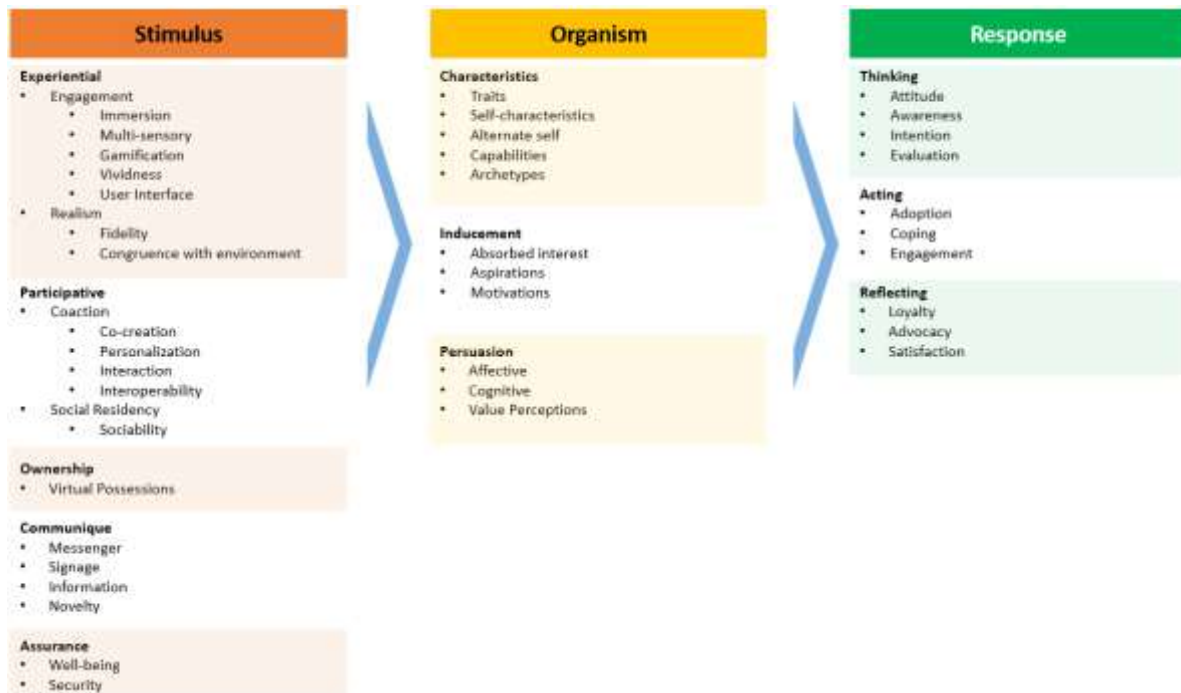


Figure 4: Factors impacting consumer behavior in the metaverse: S-O-R lens

Post integrating the findings from past studies, the noteworthy theories providing explanatory power to factors influencing consumer behavior were elucidated. 26 such theories were identified and grouped under 8 broad themes of Presence, Information processing, Sociability, Technology adoption, Media usage, Value assessment, Imagery and Self-related. We explored the potential application use-cases of these theories in consumer behavior in the metaverse.

### Directions for future research

We finally propose a detailed theoretical and methodological research agenda specifically related to consumer behavior in the metaverse (Figure 5). The theoretical agenda was categorized under ‘Ecosystem Design’, ‘Virtual possession’, ‘Communique’, ‘Consumer-centric’, and ‘Consumer well-being’ related themes. The sub-themes and potential research ideas under each sub-theme were then elucidated.



Figure 5: Directions for future research

## Conclusion

This study contributes academically by bringing together and integrating existing studies that are topically fragmented, uncovering the emerging themes of factors influencing consumer behavior and proposing potential directions for research. Given the high business potential of the metaverse, our study provides inputs to practicing managers by highlighting the marketing stimuli and consumer level moderating factors that they can leverage to garner engagement in the metaverse. Further, with the seamless interoperability across virtual and physical environments that metaverse facilitates, marketers may also want to embed the learnings integrating both environments (real and virtual) as they design and promote their offerings.

**Keywords:** *Metaverse, consumer behavior, S-O-R, virtual reality, augmented reality*

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## References:

- Aloqaily, M., Bouachir, O., Karray, F., Al Ridhawi, I., & El Saddik, A. (2022). Integrating Digital Twin and Advanced Intelligent Technologies to Realize the Metaverse. *IEEE Consumer Electronics Magazine*.
- Barrera, K. G., & Shah, D. (2023). Marketing in the metaverse: Conceptual understanding, framework, and research agenda. *Journal of Business Research*, 155, 113420.
- Belk, R., Humayun, M., & Brouard, M. (2022). Money, possessions, and ownership in the Metaverse: NFTs, cryptocurrencies, Web3 and Wild Markets. *Journal of Business Research*, 153, 198-205.
- Dionisio, J. D. N., III, W. G. B., & Gilbert, R. (2013). 3D virtual worlds and the metaverse: Current status and future possibilities. *ACM Computing Surveys (CSUR)*, 45(3), 1-38.
- Gursoy, D., Malodia, S., & Dhir, A. (2022). The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions. *Journal of Hospitality Marketing & Management*, 31(5), 527-534.
- Hollensen, S., Kotler, P., & Opresnik, M. O. (2022). Metaverse—the new marketing universe. *Journal of Business Strategy*, (ahead-of-print).
- Jeong, H., Yi, Y., & Kim, D. (2022). An innovative e-commerce platform incorporating metaverse to live commerce. *International Journal of Innovative Computing, Information and Control*, 18(1), 221-229.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. The MIT Press.
- Melacini, M., Perotti, S., Rasini, M., & Tappia, E. (2018). E-fulfilment and distribution in omni-channel retailing: a systematic literature review. *International Journal of Physical Distribution & Logistics Management*, 48(4), 391-414.
- Statista (2022). Estimated Metaverse Use Case among Consumers and Businesses Worldwide in 2026. Retrieved from: <https://www.statista.com/statistics/1290160/rejected-metaverse-use-reach-global-consumers-businesses>
- Zhang, K. Z., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision support systems*, 86, 95-108.

## Unveiling consumers' behaviours in amusement arcades and games

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### **Purpose.**

The main purposes of this paper are two-fold: first, to analyze the state of the art of amusement arcades and games without cash winnings; second, to understand young consumers' behaviour and motivations as well as potential risk factors connected with their future propensity to use games with cash winnings.

### **Background.**

The study, which the Amusement Arcade Associations financed, is related to the ongoing debate in Italy on the tendency to assimilate games without cash winnings (either amusement arcade or games and ticket redemption) to the ones with cash winnings (gambling) to shed light on a phenomenon that is still scarcely studied. The lack of current legislation and the different views of producers/institutions/associations require clarifying the nature of a phenomenon that still needs to be sufficiently explored.

### **Methodology.**

This study presents the main results of a systematic literature review (SLR) and a qualitative analysis.

The first step of the research is to investigate existing knowledge and systematically review the available information on the topic at the national and international levels using the PRISMA methodology (Moher et al., 2015). The search was developed on the Scopus database.

Second, the qualitative survey aims to outline the profile of the young players by investigating their behaviour related to amusement arcades and games. The target of empirical research is the sample of children and adolescents in Italy who are used to attending the amusement arcades and the accompanying adults (such as grandparents, parents, and relatives). The qualitative study was organized in six focus groups involving children/adolescents and parents/grandparents, and 32 in-depth interviews with young adults from 18 to 30 years, developed through digital platforms. The recruitment was designed with a snowball approach representing the North, Centre and South of Italy.

### **Results and findings.**

Regarding the SLR, a total of 680 articles were collected, of which 47 were selected for this study. The total number of papers selected is broken down into 12 records focused on amusement, 25 on gambling and ten on the comparison between gambling and amusement. The study revealed a need for more significant research on this topic. Furthermore, it was not possible to document the presence of risk factors in skill games (with or without ticket redemption) played in amusement arcades. To overcome this gap, the need to carry out an extensive and scientifically rigorous study on the effects of this type of game on the target group of children and/or adolescents emerged.

The qualitative phase showed that children and young people frequent amusement arcades up to about 18 years of age. Ticket redemption is most popular among 25–30-year-olds, and games with cash winnings are popular among 18–30-year-olds. The analysis revealed a homogeneity in ticket redemption perceptions regarding geographical location and the two target groups. Amusement arcades are perceived as meeting places with friends and new ones, especially in winter. The most popular are games of skill and movement (sports-related games). There are different views on tickets: from teenagers' point of view, tickets are an uninteresting element for older people, while ticket-related prizes arouse interest in younger children. Older children often give them as gifts to younger children. Considering parents, they showed different views; some are against (they can bring people closer to gambling); others are indifferent (their children show no interest in tickets); some are in favour (they are a gift to make the children happy and they come home with something).

### **Conclusion.**

The originality of this study is that it unveils knowledge on an understudied phenomenon, the amusement arcades and games and possible implications related to the social behaviour of young adults with the gambling phenomenon. Nevertheless, the following research has some limitations; firstly, the analysis of a single country and then the small sample size, which determines the need to develop a broader quantitative investigation necessary to confirm and generalize the results and examine the risk and protective factors identifying managerial solutions to mitigate the risk.

### Keywords

*Amusement arcades, amusement games, ticket redemption, consumers' behavior, gambling, SLR, qualitative survey.*

### References

- Armstrong, T., Rockloff, M., Browne, M., & Li, E. (2018). An exploration of how simulated gambling games may promote gambling with money. *Journal of gambling studies*, 34(4), 1165-1184.
- Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction*, 97(5), 487-499.
- Byrne, A. (2004). An exploratory study of Internet gambling among youth. *Unpublished master thesis, McGill University, Montreal.*
- Canale, N., Griffiths, M. D., Vieno, A., Siciliano, V., & Molinaro, S. (2016). Impact of Internet gambling on problem gambling among adolescents in Italy: Findings from a large-scale nationally representative survey. *Computers in Human Behavior*, 57, 99-106.
- Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & education*, 59(2), 661-686.
- Delfabbro, P., King, D., Lambos, C., & Puglies, S. (2009). Is video-game playing a risk factor for pathological gambling in Australian adolescents?. *Journal of Gambling Studies*, 25(3), 391-405.
- Dixon, M. R., Whiting, S. W., Gunnarsson, K. F., Daar, J. H., & Rowsey, K. E. (2015). Trends in behavior-analytic gambling research and treatment. *The Behavior Analyst*, 38(2), 179-202.
- Fisher, S. (2000). Developing the DSM-IV-TR criteria to identify adolescent problem gambling in non-clinical populations. *Journal of gambling studies*, 16(2-3), 253-273.
- Gainsbury, S. M., Russell, A., Hing, N., Wood, R., Lubman, D. I., & Blaszczynski, A. (2014). The prevalence and determinants of problem gambling in Australia: Assessing the impact of interactive gambling and new technologies. *Psychology of Addictive Behaviors*, 28(3), 769.
- Kaplan, S. J. (1983). The image of amusement arcades and differences in male and female video game playing. *Journal of Popular Culture*, 17(1), 93.
- Kessler, R. C., Hwang, I., LaBrie, R., Petukhova, M., Sampson, N. A., Winters, K. C., & Shaffer, H. J. (2008). DSM-IV pathological gambling in the National Comorbidity Survey Replication. *Psychological medicine*, 38(9), 1351-1360.
- Kristiansen, S., Trabjerg, M. C., Lauth, N. R., & Malling, A. (2018). Playing for fun or gambling for money: a qualitative longitudinal study of digitally simulated gambling among young Danes. *Young Consumers*.
- Langhinrichsen-Rohling, J., Rohde, P., Seeley, J. R., & Rohling, M. L. (2004). Individual, family, and peer correlates of adolescent gambling. *Journal of Gambling Studies*, 20(1), 23-46.
- Mcbride, J., & Derevensky, J. (2012). Internet gambling and risk-taking among students: An exploratory study. *Journal of Behavioral Addictions*, 1(2), 50-58.
- McBride, J., & Derevensky, J. (2017). Gambling and video game playing among youth. *Journal of Gambling Issues*, (34).
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, 4(1), 1.
- Sharma, A., & Sacco, P. (2015). Adverse childhood experiences and gambling: Results from a national survey. *Journal of Social Work Practice in the Addictions*, 15(1), 25-43.
- Steenbergh, T. A., Meyers, A. W., May, R. K., & Whelan, J. P. (2002). Development and validation of the Gamblers' Beliefs Questionnaire. *Psychology of addictive behaviors*, 16(2), 143.
- Stevens, M., & Young, M. (2010). Who plays what? Participation profiles in chance versus skill-based gambling. *Journal of Gambling Studies*, 26(1), 89-103.
- Tejeiro, R. A., Gómez-Vallecillo, J. L., Pelegrina, M., Wallace, A., & Emberley, E. (2012). Risk factors associated with the abuse of video games in adolescents. *Psychology*, 3(04), 310.

# Patient-consumers' perceptions and attitudes about the effectiveness and safety of dietary supplements

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## **Abstract:**

Dietary supplements' use and market size is growing rapidly globally, including Greece, in the pursuit of modern people to cope with their increased daily obligations and to maintain or improve their health status. This research aims to investigate the attitudes and perceptions of patient-consumers in Greece about the safety and effectiveness of dietary supplements, as well as the impact of selected sources of information on their decision making. An on-line questionnaire survey of 230 consumers of dietary supplements was conducted through Google-Forms in February 2021.

According to the survey results, patient-consumers seem to use dietary supplements to increase their performance in daily activities promoting their general health. They claim to follow the daily recommended dose, adhering to health professionals' counsels and adopting a healthy lifestyle through exercise and a balanced diet. Additionally, consumers recognize the potential perils of dietary supplement improper use, while a small percentage of the participants mentioned they have experienced side effects. Finally, the most important sources of information influencing their behavior seem to be the recommendations of health professionals.

Therefore, it is imperative that the competent regulatory authorities, in collaboration with the pharmaceutical companies, safeguard the quality of dietary supplements for the benefit of consumers and society, as a whole. To this end, inter alia, scientifically based information should be disseminated to the public and the relevant role of health professionals should be reinforced by offering to them appropriate incentives and training programs.

**Keywords::** *dietary supplements, patient/consumer attitudes, buying behaviour, effectiveness and safety, reasons of use*

## **1. INTRODUCTION**

Nowadays, more and more people are seeking non-invasive ways to improve their lifestyle and ameliorate their health status. As the majority of population lives in urban environment, millions of people cope with pollution, sedentary lifestyle, anxiety and, in general, live a very hectic routine that leads to significant decrease quality way of living and consequently to health issues. By having easier access to information and greater exposure to advertisement, today's consumers are more prone to undertake self-remedies, such as dietary and herbal supplements (e.g., vitamins, minerals, vitamins complexes) rather than to follow conventional therapy strategies. In a pursue to get detoxicated from chemically produced goods, consumers choose to more natural-based products as an act to restart their lives. This tendency has revolutionized the dietary supplements market and contributed to this market expansion by the involvement of well-known pharmaceuticals companies (Lentjes, 2019; Rautiainen et al., 2016). The same scenery is observed in Greece too, where relevant products inundate local market especially during COVID-19 pandemic.

The increasing popularity of such products comes, in general, to a contrast with healthcare professional opinion. Evidently, there is a great dispute about the safety and clinical effectiveness of such products. Even if there are several studies pinpointing the benefits of food supplements to deal with unhealthy or poor dietary habits, the fact that it is a rather unregulated market sparks the interest of healthcare professionals and dictates the intervention of regulatory authorities (Jordan et al., 2018). Clinical trials studies are not mandatory for dietary supplements to investigate and identify their safety profile and dosage before being launched into the market, whereas there are not specific guidelines for good manufacturing practice to audit and ensure their proper quality production. In addition, its distribution is not restricted to healthcare related stores and retailers, thus

both their production and distribution channels are rather controversial (Jordan et al., 2018; O'Dwyer et al., 2020).

In this study, we aim to understand and investigate the attitudes and perceptions of consumer/patients towards the safety and clinical effectiveness of dietary supplements using a questionnaire survey. This survey also intends to highlight the reasons for dietary supplements' use, as well as the sources of information and their perceived impact on consumer decision making about such products.

## 2. METHODOLOGY AND DATA COLLECTION

### 2.1. Questionnaire survey

An on-line questionnaire survey was employed to investigate consumer-patient perceptions and attitudes towards the effectiveness and safety of dietary supplements. The survey instrument design was based on the key findings of prior relevant research. The initial draft questionnaire was pilot-tested by 10 consumers-patients and its final version took around 10 minutes for its completion. The questionnaire was addressed to patient-consumers who used dietary supplements at that moment or in the past and it consisted of 37 closed-ended questions, in 5 sections. The first section explored the dietary supplements' use in terms of the type(s) consumed (O'Brien et al., 2017), the supply sources and the main reasons for their intake (Tsartsou et al., 2020). The second section investigated participants' perceptions and attitudes about the dietary supplements' effectiveness and their contribution to general health (Bailey et al., 2013; Jinkyung Choi 2019; Naqvi et al., 2018; Radwan et al., 2019; Tsartsou et al., 2020). Next, at the third section, the patient-consumers stated their perceptions concerning the dietary supplements' safety as well as the potential side effects they experienced from their usage (Bailey et al., 2019; Jordan et al., 2018; Kobayashi et al., 2017; O'Dwyer et al., 2020). The fourth section pertained to the sources of information and their perceived impact on consumer decision making about the dietary supplements (Alowais et al., 2019; Karbowink et al., 2019; Kobayashi et al., 2017; Marupuru et al., 2019; Tsartsou et al., 2020). The final section included the respondents' demographics such as the gender, age, education, training frequency, marital and family status. A 5-points Likert scale was used for questions examining respondents' attitudes in sections 1, 2, 3 and 4, from 1 meaning total disagreement to 5 meaning total agreement.

### 2.2. Sample of the study

A convenient sample was employed in this survey consisting of 230 current and former consumers of dietary supplements. The participants completed the on-line questionnaire through Google-Forms tool during the last two weeks of February 2021, a period that restrictive measures had been imposed on the movement of citizens due to the COVID-19 pandemic. Out of the 230 questionnaires, 113 were completed by men and 117 by women as shown below (Table 1). The vast majority (83%) of the respondents were between 20 and 35 years old, and none stated to be older than 50 years, which may be attributed to the fact that youngsters are more inclined to dietary supplements' consumption, and they are more familiar with digital applications. Around 75% of the participants claimed to be University/College students or graduates, indicating that the study sample is more representative of the young and well-educated market segment. In line with the above mentioned, more than 75% of the respondents alleged to be unmarried and only 13% of them to be parents. Moreover, almost one quarter of the participants claimed to train themselves once or twice a week, and half of them more than twice a week, which may also be due to the particular circumstances that people experienced because of the COVID-19 pandemic that period.

**Table 1.** Sample of the survey (% of respondents, N=230)

<i>Gender</i>		<i>Age</i>		<i>Education</i>	
Male	49.1	< 20	4.4	Secondary School	2.2
Female	50.9	20-35	83.0	High School	13
		36-50	12.6	University/ College	73.5
				MSc/PhD	11.3
<i>Marital status</i>		<i>Children</i>		<i>Training frequency</i>	
Unmarried	77.0	Yes	13.0	< once a month	11.3
Married	23.0	No	87.0	Once a fortnight	7.0
				Once a week	15.2
				Twice a week	17.0
				> Twice a week	49.6

### 2.3. Data analysis

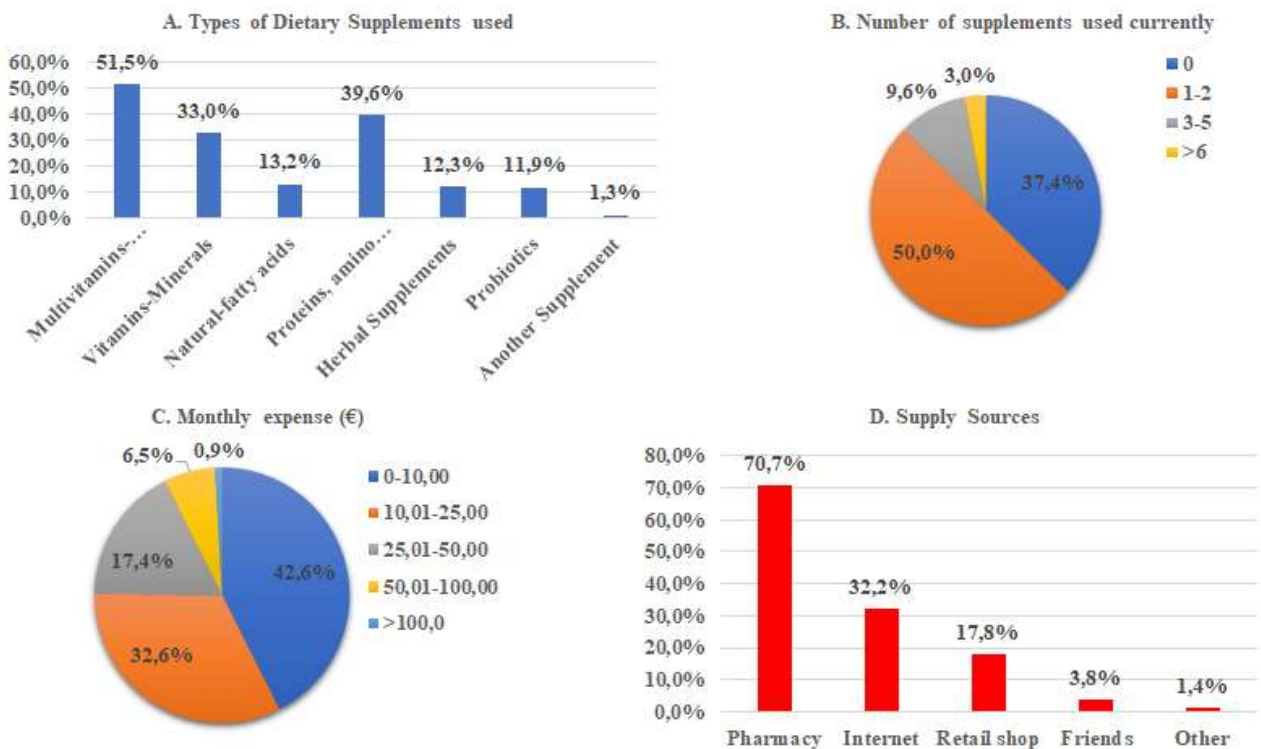
SPSS Version 28.0 was used for data analysis which included frequencies, some descriptive measures (i.e. mean, standard deviation).

**3. RESULTS**

**3.1. Dietary supplements' use**

According to study results, the majority of consumers use mostly multivitamins (51.5%), followed by proteins and amino acids (39.6%) and vitamins-multiminerals (33%), as dietary supplements. This fact is congruent with the findings of O'Brien et al. (2017) who indicated that 43.3% Australian consumers preferred multivitamins and multiminerals as dietary supplements. The results of EPIC study were also in compliance with the above finding as Greek population was found to choose multivitamins products in most cases (Skeie et al., 2009). In addition, almost half of respondents claimed to use at least one dietary supplements in their daily routine, an observation that complies with the results of O'Brien et al. (2017), while a significant high percentage, almost 40%, don't even consume such a supplement (O'Brien et al., 2017). It is pinpointing that Greek consumers do not follow the global trend in terms of adding a dietary supplement in their diet as Japanese, for example, do (Kobayashi et al., 2017). According to Skeie et al. (2009), among oncologist patients in 9 European countries, Greek participants shared the lowest levels of dietary supplements consumption, but they were eager to include them in their diet (Skeie et al., 2009).

The non-consumer rate is also translated into monthly expenses. As Figure 1.C illustrated, more than 40% of the participants spent less than 10 euros in dietary supplements per month while only a 7% spent more than 50 euros, a finding also confirmed by Tsartsou et al. (2020) study in which almost 75% of respondents spent less than 10 euros in such purchases (Tsartsou et al., 2020). The majority of the respondents supported to choose pharmacies for the purchase of dietary supplements (Figure 1.D), in line with prior research, reaping the benefits of product quality assurance and safety, as well as health professional specialized guidance, while the internet also appears to be a particularly preferred supply source due to the convenience and the 24/7 availability it offers.



**Figure 1.** Dietary Supplements' use: **A.** Types of dietary supplements used, **B.** Number of supplements used currently, **C.** Monthly expense, **D.** Supply Sources.

**Table 1.** Reasons for dietary supplements' use

	1	2	3	4	5	Mean	Std. Dev
Prevent a health problem	21.7%	13.9%	26.1%	24.8%	13.5%	2.94	1.34
Attain a good state of health.	6.1%	8.7%	27.4%	34.3%	23.5%	3.60	1.12
It is a key component of a healthy diet	23.5%	36.5%	26.1%	6.5%	7.4%	2.38	1.13
Lose weight	54.3%	24.8%	9.6%	6.5%	4.8%	1.83	1.14
Increase daily activities' performance	6.1%	11.7%	27.8%	38.7%	15.7%	3.46	1.08

In table 1, it is shown that respondents will most likely consume a dietary supplement to maintain healthy and active. Almost 40% of respondents would consume a dietary supplement aiming to improve their daily performance and 35 % to attain a good health state. Surprisingly, less than 10% of the cohort would choose a dietary supplement as way to lose weight. Our findings are similar to other studies like Jalil et al. (2022), where pharmacists reported that Jordanian consumers mostly seek for dietary supplements to maintain a healthy lifestyle (12.1% of respondents) and to deal with weight loss (14.7% of respondents). Tsartsou et al. (2020) also pinpointed that Greek consumers were prone to order or use such a product to have long-term benefits or as supplementary part of drug treatment to cope with a diagnosed disease, while consumers in US shared similar intentions about dietary supplement consumption to maintain a healthy lifestyle (Dickinson et al., 2014).

### 3.2. Effectiveness of dietary supplements

Participants shared a rather positive perception and attitude towards the consumption of dietary supplements. Indeed, 43% claimed that dietary supplements contributed to the improvement of individual's health state and that it is not solely related to healthy lifestyle. However, almost 50% of respondents weren't convinced that dietary supplements were able to ameliorate an unhealthy diet, while 33% agreed that their use was related to healthy habits. Evidently, Greek consumers believed that dietary supplements would not substitute a healthy and balance diet and healthy habits, which is very important, along with the fact that 64% stated to follow the daily recommended amount as clarified in product label. Many studies imply that region and patient location can exert an effect in dietary supplements adoption (Skeie et al., 2009). Northern countries are usually facing significant vitamin deficiencies especially of vitamin D due to the weather. To deal with it, it is very common to enhance their diet with multivitamins and minerals supplements. This need to improve their diet with additional substances, was boosted by the current trend to follow less conventional treatment to deal with a demanding lifestyle, stress and environmental pollution. In contrast, in Mediterranean countries, including Greece, consumers are more prone to rely on food consumption to get the necessary amount of vitamins, minerals, and nutrients needed to be healthy and energetic. This study results comply with the Mediterranean cultural setting which is also highlighted in Tsartou et al. (2020) and it can justify the high level of non-consumers and the low spending rate (Tsartsou et al., 2020).

**Table 2.** Perceptions about the effectiveness of dietary supplements

	1	2	3	4	5	Mean	Std. Dev
They contribute to the improvement of the health state	0.9%	9.6%	31.7%	42.6%	15.2%	3.62	0.89
They are necessary to use for a healthy lifestyle	37%	29.6%	22.6%	5.7%	5.2%	2.13	1.13
They reduce the risk of developing diseases	13.5%	34.3%	36.1%	11.7%	4.3%	2.59	1.01
Their use is accompanied by healthy habits (e.g. sports, balanced diet.)	4.3%	11.7%	20%	30.9%	33%	3.77	1.16
I follow the daily recommended amount when I use them	2.2%	4.3%	8.3%	21.7%	63.5%	4.40	0.97
Their label health claims are credible	6.1%	10%	39.1%	30%	14.8%	3.37	1.05
They can ameliorate an unhealthy diet	48.7%	19.6%	16.5%	10.4%	4.8%	2.03	1.23

### 3.3. Safety of dietary supplements

Regarding dietary supplements' safety, respondents professed low to moderate concerns, and they claimed to adopt a cautious and prudent use of such products following medical guidelines. Only 12% of respondents claimed to have faced an undesirable event due to drug-supplement interactions and a 35% of the participants believed that chronic use may lead to undesirable side effects indicating that consumers are well informed and aware of the drawbacks that overconsumption of dietary supplements can bring. These results are complaint with Kobayashi et al. (2017) survey in which 89.13% of participants mentioned that they have not experienced any adverse event upon consuming a dietary supplement. Accordingly, around 10% of the participants in the study of El Khoury et al. (2016) had suffered an adverse event (71 cases to 726 participants) owing to disease-supplement, drug-supplement and supplement-supplement interactions, thus Lebanese consumers are not in favor of dietary supplements. Similar to the previous study, Yeong & Choong (2017), demonstrated that 80% of Malaysian consumers asked, confirmed that dietary supplements might be dangerous especially if they are consumed in high doses (El Khoury et al. 2016; Kobayashi et al., 2017; Yeong & Choong, 2017).

**Table 3.** Perceptions about the safety of dietary supplements

	1	2	3	4	5	Mean	Std. Dev
They are safe products, without side effects.	12.6%	31.7%	33.5%	14.8%	7.4%	2.73	1.09
I use them under the guidance of an appropriate health scientist	10.0%	12.6%	20.0%	17.8%	39.6%	3.64	1.37
I notice undesirable interactions with the simultaneous	31.3%	27.0%	16.5%	13.9%	11.3%	2.47	1.36



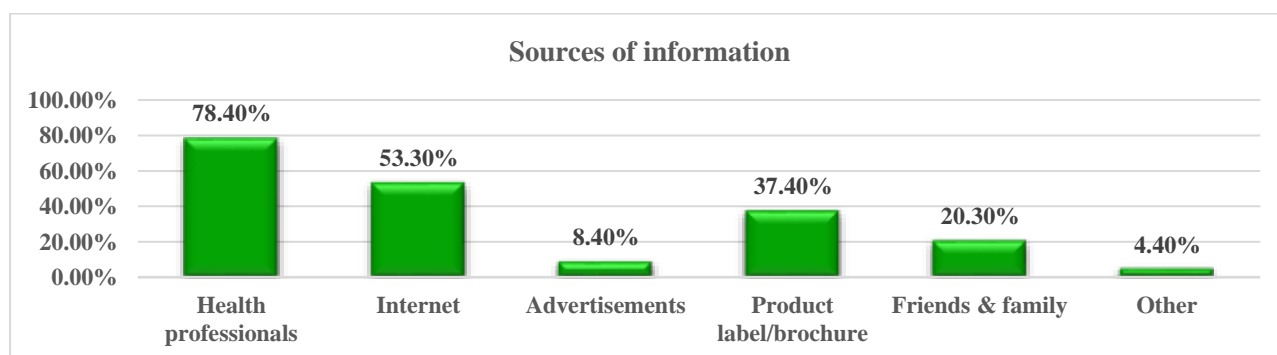
use of dietary supplements and other medicinal substances							
Their chronic use may contribute to undesirable side effects	6.5%	21.3%	30.4%	27.0%	14.8%	3.22	1.14
The appropriate approval and market surveillance measures are implemented for new dietary supplements.	6.1%	21.3%	28.3%	30.4%	13.9%	3.25	1.12

### 3.4. Sources of information about dietary supplements

Healthcare professionals (i.e., physicians and pharmacists) constituted the main source of information (78.9%) for dietary supplements followed by internet and product label (Figure 2). It is noticeable that most respondents rely on healthcare professionals for health-related information, while a great percentage of them are also willing to seek information online. In comparison with the rest of available sources, it is clear that reaching out to healthcare professionals and to internet is preferred, a fact that is justifiable because the main distribution channels of dietary supplements are pharmacies, online shops, and in a few cases in retail shops in Greece. In Japan, consumers manifested totally different preferences. It seems that they perform online orders in 38.3% while only a 2.6% consulted a healthcare professional for information (Kobayashi et al., 2017). In addition, based on Syed et al. (2022), US consumers relied on Ministry of Health for information and recommendation about dietary supplements during COVID-19 pandemic, pinpointing that consumers prefer to get informed by official, accurate and reliable sources of information to avoid being deceived or misled (Syed et al., 2022). Moreover, consumers' behavior is also explained by the fact that 71% of respondents purchased dietary supplements in pharmacies, compared to 32% of them performing online orders. Other studies concluded to similar results, enhancing the reliability and accuracy of this study's finding (Tsartsou et al., 2020 & Kobayashi, et al., 2017). Information on product label or product leaflet aren't very important for consumers and it was implied that consumers did not trust the statements made by the supplements' companies. Friends and family are not a common source of information, and they didn't exert a great impact in consumers' final choice, a fact that is opposite to Syed et al. (2022) findings. Advertising emerged to have a relatively moderate impact on public awareness about the dietary supplements commercially available. Consumers supported they trusted the expertise and opinion of healthcare professionals and asked for medical advice before choosing a dietary supplement, as more than half of respondents totally agreed with the relevant statement. On the contrary, Kobayashi et al. (2017) presented that only a 2.6% of individuals will use a health expert as a source of information.

**Table 4.** Perceptions about the Sources of information of dietary supplements

	1	2	3	4	5	Mean	Std. Dev
Advertising contributes to public awareness about the dietary supplements commercially available.	7.8%	12.6%	30.0	33.9%	15.7%	3.37	1.13
Dietary supplement advertising presents scientifically based information	19.1%	39.6%	32.2%	6.5%	2.6%	2.34	0.957
Product packaging influences my purchasing decision.	32.6%	23.9%	22.6%	17.8%	3.0%	2.35	1.19
I follow the recommendations from friends and family.	20.4%	33.0%	30.0%	11.3%	5.2%	2.48	1.10
I follow the recommendations of health scientists	1.7%	4.3%	9.6%	33.0%	51.3%	4.28	0.93



**Figure 2.** Sources of information for dietary supplements

## 4. CONCLUSIONS AND MARKETING IMPLICATIONS

Dietary supplements are gaining momentum in consumers daily life across the globe. Today's consumers are ready to change their lifestyle by introducing dietary supplements such as multivitamins and multiminerals in their diet. The adoption rate of dietary supplements differs from country to country a fact that is also highlighted

by the different expenses ratio dedicated to such products. In the future, consumers will be more open to adopt such products to improve their health status and their daily performance but in slower pace compared to the rest of the globe.

In this study, it was demonstrated that consumers preferred to buy multiminerals and multivitamins compared to the rest types of dietary supplements while they chose to enrich their diet using supplements intending to improve their daily performance and prevent any disease onset. In general, Greek consumers had a relatively positive attitude towards dietary supplements consumption, but they showed to acknowledge the positive and negative aspects of these products, and they always get advice from health experts before including a dietary supplement into their diet.

Considering the aforementioned, the role of healthcare professionals as counselors and opinion-leaders for dietary supplements should be enhanced to avoid consumers misinformation and irrational consumption of such products that can lead to unpleasant health outcomes. To do so, it is important that healthcare professionals be properly trained in the field and be regularly updated about current trends and products. For instance, healthcare professionals could attend seminars or read relevant publications to expand their knowledge and expertise while they could get information by medical consultants. To conclude with, being guided by a well-trained healthcare as a consumer, is a key to get benefit by the advantages of dietary supplements and improve your health status.

This study showed that although nutritional supplements are considered as safe and effective for improving the health of the buyer, some necessary actions need to be carried out, so that patient-consumers do not have doubts about the health results they promise. Thus, pharmaceutical industries need to safeguard the quality control of their products by strictly applying the relevant legal framework and the good manufacturing practices (GMP) specified for dietary supplements. They also need to play an important role in the promotion of these products by implementing marketing strategies for the satisfaction of the real health needs of the patient-consumer. In this context, pharmaceutical industries should provide valuable and constructive information about dietary supplements use to health professionals and consumers, by initiatives such as medical visits or seminars, and advertisements or information brochures, respectively.

## References:

- Alowais, M., & Selim, M. E.-H. (2019). Knowledge, attitude, and practices regarding dietary supplements in Saudi Arabia. *Journal of Family Medicine and Primary Care*, 8(2), 365. [https://doi.org/10.4103/jfmpe.jfmpe\\_430\\_18](https://doi.org/10.4103/jfmpe.jfmpe_430_18)
- Bailey, R. L., Dodd, K. W., Gahche, J. J., Dwyer, J. T., Cowan, A. E., Jun, S., Eicher-Miller, H. A., Guenther, P. M., Bhadra, A., Thomas, P. R., Potischman, N., Carroll, R. J., & Tooze, J. A. (2019). Best Practices for Dietary Supplement Assessment and Estimation of Total Usual Nutrient Intakes in Population-Level Research and Monitoring. *The Journal of Nutrition*, 149(2), 181–197. <https://doi.org/10.1093/jn/nxy264>
- Bailey, R. L., Gahche, J. J., Miller, P. E., Thomas, P. R., & Dwyer, J. T. (2013). Why US Adults Use Dietary Supplements. *JAMA Internal Medicine*, 173(5), 355. <https://doi.org/10.1001/jamainternmed.2013.2299>
- Choi, J. (2019). The Association Between Health Conditions, Consciousness, Involvement, and Knowledge and Dietary Supplement Intake among University Students in South Korea. *International Journal of Environmental Research and Public Health*, 16(20), 4028. <https://doi.org/10.3390/ijerph16204028>
- Dickinson, A., Blatman, J., El-Dash, N., & Franco, J. C. (2014). Consumer usage and reasons for using dietary supplements: report of a series of surveys. *Journal of the American College of Nutrition*, 33(2), 176–182. <https://doi.org/10.1080/07315724.2013.875423>
- El Khoury, G., Ramadan, W., & Zeeni, N. (2016). Herbal Products and Dietary Supplements: A Cross-Sectional Survey of Use, Attitudes, and Knowledge Among the Lebanese Population. *Journal of community health*, 41(3), 566–573. <https://doi.org/10.1007/s10900-015-0131-0>
- Jalil, B., Naser, A. Y., M Prieto, J., & Heinrich, M. (2022). Herbal supplements in Jordan: a cross-sectional survey of pharmacists' perspectives and knowledge. *BMJ open*, 12(7), e057405. <https://doi.org/10.1136/bmjopen-2021-057405>
- Jordan, S. A., Jack, S. A., & Pless, R. P. (2018). Safety Surveillance of Dietary Supplements: Importance, Challenges, and New Horizons. *Clinical Pharmacology & Therapeutics*, 104(3), 432–434. <https://doi.org/10.1002/cpt.1101>
- Karbownik, M. S., Paul, E., Nowicka, M., Nowicka, Z., Kowalczyk, R. P., Kowalczyk, E., & Pietras, T. (2019). Knowledge about dietary supplements and trust in advertising them: Development and validation of the questionnaires and preliminary results of the association between the constructs. *PLOS ONE*, 14(6), e0218398. <https://doi.org/10.1371/journal.pone.0218398>
- Kobayashi, E., Sato, Y., Umegaki, K., & Chiba, T. (2017). The Prevalence of Dietary Supplement Use among College Students: A Nationwide Survey in Japan. *Nutrients*, 9(11), 1250. <https://doi.org/10.3390/nu9111250>
- Lentjes, M. A. (2019). The balance between food and dietary supplements in the general population. *The Proceedings of the Nutrition Society*, 78(1), 97–109. <https://doi.org/10.1017/S0029665118002525>

- Naqvi, A. A., Ahmad, R., Elewi, A. A. W., AlAwa, A. H., & Alasiri, M. J. (2018). Dietary supplement use among undergraduate male students in health and non-health cluster colleges of a public-sector university in Dammam, Saudi Arabia. *BMC Complementary and Alternative Medicine*, 18(1). <https://doi.org/10.1186/s12906-018-2332-4>
- O'Brien, S., Malacova, E., Sherriff, J., & Black, L. (2017). The Prevalence and Predictors of Dietary Supplement Use in the Australian Population. (2017). *Nutrients*, 9(10), 1154. <https://doi.org/10.3390/nu9101154>
- O'Dwyer, D. D. (2020). Navigating the Maze of Dietary Supplements. *Topics in Clinical Nutrition*, 35(4), 309–319. <https://doi.org/10.1097/tin.0000000000000214>
- Radwan, H., Hasan, H. A., Ghanem, L., Alnajjar, G., Shabir, A., Alshamsi, A., & Alketbi, F. (2019). Prevalence of Dietary Supplement Use and Associated Factors Among College Students in the United Arab Emirates. *Journal of Community Health*, 44(6), 1135–1140. <https://doi.org/10.1007/s10900-019-00700-2>
- Rautiainen, S., Manson, J. E., Lichtenstein, A. H., & Sesso, H. D. (2016). Dietary supplements and disease prevention — a global overview. *Nature Reviews Endocrinology*, 12(7), 407–420. <https://doi.org/10.1038/nrendo.2016.54>
- Tsartsou, E., Proutsos, N., Papadopoulos, I., Tzouvelekas, V., Castanas, E., & Kampa, M. (2020). Consumers' attitude toward dietary supplements and functional food: a prospective survey in a Greek population sample. *Hormones*, 20(1), 177–188. <https://doi.org/10.1007/s42000-020-00209-7>
- Skeie, G., Braaten, T., Hjartåker, A., Lentjes, M., Amiano, P., Jakszyn, P., Pala, V., Palanca, A., Niekerk, E. M., Verhagen, H., Avloniti, K., Psaltopoulou, T., Niravong, M., Touvier, M., Nimptsch, K., Haubrock, J., Walker, L., Spencer, E. A., Roswall, N., Olsen, A., ... Slimani, N. (2009). Use of dietary supplements in the European Prospective Investigation into Cancer and Nutrition calibration study. *European journal of clinical nutrition*, 63 Suppl 4, S226–S238. <https://doi.org/10.1038/ejcn.2009.83>
- Syed, W., Samarkandi, O. A., Sadoun, A. A., Bashatah, A. S., Al-Rawi, M. B. A., & Alharbi, M. K. (2022). Prevalence, Beliefs, and the Practice of the Use of Herbal and Dietary Supplements Among Adults in Saudi Arabia: An Observational Study. *Inquiry : a journal of medical care organization, provision and financing*, 59, 469580221102202. <https://doi.org/10.1177/00469580221102202>
- Žeželj, S. P., Tomljanović, A., Jovanović, G. K., Krešić, G., Pelozo, O. C., Dragaš-Zubalj, N., & Prokurica, I. P. (2018). Prevalence, Knowledge and Attitudes Concerning Dietary Supplements among a Student Population in Croatia. *International Journal of Environmental Research and Public Health*, 15(6). <https://doi.org/10.3390/ijerph15061058>
- Yeong, S. W., & Choong, Y. C. (2017). Knowledge and characteristics of herbal supplement usage among community pharmacy customers in a Malaysian population. *Complementary therapies in medicine*, 35, 92–108. <https://doi.org/10.1016/j.ctim.2017.09.005>

# Smokers' perceptions of the anti-smoking campaigns and activities' effect to their attempt to cease smoking

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## **Abstract:**

Smoking is considered by many scientists as the biggest pandemic of all times due to its very high prevalence and its severe consequences, in all aspects of daily life, to smokers and their environment. This paper presents the findings of a survey aiming to explore the current habits of Greek smokers, as well as to investigate and estimate the impact of anti-smoking initiatives applied in Greece for ceasing smoking. Primary data were collected by 130 smokers participating in an on-line questionnaire survey.

Around half of the participants claimed to smoke up to 10 cigarettes daily, and only 17% more than 1 packet. The cigarette packaging is the main source of anti-smoking messages received by smokers, while the mass-media and the outdoor spaces play a, distinctly, inferior role. Smokers perceived that the anti-smoking messages they received by any channel had a marginal impact on their decision to cease smoking. Moreover, the perceived contribution of the examined anti-smoking activities/programs to smokers' decision to cease smoking varies from very little to moderate. Hence, not surprisingly, the majority of the respondents expressed not at all or little satisfaction to anti-smoking activities/programs. However, it is rather encouraging that around 40% of the participants in the survey supported that they attempted to quit smoking during the last six months, while 60% of the respondents stated that they are willing to do so in the future, and yet 17% of them within the next month, which implies a strong wish to free themselves from this habit.

**Keywords:** *smokers' attitudes, attempt/intention to cease smoking, anti-smoking campaigns/activities, mass media*

## **1. INTRODUCTION**

Smoking is a current social issue with several consequences in all aspects of daily life. Many scientists characterized it as the biggest pandemic of all times since the prevalence of current smokers is estimated to be very high. Smoking is a popular habit among all ages across the globe, even if the negative effects of smoking in human health are well-known and it is responsible for almost 8 million people deaths each year. The nicotine included in tobacco products is considered as extremely addictive making smoking a hard-to-quit habit, in spite of increasing the risk of developing cardiovascular, respiratory and other type of diseases, as well as constituting an important financial burden for both households and healthcare systems. Smokers aren't able to realize the impact that their daily habit has to multiple social parameters due to their addiction, posing healthcare systems at risk (WHO, n.d.).

The same situation exists in Greek setting too. Based on the latest studies, smoking prevalence in Greece in 2020 was 28%, placing the country near the European countries average for smoking prevalence (26%) (WHO, n.d.). In other words, a third of Greek population is current smokers, a percentage that is significantly decreased compared to 2012 when active smokers were 37% of the population. This decrease wasn't translated into health improvements, pinpointing the need for more drastic measures (Tousoulis, 2016). To achieve it, a series of proposed actions were implemented with the aim of promoting anti-smoking incentives among the population based on, primarily, advertising campaigns and pictorial warnings on cigarette packages. According to studies, it has been found that these images significantly increase public's awareness on their health. Nevertheless, mass media and networking can also play an important role (WHO, 2022; Chauhan & Sharma, 2017; Nogueira et al., 2018; Singh et al., 2017).

In this study, we aim to explore the current habits of Greek smokers, as well as to investigate and estimate the impact of anti-smoking initiatives applied in Greece for ceasing smoking.

## 2. METHODOLOGY AND DATA COLLECTION

### 2.1. Questionnaire survey

A descriptive, quantitative, questionnaire survey was employed to investigate the smokers' perceptions of the anti-smoking campaign/activities effect on their attempt and intention to cease smoking. The questionnaire design accrued from the main findings of the literature review. Then, the initial draft questionnaire was pilot-tested by 15 smokers and the final version of the questionnaire required around 8 to 10 minutes to be completed. The questionnaire consisted of 5 sections with closed-ended questions. The first part concerned the smoking habit and the attendant expenses (World Health Organization, & Control (U.S.), C. for D., 2011; Martire et al., 2017; Kaai et al., 2019). The second section examined the frequency of smokers' exposure to anti-smoking message campaigns and their effect on smokers' decision to cease smoking (World Health Organization, & Control (U.S.), C. for D., 2011; Chauhan and Sharma, 2017; Li et al., 2014; Jarlstrup et al., 2018). Next, smokers' perceptions of the influence of anti-smoking activities/programs to their decision to cease smoking were assessed (World Health Organization, & Control (U.S.), C. for D., 2011; Chauhan and Sharma, 2017; Li et al., 2014; Jarlstrup et al., 2018). The fourth part investigated smokers' last year's attempt and future intentions to quit smoking (World Health Organization, & Control (U.S.), C. for D., 2011; Kaai et al., 2019; Chauhan and Sharma, 2017) and the last section of the questionnaire dealt with participants' demographics (gender, age, education). A 5-points Likert scale was used for the statements examining the frequency of smokers' exposure to anti-smoking message campaigns, from 1 meaning rarely to 5 meaning very often. A 5-points Likert scale was also utilized for the rest questions in sections 2 and 3, from 1 meaning not at all to 5 meaning very much.

### 2.2. Sample of the study

A convenient sample of 130 smokers (60 men (43.2%) and 70 women (53.8%)) participated in the survey (Table 1). The participants completed the questionnaire online through Google forms during May and June 2020, since restrictive measures were applied because of the COVID-19 pandemic. Although, men (60% of smokers' population) are more likely to smoke daily or occasionally than women (40%) (Hellenic Statistical Authority, 2020), no significant differences (Mann-Whitney U test) were identified in participants' perceptions according to gender. The majority of the respondents are young (around 80% less than 45 years old) and graduates of higher education (more than 60%), indicating that the study sample is more representative of this group of smokers. This may be attributed to fact that the relatively young and of higher education individuals are more likely to participate in questionnaire surveys, and, particularly, online.

**Table 1.** Sample of the survey (% of respondents, N=130)

<i>Gender</i>	<i>Age</i>		<i>Education</i>		
Male	46.2	<= 25	25.4	Secondary/High School	26.9
Female	53.8	26-35	33.1	Vocational School	11.5
		36-45	20.0	University/ College	40.8
		46-55	16.2	MSc/PhD	20.8
		>55	5.4		

### 2.3. Data analysis

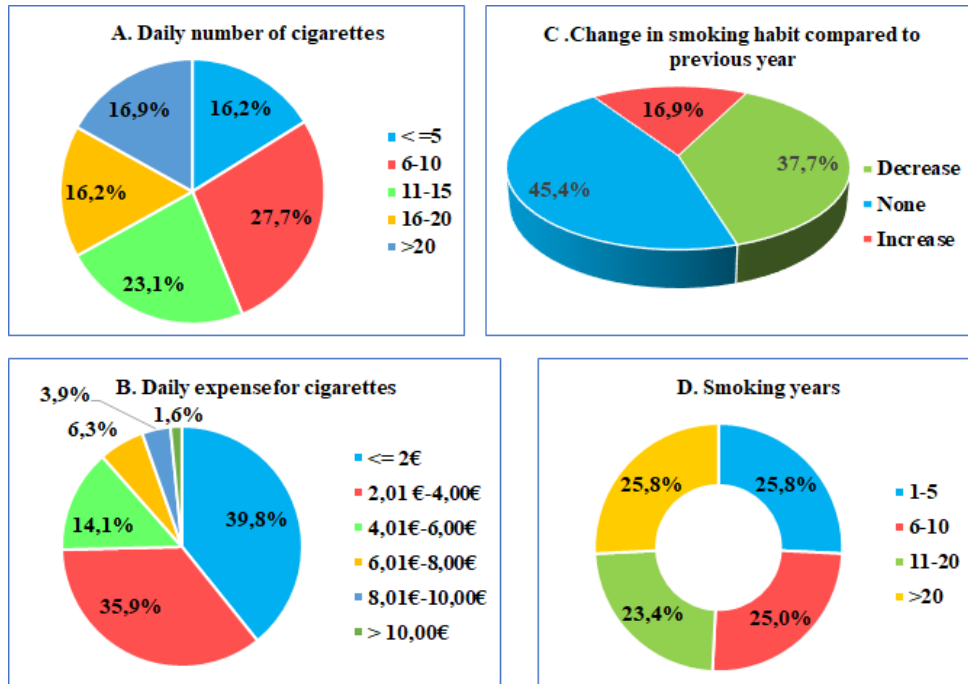
SPSS Version 28.0 was used for data analysis which included frequencies, some descriptive measures (i.e., mean, standard deviation), as well as non-parametric tests such as Mann-Whitney U analysis to examine the effect of respondents' perceptions on their attempt and intention to cease smoking. Moreover, the internal consistency of scales was evaluated by the Cronbach's alpha measure.

## 3. RESULTS

### 3.1. Smoking habit

Almost half of the participants (around 45%) stated that they smoked up to 10 cigarettes daily, while almost 40% of them claimed to smoke 11 to 20 cigarettes per day, and only 17% more than 1 packet (20 cigarettes) (Figure 1). In line with the cigarette consumption, 40% claimed to spend less than 2 € daily, and 36% 2-4 €, while it is worth noting that only 5% alleged to spend more than 8 €, indicating that they are heavy-smokers and consume 2 or more packets of cigarettes on a daily basis. These results comply with the literature and the findings of other studies. Following to Kapetanstrataki et al. (2021), the mean consumption of cigarettes per day was estimated at 15 cigarettes, while most of Greek smokers are identified as male. Similar to our findings are the results of Michas et al. (2022), in which the median daily consumption of cigarettes are 12 cigarettes (Michas et al., 2022).

Furthermore, the majority of individuals (45%) purported that there was no change in their smoking habit compared to the previous year, while more than one third of them (38%) tried to decrease smoking and 17% stated to increase it. This comes in accordance with Tzortzi et al. (2020) study, which took place in Greece on 2020 and it demonstrated that 65% of participants haven't changed their smoking habits during the last year, while only 7% claimed to increase smoking. As far as smoking years are concerned, it was observed that smoking years reported were from one to 50 years with mean value of 15.05 years. Indeed, a 26% of participants started smoking more than 20 years ago while a 45.8% of individuals reported to be smokers less than 10 years. The distribution of participants' smoking years conforms, to great extent, with their age, setting the threshold for the quartiles at 5, 10 and 20 years.



**Figure 1.** A. Daily number of cigarettes smoked, B. Daily expense for cigarettes, C. Change in smoking habit compared to previous year, D. Smoking years.

**3.2. Smokers' exposure to anti-smoking messages and their effect on smokers' decision to cease smoking**

Based on our results, the vast majority of individuals (65.7%) claimed to be exposed very often to anti-smoking messages when those are written on the cigarette packaging, whereas only 10% maintained the same for internet sources and messages in workplace. Thus, the cigarette packaging is the main source of anti-smoking messages received by smokers, while the mass-media and the outdoor spaces play a secondary role (Table 2). The mean values of smokers' answers to the frequency of their exposure to mass-media anti-smoking messages ranged from 1.51 to 2.48. Specifically, the frequency of exposure was very low for newspapers, magazines, radio, and television (means ranging from 1.5 to 1.8), while it was relatively moderate for internet (mean 2.5). Cronbach's a measure of internal consistency was high, 0.87, and the mean value of the corresponding composite factor 1.80. The frequency of exposure to outdoor spaces' anti-smoking messages is slightly higher than mass-media, with the mean value of the relevant factor being 2.11. Cronbach's a was relatively high, 0.78, and stores were the outdoor spaces promoting more (mean 2.4) the anti-smoking messages. Not surprisingly, cigarette packaging was the most prominent means of communication for anti-smoking messages, as two thirds of respondents answered they read such messages very often and the mean value was 4.3.

**Table 2.** Frequency of exposure of smokers to anti-smoking messages

	1	2	3	4	5	Mean	Std. Dev
TV	54.7%	21.1%	14.8%	7.8%	1.6%	1.80	1.06
Newspapers	68.0%	19.5%	7.0%	4.7%	0.8%	1.51	0.88
Magazines	60.2%	25.0%	9.4%	4.7%	0.8%	1.61	0.90
Radio	64.1%	18.8%	10.9%	4.7%	1.6%	1.61	0.97
Internet	30.5%	25.0%	19.5%	16.4%	8.6%	2.48	1.31

<i>Frequency of exposure to mass-media anti-smoking messages</i>						<i>1.80</i>	<i>0.84</i>
Movie theaters/cinemas	58.6%	16.4%	14.1%	10.2%	0.8%	1.78	1.08
Workplace	50.8%	14.8%	13.3%	10.2%	10.9%	2.16	1.42
Stores	43.0%	14.1%	14.1%	19.5%	9.4%	2.38	1.44
<i>Frequency of exposure to outdoor spaces' anti-smoking messages</i>						<i>2.11</i>	<i>1.10</i>
Cigarette packaging	4.7%	4.7%	10.2%	14.8%	65.6%	4.32	1.13

Smokers perceived that the anti-smoking messages they received had a marginal impact on their decision to cease smoking, while only the cigarette packaging messages had a mean value just above 2 (2.1) (Table 3). Cronbach's  $\alpha$  values for the items concerning the effect of mass media and outdoor spaces anti-smoking messages were both high, 0.92 and 0.85, respectively, and the mean values for both factors were very low, around 1.6. These observations imply that the current smokers are rather reluctant to change their habits and quit smoking even if they are exposed to a series of anti-smoking efforts such as advertisements, messages, campaigns.

**Table 3.** Perceived effect of anti-smoking messages on smokers' decision to cease smoking

	1	2	3	4	5	Mean	Std. Dev
TV	62.5%	20.3%	10.9%	4.7%	1.6%	1.63	0.96
Newspapers	72.7%	18.0%	4.7%	3.9%	0.8%	1.42	0.82
Magazines	71.1%	19.5%	6.3%	2.3%	0.8%	1.42	0.78
Radio	66.4%	22.7%	7.0%	3.1%	0.8%	1.49	0.82
Internet	50.0%	22.7%	15.6%	6.3%	5.5%	1.95	1.19
<i>Effect of mass media anti-smoking messages</i>						<i>1.58</i>	<i>0.81</i>
Movie theaters/cinemas	64.8%	23.4%	3.9%	5.5%	2.3%	1.57	0.97
Workplace	60.9%	21.1%	7.0%	5.5%	5.5%	1.73	1.15
Stores	60.2%	25.0%	3.9%	7.8%	3.1%	1.69	1.07
<i>Effect of outdoor spaces' anti-smoking messages</i>						<i>1.66</i>	<i>0.99</i>
Cigarette packaging	44.5%	25.8%	10.9%	10.2%	8.6%	2.13	1.32

Previous studies concluded that individuals were exposed to anti-smoking messages mainly via mass media (especially television, radio and cinema, however, without reporting the frequency of exposure. Indeed, Chauhan & Sharma (2017) stated that 60% of men and 40% of women respondents, respectively, got informed about anti-smoking messages by campaigns in television, while they expressed their annoyance for being exposed to anti-smoking messages in movies. Nogueira et al. (2018) also supported those conclusions and demonstrated that television was the main source of information in terms of anti-smoking messages. In this latter study, Greek respondents claimed that, concerning mass media, they noticed anti-smoking advertising, mainly on television, a fact that is confirmed, as well, in another Greek study (Stafylis et al., 2018). These findings are, to great extent, in accordance with our study. However, different communication strategies, methods and ways are applied to raise public awareness among countries because cultural, socioeconomic, and religious conditions must be taken into consideration. Moreover, the increasing rate of internet use constitutes this channel as the most important among mass media in delivering anti-smoking messages. Although, posting anti-smoking messages on the cigarettes packaging is probably unpleasant and annoying for smokers, it appears to be the most precise and effective way to convey anti-smoking messages to the targeted cohort.

Prior research demonstrated that mass media anti-smoking campaigns, particularly in television, radio, cinema, and internet, affected smokers' attempts to quit smoking (Chauhan and Sharma, 2017). Another study also found that anti-smoking advertisements have a positive impact on smokers by encouraging them to quit smoking (Nogueira et al., 2018). Moreover, a study conducted in 6 cities of China, likewise, deduced that the exposure to anti-smoking advertising on newspapers, television, radio and workplaces seems to play an important role on smokers' intent to cease smoking (Li et al., 2014).

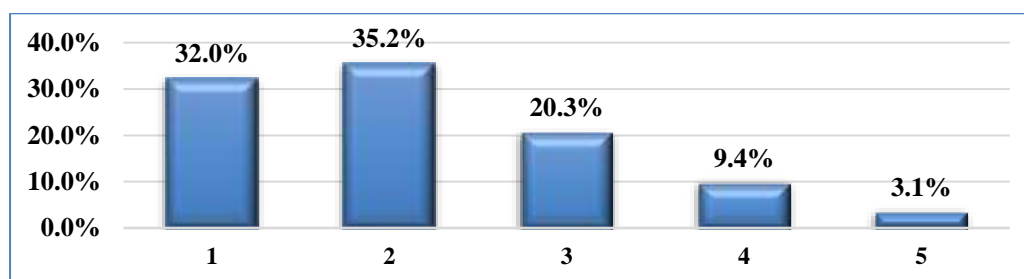
### 3.3. Smokers' perceptions of the influence of anti-smoking activities/programs to their decision to cease smoking

Participants seemed to have a rather moderate perception about the contribution of anti-smoking programs on quitting smoking. It was demonstrated that teacher training to promote anti-smoking education to students was considered as the most impactful activity (mean 2.9), although its effects are indirect and could be seen in the long-term, followed by the promotion of cessation clinics operating in hospitals (mean 2.6) which have more direct outcomes. Telephone support and advice line, organization of seminars in municipalities and educational

institutions, along with promotion of existing websites and creation of new to help smokers quitting smoking (e.g., Smoke free Greece) seem to influence very little smokers' decision to quit smoking (mean ranging from 1.7 to 2.1). Cronbach's  $\alpha$  index was high, 0.88, and the mean value of the corresponding factor, influence of soft anti-smoking campaigns, was 2.3, equivalent to the perceived effect of tax increase on tobacco products. Therefore, it is not surprising that around two thirds of the respondents expressed not at all or little satisfaction to anti-smoking activities/programs, whereas the mean value was 2.15 (Figure 2).

**Table 4.** Perceived level of influence of anti-smoking activities/programs to smokers' decision to cease smoking

	1	2	3	4	5	Mean	Std. Dev
Telephone support and advice line	57.7%	26.2%	10.0%	3.1%	3.1%	1.68	0.99
Organization of seminars in municipalities and educational institutions	49.2%	23.1%	12.3%	4.6%	10.8%	2.05	1.33
Promotion of existing websites and creation of new to help smokers quitting smoking (e.g. Smoke free Greece)	41.5%	28.5%	13.1%	8.5%	8.5%	2.14	1.28
Promotion of cessation clinics operating in hospitals	33.8%	21.5%	13.8%	13.8%	16.9%	2.58	1.49
Teacher training to promote anti-smoking education to students	26.9%	20.8%	18.5%	8.5%	25.4%	2.85	1.54
<i>Influence of soft anti-smoking campaigns</i>						<i>2.26</i>	<i>1.11</i>
Tax increase on tobacco products	24,6%	41,5%	20,8%	5,4%	7,7%	2,30	1,13



**Figure 2.** Satisfaction from anti-smoking activities/programs

Despite participants' perceptions of the relatively low influence of tax increase on their decision to cease smoking, prior research results indicate that prices and taxes are among the most effective approaches to reduce overall tobacco use (Jarlstrup et al., 2018; Ho et al., 2019). In particular, this measure appears to affect, primarily, adolescents and individuals with low income (Nikaj and Chaloupka, 2014; Tauras et al., 2013). Jarlstrup et al. (2018) also mentioned that tobacco control initiatives implemented in Denmark, such as had not achieved in full their potential results, and a long-term national plan for coordinated tobacco control is necessary to ameliorate the current situation in terms of preventing smoking initiation and encouraging cessation among Danish youth.

### 3.4. Smokers' intentions to cease smoking and the impact of anti-smoking campaigns

It was found that almost half of the participants (42%) in the survey supported that they attempted to quit smoking during the last six months, obviously without achieving the desired outcome (Figure 3A), while when they asked about their willingness to stop smoking, a 60% of them stated that they were willing to do so in the future, but only a 17% of them were apt to quit smoking within the next month (Figure 3B). This tendency illustrates that individuals are aware of smoking drawbacks and they are convinced to free themselves from this habit.

Finally, Mann-Whitney U test results revealed that the smokers, that attempted to cease smoking in the past or intended to do so in the future, professed to be more affected by initiatives related to anti-smoking messages in mass media like television, on cigarette packaging, and the soft anti-smoking campaigns/activities, compared to other awareness strategies such as outdoors anti-smoking advertisements or informational campaigns (Table 5).





**Figure 3.** A. Smokers' attempt to cease smoking during last 6 months, B. Smokers' willingness to cease smoking in future.

**Table 5.** Impact of anti-smoking campaigns/activities on smokers' intentions to cease smoking

	Attempt to cease smoking			Willingness to cease smoking		
	No	Yes	Asymp. Sig. (2-tailed)*	No	Yes	Asymp. Sig. (2-tailed)*
Frequency of exposure to mass-media anti-smoking messages	1.79	1.82	0.647	1.79	1.81	0.697
Frequency of exposure to outdoor spaces' anti-smoking messages	2.04	2.20	0.630	2.17	2.06	0.335
Frequency of exposure to cigarette packaging anti-smoking messages	4.22	4.46	0.424	4.33	4.32	0.761
Effect of mass media anti-smoking messages	1.41	1.82	0.004	1.39	1.71	0.009
Effect of outdoor spaces' anti-smoking messages	1.49	1.90	0.142	1.53	1.76	0.329
Effect of cigarette packaging anti-smoking messages	1.76	2.63	0.000	1.69	2.42	0.002
Effect of soft anti-smoking campaigns/activities	1.92	2.72	0.000	1.76	2.60	0.000
Effect of tax increase on tobacco products	2.26	2.35	0.610	2.02	2.49	0.062
Satisfaction from anti-smoking campaigns/activities	2.23	2.07	0.360	2.27	2.09	0.340

\*: Mann-Whitney U test

Our results are also supported by literature. It was reported that among several countries, in Greece, a 51.3% of smokers were trying to quit smoking a percentage that is close to our results (Riahi et al., 2019). However, another Greek study conducted on 2011 concluded that only a 24.9% of smokers were prone to quit smoking the last past months, a percentage that has been triples in 2020 when our study took place (Schoretsanti et al., 2014). Furthermore, in Riahi et al. (2019), when Greek individuals were asked about their plans to quit smoking, in general, and in the near future, 39% were thinking of stopping this habit, in general, and a 31.7% were thinking of quitting smoking in the next six months (Schoretsanti et al., 2014). In general, it seems that Greek smokers are aware of the bad aspects of smoking in their daily life and are willing to quit it. However, they are rather indecisive on when they could quit smoking, which is a very old habit for many respondents.

Although, Greek smokers probably underestimate the level of influence on tobacco control initiatives on their attempt and intent to cease smoking, the study results comply with the findings of prior research concluding that mass media and cigarette packaging anti-smoking messages, as well other soft anti-smoking activities have a positive impact (Jarlstrup et al., 2018; Ho et al., 2019).

#### 4. CONCLUSIONS AND RECOMMENDATIONS

Smoking is a life-threatening habit that has severe impact on all life's aspects. Its disadvantages are frequently communicated to society to raise awareness and convince current smokers to quit this bad habit. According to our results, there were many current smokers who despite of being daily smokers, they tried to maintain their smoking habit at almost low levels, smoking a sufficient number of cigarettes per day and spending a relatively low amount of money on the purchase of cigarettes compared to the general tobacco price index.

The participants in the survey ascertained that cigarette packages are the main means of exposure to anti-smoking messages, which was expected as cigarette packs are surrounded by anti-smoking warning images and labels. The exposure to anti-smoking messages from mass media and outdoor spaces appeared to be rather little. Although a large number of people are daily exposed to any of the above media, it seems that anti-smoking messages are not delivered effectively to them, probably due to individuals' selective exposure and attention to unpleasant and annoying messages. Moreover, it was found that respondents' exposure to anti-smoking messages does not have the desired, extent, influence to prompt them to quit smoking. The perceived

contribution of the examined anti-smoking activities/programs to smokers' decision to cease smoking varies from very little to moderate, with teacher training to promote anti-smoking education to students, and the promotion of cessation clinics operating in hospitals, considered to exert the most important effect. However, there is a great number of smokers who intend to quit their habit in the near future or who have already tried to cease smoking.

To conclude with, it is evident that each society has different needs and consequently different approaches should be put in place to reach a significant reduction of current smokers. It is already proven that smoking is a deadly habit with several repercussions both personal and societal. Although, several tobacco control initiatives are implemented in Greece, the study results suggest that they have not achieved their full potential, and there is a need for a long-term national plan for coordinated tobacco control to avert smoking initiation and prompt cessation.

## References:

- Chauhan, A., & Sharma, R. (2017). Impact of Anti Smoking Campaigns on Youth. *Procedia Computer Science*, 122, 941–948. <https://doi.org/10.1016/j.procs.2017.11.458>
- Harutyunyan, A., Abrahamyan, A., Grigoryan, Z., Hayrumyan, V., Truzyan, N., & Petrosyan, V. (2020). Smoking cessation knowledge, attitude and practices among tuberculosis physicians: A qualitative study. *Tobacco Prevention & Cessation*, 6 (December), 1–9. <https://doi.org/10.18332/tpc/130475>
- Health policy in Greece. (2016). <https://www.oecd.org/greece/Health-Policy-in-Greece-January-2016.pdf>
- Hellenic Statistical Authority (2020). Health Survey: Year 2019. <https://www.statistics.gr/documents/20181/16853583/%CE%88%CF%81%CE%B5%CF%85%CE%BD%CE%B1+%CE%A5%CE%B3%CE%B5%CE%AF%CE%B1%CF%82+%28+2019+%29.pdf/5856c8ff-59cd-ae0-2883-f90e4b265706?t=1608292190669>
- Ho, S. Y., Chen, J., Leung, L. T., Mok, H. Y., Wang, L., Wang, M. P., & Lam, T. H. (2019). Adolescent Smoking in Hong Kong: Prevalence, Psychosocial Correlates, and Prevention. *Journal of Adolescent Health*, 64(6), S19–S27. <https://doi.org/10.1016/j.jadohealth.2019.01.003>
- Jarlstrop, N. S., Juel, K., Pisinger, C. H., Grønbaek, M., Holm, S., & Andersen, S. (2018). International Approaches to Tobacco Use Cessation Programs and Policy in Adolescents and Young Adults: Denmark. *Current Addiction Reports*, 5(1), 42–53. <https://doi.org/10.1007/s40429-018-0187-x>
- Kaai, S. C., Fong, G. T., Goma, F., Meng, G., Ikamari, L., Ong'ang'o, J. R., & Elton-Marshall, T. (2019). Identifying factors associated with quit intentions among smokers from two nationally representative samples in Africa: Findings from the ITC Kenya and Zambia Surveys. *Preventive Medicine Reports*, 15, 100951. <https://doi.org/10.1016/j.pmedr.2019.100951>
- Kapetanstrataki, M., Tzortzi, A., Evangelopoulou, V., & Behrakis, P. (2021). Profiling smokers in Greece in 2020. *Tobacco Prevention and Cessation*, 7(Supplement). <https://doi.org/10.18332/tpc/143619>
- Li, L., Borland, R., Yong, H.-H., Fong, G. T., Jiang, Y., Li, Q., Hammond, D., & Quah, A. C. K. (2014). Reported exposures to anti-smoking messages and their impact on Chinese smoker's subsequent quit attempts. *International Journal of Behavioral Medicine*, 21(4), 667–676. <https://doi.org/10.1007/s12529-013-9349-3>
- Martire, K. A., Clare, P., Courtney, R. J., Bonevski, B., Boland, V., Borland, R., Doran, C. M., Farrell, M., Hall, W., Iredale, J. M., Siahpush, M., & Mattick, R. P. (2017). Smoking and finances: baseline characteristics of low income daily smokers in the FISCALS cohort. *International Journal for Equity in Health*, 16, 1–8. <https://doi.org/10.1186/s12939-017-0643-6>
- Michas, G., Magriplis, E., Micha, R., Chourdakis, M., Koutelidakis, A., Dimitriadis, G., Panagiotakos, D., & Zampelas, A. (2022). Prevalence and factors associated with smoking in a nationally representative sample of Greek adults: The Hellenic National Nutrition and Health Survey (HNNHS). *Hellenic journal of cardiology: HJC = Hellenike kardiologike epitheorese*, 67, 19–27. <https://doi.org/10.1016/j.hjc.2022.05.005>
- Nikaj, S., & Chaloupka, F. J. (2013). The Effect of Prices on Cigarette Use Among Youths in the Global Youth Tobacco Survey. *Nicotine & Tobacco Research*, 16(Suppl 1), S16–S23. <https://doi.org/10.1093/ntr/ntt019>
- Nogueira, S., McNeill, A., Fu, M., Kyriakos, C., Mons, U., Fernández, E., Zatoński, W., Trofor, A., Demjén, T., Tountas, Y., Przewoźniak, K., Quah, A., Fong, G., Hitchman, S., Vardavas, C., & consortium \*, on behalf of the E.-P. (2018). Impact of anti-smoking advertising on health-risk knowledge and quit attempts across 6 European countries from the EUREST-PLUS ITC Europe Survey. *Tobacco Induced Diseases*, 16(2). <https://doi.org/10.18332/tid/96251>
- Riahi, F., Rajkumar, S., & Yach, D. (2019). Tobacco smoking and nicotine delivery alternatives: patterns of product use and perceptions in 13 countries. *F1000Research*, 8, 80. <https://doi.org/10.12688/f1000research.17635.2>
- Schoretsaniti, S., Filippidis, F. T., Vardavas, C. I., Dimitrakaki, C., Behrakis, P., Connolly, G. N., & Tountas, Y. (2014). 5-Year trends in the intention to quit smoking amidst the economic crisis and after recently

- implemented tobacco control measures in Greece. *Addictive Behaviors*, 39(1), 140–145. <https://doi.org/10.1016/j.addbeh.2013.09.015>
- Singh, S. K., Schensul, J. J., & Kashyap, G. C. (2017). The Reach of Media to Smokers and Smokeless Tobacco Users in India: Evidence from the Global Adult Tobacco Survey (GATS). *Journal of Population and Social Studies*, 26(1), 42–52. <https://doi.org/10.25133/jpssv26n1.004>
- Stafylis, C., Rachiotis, G., Katsioulis, A., Mouchtouri, V., & Hadjichristodoulou, C. (2018). Prevalence and determinants of smoking and secondhand smoke exposure in a rural population of central Greece: a cross-sectional study. *Rural and Remote Health*. <https://doi.org/10.22605/rrh4218>
- Tauras, J., Huang, J., & Chaloupka, F. (2013). Differential Impact of Tobacco Control Policies on Youth Sub-Populations. *International Journal of Environmental Research and Public Health*, 10(9), 4306–4322. <https://doi.org/10.3390/ijerph10094306>
- Tobacco Questions for Surveys A Subset of Key Questions from the Global Adult Tobacco Survey (GATS) 2nd Edition GTSS GLOBAL TOBACCO SURVEILLANCE SYSTEM*. (n.d.). Retrieved April 11, 2023, from [http://www.who.int/tobacco/surveillance/en\\_tfi\\_tqs.pdf](http://www.who.int/tobacco/surveillance/en_tfi_tqs.pdf)
- Tousoulis, D. (2016). Smoking Cessation and Health Economics. *Hellenic Journal of Cardiology*, 57(1), 67–69. [https://doi.org/10.1016/s1109-9666\(16\)30024-0](https://doi.org/10.1016/s1109-9666(16)30024-0)
- Tzortzi, A., Kapetanstrataki, M., Evangelopoulou, V., Behrakis, P. (2020). Smoking in Greece Where we stand in 2020. *Pneumon*, 33(2), 59-67. <http://www.pneumon.org/Smoking-in-Greece-Where-we-stand-in-2020,137305,0,2.html>
- WHO global report on trends in prevalence of tobacco use 2000-2025 Fourth edition*. (n.d.). <https://apps.who.int/iris/rest/bitstreams/1390521/retrieve>
- World. (2022, May 24). Tobacco. Who.int; World Health Organization: WHO. <https://www.who.int/news-room/fact-sheets/detail/tobacco>
- World Health Organization, & Control (U.S.), C. for D. (2011). Tobacco questions for surveys: a subset of key questions from the Global Adult Tobacco Survey (GATS): global tobacco surveillance system. In apps.who.int. World Health Organization. <https://apps.who.int/iris/handle/10665/87331>

# Digital Marketing

# Identifying the antecedents and consequences of digital content marketing in the era of ChatGPT

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## **Abstract**

The artificial intelligence has changed the way businesses operate. Practitioners these days are trying to understand how AI advanced solutions can be used perfectly for their marketing functions. This research illustrates the possible relationship between two different scientific branches of marketing science and computer science. It examines the interaction of digital marketing tools and artificial intelligence (AI), identifying, at the same time the antecedents and consequences of ChatGPT for content marketing. The previous research studies examined generic aspects of AI and digital marketing such as social media advertisement, search engines, social media marketing, email marketing etc.

Despite the number of research studies in this regard, it seems that there is a lack of scientific publications regarding specifically digital content marketing and artificial intelligence (ChatGPT). Never the less, there are some recent papers attempted generally to examine the nature of the this relationship. In fact, this research shows possible consequences of the ChatGPT on the future of Content Marketing, and highlights the corner stone publications, provides an overview of key definitions related to ChatGPT, sheds the light on some major aspects of digital content marketing in the era of artificial intelligence.

This study contributes to this growing research area by identifying the antecedents and consequences for this controversial topic, and developing a comprehensive conceptual model of content marketing based on artificial intelligent.

Keywords: Artificial intelligence (AI) · Digital marketing · Content marketing · Engagement

## **Towards nowcasting tourism demand using user-generated online data and machine learning techniques**

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### **Abstract:**

A search engine is not only a leading tool intensively used in planning activities like tourism, but it has been proven effective in studying preferences for particular destinations or travel products and timely detecting behavioral patterns and trends. As many decisions for tourism service acquisition emerge online, Google Trends, a service based on Google search-generated data, grasps consumers' interest and reveals the geography of distinctive searches in real-time.

This study benchmarks relevant state-of-art machine learning (ML) techniques to predict tourist demand, considering potential determinant factors and the geography of cyberspace. Managing the Google Trends repository, our big data-driven forecasting models finely reflect relevant search terms with the maximal predictive capacity for our target variable based on a myriad of search results and spatial-specific behavioural patterns.

The validity and generality of the proposed scientific approach are demonstrated in a case study of Romanian tourism demand that models monthly tourist arrivals at the regional level.

This approach illustrates the informativeness of Google Trends in uncovering temporal relationships and non-linear associations between driving factors and tourism demand at the regional level and the predictive capacity of machine learning algorithms for accurate forecasting of actual tourist arrivals, which are sometimes difficult to be disclosed with traditional techniques.

Our scientific results indicate that search-based tourist demand predictors are a good approximation of reality in the context of the Romanian tourism industry. After evaluating the forecasting performances of nineteen supervised learning techniques, it is shown that the best results are achieved using the gradient boosting regression method and accommodation and holiday searching keywords.

**Keywords::** *nowcasting, Google Trends data, machine learning techniques*

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### **Introduction**

Modelling and forecasting tourism activities is a topical topic of interest for academics and practitioners as it provides valuable support for strategic and operational decisions and influences the economic outcomes of many businesses going from airlines to restaurants and destination shops. Policymakers typically make real-time decisions using incomplete information regarding the number of incoming tourists, as personal or impersonal factors may impact customers' choices to travel to a destination, even when they have a previous reservation.

Similar to other business operations, tourism activities are contingent on forecasts. However, predicting based on traditional econometric models might be out-of-date, very expensive and ineffective without updated primary data. Therefore, new methods that propose accurate, almost real-time predictions based on alternative data are expected.

Given the perishable stripe of tourism products that cannot be stockpiled and defective management may generate significant revenue lost, the accurate nowcasting of inbound tourists is equally essential for business managers, policymakers and practitioners. Predicting tourism demand is challenging and multifaceted because of seasonal variations, the impact of unforeseen events, the diversity of determinant factors and the complexity of travelers' decision-making practice (Song et al. 2010).

To mitigate the impact of these challenges, nowcasting models based on machine learning techniques have been approached as they can capture non-linear relationships between data and improve prediction accuracy.

Furthermore, consumers' interaction with social media generates relevant information able to outstandingly reflect the internal and exogenous factors of their decisions and interest in particular activities or tourism destinations. These new data sources are helpful in improving the performances of forecasting models thanks to developments in big data analytics, which provide methods for gathering and revealing patterns in data.

This research examines various predictive data-driven techniques and evaluates them against different explainable metrics to identify the most accurate model for nowcasting. Apart from other research papers, this study uses external predictors capture from Google Trends to reveal and quantify tourists' interest during their preparedness for a vacation or traveling to a specific region and to integrate them into the forecasting process.

The proposed approach uncovers both seasonality and spatial features of tourism activity, and it is applied and verified in nowcasting the monthly incoming domestic tourism volume at the regional (NUTS 3) level across Romania's counties.

In contrast to other research papers, our study focuses on a whole country and forecasts the number of incoming tourists at the regional level. Our findings are particularly important to support policy decisions at the regional level, like transportation, accommodation, the hospitality industry and public administration.

The rest of this paper is shaped as follows: Section 2 overviews the current state of the art in approaching machine learning techniques and online-generated data for nowcasting. Section 3 details the empirical research methodology, explaining how the online dataset is gathered and how the ML model is built and evaluated. Section 4 presents and analyses the results of the regression ML techniques applied to the dataset. The conclusive section includes future work directions.

## 2. Literature review

Forecasting tourists' behavior in choosing a destination is essential for tourism management as it may enhance resource administration and their appropriate allocation (Havranek and Zeynalov 2021). To a great extent, available studies on tourism demand forecasting have used time series, econometrics, and artificial intelligence (Song, Qiu, and Park 2019).

Statistical models have been traditionally applied to large amounts of historical data and generate outstanding results in a common context (Sanders and Ritzman 2001), catching and modelling current states and identifying future trends. Time-series statistical models predict dependent variables based on their own past and some independent determinants (Borup and Schütte 2020).

Since econometric methods rely on a consistent historical dataset and a longstanding economic setting, any impressive fundamental deviations in the economy or unforeseen events may decline their forecasting accuracy (Joseph, Babajide Wintoki, and Zhang 2011). Moreover, they depend on the flow of official statistics that is unavailable on time or insensitive to changes since many key statistics useful for traditional forecasting methods, such as tourism arrivals, are published with delays and are subject to recurrent updates.

Consequently, classic forecasting methods are ineffective in the context of unpredictable events such as a pandemic, terrorist attacks, earthquakes or damaging storms that generate sharp changes in tourists' behavior, difficult to be captured using traditional data sources (Borup and Schütte 2020).

In a disturbing setting caused by an unexpected event, traditional statistical models fail to encompass the challenges generated by consumers' behavior changes and timely capture their long- and short-term impact on supporting managerial decisions in the tourism industry (P. Liu et al. 2019).

Fortunately, the sheer amount of data put forth over the past decade by big data provides scientists and practitioners with novel, more accurate and timely data sources for studying the economic behavior of customers that have been proven beneficial for forecasting (Malyy, Tekic, and Podladchikova 2021). In this context, social media and online systems significantly support travelers' decisions to select their destinations and products. They also provide relevant data for improving travel demand nowcasting and identifying new data patterns (Borup and Schütte 2020).

Online search data, like Baidu and Google Trends, have been approached in investigating and modelling various issues in domains like unemployment (Baker and Fradkin 2017) and stock rates (Kristoufek 2013). Therefore, online search data have proved helpful for assessing past or present subjects and predicting near or future trends (Y. Y. Liu, Tseng, and Tseng 2018).

Because search engines represent a prominent tool in planning vacations, booking and tourism services acquisition, researchers have approached search engine-generated data for tourism services consumption forecasting (Padhi and Pati 2017). The traces left behind by the user interacting with search engines and the search volume became indicators of users' interests and attitudes, relevant for defining behavioral patterns (Cuomo et al. 2022).

In this context, emerging machine learning techniques have been approached for nowcasting, as they can better handle the nonlinear relationship between and among predictors and output variables and can identify patterns in unstructured data gathered from big data sources. Neural networks have been successfully applied in different research fields, but only recently for tourism demand forecasting (Cuomo et al. 2022).

Several attempts have been made to forecast tourism demand at the regional level. However, previous studies have investigated particular locations and tourist attractions or have been conducted at the city level (Önder 2017). Further regional-focused predictions are significantly expected for modelling tourism activities as they are valuable for academic and business purposes (Padhi and Pati 2017).

A critical challenge in approaching online data in forecasting is the selection of relevant keywords and the identification of non-linear methods in widely available information embedded in these series correlated with the target variables.

However, the predictive capacity of a model developed around machine learning techniques and big data sources is influenced by the appropriate selection of determinant factors of the target variable, having a significant predictive power and revealed according to a plausible theoretical lens explaining the consumers' behavior (Chung et al. 2015).

Relevant variable selection is critical because extant literature proves that Google Trends encompasses powerful predictors hidden within a large number of weak or irrelevant series (Borup and Schütte 2020). Moreover, the non-linearity of the predictors in the tourism demand relationship plays an essential role due to the inherent complexity in using data based on text, and our results show that we can identify from them significant predictors of the target variable.

### 3. Research Methodology

Considering the targeted literature presented, our research aims to address the following research questions:

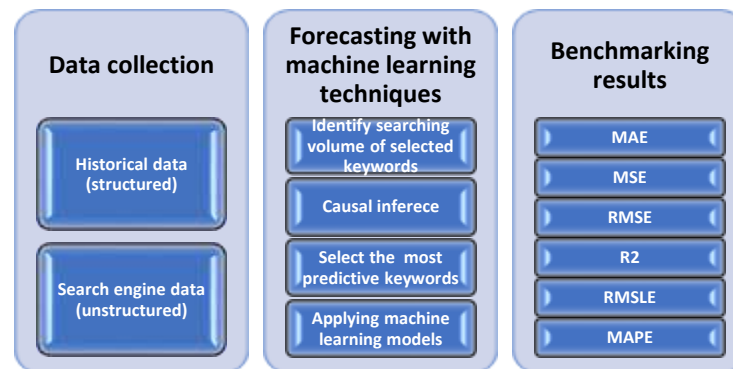
RQ1. Are Google Trends generated data valid predictors for tourist demand in Romania?

RQ2. What are the most appropriate machine learning models for forecasting tourism demand evolution at the regional level in Romania?

RQ3. What are the most powerful and predictive queries for tourism demand regarding arrivals?

A three-prong approach is used to set up our research framework, from collection to data analysis, as depicted in Figure 1. This research scenario can be generalized by adapting it to the local linguistic context.

The entire process is performed using the Python programming language as well as PyCaret, Pandas and Sklearn libraries.



**Figure 1.** The framework for tourism demand nowcasting

In a data-rich environment like our big data solution, the target predictors were first pre-selected and uninformative predictors were removed.

Machine learning techniques are appropriate for tourism nowcasting because they do not make a priori assumptions on the connections among predictive variables and model specifications, and they create a model that involves explanatory variables and the lagged dependent variables.

Subsequently, we perform our empirical forecasting at the county level because this is the decisional level for policymakers in tourism.

#### A. Data source

Two data sources have been used for this study, as depicted in Figure 1: historical data about tourist arrivals breakdown at the regional level and search engine data acquired using Google Trends API for the 2013-2023 time span and all Romanian counties. Google Trends provides a real-time series on the ratio of queries for a search term in a specific geographical area (Google Trends n.d.).

We use vintages of historical data for incoming tourists and create monthly time series considering all Romanian regions at the county level (NUTS3).

Data about the frequency of 6 hit tourism-related search terms gathered from the Google Trends service were used as a predictor to improve the nowcasting performance of machine learning algorithms over the 2013-2022 period.

Therefore, a high-dimensional panel of Google Trends data was created using a four-stage procedure that selects relevant candidate queries with the highest predictive power for tourism demand in Romania's regions.



The initial selection of keywords is grounded in the literature on online tourist behaviour. First, six basic search queries (in Romanian) were defined, considering various dimensions of trip planning. To capture Google Trends queries potential predictors of Romanian tourism demand, we begin with seed keywords appropriate for seven significant categories: dining, lodging, transportation, and general tourism. Table 1 lists the translated seed keywords used in this study with their corresponding categories.

The data is then collected in a raw form, cleaned, transformed, and finally aggregated.

Due to the data acquisition mechanism, our dataset has no duplicates or empty it is not necessary to fulfil data cleaning and pre-processing, which are typical stages of the machine learning pipeline.

After data acquisition, the third stage normalizes the numerical variables, transferring values in the range [0-100].

For this work, we created a tabular dataset for ten years that includes 5040 records and ten input attributes, as depicted in Table 1.

Each record was then completed with the monthly number of incoming tourists at the regional level from the official statistics.

• **Table 1.** The structure of gathered data

Keyword (in Romanian)	Description	Domain
Cazare	Accommodation	Lodging
Hotel	Hotel	Lodging
Tren	Train	Transportation
Vacanta	Holiday	Tourism - general
Pizza	Pizza	Dining
Pensiune	Guest house	Lodging
Restaurant	Restaurant	Dining

### B. Supervised ML Analysis and benchmarking forecasting results

This paper investigates the performance of various ML algorithms to detect the most accurate method and to nowcast incoming domestic tourists at the regional level in Romania. A comparison of nineteen supervised machine learning techniques revealed the best method to predict the output variable accurately.

Given the specificity of our target variable with continuous values, supervised machine learning regression techniques were used to reveal the relationships between the continuous dependent variable (incoming tourists) and independent variables (features gathered from Google Trends) and perform predictions.

The acquired dataset was split in the 80/20 ratio for training and testing purposes as required by machine learning models. The outcome of various machine learning and scaling algorithm blends is presented in the next section.

To make a methodologically fair comparison of the forecasting performance of the machine learning techniques are evaluated using traditional MAE, MSE, MAPE, RMSE, RMSLE and R2 of ex-ante out-of-sample predictive means of incoming tourists in every region.

MAE depicts the typical level of the residuals calculated for every data point.

$$MAE = \frac{1}{n} \sum [y - \hat{y}]$$

Since it uses absolute values and hides the bias's direction, this model evaluator cannot specify if the model is over-estimate or under-estimate.

Instead of using the absolute value like the MAE, MSE (mean square error) squares the difference before summing all data values, as described in the following formula:

$$MSE = \frac{1}{n} \sum (y - \hat{y})^2$$

A major disadvantage of the MSE, which may lead to the misinterpretation of final results is the usage of squared units.

Mean absolute percentage error (MAPE) figures how far the model's predictions are from their corresponding outputs, on average, using the formula:

$$MAPE = \frac{100\%}{n} \sum \left[ \frac{y - \hat{y}}{y} \right]$$

Both MAPE and MAE are considered robust to the effects of outliers because they use absolute values.

Root mean square error (RMSE) measures the average distance between the predicted values and the actual values of a target variable, as follows:

$$RMSE = \sqrt{\frac{\sum_{i=1}^n (y_i - \hat{y})^2}{n}}$$

$R^2$  rates the goodness of fit and figures how well an unobserved sample is probable to be predicted by the model. It figures the proportion of variance of the y variable that the independent variables have explicated.

$$R^2 = 1 - \frac{\sum (y_i - \hat{y}_i)^2}{\sum (y_i - \bar{y})^2}$$

A low RMSE value and a high  $R^2$  indicate an accurate forecasting that fits the model.

Root Mean Squared Log Error (RMSLE)

$$RMSLE = \sqrt{\frac{\sum_i \left( \log \frac{\hat{y}_i + 1}{y_i + 1} \right)^2}{n}}$$

### C. Relationship investigation

The Granger causality analysis is applied to investigate whether our target keywords: kw = [1,7], for each region reg = [1,42] have an influence on the incoming tourists based on data gathered online and to statistically test the predictive power of Google trends variables on the number of incoming tourists. This step aims to explore the influential power of Google trends keywords selected, among the seven candidates, in terms of having a statistically significant relationship with the monthly number of incoming tourists, at the regional level, in Romania.

Since Granger causality provides information about forecasting ability (Emirmahmutoglu and Kose 2011), this test may discover statistically significant keywords for forecasting.

### 4. Research findings

The monthly distribution of incoming tourists at the regional level in Romania is widely varied, as Figure 2 shows the average number of arrivals between 1.01.2013 and 31.12.2022.



**Figure 2.** Geographical distribution of incoming tourists

For this study, 19 regression techniques and PyCaret ML library were employed, more specifically K Neighbors Regressor, Extreme Gradient Boosting, Random Forest Regressor, Gradient Boosting Regressor, Extra Trees Regressor, Decision Tree Regressor, Linear Regression, Lasso Regression, Ridge Regression, Least Angle Regression, Lasso Least Angle Regression, Bayesian Ridge, Elastic Net, Huber Regressor, AdaBoost Regressor, Light Gradient Boosting Machine, Orthogonal Matching Pursuit, Passive Aggressive Regressor and Dummy Regressor.

Table 2 illustrates the results of the metric performance of the ML regression models evaluated on different scaling techniques applied to the gathered dataset. A k-fold cross-validation for metric assessment was involved. Since  $R^2$  is larger than 0.5 for six machine learning regression forecasting models we can conclude that a good amount of variance (more than 50%) of our dependent variable (incoming tourists) is explained using Google

Trends search queries. Consequently, we can infer that Google Trends queries are valid predictors of tourism incoming, in Romania (RQ1).

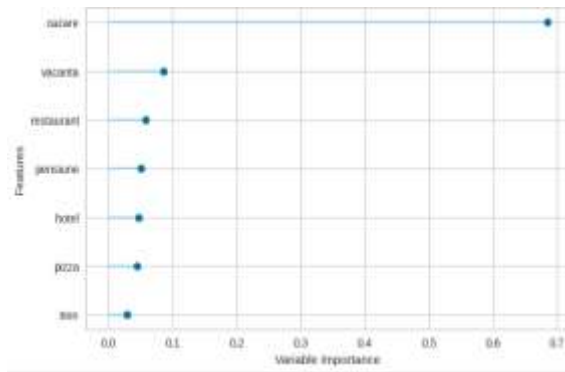
To select a predictive machine learning model, the MAE performance criterion is used as it reveals the absolute difference between the initial data values and the predictions of the forecasting model. Furthermore, since one objective (RQ2) of our research aims to reveal the most helpful features for forecasting the target variable, it is essential to identify the best ML model that plots the features importance of predictors.

According to the summary of regression models' performances figured in Table 2, it can be concluded that the best results are achieved by K Neighbors Regressor (KNN), Gradient Boosting Regressor (GBR) and Random Forest Regressor (RF) techniques. KNN provides the lowest MSE, RMSE, R2 values, GBR the best MAE indicator, while RF technique provides a good balance against various metrics.

The predictive power of the forecasting method comes mainly from four search keyword: "accommodation" with a very strong predictive power of 69% "holiday" with 9%, "restaurant" and "guest house" with 6% each, hidden within a number of weak and uninformative predictors, with an influence lower than 5%, as presented in Figure 3.

• **Table 2.** Summary of the performance of applied regression models against various metrics

	Model	MAE	MSE	RMSE	R2	RMSLE	MAPE
knn	K Neighbors Regressor	13971.91	<b>1239682664.01</b>	<b>35076.73</b>	<b>0.5689</b>	1.3826	2.6062
gbr	Gradient Boosting Regressor	<b>13888.37</b>	1273351311.34	35571.03	0.5536	1.3361	2.3070
rf	Random Forest Regressor	14575.19	1285772717.35	35712.7325	0.5500	1.4251	2.6551
ada	AdaBoost Regressor	13972.22	1292909343.97	35834.3352	0.5456	1.3453	<b>2.0339</b>
et	Extra Trees Regressor	15070.36	1380032733.98	36932.2510	0.5143	1.4777	2.8219
lightgbm	Light Gradient Boosting Machine	14621.72	1359850131.14	36846.4339	0.5087	1.3534	2.3271
xgboost	Extreme Gradient Boosting	15169.73	1402091518.94	37406.0904	0.4916	1.4372	2.5980
omp	Orthogonal Matching Pursuit	14952.39	1452231117.74	37929.9087	0.4830	1.3457	2.3600
llar	Lasso Least Angle Regression	14833.71	1442106391.20	37851.3587	0.4829	1.3319	2.2771
lasso	Lasso Regression	14833.71	1442106633.99	37851.3621	0.4829	1.3319	2.2771
br	Bayesian Ridge	14840.82	1450248223.17	37966.2060	0.4784	1.3303	2.2723
en	Elastic Net	14860.67	1452937782.57	38008.3694	0.4769	1.3306	2.2671
lr	Linear Regression	14899.02	1466515910.35	38199.9807	0.4696	<b>1.3296</b>	2.2632
ridge	Ridge Regression	14899.02	1466515606.65	38199.9763	0.4696	<b>1.3296</b>	2.2632
lar	Least Angle Regression	14899.02	1466515910.35	38199.9807	0.4696	<b>1.3296</b>	2.2632
dt	Decision Tree Regressor	17280.95	1669384670.00	40774.9018	0.3778	1.5769	3.3769
dummy	Dummy Regressor	18517.07	2532975498.97	50003.50	-0.0679	1.4306	2.5579
huber	Huber Regressor	39247458 1.96	7706329923963 7008384.00	5131779971 .54	- 41138888782. 5035	4.4366	27747.6130
par	Passive Aggressive Regressor	33547258 047731.22	5271373963862 6115433744092 3648.00	4191807077 88949.68	- 247259285250 189656064.00 00	3.0083	116245153.755 8



**Figure 3.** Feature importance plot: GBR model

To encompass the regional dimension in our model and investigate its applicability at the regional (county) level, we construct a Google Trends county-level panel for each Romanian region.

The panel for each county is conformed of national (country level).

The Granger causality test was applied to investigate top predictors determining forecasting performance statistically relevant relationship.

RELATIONSHIP INVESTIGATION USING THE GRANGER CAUSALITY TEST APPLIED TO OUR DATASET REJECTED THE NULL HYPOTHESIS THAT GOOGLE SEARCHES DID NOT GRANGER-CAUSE THE NUMBER OF INCOMING TOURISTS FOR TWO KEYWORDS, AS THE P-VALUE IS SMALLER THAN 0.05 (THE SIGNIFICANCE LEVEL). OUR RESULTS CONFIRM THE CAUSALITY OF “ACCOMMODATION” AND “HOLIDAY” KEYWORDS, AS DEPICTED IN TABLE 3.

**Table 3.** Results of Granger causality test

	<b>Granger causality test</b>
accommodation	<b>0.0000</b>
train	0.1077
holiday	<b>0.0002</b>
pizza	0.0256
restaurant	0.0538
hotel	0.0704
Guest house	0.7133

**Conclusion**

The methodological approach of this research flexibly identifies cross-regional heterogeneity and consider specific path at the regional level. It exploits the capacity of Google Trends and makes use of information related to tourists' online searching behaviour when preparing for their holiday.

We propose a two-step model to nowcast the number of incoming tourists at the regional level. First, a monthly model of incoming tourists is projected based on Google Trends searches. Second, the relationship between the number of incoming tourists as reported by the official statistics and Google Trends variables is fitted using machine learning algorithms, which are prone to capture the non-linear association expected, especially in extreme situations and difficult to estimate using traditional econometric models.

Using interpretability mechanisms of modern machine learning techniques, this paper reveals insights into non-linear patterns captured by the model.

The tourism demand model based on Google Trends performs well in out-of-sample nowcast simulations. These empirical outcomes are particularly significant since traditional forecasting models do not provide accurate predictions in the context of unpredictable factors like changing weather conditions, human-made crises or sudden events, which may impact the demand for tourism services.

The generalizability of our research results is subject to certain limitations because of cultural differences between the online behaviour of tourists from different countries. However, this paper provides appropriate methodological and empirical results to make it compliant with different cultures. However, even if data from Google searches are imperfect, Google Trends offers one of the best real-time information sources, so it has the potential to act as a prominent resource for nowcasting, especially because it provides data at the regional level. Moreover, time series data generated by search engines are particularly serviceable during unpredictable situations, when consumer behaviour suffers insightful transformations, and the flow of official information is unavailable on time or is sensitive to catch the changes and make reasonable predictions (Önder 2017).

**Further research can explore the effectiveness of including additional predictors for the forecasting model. additionally, neural networks and deep learning techniques could be considered in the attempt to increase forecasting performance.**

**References:**

- Baker, Scott R., and Andrey Fradkin. 2017. "The Impact of Unemployment Insurance on Job Search: Evidence from Google Search Data." *Review of Economics and Statistics* 99(5): 756–68.
- Borup, Daniel, and Erik Christian Montes Schütte. 2020. "In Search of a Job: Forecasting Employment Growth Using Google Trends." *Journal of Business and Economic Statistics* 0015.
- Chung, Namho, Hyunae Lee, Seung Jae Lee, and Chulmo Koo. 2015. "The Influence of Tourism Website on Tourists' Behavior to Determine Destination Selection: A Case Study of Creative Economy in Korea." *Technological Forecasting and Social Change* 96: 130–43. <http://dx.doi.org/10.1016/j.techfore.2015.03.004>.
- Cuomo, Maria Teresa et al. 2022. "Enhancing Traveller Experience in Integrated Mobility Services Via Big Social Data Analytics." *Technological Forecasting and Social Change* 176(January): 121460. <https://doi.org/10.1016/j.techfore.2021.121460>.
- Emirmahmutoglu, Furkan, and Nezir Kose. 2011. "Testing for Granger Causality in Heterogeneous Mixed Panels." *Economic Modelling* 28(3): 870–76. <http://dx.doi.org/10.1016/j.econmod.2010.10.018>.
- "Google Trends." <http://www.google.com/Trends>.
- Havranek, Tomas, and Ayaz Zeynalov. 2021. "Forecasting Tourist Arrivals: Google Trends Meets Mixed-Frequency Data." *Tourism Economics* 27(1): 129–48.
- Joseph, Kissan, M. Babajide Wintoki, and Zelin Zhang. 2011. "Forecasting Abnormal Stock Returns and Trading Volume Using Investor Sentiment: Evidence from Online Search." *International Journal of Forecasting* 27(4): 1116–27. <http://dx.doi.org/10.1016/j.ijforecast.2010.11.001>.
- Kristoufek, Ladislav. 2013. "Can Google Trends Search Queries Contribute to Risk Diversification?" *Scientific Reports* 3: 1–5.
- Liu, Peixue et al. 2019. "Spatial-Temporal Response Patterns of Tourist Flow under Impulse Pre-Trip Information Search: From Online to Arrival." *Tourism Management* 73(April 2018): 105–14.
- Liu, Yuan Yuan, Fang Mei Tseng, and Yi Heng Tseng. 2018. "Big Data Analytics for Forecasting Tourism Destination Arrivals with the Applied Vector Autoregression Model." *Technological Forecasting and Social Change* 130(February): 123–34. <https://doi.org/10.1016/j.techfore.2018.01.018>.
- Malyy, Maksim, Zeljko Tekic, and Tatiana Podladchikova. 2021. "The Value of Big Data for Analyzing Growth Dynamics of Technology-Based New Ventures." *Technological Forecasting and Social Change* 169(April): 120794. <https://doi.org/10.1016/j.techfore.2021.120794>.
- Önder, Irem. 2017. "Forecasting Tourism Demand with Google Trends: Accuracy Comparison of Countries versus Cities." *International Journal of Tourism Research* 19(6): 648–60.
- Padhi, Sidhartha S., and Rupesh K. Pati. 2017. "Quantifying Potential Tourist Behavior in Choice of Destination Using Google Trends." *Tourism Management Perspectives* 24: 34–47. <https://doi.org/10.1016/j.tmp.2017.07.001>.
- Sanders, Nada R., and Larry P. Ritzman. 2001. "Judgmental Adjustment of Statistical Forecasts." (January): 405–16.
- Song, Haiyan, Gang Li, Stephen F. Witt, and Baogang Fei. 2010. "Tourism Demand Modelling and Forecasting: How Should Demand Be Measured?" *Tourism Economics* 16(1): 63–81.
- Song, Haiyan, Richard T.R. Qiu, and Jinah Park. 2019. "A Review of Research on Tourism Demand Forecasting." *Annals of Tourism Research* 75(December 2018): 338–62. <https://doi.org/10.1016/j.annals.2018.12.001>.

# VidAdChain: An innovative blockchain approach for digital video ad serving and management

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## **Abstract:**

Digital advertising from its humble beginning at the end of the 20<sup>th</sup> century has grown into a multi-billion-dollar industry. Along with its increasing size and worth, the industry is facing challenges of increasing severity. Securing the validity and safety of transactions within the digital advertising ecosystem, protecting the personal data of advertisers, publishers and consumers and minimizing the effects of intermediaries and fraud are currently the principal factors that threaten the value of digital advertising. Blockchain, an emerging technology first adopted in digital currencies and financial transactions, is gaining attention as promising solutions to the above-mentioned challenges. Blockchain is founded on distributed ledger technologies, incorporating advanced security features, such as cryptographic signature technologies and cement transparency and trust between advertisers and publishers. With Blockchain the need for intermediaries is limited, all campaign and personal data of the viewers are stored encrypted in the blockchain, providing transparency to the advertising model and, consequently, increasing the value of advertising across the ecosystem. In this paper we present an innovative approach for developing a blockchain enabled ad serving and management service, named VidAdChain, which we develop as the next gen solution of the established in the Greek advertising market, Vidads© video ad server. The service targets the digital video advertising segment of the market, due to the increasing significance of video in the digital advertising mix. Nonetheless, the core features of the present technological solution can find applications in all forms of digital advertising (banners, rich media, native ads etc.). Our research demonstrates that blockchain technology can effectively mitigate ad fraud by recording ad-related data on an immutable ledger, providing accurate and reliable information about ad performance. Moreover, the decentralized nature of blockchain enables real-time data access, automated transactions, and streamlined payments. However, challenges related to scalability, user privacy, and regulatory compliance need to be addressed for widespread adoption. This paper concludes that developing a blockchain video ad server has the potential to revolutionize the advertising industry by improving the integrity and efficiency of video ad serving, and further research and development in this field are crucial for its full realization.

**Keywords:** *Digital Advertising, Video Advertising, Blockchain, B2B Marketing, Innovation*

## ■ **Introduction**

Global marketing spending to digital advertising has increased rapidly over the last years, leading to an estimated 567 billion dollars for 2022 (Cramer-Flood, 2023). With the emergence of mobile technologies, the penetration of internet in the global population (yearend estimates 2021) has reached a new maximum of 63% (ITU, 2021). As is the case with any rapidly evolving and unregulated market, challenges are on the rise. Most of them are owed to its convoluted and opaque supply chain. These issues, being inherent in the core of current operations, affect every member of the advertising chain: publishers, advertisers, and consumers. B.R. Gordon et al. have recently highlighted four major inefficiencies of the digital market: ad effect measurement, frictions between and within advertising channel members, ad blocking, and ad fraud (Gordon et al., 2020).

Starting in reverse order, ad fraud is currently one of the most challenging and far-reaching problems of the digital advertising industry. Put simply, the term digital advertising fraud refers to a group of practices that misrepresent advertising inventory or utilize machines to mimic human behaviour with the goal of “stealing” advertising budgets. Not only is advertising fraud difficult to quantify but it is presumed to be widespread on the internet. A recent report has estimated that about 14% of PPC ad spending globally is invalid and most likely attributed to ad fraud schemes. Sadeghpour and Vlajic recently reviewed the current state of the usage and impact of bots in click fraud and provide an account of the most recent threat mitigation strategies available

(Sadeghpour & Vlajic, 2021). They concluded that contemporary click-bots can replicate human-like interaction behaviors and consequently traditional, interaction-based user behaviour analysis is highly unlikely to detect them. Furthermore, they highlight the inefficacy of solutions currently available against complex click bots in the real-world that are evolving and mutating constantly. Finally, they too suggest that the most severe challenge in defending against ad fraud can be found in the ad industry's lack of transparency and accessibility of information in the ecosystem.

Tightly bound to the issue of fraud is also the next major challenge of the market, ad-blocking. Ad blocking software has been established in the digital ecosystem with 290 million active desktop users using ad blocking solutions (2022 *PageFair Adblock Report*, 2022). The reason behind this increase has two main explanations. Digital advertising has become the industry of personalized ads. Through tracking technologies, advertising services can collect data about the users' online behaviour, besides demographic or geolocation data. Third-party data brokers can in fact aggregate data from several sources and sell them to marketers. According to a study performed by N. H. Brinson et al., it is exactly against this sort of personalized advertising that consumers that use ad-blocking software want to protect themselves (Brinson et al., 2018). Not having an established relationship with third parties increases insecurity and raises data-protection concerns and favors the use of ad-blocking. In addition to the above, webpages overpopulated with ads are deteriorating the users' experience. In a relevant study performed by B. Miroglio et al., it was shown that ad-blocking increases significantly active time spent browsing and number of webpages viewed (Miroglio et al., 2018). Besides the benefits to users, ad-blocking means revenue losses. For example it is reported that in 2016, estimated global loss from the use of ad-blocking was \$1.4 billion (Respati & Irwansyah, 2020). To summarize, personal data protection and the intrusiveness of digital ads, in combination with ad-fraud schemes constitute the major challenges faced by the industry, the state of which is further contributing to their expansion rather than minimizing it.

The current digital advertising ecosystem is overly complex in nature, including countless advertisers, publishers, ad networks, agencies and affiliate networks. As a result of its size and of the absence of a widely adopted system for targeting online audiences without compromising sensitive information and identity data of these audiences, the industry has become dependent on the Meta/Google duopoly. These corporate giants, absorbing more than half of the digital ad spend globally, have more than once been accused of malpractices concerning data privacy and monopolistic behaviour (Colangelo & Maggolino, 2018). These companies have been exploiting their privileged market position and trying to present themselves as de facto privacy regulators (Geradin et al., 2021). Moreover, middleware and intermediaries are absorbing increasing amounts of digital ad spend, pressuring the ad spending capacity of small and medium enterprises. Consequently, if the current status of the ecosystem persists, digital advertising will inevitably reach a point of devaluation, which could have dramatic effects for all actors in the value chain.

The above analysis more than highlights the pressing need of the industry to invent new technologies and frameworks and secure brand safety, consumer privacy, measurement, market power and transparency. Blockchain is one of the technologies with disruptive potential to achieve these goals.

In this article we first present some fundamental features of blockchain technologies and highlight how they directly address the issues of privacy, transparency and measurement validity. We then go on to introduce VidAdChain, a concept for a blockchain based video advertising serving and management tool. In this section we will present the ad buying and serving operations that revolve around the concept of Smart Contracts – digital entities that include all the advertising campaign information needed to execute advertising campaigns with Blockchain capabilities. Finally, we will present the challenges our group has already identified in the course of the research and how we plan to address them in the course of our research.

- **Fundamentals of blockchain**
- ***Blockchain as Distributed Ledger***

Blockchain is defined as a decentralized network of peer nodes, within the boundaries of which the data and transactions carried out between these nodes are recorded. In this particular network, data is registered and stored in packets (Blocks), which are connected to each other, creating a chain of Blocks. A Blockchain network is distributed peer-to-peer, meaning that no one person (or computer) within the network is superior to another. All computers participating in the network have access to it and record transaction and communication data, each keeping a copy of the record file, which ensures the security and transparency of transactions (Gorkhali et al., 2020; Lashkari & Musilek, 2021). The process of creating and preserving the file is defined and controlled by a set of rules called a consensus protocol (Lashkari & Musilek, 2021). The rules are set by the network participants and participation in the network automatically constitutes acceptance of them.

Each transaction, before being registered in the Blockchain, is checked by the computers of the network based on the rules of the protocol. Once verified and approved, it is entered in the file according to the chronological order in which it was carried out. The file created and shared among a large number of users is encrypted and does not allow changing the records already registered in it, while the absence of a central administrator increases the reliability of the system, making it difficult to manipulate. In practice the log file acts as an

immutable record of transactions that does not require validation of the authenticity and integrity of the data by an external authority (Zheng & Lu, 2021).

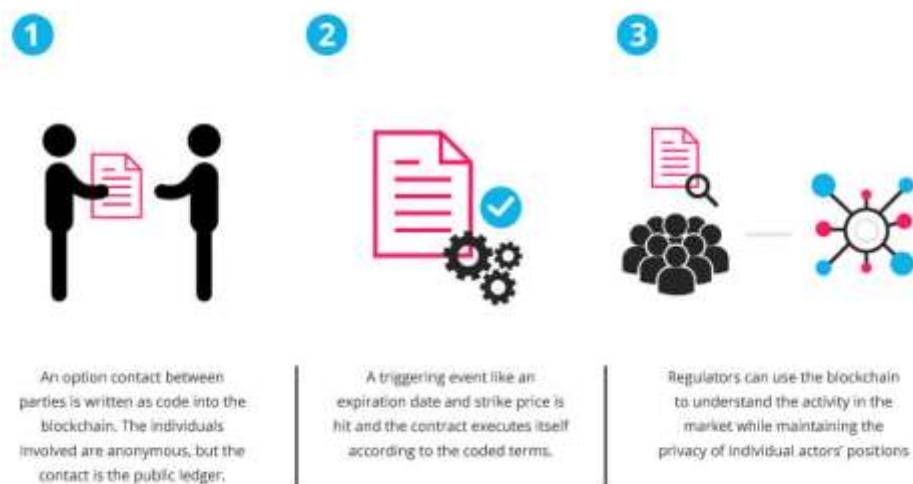
The information contained in a Blockchain can be about an asset or intellectual property, even a voting system or legal documents. In the case of the technology presented in the scope of this research, the information that needs to be stored in a Blockchain is data of digital advertising campaigns. Hence, the primary goal of the research is to describe how such a Blockchain ad management system needs to be designed and developed.

According to the above, the most important aspect of a Blockchain technology for the digital advertising market is to find a means to describe the advertising transaction as a set of rules that can be handled and verified digitally by the different nodes (advertisers, publishers, agencies etc.). This is achieved by Smart Contracts, digital entities that will be briefly described in the next subsection.

#### ▪ **Smart Contracts**

Blockchain technologies make possible the creation and execution of Smart Contracts, which offers the perspective of developing a peer-to-peer market in the near future. A detailed description of the technological and technical properties of smart contracts has been performed by Z. Zheng et al. (Zheng et al., 2020), while a critical review of the main technological and legal issues raised during this early period regarding the applications of smart contracts has been done by E. Mik (Mik, 2017).

A smart contract is a digital protocol whose purpose is to verify or facilitate the negotiation or execution of an agreement. Smart contracts allow trusted transactions to be performed without the need for a third party. Transactions are irreversible and simultaneously tracked. It contains rules that participants have agreed to adhere to in their interactions with each other. When the predefined conditions of a smart contract are met, the contract is automatically activated. Its behavior is based on the algorithms on which it is built. Blockchain platforms that support smart contracts are also referred to as programmable blockchains.(Oliva et al., 2020). The operation mode of smart contracts in the context of a Blockchain is briefly presented in Figure 1.



**Figure 1.** Core features and operation procedure of a Smart Contract in Blockchain applications

The biggest advantage of smart contracts is the fact that they dramatically reduce transaction costs. A smart contract defines the rights and obligations that participating members agree to abide by. Compliance monitoring and enforcement of each member's contractual right are handled by a computer network. In this way, it is possible to enter into contracts with members for whom there is no previous solvency information. In addition, it becomes possible to carry out transactions involving amounts that would not justify the cost and burden of concluding agreements if they were to proceed in the traditional way. Other attractive features include their continuous operation and that they do not impose time or location-related availability restrictions. Smart contracts are self-verifying, self-executing and unbreakable. Their typical use cases are situations in which the parties wishing to enter into a contract do not know each other and do not necessarily trust each other. They can bypass intermediaries and through Blockchain provide the required security.

#### ▪ **Security and Consensus**

As in a Blockchain network, there is no central entity, so there is no one to control which transactions will be stored in the chain of records, it is necessary to have a consensus algorithm or protocol, based on which the participants will verify and approve information before it is entered into the system. Consensus algorithms must be invulnerable to any malicious action. The two most well-known consensus algorithms are Proof of Work and Proof of Stake.



- **Proof of work:** In Blockchain transactions are grouped into a block. The hashing of the previous block acts as a unique identifier and is added to the current block, which connects all blocks together forming a chain. The internal consistency of transactions in each block can be easily verified by an honest client. For this reason, the nodes of a Blockchain network perform the Proof of Work algorithm to create a new block. This algorithm requires a node (also called miner) to pick a random number called a nonce, add it to the list of transactions that make up a block, hash the block and check whether the resulting hash starts with a specified number of zeros. If not, it picks a new random nonce number and tries again. The miner's computer processor will generate many hashes until it succeeds, making it a direct CPU-level problem. The Proof of Work algorithm is based on the principle that no node in the network should own more than 50% of the total computing power, as it will be able to effectively control the system (51% attack). When the network is managed by a large number of users, then this is almost impossible.
- **Proof of stake:** The Proof of Stake algorithm replaces the competition of Proof of Work by randomly selecting participants, who will take part in the process of verifying transactions in a block and its subsequent entry into the Blockchain. In this particular algorithm, interested parties who want to participate in the validation process are required to "lock" a certain amount of coins in the network as their stake. A stakeholder of a given Blockchain is a person who holds some native coins of that Blockchain, and staking refers to a shareholder's ownership of such coins. The size of the stake determines the chances that a node will be selected as the next validator, i.e., the higher the stake, the higher the chances. In theory, validators with higher stakes are more likely to be chosen to validate their reputation. A special case of the Proof of Stake consensus is the so-called **Proof of Authority (PoA)**. On PoA-based networks, only approved accounts can validate transactions and blocks. These accounts are also known as validators. Validators run software which by definition allows them to record and verify transactions in blocks. The process is completely automated, and validators do not need to be constantly monitoring their computers. It, however, does require maintaining the computer (also called the authority node) uncompromised.

▪ **VidAdChain: A blockchain enabled video ad serving and management tool**

VIDADCHAIN is an innovative research project that attempts to apply the principles of Blockchain technology to the design of digital video advertising scheduling, display and control software that will have increased capabilities to address the inherent pathologies of the digital advertising ecosystem (data protection, fraud, dominance intermediaries). In more detail, VidAdChain aims to:

- i. *Provide an environment for secure and automated digital advertising transactions*

With Smart Contract technology regulating the terms of the transaction and the Blockchain architecture securing the validity of the details of any advertising contract, the technology designed for VidAdChain can revolutionize digital ad operations.

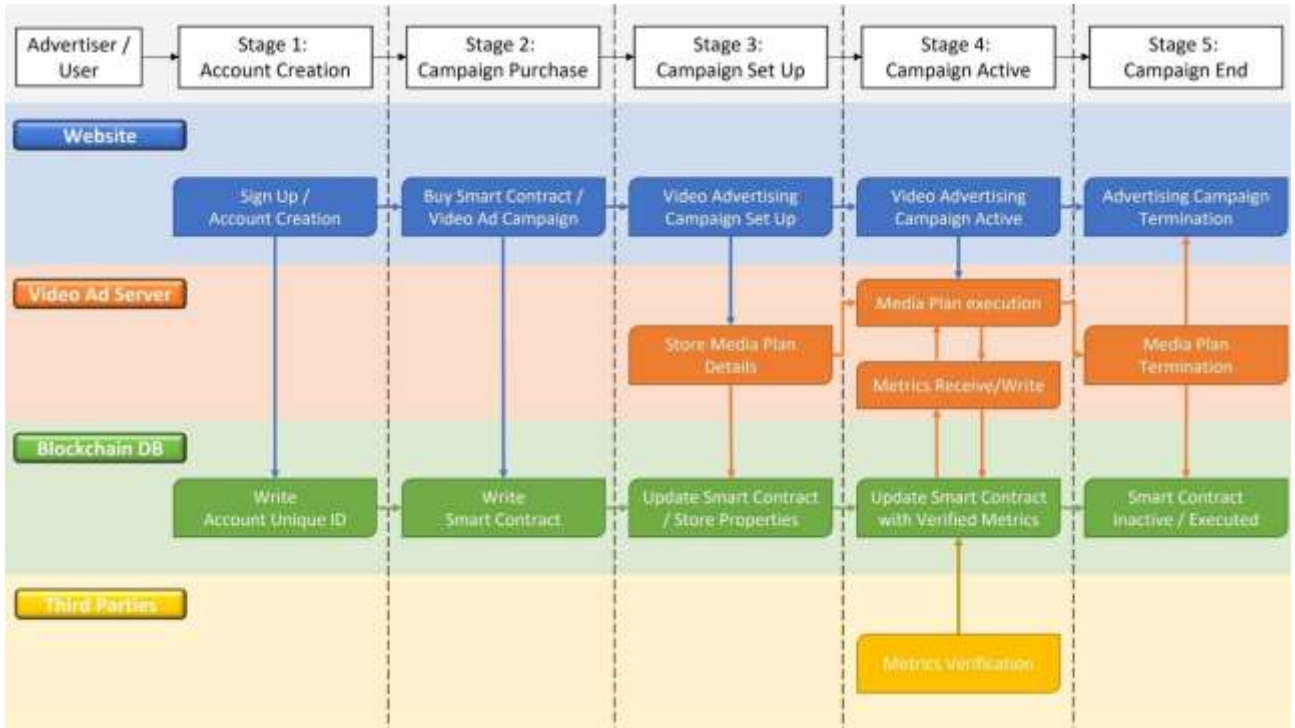
- ii. *Provide ad delivery data that are validated through the Proof of Authority protocol and provide a successful antifraud measure*

As mentioned earlier, the PoA consensus protocol implemented in VidAdChain's architecture, supported by Artificial Intelligence algorithms that can detect click fraud patterns, will ensure that advertisers can have higher return on investment on their digital ad spending. At the same time, sources of fraud can be detected automatically, giving the opportunity to restrict the activity of malicious players in the digital advertising ecosystem. Most importantly, any party interested to join in the Blockchain can act as a validator, meaning that the data will not only be validated by the authority node of VidAdChain, but also from individual third-party services or even from individual advertisers or publishers, in a truly open and transparent system. In this way, while our proposed solution utilizes a private blockchain network, the data stored in the blockchain ledger will have originated through third-party validators who have access to them indefinitely, making VidAdChain a truly transparent ad serving solution.

- iii. *Provide increased encryption and safety of consumer and ad delivery data*

All transaction, ad delivery and consumer interaction data are stored in the blockchain which operates with cryptographic technologies. This makes all data practically impossible to obtain or manipulate as there is no single point of failure in the system.

According to the above, the innovative solution proposed is expected to have significant benefits in the future, especially for the advertising expenditure of the tourism market, which is experiencing high losses due to digital advertising fraud and the dominance of intermediaries.



**Figure 2.** A design of the function layers of the complete model for the advertising solution. From the marketing website to the blockchain database, the use of smart contracts and the campaign statistics interface.

At this stage of the research, different layers of the software development process have been defined and the corresponding action map for the use of the software has been designed. Figure 2 depicts the layers and actions taking place by a hypothetical user – an advertiser that wants to place an ad in our service. By following this action map, the core features of blockchain and its capabilities can be better understood.

In more detail, all actions and interactions of the user/advertiser with the service, the management and monitoring of the course of his advertisement as well as his billing and pricing for this display, take place in three axes or three levels of implementation: (a) on a website, which constitutes the user interface with the service (UI interface), (b) in a video advertisement server (Video Ad Server) and (c) in the blockchain database that records, stores and provides access to all data (commercial, finance, metrics) that are traded all the way. These three levels constitute a closed system, with each layer communicating with the others, while the advertiser is enjoying an orderly and reliable display, having as much control as possible over the renewal of its properties. Finally, there is always one more level, outside the system, where various services providers can interact with the blockchain, performing various functions such as independently validating data and statistics, reading the data in the advertising transactions, etc. This open Application Programming Interface (API) architecture that allows access to the blockchain from third party validators is an unprecedented proposition for the development of an ad server. Its originality and innovation lie in its potential to offer transparency in data that cannot be manipulated (in Blockchain no transaction can be erased).

From the above analysis, it is easy to see that the differentiation of the studied solution in relation to the existing ones is at the level of the database. As, as mentioned above, Blockchain is essentially a database shared among the users of a Peer-to-Peer network, a system architecture should be developed that allows (a) the "sharing" of the database among its nodes network, (b) the ability to confirm the data that is being exchanged in immutable ways, before it is recorded in the common ledger of the blockchain. A second important differentiation lies in the form in which the data of an ad or campaign must take in order to be entered into the Blockchain and subsequently updated through it.

The way to achieve this is through the use of Smart Contracts that fully and quantitatively describe the properties to be recorded and which conditions must be met in order for the contract to be considered successful. Turning now to Figure 3, at its upper part, the user's journey in distinct stages, from registration to purchase, execution and completion of an advertising campaign is shown. These stages are the following:

- **Stage 1 – Account Creation:** This is the registration of the user to the service. This stage only takes place the first time the user uses the service. Automatically upon confirmation of registration, it obtains a Unique ID which enters the Blockchain. This Unique ID represents his account in terms of transactions that will be recorded on the Blockchain in future campaigns.

- **Stage 2 – Campaign Purchase:** The now registered user can purchase from the commercial website an advertising campaign (an ad package), with specific elements/features. When purchase of the ad package is confirmed, a Smart Contract is created and entered into the Blockchain, which encodes as properties the specific elements of the package. These are objects of the future advertising transaction, e.g., campaign duration, number of creatives, available display budget, etc.
- **Stage 3 – Advertising campaign configuration (Campaign Set up):** The user through the UI enters the specific data that will determine the specifics of the advertising package purchased. She defines the start and end date of the campaign, uploads the video ad files into her account and defines the targets of the campaign. The data that are part of the smart contract, after their final registration by the user, are entered into the Blockchain. This process constitutes an update of the smart contract's properties, and their saving must be confirmed.
- **Stage 4 – Monitoring of an active campaign (Campaign Active):** When the campaign is ready to launch, VidAdChain's Video Ad Server is called upon to validate the first ad view. Practically, this procedure constitutes testing of the functionality of the Smart Contract. At this point it should be noted that the uniqueness of a view, which is the fundamental transaction within the context of the smart contract, is ensured by the existence of the property called "Unique View ID." The Unique View ID is a unique encrypted ID that corresponds to a unique view that will be made on a certain player and on a specific publisher's webpage. All the properties contained in the smart contract are connected to the Unique View ID and the information concerning them (statistics, measurements, etc.) that will be recorded in the Blockchain are part of it. Practically every view of the video advertisement that takes place, on every player and on every page of a publisher has its own Unique View ID and in this way the reliability of the produced results of the advertising campaign is ensured. Once the first view is validated the campaign is considered active. VidAdChain's Ad Server, based on the Index, Inventory and characteristics of the campaign, initiates the display to various publishers and the ad placements they have available for advertising. Viewing is done using the Unique View ID and campaign results, as smart contract transactions are stored on the Blockchain. The process of trading, storing and confirming new blocks is constantly evolving for the duration of the campaign.

As new blocks are confirmed on the blockchain, there are constantly improved versions of campaign statistics. The Ad Server receives data from the Blockchain about the current state of the campaign and constantly recalculates the Inventory and refreshes the Indexes. Accordingly, the databases used for real-time recording of the campaign and recording of the overall campaign metrics communicate with the Blockchain layer and retrieve the latest data for the campaign. This is where the essential difference and revolutionary function of Blockchain emerges. For each confirmed transaction (ad view) there is a Unique View ID whose validity is ensured by rules that are constantly checked by an AI system. Consequently, only validated, i.e., human generated transaction data are stored in the blockchain, and the act of validation can be performed and confirmed by any validator that participates in the blockchain. In simple words, with this AI enhanced and validation process, the ad delivery data are true and unmanipulated and can be used by advertisers and agencies to make informed decisions about their marketing plan. Practically this means that it is impossible for anyone to "cheat" the terms of the smart contract and falsify the statistics obtained from the database.

Finally, as mentioned earlier, third-party validators can verify data through the implementation of an open API. In this way any given third-party can act as a validator who records advertising data from an active campaign and cross-checking them according to the rules set by the AI algorithm. In this manner, the transparency and validity of data (i.e., that they originate from human interaction with the video content and not by a machine) is undeniable and cannot be refuted by anyone in the ecosystem.

- **Stage 5 – Completion of campaign (Campaign End):** Upon completion of the campaign (execution of the terms of the smart contract), the display of advertisements by the Ad Server stops. The display data stored in the Blockchain remains unchanged and, at any time, they can be retrieved for analysis or exploitation by the various interested parties.
- **Challenges and further work**

The discussion of blockchain technologies in the digital marketing industry is beginning to heat up. This can be verified by the recent streak of recent published research highlighting the benefits, challenges and obstacles to implementation of this new technology (Malik et al., 2023; Marthews & Tucker, 2023; Peres et al., 2023). During our research with the design and implementation of VidAdChain we have faced some of the challenges already mentioned by the previous researchers but also technical challenges that are, in many respects, the most pressing at this early stage of development.

These technical challenges can be broken into three axes: (i) Data encryption, user privacy concerns and regulatory compliance, and consensus protocols, (ii) Data Storage needs and the scalability of blockchain networks, as video ad serving involves handling a large volume of data and transactions. (iii) Rate of ledger update. Data encryption in Blockchain applications is a critical issue. The higher the encryption level, the higher the cost in computational resources for the writing of new blocks in the blockchain, regardless of the consensus algorithm chosen. Considering that ad transactions could be in the magnitude of thousands per hour, the issue could become a serious barrier to implementation. The PoA consensus offers a cost-effective alternative, although it creates some central points of authority and, correspondingly decreases the data security potential of traditional blockchain technologies. The other two challenges mentioned are both related to the amount of data generated in the digital advertising ecosystem. The architecture of Blockchain demands that all transactions are constantly stored and transferred from one block to the next, thus exponentially increasing the amount of data stored in the ledger. This becomes a significant cost factor if the solution proposed is to be scaled up and achieve commercial implementation. Finally, with the amount of data flooding in even from a single advertising campaign, the issue of how frequent the update of the blockchain should be is another critical issue. Updating the ledger of transactions regularly increases the computational strain but, on the other hand, current digital ad monitoring and delivery services offer an almost live update of ad efficiency data. A blockchain enabled service has to be able to meet the current state-of-the-art features that the market is accustomed to.

Solving these issues is an integral part of our ongoing research. First of all, after the design of the prototype of the service, test campaigns have been performed in order to assess and measure the exact demands on data storage and provide data with the ad fraud limitation that our ad server can produce. Part of the testing will include prioritizing and tracking the most storage demanding parameters of the campaigns. It is likely that we might need a new model to compress campaign data, and/or possibly to use an http layer above the blockchain where all validators' data will be checked and then stored compressed to the blockchain. Moreover, different solutions for storing the verified data will be compared. In the field of encryption, different algorithms will be tested for our solution. Encryption of advertising data does not need the same amount of sophistication as financial transaction data and currently most encryption methodologies originate from fintech blockchain applications.

#### ▪ **Conclusion**

Our research has demonstrated that integrating blockchain technology into video ad serving can bring numerous benefits to all stakeholders involved. Advertisers can gain increased trust and accountability by verifying ad impressions and ensuring that their content is being served to genuine users. Publishers, on the other hand, can benefit from improved revenue potential through the elimination of ad fraud and enhanced targeting capabilities. VidAdChain is an innovative research project that is in the process of designing a prototype, blockchain enabled, video advertising management and delivery system. In this stage of the research endeavor, the algorithmic design of the system has progressed, and the main challenges/barriers to implementation have been identified. VidAdChain is currently addressing these challenges and aims to demonstrate by the end of the project's duration a working prototype solution for a blockchain-enabled digital video ad serving and management service.

One of the key findings of our study is that blockchain-based video ad servers can significantly mitigate the issues of ad fraud, such as impression laundering, click fraud, and bot traffic. By recording ad-related data on an immutable ledger, it becomes nearly impossible for malicious actors to manipulate the system, ensuring that advertisers receive accurate and reliable information about the performance of their ads.

Furthermore, the decentralized nature of blockchain technology allows for a more transparent and auditable ad-serving process. Advertisers and publishers can access real-time data and insights, enabling them to make data-driven decisions and optimize their campaigns effectively. Moreover, the use of smart contracts facilitates automated and secure transactions between advertisers and publishers, reducing the need for intermediaries and streamlining the payment process.

In conclusion, our research demonstrates that developing a blockchain video ad server offers a promising solution to address the shortcomings of traditional ad-serving platforms. By leveraging the benefits of blockchain technology, such as decentralization, transparency, and security, we can enhance the integrity and efficiency of video ad serving, benefiting advertisers, publishers, and users alike. Further research and development in this area will be essential to overcome the remaining challenges and fully realize the potential of blockchain technology in the advertising industry.

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## References:

- 2022 PageFair Adblock Report. (2022). Blockthrough.com. Retrieved 22 May from
- Brinson, N. H., Eastin, M. S., & Cicchirillo, V. J. (2018). Reactance to Personalization: Understanding the Drivers Behind the Growth of Ad Blocking. *Journal of Interactive Advertising*, 18(2), 136-147. <https://doi.org/10.1080/15252019.2018.1491350>
- Colangelo, G., & Maggiolino, M. (2018). Data accumulation and the privacy–antitrust interface: insights from the Facebook case. *International Data Privacy Law*, 8(3), 224-239. <https://doi.org/10.1093/idpl/ipy018>
- Cramer-Flood, E. (2023). *Worldwide Digital Ad Spending 2023*. eMarketer. Retrieved 22 May from <https://www.insiderintelligence.com/content/worldwide-digital-ad-spending-2023>
- Geradin, D., Katsifis, D., & Karanikioti, T. (2021). Google as a de facto privacy regulator: analysing the Privacy Sandbox from an antitrust perspective. *European Competition Journal*, 17(3), 617-681. <https://doi.org/10.1080/17441056.2021.1930450>
- Gordon, B. R., Jerath, K., Katona, Z., Narayanan, S., Shin, J., & Wilbur, K. C. (2020). Inefficiencies in Digital Advertising Markets. *Journal of Marketing*, 85(1), 7-25. <https://doi.org/10.1177/0022242920913236>
- Gorkhali, A., Li, L., & Shrestha, A. (2020). Blockchain: a literature review. *Journal of Management Analytics*, 7(No. 3), 321-343.
- ITU. (2021). *Individuals using the Internet (% of population)*. International Telecommunication Union. Retrieved 22 May from <https://data.worldbank.org/indicator/IT.NET.USER.ZS>
- Lashkari, B., & Musilek, P. (2021). A Comprehensive Review of Blockchain Consensus Mechanisms. *IEEE Access ( Volume: 9)*, 43620 - 43652.
- Malik, N., Wei, Y. M., Appel, G., & Luo, L. (2023). Blockchain technology for creative industries: Current state and research opportunities. *International Journal of Research in Marketing*, 40(1), 38-48. <https://doi.org/https://doi.org/10.1016/j.ijresmar.2022.07.004>
- Marthews, A., & Tucker, C. (2023). What blockchain can and can't do: Applications to marketing and privacy. *International Journal of Research in Marketing*, 40(1), 49-53. <https://doi.org/https://doi.org/10.1016/j.ijresmar.2022.09.001>
- Mik, E. (2017). Smart contracts: terminology, technical limitations and real world complexity. *Law, Innovation and Technology*, 9(2), 296-300.
- Miroglio, B., Zeber, D., Kaye, J., & Weiss, R. (2018). *The Effect of Ad Blocking on User Engagement with the Web* Proceedings of the 2018 World Wide Web Conference, Lyon, France. <https://doi.org/10.1145/3178876.3186162>
- Oliva, G. A., Hassan, A. E., & Jiang, Z. M. (2020). An exploratory study of smart contracts in the Ethereum blockchain platform. *Empirical Software Engineering*, 25, 1864–1904
- Peres, R., Schreier, M., Schweidel, D. A., & Sorescu, A. (2023). Blockchain meets marketing: Opportunities, threats, and avenues for future research. *International Journal of Research in Marketing*, 40(1), 1-11. <https://doi.org/https://doi.org/10.1016/j.ijresmar.2022.08.001>
- Respati, R. E., & Irwansyah, I. (2020, 6-7 November 2019). *Ad-Blocking Threats on Online Advertising* Proceedings of 3rd International Conference on Strategic and Global Studies, ICSGS 2019, Sari Pacific, Jakarta, Indonesia.
- Sadeghpour, S., & Vljajic, N. (2021). Click Fraud in Digital Advertising: A Comprehensive Survey. *Computers*, 10(12), 164. <https://www.mdpi.com/2073-431X/10/12/164>
- Zheng, X. R., & Lu, Y. (2021). Blockchain technology – recent research and future trend. *Enterprise Information Systems*.
- Zheng, Z., Xie, S., Dai, H.-N., Chen, W., Chen, X., Weng, J., & Imran, M. (2020). An overview on smart contracts: Challenges, advances and platforms. *Future Generation Computer Systems*, 105, 475-491.

## **An evaluation of the websites of sustainable tourism websites. An eye tracking experiment**

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### **Introduction**

The purpose of this study is to examine and evaluate the content of the websites of sustainable tourism services in Greece. Three different research methodologies are combined for the study: 1) a content analysis the marketing messages of selected sustainable tourism websites, 2) an eye tracking experiment to monitor the point of gaze towards the characteristics of the content-analysed websites, and 3) an online survey which includes various questions about customers' views on the website design of sustainable tourism SMEs. The findings of the study will be used to create a new, beta-version website about eco-tourism in Greece.

### **Literature review**

Tourism is one of the most thriving industries in the world, making a substantial input to the world's Gross Domestic Product (GDP). In fact, in some countries, tourism is the biggest contributor to their GDP. Every year, millions of people travel to distant places, to experience different cultures. Travelling has been made easier the last 20 years due to improved and inexpensive tourism infrastructure as well as due to the rise of the internet. According to the International Association of Scientific Experts in Tourism (AIEST, 2019), the immense rise of travelling resulted in the creation of many types of tourism. Yet this research project focuses only on the types that lie under the sustainable tourism notion: ecotourism, nautical tourism, culinary tourism, adventure tourism and geo-tourism.

Greece is the top European ecotourism destination with 7 UNESCO World Heritage sites, 29 National Parks and numerous ecolodges around the country (TIES, 2018). There are over 300 Blue Flag labelled beaches, ancient ruins, traditional architecture, and gorgeous vineyards. Regarding sustainable SMEs, there is a range of tourism services on offer such as windsurfing, bird watching, hiking, horse riding, and mountaineering and a plethora of eco products like bio-wine, dairy products, local spoon sweets and wild herbs (TIES, 2018). Tourism is a central player of the Greek economy and the need for adopting sustainable tourism practices is essential to align with the EU 2030 sustainable development goals and directives (EU, 2019).

The advance of Internet technology has contributed to the growing influence of online marketing on sustainable traveling (Lai and Shafer, 2005). Undeniably, knowledge regarding how ecotourism is practiced and how it is marketed through the Internet is still lacking (Lai and Shafer, 2005). However, in the web-tourism sector interactive characteristics expand the communication process between consumers, entrepreneurs and the Human2Human model (H2H). The ease of use, interactivity, and flexibility of Web based boundaries of the Internet (Dollin *et al.*, 2002) are principally appealing to tourism, due to the information-demanding concept of the industry (Gretzel *et al.*, 2000; Werthner and Klein, 1999, WTO Business Council, 1999).

The most significant characteristic of interactivity is to allow the tourism organisation to engage consumers' attention, curiosity and participation, to gather data about their preferences, and to use that data to provide tailored communication and services through customer relationship management (CRM). Therefore, the content of sustainable tourism services websites is central as it directly impacts the image of the destination and forms a virtual experience for the consumer (Cano and Prentice, 1998; Gretzel *et al.*, 2000). Tourism websites provide exceptional prospects for persuasion through interactivity and the capability to create motivating data environments (Gretzel *et al.*, 2000), such as virtual tours.

### **Methodology**

Considering that social sciences have largely relied on surveys and interviews as the main research methodologies to gain a deeper understanding into people's attitudes, this research project aims to follow a hybrid research methodology which three different studies.

### Study 1

The study starts with the content analysis of fifteen selected Greek sustainable tourism websites that are grouped per category (ecotourism, nautical tourism, culinary tourism, adventure tourism and geo-tourism). The SME's websites that are content analysed can be found in Table 10. The objective of this study is to determine whether there are any marketing patterns that can be identified. The importance of website evaluation has been addressed by many scholars (Law *et al.*, 2010; Morrison *et al.*, 2004). We followed a widely accepted website evaluation approach introduced by Schmidt *et al.* (2008), which includes 25 different attributes that are grouped into eight dimensions (Table 1) of promotion, price, product, multimedia, navigability, reservation system, customer retention, and privacy and security (Law *et al.*, 2022; Van Huy and Thai Thinh, 2022; Ramzaninejad *et al.*, 2020; Suau-Jimenez, 2019; Dominguez Vila, 2018).

### Study 2

The second study is the completion of an online survey that is related to people's views about the website design of sustainable tourism SMEs. The items of the questionnaire are based on Schmidt *et al.*'s (2008) scale (Table 1). The results are statistically analysed with SPSS to describe the respondents' views and identify useful relationships.

### Study 3

The third study is about the eye tracking experiment. The initial target was to invite around 130 participants to the eye tracking experiment, at the premises of Aristotle University of Thessaloniki. However, the experiments took place in September and November 2021, which is a time that the Greek Government had imposed Covid-19 restriction measures, such as the entrance to universities only with the appearance of a vaccination certificate or negative Covid-19 test. Consequently, this resulted in not being able to invite people who are not related to Aristotle University of Thessaloniki. Taking the above into consideration, we managed to perform some experiments (N=24) at the cafeteria of the School of Economics and Political Science, but we then had to delete the outputs as the noise and distractions were a huge caveat to the experiment and the data was not practicable. All in all, we had to compromise with inviting primarily students, and some admin staff, to take part in the experiment. In total, we managed to get data from 62 participants. The purpose of the eye tracking experiment is to monitor the point of gaze and the number of fixations towards the characteristics of the content analysed websites. Eye movement reflects the human thought processes; so, the participant's thought may be followed to some extent from records of eye movement (the thought accompanying the examination of the object). From these records we identified which elements attracted the participant's eye, in what order, and how often (Yarbus, 2013).

## Findings

### Content Analysis

Only descriptive statistics can be derived from the content analysis data as the number of SMEs' websites is very small (N=15) and the objective is to show the characteristics of those websites. Table 1 shows Schmidt *et al.*'s (2008) content analysis scale that has been used in numerous recent studies (Law *et al.*, 2022; Van Huy and Thai Thinh, 2022; Suau-Jimenez, 2019; Dominguez Vila, 2018).

Promotion	Hotel services/Business services text
	Hotel services/ Business services photos
	Room/Activities text
	Room/Activities photos
	Surrounding area text
	Surrounding area photos
Price	Presence of price segmentation
Product	Presence of product configuration features
Multimedia	Hotel services videos or 3D photos
	Room videos or 3D photos
	Surroundings videos or 3D photos

Navigability	Standard page design
	Standard menu structure
	Structure localisation information
	Home page links
Reservation system	Type of reservation system
	Reservation system response time
	Sales policies
Customer retention	User registration
	Newsletter
	Fidelity program
	FAQ
Privacy & Security	Privacy policy
	Secure credit card page
	Security policy

Table 1: Schmidt et al.'s (2008) scale about the content of tourism websites

Regarding the results, these are briefly presented in bullets:

- 80% of the websites include promotional text.
- 40% of the websites only show one picture and another 40% of them show up to three pictures of the hotel/business services.
- 100% of the hotels show both photos and promotional text.
- 100% of the websites show text for the surrounding area, however 66.7% of the websites show pictures of the surrounding area.
- Only 46.7% of the SMEs include a pricelist.
- 100% of the businesses provide the opportunity to personalise the service to the traveller's likes.
- Only 6.7% of the SMEs shows either videos or 3D pictures.
- 100% of the SMEs website go by the standard website design.
- 100% of the SMEs have a 'menu' structured website.
- 100% of the SMEs have adapted their website design to the business needs.
- 100% include links at their home page.
- In 20% of the SMEs' websites there is no online booking system, in 33.3% of the SMEs there is the option of an automated reservation, in 33.3% of the websites the reservation can be made by sending an email, and in 13.3% of the websites there is no information about reservations.
- For 33.3% of those SMEs the booking confirmation email was received within minutes.
- Only for 20% of the SMEs that offer online booking require user registration.
- In 60% of the websites there is a section about the reservation policy.
- 46.7% of SMEs do not provide a newsletter, 20% offer a personalised newsletter based on website cookies, and 33.3% offer a basic newsletter for all users.
- Only 6.7% of the SMEs provide a fidelity programme for their customers.
- 100% of the websites have a FAQs section.
- Privacy policy is mentioned in 73.3% of the websites.
- 73.3% of the websites provide a secure credit card page.
- Security policy is mentioned in 73.3% of the websites.

### Survey

The survey items are based on Schmidt et al.'s (2008) typology with a 5-Likert type scale from strongly disagree to strongly agree. The online survey was created through Google forms and sent to approximately 280 prospective respondents, primarily through LinkedIn and Facebook in November 2021. 196 responses were collected in 23 days.



The data was analysed with SPSS v.27. The majority of the respondents are men (56.1%) and most responses came from people aged 31 to 45 years (66.8%). It is worrying that we gathered no data from people above the age of 45. All respondents agreed that they go online to find information about their next holiday. Regarding the importance of information as opposed to pictures/videos, 50% of men agreed/strongly agreed that they care more about information provided in the website rather than pictures/videos. For women the respective percentage is remarkably smaller (37.2%). This finding shows the importance of text in tourism related SMEs and can later guide us in searching for similar information during the eye tracking experiment.

Then, we run a Pearson correlation to check whether there is a relationship between the importance of information in tourism websites and the purchase intention when information about pricing is clear and easy, but the results are not significant ( $p=.914$ ), hence we can't report any findings.

Similarly, we run a Pearson correlation to check if there is a relationships between the importance of pictures/videos in tourism websites and higher purchase intention when there is photos and information of surrounding places. The results show that there is a positive correlation between the two variables (Table 2),  $r(196)=.331, p<.001$

		When I visit tourism related websites I care more about pictures/videos provided, rather than information	The more photos/info of surrounding places I see in a tourism website, the higher the chance to make a purchase
When I visit tourism related websites I care more about pictures/videos provided, rather than information	Pearson Correlation	1	.331*
	Sig. (2-tailed)		<.001
	N	196	196
The more photos/info of surrounding places I see in a tourism website, the higher the chance to make a purchase	Pearson Correlation	.331*	1
	Sig. (2-tailed)	<.001	
	N	196	196

\*\*Correlation is significant at the .01 level (2-tailed).

Table 2: Pearson correlation for the relationship between the importance of pictures/videos and higher purchase intention

Moreover, the results show that all women, and 79.8% of men prefer a website with hyperlinks on the home page (Tables 3 and 4).

It is best if there are quite a few hyperlinks in the home page of a tourism related website.		Gender		Total
		Males	Females	
Neither agree nor disagree	Neither agree nor disagree	20.4%	0%	11.2%
	Agree	19.4%	25.3%	21.9%
	Strongly agree	60.2%	74.7%	66.3%
Total		100%	100%	100%

Table 3: Attitude towards the appearance of hyperlinks on the home page

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-square	216.096 <sup>a</sup>	6	.000
Likelihood ratio	40.807	6	.000
N of Valid cases	196		

a. 6 cells (50%) have expected count less than 5. The minimum expected count is .01

Table 4: Chi square test for Attitude towards the appearance of hyperlinks on the home page

Regarding online reservation systems, the content analysis of the websites shows that a few SMEs do not have an online booking system in their websites and will accept reservations via email or telephone communication. The data show that 65.9% of the respondents (74.9% of women and 59.3% of men) agreed or strongly agreed

that they prefer automated systems for reservations. Yet, 33.7% of the respondents did not mind about this feature (Table 5).

		Males	Females	Total
If I want to make a reservation online, I prefer automated systems for reservation (i.e. to book a room, to book a nautical activity).	Neither agree nor disagree	40.7%	25.3%	33.7%
	Agree	38.9%	25.3%	32.7%
	Strongly agree	20.4%	49.4%	33.2%
Total		100%	100%	100%

Table 5: Preference of online reservations system

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-square	214.413 <sup>a</sup>	6	.000
Likelihood ratio	31.025	6	.000
N of Valid cases	196		

a. 6 cells (50%) have expected count less than 5. The minimum expected count is .01

Table 6: Chi square test for preference of online reservations system

Another important finding from the content analysis is that a few SMEs did not include a privacy and security policy section in their websites. In fact, this finding is quite worrying considering GDPR. As a result, we wanted to check people’s views around privacy and security policy and whether those two are associated. Table 7 shows that there is a strong positive correlation between privacy policy and security policy and the importance of them being clear and easy to find on the website.

		Privacy policy should be clear and easy to find in tourism related websites	Security policy should be clear and easy to find in tourism related websites
Privacy policy should be clear and easy to find in tourism related websites	Pearson Correlation	1	.821*
	Sig. (2-tailed)		<.001
	N	194	194
Security policy should be clear and easy to find in tourism related websites	Pearson Correlation	.821*	1
	Sig. (2-tailed)	<.001	
	N	194	194

\*\*Correlation is significant at the .01 level (2-tailed).

Table 7: Pearson correlation for the relationship between privacy and security policy

Moreover, Frequently Asked Questions (FAQs) seem not to be very important in tourism related websites as 61.1% of men and 49.4% of women said that they disagreed or strongly disagreed that they prefer to see FAQs. Newsletters seem to be popular in many industries, but for the tourism related websites 38.9% of men and 50.6% of women said that they would like to be able to subscribe to the company’s newsletter.

### Eye tracking experiment

An eye tracking experiment took place in November 2021 at the premises of the Department of Journalism and Media Communications, at Aristotle University of Thessaloniki, Greece. No incentive for participation was provided. All participants reported no color-blindness. In total, 87 participants were invited to take part in the experiment and 62 showed up on the day that they were allocated. 36 of the participants are university students. 54% are women and 46% are men. Most of the participants are of younger age (18 to 30 years old), and only 28% of them are above 31 years of age.

Considering that samples of past eye tracking studies on marketing and consumer behavior ranged from 40 to 60 participants (Muñoz-Leiva et al., 2019; García-Madariaga et al., 2019; Meißner et al., 2016; Piqueras-Fiszman et al., 2013; Hervet et al., 2011; Clement, 2007) we consider the sample size for this research both adequate and sufficient.

Tobii Pro Lab was used to record the participants eye movement. Viewing was not binocular; instead the Tobii Pro screen-based eye tracker was used to monitor eye movements thus allowing participants' freedom of movement. Infrared (940nm) video-based technology was used by the system to monitor true gaze position on a display despite head motion. Eye positions were sampled at 120 Hz which means that the Tobii eye tracker tracks where the participants look 120 times per second, therefore providing detailed research into the timing and duration of fixation. The Tobii computer screen that was used was 22 inches with a 16:9 Aspect Ratio. The websites of the Greek SMEs that were content analysed in study 1 are selected as stimuli for the experiment.

The study was conducted in a quiet soundproof room under standard illumination conditions. Each participant was seated 64cm from the eye tracker and screen (valid for Tobii T Series Eye Trackers). After calibration, general instructions for the task were verbally communicated to each participant to ensure they fully understood what was asked.

Every participant could choose to view as many websites as they liked within a two minutes timeframe, and they were asked to navigate the websites as they would have done in a normal environment.

### Findings

In general, across all websites, there is a common finding: the participants paid more time reading information around food rather than anything else. Also, participants spent more time reading text than viewing photos. However, the pictures that grabbed participant's attention are related to scenery, food and sea. There are videos in only a couple of the researched websites, yet no participant viewed the videos. Regarding reservation and pricing, 83% of the participants visited or searched for the pricing section as well as the reservation section.

Areas of Interest (AOIs) were created after the experiment had finished, to illustrate where the participants fixated in every page of a website. Hessels et al. (2016) admit that AOI-production methods can be a problem because researchers choose the same AOI for similar stimuli (for example, all pictures is one stimuli, text is another, etc.). However, this may result in issues when making comparisons as the AOIs have different shapes and sizes. Indeed, this is true but, as the authors quote, there is no guidelines as to how to design AOIs, so we decided to follow the similarity method too.

After having produced the AOIs, we extracted heatmaps (Figure 1) and gaze plots (Figure 2) that show the *average* of our participants eye movement to illustrate the points of interest. In specific, a heatmap shows the areas within the page that the participant paid attention to, and the gaze plot presents the sequence of the eye movement (what the participant looked at first, second, third, etc.). Both heatmaps and gaze plots are very important eye tracking metrics as they illustrate what grabs people's attention and what doesn't. The ultimate goal in marketing is to hold people's attention for as long as possible, and the eye tracking visualizations can help in that direction by providing data that are otherwise missed.



Figure 1: Heatmap example for the Wine Roads of Greece website



Figure 2: Gaze plot example for the Wine Roads of Greece website

Figures 2 and 3 show that, on average, the participants who visited the Wine Roads of Greece website spent 9 seconds in looking at the website title, reading the headline text, and looking at the picture about the trip to Peloponnese. The gaze plot shows that the first point of view was the picture, and the last one was the headline and the website title. This shows that the participants did not start viewing the page from start to bottom, rather

they focused on the scenery first and then read the text which explains what the page is about. Interestingly, the participants did not look at the hyperlinks at the bottom of the page. This is in accordance with usability and market research which shows that people focus above the fold and will only scroll if the website is well-built and interesting (Alan Smith, 2022). An eye tracking experiment in 2018 showed that users spent about 57% of their page-viewing time above the fold and 74% of the viewing time was spent in the first two screenfuls (Fessenden, 2018).

#### Fixation duration

We then wanted to check the average fixation duration for every website (Table 8). It needs to be noted that not all participants viewed all websites, so N is not 87. On average participants visited 9 websites, and as illustrated in Table 15, they spent more time reading the text than viewing pictures. All websites have a menu bar, but only some of them have a specialised sub-menu bar. The fixation duration on a menu or sub-menu bar is an indication of the user not liking what he/she sees, so they look for another page to visit. Six websites were not viewed at all.

INDUSTRY	COMPANY	Fixation duration per AOI				
		Headline	Text (body)	Pictures	Menu bar	Specialised menu bar
HOTELS	Ibiscos	0.32	0.76	0.23	0.14	0.21
	Mediterranean Olympus	0.24	0.65	0.15	0.18	0.29
	Akrathos	0.22	0.55	0.11	0.17	0
SMEs	Green Oliver Hiking and Adventure Travel	0.43	0.97	0.54	0.07	0.22
	Explosivo excursions	0.15	0.43	0.38	0.22	0.45
	Truffle hunting	0	0	0	0	0
GASTRO	Sani Gourmet	0.41	1.12	0.65	0.09	0.18
	Tsantali	0.38	0.87	0.43	0.29	0.65
	Wine roads of Greece	0.27	0.45	0.36	0.27	0
NAUTICAL	Surf Club Keros	0.58	1.54	0.76	0.06	0
	Sail Ionian	0	0	0	0	0
	Paros kite	0	0	0	0	0
GOVERNMENT	National Park of lakes Koronia and Volvi	0	0	0	0	0
	National Park of Mount Olympus	0	0	0	0	0
	National Park of lake Kerkini	0	0	0	0	0

Table 8: Average fixation duration per AOI per website

#### Statistical analysis

To determine which variations had a significant impact on attention captured by each AOI, analyses of variance (ANOVAs) were performed on the total fixation duration data for each AOI.

The analysis of variance was performed with the independent variables being the headline, the text, the pictures, the menu bar, and the sub-menu bar (where applicable), and a dependent variable being the fixation time that was recorded through the eye-tracker (n=data points collected, which is either 4 or 5 AOIs). From the sum square (SS), mean square (MS), and F, statistically significant differences in fixation time were found between the groups, as listed in Table 9. It must be noted that table 9 does not include the six websites that were not viewed by any participant.

Item		SS	df	MS	F	Sig
Ibiscos	Model	45306,840	5	9061,368	57,653	0,000*
	Error	65068,660	414	157,17		

<b>Mediterranean Olympus</b>	<i>Model</i>	2928,011	5	585,602	2,772	0,000*
	<i>Error</i>	87435,589	414	211,197		
<b>Akrathos</b>	<i>Model</i>	3220,040	4	805,01	11,441	0,000*
	<i>Error</i>	29198,760	415	70,358		
<b>Green Oliver Hiking and Adventure Travel</b>	<i>Model</i>	5245,248	5	1049,049	7,726	0,000*
	<i>Error</i>	56209,752	414	135,772		
<b>Explosivo excursions</b>	<i>Model</i>	6397,571	5	1279,514	5.797	0,002*
	<i>Error</i>	91377,429	414	220,718		
<b>Sani Gourmet</b>	<i>Model</i>	7388,082	5	1477,616	14,603	0,000*
	<i>Error</i>	41889,918	414	101,183		
<b>Tsantali</b>	<i>Model</i>	67487,821	5	13497,564	72,973	0,000*
	<i>Error</i>	76575,679	414	184,965		
<b>Wine roads of Greece</b>	<i>Model</i>	8463,393	4	2115,848	9,613	0,000*
	<i>Error</i>	91342,440	415	220,102		
<b>Surf Club Keros</b>	<i>Model</i>	26858,392	4	6646,348	49,078	0,000*
	<i>Error</i>	56201,322	415	135,424		

Table 9: ANOVA results on the total fixation duration data for each AOI

Separate post hoc tests were performed using the Bonferroni corrected coefficient as a cutoff point, for each independent variable (picture). SPSS offers Bonferroni-adjusted significance tests for pairwise comparisons. This adjustment is available as an option for post hoc tests and for the estimated marginal means feature. There were statistically significant differences within the groups. The results are explained for each picture separately.

**Ibiscos** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.008$ ), statistically significant differences were found within the groups headline - text ( $t(32)= 3.505, p<.008$ ), headline – menu bar ( $t(32)= 3.820, p<.008$ ). The post hoc test shows that the most significant features for the Ibiscos hotel is the headline compared to the text and the menu bar.

**Mediterranean Olympus** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.01$ ), statistically significant differences were found within the groups text - pictures ( $t(21)= -2.842, p<.01$ ), sub-menu bar – menu bar ( $t(21)= -3.329, p<.01$ ). Hence, the post hoc test indicates that fixation duration is significant for the main text and the sub-menu bar, compared to the pictures and the menu bar.

**Akrathos** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.01$ ), statistically significant differences were found within the groups headline - pictures ( $t(16)= -3.691, p<.01$ ), text - pictures ( $t(16)= -3.237, p<.01$ ), menu - picture ( $t(16)= 3.737, p<.01$ ). The post hoc test shows that there is significance for headline, the main text and the menu bar, compared to the pictures.

**Green Oliver Hiking and Adventure Travel** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.008$ ), statistically significant differences were found within the groups pictures – menu bar ( $t(46)= -2.949, p<.008$ ), pictures – headline ( $t(46)= 2.897, p<.008$ ), text - headline ( $t(46)= -3.365, p<.008$ ). The post hoc test illustrates that fixation duration is significant for the pictures and the main text, compared to the menu bar and the headline.

**Explosivo excursions** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.008$ ), statistically significant differences were found within the groups headline - text ( $t(29)= -3.443, p<.008$ ). So, the headline is significant compared to the main text for this website.

**Sani Gourmet** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.007$ ), statistically significant differences were found within the groups headline - text ( $t(51)= -4.105, p<.007$ ), picture - menu ( $t(51)= 2.973, p<.007$ ), picture – sub-menu bar ( $t(51) = 4.957, p < .007$ ). In this website, the headline and the pictures are significant compared to the main text and the sub-menu bar.

**Tsantali** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.008$ ), statistically significant differences were found within the groups text - headline ( $t(34)= -4.387, p<.008$ ), pictures - headline ( $t(34)= -2.871, p<.008$ ). The post hoc test shows that the text and the pictures are significant compared to the headline.

**Wine roads of Greece** - According to the post hoc test (corrected criterion Bonferroni  $\alpha=.008$ ), statistically significant differences were found within the groups picture – text ( $t(19)= 2.961, p<.008$ ), headline - text ( $t(19)=$

-4.867,  $p < .008$ ), menu bar - text ( $t(19) = -4.447$ ,  $p < .008$ ). In this website, the post hoc tests shows that the picture, the headline, and the menu bar are significant compared to the text.

**Surf Club Keros** - According to the post hoc test (corrected criterion Bonferroni  $\alpha = .007$ ), statistically significant differences were found within the groups pictures - menu ( $t(58) = 3.385$ ,  $p < .007$ ), pictures - headline ( $t(58) = 4.475$ ,  $p < .007$ ), text - sub-menu bar ( $t(58) = 3.349$ ,  $p < .007$ ). Hence, the pictures and the text are significant compared to the menu bar, the headline, and the sub-menu bar.

### Conclusions

The data from the combination of the above three studies provides lots of information around the design of an effective and eye-catching website. So far, we conclude that most tourism related websites include promotional text for their business; they also show text for the surrounding area; they all provide the opportunity for customers to personalise the service to their needs; they follow the standard website design with a menu structured design; but very few provide an online booking system and require user registration. Also, all websites have a FAQs section and privacy and security policy is mentioned in only some of the websites under investigation.

Furthermore, the data from the survey confirm the importance of text in tourism related websites. The data shows that the importance of pictures/videos in tourism websites is associated with higher purchase intention when there is photos and information of surrounding places. The respondents said that they prefer automated systems for reservations, and they like to see hyperlinks in the homepage of the website. Lastly, we found a strong positive correlation between privacy policy and security policy and the importance of them being clear and easy to find on the website.

Regarding the eye tracking experiment, we conclude that the respondents spent more time reading the text than viewing pictures. The fixation duration on a menu or sub-menu bar is an indication of the user not liking what he/she sees, so they look for another page to visit. Hence, businesses should create websites with relevant and clearer menu and sub-menu titles to retain visitors on the webpage.

### Bibliography

- Cano, V., and Prentice, R. (1998) Opportunities for endearment to place through electronic 'visiting': WWW homepages and the tourism promotion of Scotland. *Tourism management*, 19 (1): 67-73.
- Chaffey, P., Artstein, R., Georgila, K., Pollard, K. A., Gilani, S. N., Krum, D. M., ... & Traum, D. (2019). Developing a virtual reality wildfire simulation to analyze human communication and interaction with a robotic swarm during emergencies. In *Proceedings of the 9th Language and Technology Conference*.
- Clement, J. (2007). Visual influence on in-store buying decisions: an eye-track experiment on the visual influence of packaging design. *Journal of marketing management*, 23(9-10), 917-928.
- Deighton, J., & Sorrell, M. (1996). The future of interactive marketing. *Harvard business review*, 74(6), 151-160.
- Dichter, E. (1966) How word-of-mouth advertising works. *Harvard Business Review*, November, 131-44.
- Dollin, B., Burgess, L. and Cooper, J. (2002) Evaluating the use of the Web for tourism marketing: A case study from New Zealand. *Tourism Management* 23: 557-561.
- Domínguez Vila, T., Alén González, E., & Darcy, S. (2018). Website accessibility in the tourism industry: an analysis of official national tourism organization websites around the world. *Disability and rehabilitation*, 40(24), 2895-2906.
- García-Madariaga, J., López, M. F. B., Burgos, I. M., & Virto, N. R. (2019). Do isolated packaging variables influence consumers' attention and preferences?. *Physiology & behavior*, 200, 96-103.
- Gilbert, D. C., Powell-Perry, J., & Widijoso, S. (1999). Approaches by hotels to the use of the Internet as a relationship marketing tool. *Journal of Marketing Practice: Applied Marketing Science*.
- Gretzel, U., Yuan, Y. L., and Fesenmaier, D. R. (2000) Preparing for the new economy: Advertising strategies and change in destination marketing organizations. *Journal of travel Research*, 39 (2): 146-156.
- Haywood, K. M. (1989) Managing word of mouth communications. *Journal of Services Marketing*, 3 (2): 55-67.
- Hervet, G., Guérard, K., Tremblay, S., & Chtourou, M. S. (2011). Is banner blindness genuine? Eye tracking internet text advertising. *Applied cognitive psychology*, 25(5), 708-716.
- Hessels, R. S., Kemner, C., van den Boomen, C., & Hooge, I. T. (2016). The area-of-interest problem in eyetracking research: A noise-robust solution for face and sparse stimuli. *Behavior research methods*, 48, 1694-1712.

Lai, P. H., and Shafer, S. (2005) Marketing ecotourism through the Internet: An evaluation of selected ecolodges in Latin America and the Caribbean. *Journal of Ecotourism*, 4 (3): 143-160.

Law R and Cheung C (2005) Weighting of hotel websites dimensions and attributes. In: FrewA (ed.) *Information and Communication Technologies in Tourism 2005*. Vienna: Springer, 350–359.

Law, R., Ye, H., & Chan, I. C. C. (2022). A critical review of smart hospitality and tourism research. *International Journal of Contemporary Hospitality Management*, 34(2), 623-641.

McCarthy, E. J., Shapiro, S. J., & Perreault, W. D. (1979). *Basic marketing* (pp. 29-33). Georgetown, ON, Canada: Irwin-Dorsey.

Meißner, M., Musalem, A., & Huber, J. (2016). Eye tracking reveals processes that enable conjoint choices to become increasingly efficient with practice. *Journal of Marketing Research*, 53(1), 1-17.

Morrison AM, Taylor JS and Douglas A (2004) Web site evaluation in hospitality and tourism: the art is not yet stated. *Journal of Travel & Tourism Marketing* 17(2/3): 233–251.

Muñoz-Leiva, F., Hernández-Méndez, J., & Gómez-Carmona, D. (2019). Measuring advertising effectiveness in Travel 2.0 websites through eye-tracking technology. *Physiology & behavior*, 200, 83-95.

Novak, T. P., & Hoffman, D. L. (1997). Measuring the flow experience among web users. *Interval Research Corporation*, 31(1), 1-35.

Piqueras-Fiszman, B., Velasco, C., Salgado-Montejo, A., & Spence, C. (2013). Using combined eye tracking and word association in order to assess novel packaging solutions: A case study involving jam jars. *Food Quality and Preference*, 28(1), 328-338.

Ramzaninejad, R., Boroumand, M. R., & Ahmadi, F. (2020). Content analysis of research articles in sport tourism of Iran. *Annals of Applied Sport Science*, 8(1), 0-0.

Rosen, D. E., & Purinton, E. (2004). Website design: Viewing the web as a cognitive landscape. *Journal of Business Research*, 57(7), 787-794.

Schmidt S, Cantallops AS and Santos CP (2008) The characteristics of hotel websites and their implications for website effectiveness. *International Journal of Hospitality Management* 27 (2): 504–516.

Suau-Jiménez, F. (2019). Engagement of readers/customers in the discourse of e-tourism promotional genres. *Engagement in professional genres*, 301, 341-358.

Van Huy, L., & Thai Think, N. H. (2022). Ranking the hotel website service quality according to customer's perception: A case study of 4-star hotel. *Journal of Quality Assurance in Hospitality & Tourism*, 1-20

Werthner, H. and Klein, S. (1999) *Information Technology and Tourism: A Challenging Relationship*. New York, NY: Springer.

Yarbus, A. L. (2013). *Eye movements and vision*. Springer.

Yelkur, R., & DaCosta, M. M. N. (2001). Differential pricing and segmentation on the Internet: the case of hotels. *Management Decision*.

#### Websites

Alan Smith, 2022, How Scrolling Can Make (Or Break) Your User Experience, <https://usabilitygeek.com/how-scrolling-can-make-or-break-your-user-experience/> Accessed in February 2023.

European Commission, Sustainable Development Agenda 2030, accessed in February 2019

[https://ec.europa.eu/europeaid/policies/european-development-policy/2030-agenda-sustainable-development\\_en](https://ec.europa.eu/europeaid/policies/european-development-policy/2030-agenda-sustainable-development_en)  
Fessenden Therese, 2018, Scrolling and Attention, <https://www.nngroup.com/articles/scrolling-and-attention/> Accessed in February 2023.

The International Ecotourism Society (2005) On WWW at <http://www.ecotourism.org/index2.php?membership2/application/samples.php>. Accessed 7.1.2017

World Tourism Organization Business Council (1999) Chapter 1: Introduction. In: *Marketing Tourism Destinations Online: Strategies for the Information Age*, Madrid: World Tourism Organization. Available at: <http://www.world-tourism.org/isroot/wto/pdf/1133-1.pdf>

## **Digital customer segmentation. A case study of a Greek fashion e-shop**

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#### **Abstract:**

Nowadays, customer segmentation plays a vital role in the marketing success. There is a huge amount of information that is crucial for the companies to be managed and analyzed properly. This could be achieved by making use of advanced technologies, such as Machine Learning algorithms. Indeed, the companies that will achieve these tasks will be able to proceed with customer segmentation techniques and therefore they will gain a competitive advantage against their competitors, while it is highly possible to increase their profits through customer satisfaction. The proposed framework consists of five core steps. The first step involves receiving and analysing a real dataset from a Greek fashion e-shop. All the necessary actions in order to improve the quality of the results were taken, such as reading and cleaning the data very carefully. Subsequently, Recency, Frequency, and Monetary values were calculated for each customer. In the third step, four tests were employed to determine the optimal number of clusters and after that, the fourth step involves applying the k-means algorithm using the output of the tests conducted in step (3) as the value of k (number of clusters). Lastly, the k-means algorithm was applied again to the best cluster in order to further explore the behavior of the best customers.

**Keywords:** *customer segmentation, RFM, k-means, clustering, CRM*

#### **1. Introduction**

According to Yıldız et al. (2023), the increase in technology usage led to a rise in data volume. As a result, the delivery of information is cheaper and easier, but also has a few challenges related to data storage and accessibility, which is vital for the companies in order to meet their customers' needs. Customer satisfaction and management is one of the main goals of marketing according to Kotler and Armstrong (2018, pp. 28), as the companies should be interactive with their customers and try to define the profitable ones. Segmentation is vital for the companies as it is a fundamental element that influences the overall marketing strategy and the budget allocation as well (Mora Cortez et al., 2021).

Therefore, Customer Relationship Management (CRM) plays a key role to the company success. In more detail, companies should use data mining techniques to analyze the transactional records provided by the CRM systems (Greenberg, 2010), because they will have the opportunity to predict the customer behavior (Wan et al., 2022) and allocate resources in a more efficient way. Hence, taking into consideration the challenges that the companies must face, alongside with the fact that the business environment is uncertain, customer segmentation



can be considered as a guide for decisions related to a lot of business processes, such as the marketing budget and the customizations of offerings (Harish and Malathy, 2023). In addition, Yan (2022) pointed out that customer segmentation can lead companies to gain an advantage against their competitors, as the companies, through segmentation, will be ready to provide personalized marketing tactics and improve the efficiencies of digital marketing, as AI-based customer segmentation can identify behavioural patterns (Wang, 2022). Customer segmentation is vital for the efficiency of marketing as the companies can adjust their Unique Selling Proposition based on the different needs of each segment (Harish and Malathy, 2023). Different segments can be created based on age, gender, or the shopping pattern of each customer (Mahfuza et al., 2022). The technique of Recency, Frequency and Monetary is a very well-known customer segmentation technique (Mahfuza et al., 2022) that can be applied easily (Amoozad Mahdiraji et al., 2022). It was first introduced by Hughes in 1994. Bult and Wansbeek (1995) were the first scientists who applied this analysis in order to decide the segments that could be beneficial for their direct mail campaign.

The aim of this article is to apply a 2-layer customer segmentation and improved clustering through the application of RFM and k-means clustering on a real dataset of a Greek-based fashion e-shop. Noteworthy, that four different metrics were used to determine the optimal number of clusters. The results, could be beneficial for the company for both cost and efficiency reasons, because through segmentation, the company will have the ability to proceed with better budget allocation and customer satisfaction.

## 2. Related Work

### 2.1 RFM

While applying RFM analysis, the researchers want to calculate the Recency, Frequency and Monetary values in order to proceed with the segmentation. In more detail, Recency stands for the difference in days between the study date and the last customer purchase. Frequency is the number of transactions that a customer has completed. This metric can give an indication of customer loyalty (Amoozad Mahdiraji et al., 2022). Lastly, Monetary is the total amount of money that the customer has spent (Huang et al., 2022). In more detail, RFM uses transactional data in order to separate the audience into smaller segments with similar behavioural patterns (Yan, 2022). Indeed, RFM can be combined with various data mining techniques in order to explore those patterns. However, it suffers from some weaknesses, as for example, it strongly relies on the existence of a unique identifier in order to differentiate each customer (Palupi and Fakhruzzaman, 2022). RFM has been applied to various industries, such as e-commerce (Yan, 2022; Yıldız et al., 2023), retail (Harish and Malathy, 2023), travel (Huang et al., 2022), pharmacy (Palupi and Fakhruzzaman, 2022) and banking (Amoozad Mahdiraji et al., 2022).

### 2.2 K-means

Many researchers tend to use RFM analysis along with the K-means clustering algorithm (Agustino et al., 2022; Becker et al., 2017, among others). K-means is an unsupervised machine learning algorithm that groups the audience based on its characteristics. Specifically, the k-means algorithm divides the group into smaller groups in terms of similar characteristics which are different from the other groups (Agustino et al., 2022). K-means initially calculates the centroids, which move the data points to the appropriate group. In more detail, k-means does the calculations until the sum of distances between the centroids and the data points cannot be decreased anymore, creating the different clusters (Christy et al., 2021). K-means is also well known because it is easily applied. There are several metrics available in order to determine the optimal number of clusters (k). A very common method called “elbow method” is responsible for assisting the analysts with the optimal number of clusters (Chen et al., 2022). Other available ways to find the optimal number of clusters are the Silhouette Index, the Calinski-Harabasz Index and Davies-Bouldin Index (Gustriansyah et al., 2020). However, many companies determine the number of clusters based on their experience or their strategy without taking into consideration the real data dynamics (Tavakoli et al., 2018). On the other hand, the use of machine learning can be beneficial for the accuracy of the results, as the manual determination of the number of clusters can affect the efficiency in a negative way (Ashari et al., 2022).

## Methodology

In this paper the analysis procedure was based on recommendations of Gustriansyah et al. (2020) as follows:

1. Determine the number of clusters k;
2. Initialize k values as cluster centers (centroids) randomly;
3. Group each data point into the closest cluster. The proximity of two data points is calculated using the Euclidean distance or other distance measures;

4. Recompute each centroid by computing the mean value of all centroid data with current cluster members;
5. Re-clustering each data point (back to step 3) using all new centroids until all centroids do not change anymore;
6. If the centroid has not changed again, the clustering process is complete.

However, it is important to be mentioned that the above process had been also applied for the purpose of splitting the best cluster further.

### 3. Results

#### 3.1 Data understanding

The dataset that used for the purpose of the case study is a dataset that consists of real data. It contains the orders of a Greek fashion e-shop. The received orders were between 2019 and 2023. The orders amount before the data cleaning was 50.276 rows while the columns were: Order date, mobile phone, email, order value, and postcode (Table 1).

Table 3: Variables and their data types

Variables	Type
Order Date	Datetime
Mobile Phone	text
Email	text
Order Value	Float
Postcode	text

#### 3.2 Data preparation and cleaning

For the purpose of reading, cleaning and analysing the data various Python libraries were used, such as sklearn, pandas, numpy, seaborn and matplotlib.

Step 1: It was crucial to determine the importance of each variable that should be isolated from the whole dataset in order to proceed with the RFM application. Therefore, email, phone and order value were chosen. In more detail, the calculation of Recency requires the last date of transaction that a single customer has completed. Also, the calculation of Frequency and Monetary require the volume of orders and the total revenue that a single customer done.

Step 2: It was really important to create a unique identifier in order to measure the RFM variables per unique person. For that reason, at first, validity check took place for both email and phone numbers using python functions. In more detail, in some cases, a few orders were completed by the developers or the owners (employees) of the company and as a result they dropped out as those orders were for test purposes. Also, fortunately, any n/a values didn't exist. Lastly, the email and phone variables were merged. However, in some cases, people used different mobile phones for the same email. Hence, the values replaced to have a one-to-one relationship between email and phone and as a result the email variable.

### 4. Implementation

Step 1: The formulas below, were used for the calculation of the RFM variables. In more detail, the order date variable was used for the calculation of the Recency (1). Regarding Frequency calculation, the updated e-mail variable was used as a unique identifier to calculate the orders amount per digital customer (2). Lastly, the monetary value was used for the purpose of calculation the monetary value (3).

$$\text{Recency} = \text{Date of the study} - \max(\text{order date}) \quad (1)$$

$$\text{Frequency} = \text{COUNT}(\text{email}) \quad (2)$$

$$\text{Monetary} = \text{SUM}(\text{order value}) \quad (3)$$

Table 2: Calculation of Recency, Frequency and Monetary Value

Email	Recency	Frequency	Monetary
*@gmail.com	774 days	2	76
**@hotmail.com	905 days	1	35
***@hotmail.com	314 days	3	304

Step 2: In order to determine the optimal number of clusters, the company’s marketing team shared their opinion. Their belief was that the audience should be segmented into 4 to 6 clusters, but using (four) different statistical tests in order to determine the optimal k as Gustriansyah et al. (2020) did was a better approach. For that purpose, the “Elbow Method”, the Calinski Harabasz Index, the Silhouette Index and the Davies-Bouldin Index were the 4 (four) different test. According to Figure 2, 2 out of 4 indices showed that the optimal k is 4. Thus, the k-means clustering algorithm had as goal to create 4 clusters.

The silhouette score ranges from -1 to +1. A score of +1 suggests that the objects are accurately clustered. According to Figure 2, cluster 6 has the highest value (Ogbuabor and Ugwoke, 2018). In addition, speaking about the Elbow method, the optimal cluster is 4 as the Sum of Squared Error (SSE) is sharply decreasing between cluster 3 and cluster 4 and then the decrease of Sum of Squared Error (SSE) seems flat (Liu and Deng, 2021). Lastly, according to Calinski-Harabasz method, the optimal number of clusters is 2 as the value should be maximized. On the other hand, Davies-Bouldin score should minimized and therefore the optimal number of clusters is 4 (Craenendonck and Blockeel, 2015).

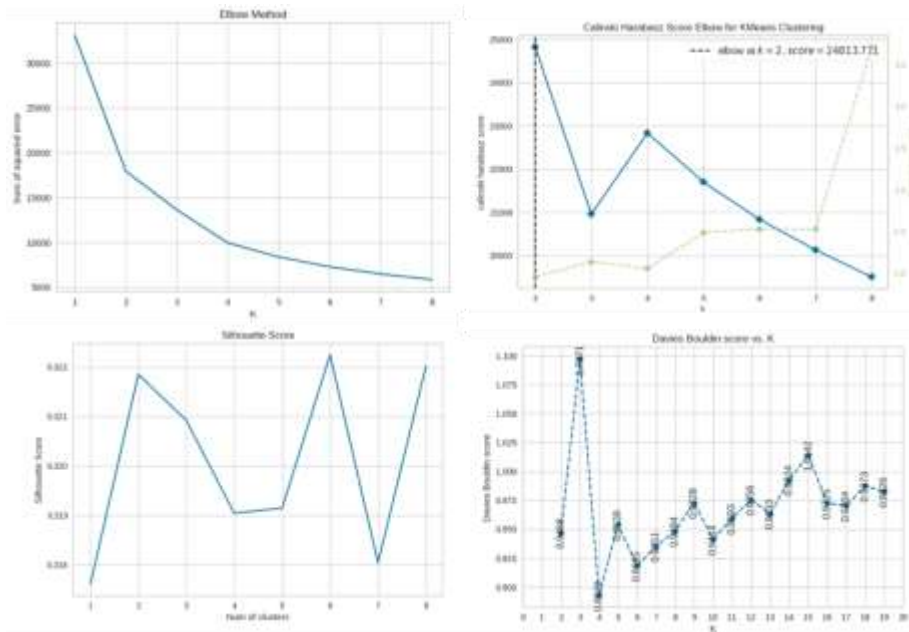


Figure 2: Tests to determine the optimal k

As has already been mentioned, four methods were applied in order to determine the optimal number of clusters. Thus, all the methods used for finding a k greater than 1. Based on the graphs above, it seems that 2 (two) out of 4 (four) methods presented the 4 (four) clusters as the optimal number for k.

**5. Results**  
**Application of k-means clustering**

In order to create the appropriate marketing strategies, it is important to define and better understand the behavior of the different clusters that were created. From Table 3, it is easily understood that Cluster 2 is the best cluster compared to the rest of the created clusters. It has the best average Frequency and Monetary values, while in terms of Recency, it has the second-best performance with relatively small difference from the first cluster. On the other hand, Cluster 4 consists of low-value customers, while Cluster 3 customers although they have a good Monetary value, they should be considered lost. Lastly, Cluster 1 seems to have good performance in terms of Recency, however, Frequency and Monetary are not well enough. Probably, Cluster 1 consists of new customers, thus, the frequency is low, but also that the Monetary value is low. Thus, Cluster 2 consists of the Best Customers.

Table 4: Presentation of the clusters (means) after applying k-means

Cluster	n (%)	Recency	Frequency	Monetary
1	17.20%	309	1	57,6
2	13.77%	387	4	239,6
3	30.20%	828	1	89
4	38.83%	922	1	34

One step further, the share of customers in each cluster out of the total customers was analyzed. It seems that clusters 3 and 4 have the highest shares with 30.20% and 38.83% accordingly. On the other hand, cluster 2 is 13.77% and the share of cluster 1 is 17.20%. From this analysis, it was concluded that the database can be divided into 4 different clusters, as each cluster has a different value for the company. In more detail, it seems that the best cluster (Cluster 2) is 13.77% of the total, while the low-valued clusters are almost 70%. Thus, the company should apply different marketing strategy for them in comparison with the rest clusters. Specifically, speaking about cluster 2, the company should ensure that the metrics should be stable or improved. To achieve that, the company should closely monitor the behavior of those customers in order to discover their needs and ensure the satisfaction of these needs. On the other hand, in cluster 3, the customers tend to have high monetary value in comparison with cluster 1 and 4, while Recency and Frequency are low in terms of performance. Hence, the company should use promotion techniques, such as discounts or gifts in order to influence their purchase behavior. Lastly, cluster 4 seems to be the worst one, compared to the rest clusters in all metrics. From a topline view, a recommendation could be to stop investing in the advertising budget to influence their purchase behavior and re-invest the extra budget for improving cluster 1.

In addition, it is very important for the company to further investigate the behavior of each cluster separately. Explicitly, the same process applied again with an important difference regarding the data. Specifically, the data of cluster 2 had been used as an input instead of the whole dataset. The results of the analysis showed that cluster 2 could be segmented into 4 different clusters as 3 out of 4 tests, suggested the creation of 4 different clusters (Figure 3).

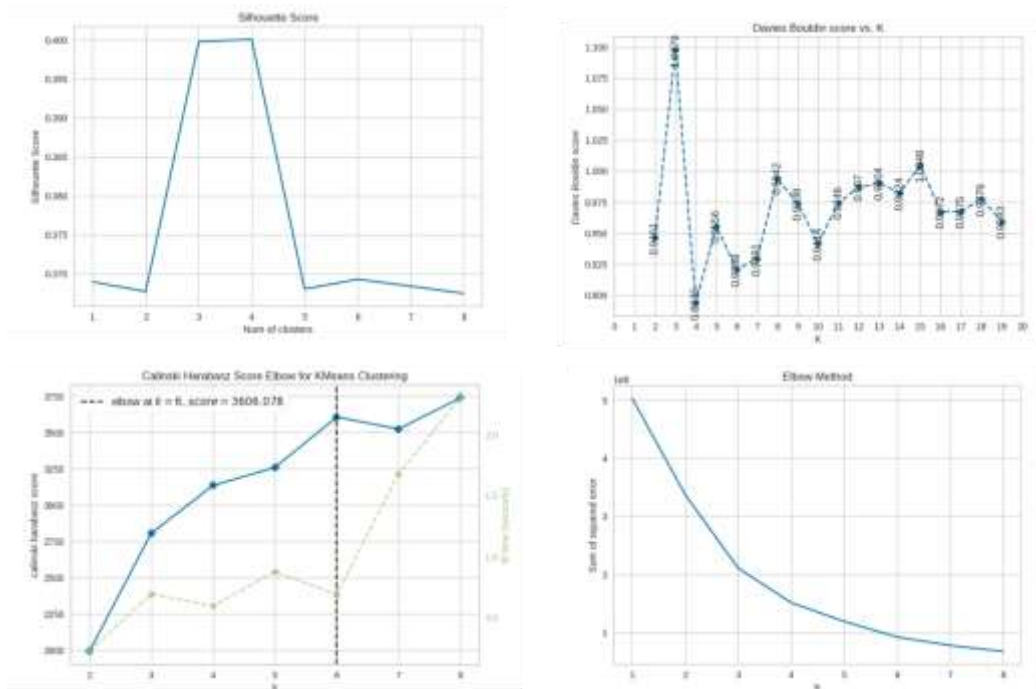


Figure 3: Tests to determine the optimal k for cluster 2

Accordingly, the k-means clustering applied again, only for cluster 2 in order to segment into 4 different clusters. The table below shows that the 3<sup>rd</sup> cluster is the best as it has the best results across all different metrics. However, cluster 3 is the smallest cluster in terms of size as it consists of 41 customers. On the other hand, cluster 1 has the largest size in terms of customers (2258).

Table 4: Presentation of the clusters (means) after applying k-means at cluster 2

Cluster	n (%)	Recency	Frequency	Monetary
1	55.67%	304	4	236
2	10.43%	324	8	729
3	1.01%	269	20	2134
4	32.89%	682	4	269

## 6. Conclusions and Further Suggestions

Nowadays the volume of information available to companies is growing fast. Thus, companies must be able to adapt easily to the new era and make use of the new technologies in order to be in better position against competition and maximize their profits. It is highly important to combine traditional analysis tools with advanced machine learning methodologies to enhance the final results. In more detail, companies in general and Greek companies more specifically, must gather and properly analyze the data in order to meet their customers' needs. Therefore, segmentation techniques and clustering must be applied before the planning of any digital marketing strategy. Actually, the digital marketing strategy should rely on the results of the analysis. Also, it is vital for the companies to rely their decisions on the data, instead of their general thoughts and beliefs, such as the optimal number of clusters. In this paper, the implementation of customer segmentation and clustering for a Greek fashion e-shop has been conducted. Specifically, for the purpose of the analysis, RFM and the k-means applied while k-means was utilized twice. The first time, k-means was applied to the whole dataset in order to segment the clients into 4 different groups whereas the second time k-means was applied using only the data of the best cluster in order to further segment it and understand the behavior of the clients. It is crucial to point out that many researchers tend to use one metric to determine the optimal k number, such as the elbow method or Davies-Bouldin Index. However, in this paper, 4 (four) different metrics were used for that purpose. In more detail, Silhouette Index, the Calinski-Harabasz Index and Davies-Bouldin Index and the elbow method were employed. Since this topic is very important for the company's digital marketing strategy, the creation of an extension of the RFM based on the company's needs and measure the Customer Lifetime Value (CLV) could be considered as a next step. After that, a comprehensive digital marketing strategy will be able to be suggested, with the best media channels per audience size and value being chosen.

## 7. References

- Agustino, D. P., Harsemadi, I. G., and Budaya, I. G. B. A. (2022). Edutech Digital Start-Up Customer Profiling Based on RFM Data Model Using K-Means Clustering. *Journal of Information Systems and Informatics*, 4(3), 724–736. <https://doi.org/10.51519/journalisi.v4i3.322>
- Amoozad Mahdiraji, H., Tavana, M., Mahdiani, P., and Abbasi Kamardi, A. A. (2022). A multi-attribute data mining model for rule extraction and service operations benchmarking. *Benchmarking: An International Journal*, 29(2), 456–495. <https://doi.org/10.1108/BIJ-03-2021-0127>
- Ashari, I. F., Banjarnahor, R., Farida, D. R., Aisyah, S. P., Dewi, A. P., and Humaya, N. (2022). Application of Data Mining with the K-Means Clustering Method and Davies Bouldin Index for Grouping IMDB Movies. *Journal of Applied Informatics and Computing*, 6(1), 07–15. <https://doi.org/10.30871/jaic.v6i1.3485>
- Becker, I. F., Linzmajer, M., and Von Wangenheim, F. (2017). Cross-Industrial User Channel Preferences on the Path to Online Purchase: Homogeneous, Heterogeneous, or Mixed? *Journal of Advertising*, 46(2), 248–268. <https://doi.org/10.1080/00913367.2017.1300076>
- Bult, J. R., and Wansbeek, T. (1995). Optimal Selection for Direct Mail. *Marketing Science*, 14(4), 378–394. <https://doi.org/10.1287/mksc.14.4.378>
- Chen, A. H. L., Liang, Y.-C., Chang, W.-J., Siau, H.-Y., and Minanda, V. (2022a). RFM Model and K-Means Clustering Analysis of Transit Traveller Profiles: A Case Study. *Journal of Advanced Transportation*, 2022, 1–14. <https://doi.org/10.1155/2022/1108105>
- Chen, D., Sain, S. L., and Guo, K. (2012). Data mining for the online retail industry: A case study of RFM model-based customer segmentation using data mining. *Journal of Database Marketing and Customer Strategy Management*, 19(3), 197–208. <https://doi.org/10.1057/dbm.2012.17>

- Cho, Y. S., Moon, S. C., Noh, S. C., and Ryu, K. H. (2012). Implementation of personalized recommendation system using k-means clustering of item category based on RFM. *2012 IEEE International Conference on Management of Innovation and Technology (ICMIT)*, 378–383. <https://doi.org/10.1109/ICMIT.2012.6225835>
- Chou, S.-Y., Trappey, A., Pokojski, J., and Smith, S. (Eds.). (2009). *Global Perspective for Competitive Enterprise, Economy and Ecology: Proceedings of the 16th ISPE International Conference on Concurrent Engineering*. Springer London. <https://doi.org/10.1007/978-1-84882-762-2>
- Christy, A. J., Umamakeswari, A., Priyatharsini, L., and Neyaa, A. (2021a). RFM ranking – An effective approach to customer segmentation. *Journal of King Saud University - Computer and Information Sciences*, 33(10), 1251–1257. <https://doi.org/10.1016/j.jksuci.2018.09.004>
- Craenendonck, T. V., and Leuven, K. (2015). *Using Internal Validity Measures to Compare Clustering Algorithms*.  
Greenberg, P. (2010). The impact of CRM 2.0 on customer insight. *Journal of Business and Industrial Marketing*, 25(6), 410–419. <https://doi.org/10.1108/08858621011066008>
- Gustriansyah, R., Suhandi, N., and Antony, F. (2020). Clustering optimization in RFM analysis Based on k-Means. *Indonesian Journal of Electrical Engineering and Computer Science*, 18(1), 470. <https://doi.org/10.11591/ijeecs.v18.i1.pp470-477>
- Huang, S., Qin, S., Jiang, X., and Cao, Y. (2022). A travel customer segmentation method based on improved RFM and k-means++. *2022 5th International Conference on Computer Science and Software Engineering (CSSE 2022)*, 436–440. <https://doi.org/10.1145/3569966.3570085>
- Mahfuza, R., Islam, N., Toyeb, Md., Emon, M. A. F., Chowdhury, S. A., and Alam, Md. G. R. (2022). LRFMV: An efficient customer segmentation model for superstores. *PLOS ONE*, 17(12), e0279262. <https://doi.org/10.1371/journal.pone.0279262>
- Maryani, I., and Riana, D. (2017). Clustering and profiling of customers using RFM for customer relationship management recommendations. *2017 5th International Conference on Cyber and IT Service Management (CITSM)*, 1–6. <https://doi.org/10.1109/CITSM.2017.8089258>
- Mora Cortez, R., Højbjerg Clarke, A., and Freytag, P. V. (2021). B2B market segmentation: A systematic review and research agenda. *Journal of Business Research*, 126, 415–428. <https://doi.org/10.1016/j.jbusres.2020.12.070>
- Ogbuabor, G., and F. N, U. (2018). Clustering Algorithm for a Healthcare Dataset Using Silhouette Score Value. *International Journal of Computer Science and Information Technology*, 10(2), 27–37. <https://doi.org/10.5121/ijcsit.2018.10203>
- Palupi, G. S., and Fakhruzzaman, M. N. (2022). Indonesian pharmacy retailer segmentation using recency frequency monetary-location model and ant K-means algorithm. *International Journal of Electrical and Computer Engineering (IJECE)*, 12(6), 6132. <https://doi.org/10.11591/ijece.v12i6.pp6132-6139>
- S. Harish, A., and Malathy, C. (2023). Customer Segment Prediction on Retail Transactional Data Using K-Means and Markov Model. *Intelligent Automation and Soft Computing*, 36(1), 589–600. <https://doi.org/10.32604/iasc.2023.032030>
- Sharma, D. K., Lohana, S., Arora, S., Dixit, A., Tiwari, M., and Tiwari, T. (2022). E-Commerce product comparison portal for classification of customer data based on data mining. *Materials Today: Proceedings*, 51, 166–171. <https://doi.org/10.1016/j.matpr.2021.05.068>
- Tavakoli, M., Molavi, M., Masoumi, V., Mobini, M., Etemad, S., and Rahmani, R. (2018). Customer Segmentation and Strategy Development Based on User Behavior Analysis, RFM Model and Data Mining Techniques: A Case Study. *2018 IEEE 15th International Conference on E-Business Engineering (ICEBE)*, 119–126. <https://doi.org/10.1109/ICEBE.2018.00027>

Wan, S., Chen, J., Qi, Z., Gan, W., and Tang, L. (2022). Fast RFM Model for Customer Segmentation. *Companion Proceedings of the Web Conference 2022*, 965–972. <https://doi.org/10.1145/3487553.3524707>

Wang, C. (2022). Efficient customer segmentation in digital marketing using deep learning with swarm intelligence approach. *Information Processing and Management*, 59(6), 103085. <https://doi.org/10.1016/j.ipm.2022.103085>

Wei, J. T., Lin, S.-Y., Yang, Y.-Z., and Wu, H.-H. (2016). Applying Data Mining and RFM Model to Analyze Customers' Values of a Veterinary Hospital. *2016 International Symposium on Computer, Consumer and Control (IS3C)*, 481–484. <https://doi.org/10.1109/IS3C.2016.126>

Yan, C. (2022). Data Mining and Marketing Strategy Analysis of E-commerce Enterprises Based on RFM Model. *Proceedings of the 7th International Conference on Intelligent Information Processing*, 1–5. <https://doi.org/10.1145/3570236.3570243>

Yıldız, E., GÜNGÖR Şen, C., and Işık, E. E. (2023). A Hyper-Personalized Product Recommendation System Focused on Customer Segmentation: An Application in the Fashion Retail Industry. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(1), 571–596. <https://doi.org/10.3390/jtaer18010029>

# **E-Commerce and E-Marketing**



# The Adoption of Digitalization by Exporting Firms During the Pandemic: A Systematic Literature Review

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## Abstract:

Research on the impact of the COVID-19 pandemic on exports is growing across disciplines, focusing on different countries, sectors and types of firms. Nevertheless, the impact varies between the different contexts analyzed, making it hard for researchers and practitioners to fully understand how COVID-19 has affected exporting firms. Moreover, exporting firms had heterogeneous responses to the pandemic. This systematic review synthesizes insights from 11 International Business studies, regarding the digitalization practices adopted by exporting firms as a response to the pandemic and the practices that helped them to overcome the challenges COVID-19 imposed on their exporting activities.

**Keywords:** Exports, Digitalization, E-commerce, COVID-19, Pandemic.

## Introduction

The COVID-19 pandemic has been one of the most profound crises of our time (Mena et al., 2022), having a significant impact on businesses worldwide, with exporting firms being no exception (Aga & Maemir, 2022). The outbreak of the virus in early 2020 forced governments around the world to apply strict containment measures (Pei et al., 2022). Most countries took recourse to various combinations of restrictions on economic and social activities (Ahmed et al., 2020), like restrictions on social gatherings, controls on traveling (Caporale et al., 2023), restrictions on other commercial activities, market shutdowns and workplace closures, to complete country-level lockdowns, leading to a decline in economic activities (Che et al., 2021; Cheong et al., 2022; Li & Lin, 2021; Aga & Maemir, 2022). Also, it led to a decline in global trade and disruptions in supply chains, affecting exporting firms' operations, production, and sales (Lee et al., 2023). The uncertainty and unpredictability of the situation also resulted in a decline in consumer demand and investment, leading to reduced revenues and financial difficulties for many exporting firms (Khan, 2022). Apart from the business side, the pandemic also caused changes in consumer behavior, with a shift towards online shopping (Onjewu et al., 2022), which further affected exporting firms that had not yet advanced the digitalization of their operations by adopting digital marketing (DM) strategies and e-commerce (EC) practices.

In response to these changes, exporting firms had to adopt new strategies and practices to remain competitive and survive in the global market, with EC and DM becoming increasingly important during the pandemic (Hayakawa et al., 2021). Acknowledging this, international business (IB) researchers have started exploring the changes and challenges firms faced during the pandemic and their responses emphasizing also the shift of exporting firms in digitalization practices (e.g. Kampouri & Hajidimitriou, 2023). Nevertheless, up to our knowledge, there is no synthesis of studies focusing how digitalization enabled firms to overcome the challenges COVID-19 caused. This literature review aims to provide a preliminary overview of how exporting firms reacted to the challenges caused by the COVID-19 pandemic by adopting digitalization practices, such as EC and DM strategies. By synthesizing existing research on the topic, we seek to shed light on the challenges faced by exporting firms during the pandemic, as well as the digital strategies they have adopted to mitigate these challenges. In particular, our study answers the following research questions: 1) *What digitalization practices (such as EC) have exporting firms adopted in response to the pandemic?* 2) *How did these digitalization practices help them overcome the challenges of the pandemic?*

The findings illustrate that exporting firms have adopted digitalization by implementing digital technologies to automate and improve their business processes, reduce costs and enhance their efficiency (Lee et al., 2023).

Furthermore, EC has also become critical enabling them to reach customers and sell their products online, especially with the general increase in online shopping due to the pandemic (Onjewu et al., 2022). Finally, DM has also become increasingly important for exporting firms in their effort to reach customers, build brand awareness and promote their products or services (Caporale et al., 2023).

The remainder of the paper proceeds as follows: In the next section, definitions of key concepts are discussed. Then, the methodology of the literature review is described. In the fourth section, the main findings are presented. The fifth section discusses future research pathways, while the final section provides the conclusions and the limitations of our study.

### Definitions of key concepts

*Digitalization* or *Digital Transformation* refers to the changes associated with the application of digital technology in all aspects of human society (Stolterman & Fors, 2004), but also to the adoption of digital technologies in business operations and processes (Urbach & Röglinger, 2018). *E-commerce* refers to any business transaction, in which the parties interact electronically rather than by physical contact (Gupta, 2014). More specifically, it refers to the buying and selling of goods, services and information over electronic networks, primarily the Internet (Turban et al., 2018; Laudon & Traver, 2020). Accordingly, *cross-border EC* involves transactions conducted between firms in different countries through EC platforms. *Digital marketing*, on the other hand, refers to the strategic use of digital technologies, online channels and data-driven techniques to promote products, services, brands and ideas to target customers (Chaffey & Ellis-Chadwick, 2019; Ryan & Jones, 2019). It involves promoting products or services through digital channels, such as social media, search engines or email marketing (Hoffman & Fodor, 2010). According to the literature, despite the challenges and disruptions caused by the pandemic, exporting firms seem to have demonstrated resilience and adaptability during the pandemic by digitalizing certain operations, such as DM strategies and EC practices. Overall, literature suggests that digitalization and, more specifically, the adoption of DM strategies and EC practices have played a crucial role in helping exporting firms navigate the challenges of the pandemic.

### Methodology

In order to address the aforementioned research questions, we conducted a systematic literature review to detect, analyze, select and synthesize the existing literature in a rigorous and replicable way, leading to robust conclusions (Vrontis & Christofi, 2019; Paul & Criado, 2020). By doing this, we also determined what future studies should be conducted to identify and examine further implications of the pandemic (Snyder et al., 2019).

We used inclusion and exclusion criteria to identify the relevant studies (e.g. Vrontis and Christofi, 2019) and proceeded with a qualitative content analysis approach which allows for fresh conceptual understanding that is grounded on empirical data (e.g. Yaghmaie & Vanhaverbeke, 2019). The primary database used was Web of Science, the most well-known bibliographic database. The combination of search terms was ((marketing) OR (e-commerce)) AND ((covid\*) OR (pandemic) OR (corona\*)) AND ((export\*) OR ("exporting")), to include all the relevant results. The search was limited to studies published between 2020 and 2023 to ensure the relevance and recency of the studies, with April 2023 chosen as the cut-off date to avoid never-ending results.

Initially, the search identified a total of 411 results. Then, we selected the relevant Web of Science categories, namely Economics, Business, Management, International Relations, Business Finance, Social Sciences Interdisciplinary and Computer Science Information Systems. Moreover, we wanted to include articles from peer-reviewed journals featuring in the Social Science Citation Index (SSCI) and Science Citation Expanded Index (SC-EXPANDED). We also excluded papers that were not written in English as well as letters, books and conference papers. After applying the above inclusion and exclusion criteria, 97 studies were selected for the final review.

Next, we carefully read the abstract of the 97 studies and realized that 11 studies were exploring the digitalization practices of exporting firms during COVID-19. We proceeded by independently and separately analyzing these 11 studies through a coding scheme capturing the theories used in the articles, the research purposes, and the main findings. The articles were published between 2021 and 2023 in distinguished academic journals, namely International Marketing Review, Management International Review, Information Systems Frontiers and Journal of Development Studies.

## Findings

In response to the pandemic and its challenges, exporting firms were forced to rapidly adapt their business practices in order to maintain their sales and survive in the international arena. Many of them had to shift their activities online and digitalize their operations (Hayakawa et al., 2021). This section presents and synthesizes the findings from 11 recent studies investigating how exporting firms have responded to the pandemic and the digital strategies and practices they have adopted as a result.

Most studies from our data pool revealed the accelerated adoption of digital technologies by firms in general but also by exporting firms (Khan, 2022; Lee et al., 2023; Jeong et al., 2023) and the significant role digitalization played in helping exporting firms overcome the challenges of COVID-19, highlighting also the challenges and risks associated with digitalization (Lee et al., 2023). Our findings illustrate that, during the pandemic, exporting firms increasingly used business-to-business (B2B) digital platforms, like Alibaba or eWorldTrade, for finding new markets and customers (Lee et al., 2023), for communication and customer engagement (Khan, 2022; Hayakawa et al., 2021) or to improve their supply chain management and reduce the impact of future disruptions and crises (Caporale et al., 2023; Khan, 2022; Jeong et al., 2022). With few exceptions (e.g. Hayakawa et al., 2021), most studies from our data pool have emphasized that the adoption of digital technologies has provided benefits for exporting firms, such as increased efficiency and flexibility (Lee et al., 2023). Especially those exporting firms that had invested in digitalization before the pandemic were better equipped to navigate the challenges of the crisis (Khan, 2022).

### *E-commerce Adoption and Digital Marketing*

Since the outbreak of COVID-19 and the lockdown measures, consumers started to purchase items online leading to a rapid growth of e-commerce in domestic and international markets (Hayakawa et al., 2021; Jeong et al., 2022; Onjewu et al., 2022). Apart from domestic transactions, online shopping was also possible in international transactions, known as “cross-border EC” (Hayakawa et al., 2021). Moreover, EC and digital marketing tools enabled firms to conduct B2B activities online, namely search for new suppliers and customers, despite the supply chain disruptions and the measures applied due to the pandemic.

Nevertheless, the existing literature seems to argue whether the adoption of EC actually helped exporting firms or not. To illustrate, on the one hand, Hayakawa et al. (2021) found that EC development indeed mitigated the negative effects of COVID-19, but only in the case of importing countries and not in exporting countries. This could indicate either that many exporting firms had not adopted EC business or that business-to-consumer (B2C) EC is more developed and widely used than cross-border B2B EC (Hayakawa et al., 2021). On the other hand, there are studies conducted in recent years that highlight that EC is positively associated with direct exports, exporting resilience and export performance (Onjewu et al., 2022; Caporale et al., 2023) and that actually helped exporting firms to recover in the short and long run (Caporale et al., 2023).

Caporale et al. (2023) show that exporting firms that adopted EC practices during the pandemic were able to mitigate its negative impacts on their exports. More specifically, EC allowed exporting SMEs to establish direct relationships with foreign customers, which exempted them from needing local intermediaries which were unavailable or difficult to reach due to the containment measures (Onjewu et al., 2022; Fan et al., 2023). Moreover, EC platform empowerment is found to have a significant and positive effect on SMEs’ export performance and on strategic flexibility that further enhances export performance (Fan et al., 2023). The positive influence of EC on SMEs’ survival and exporting activity can be explained through the prism of transaction costs. It is argued that exporting SMEs’ resilience necessitates a proactive approach towards gathering and utilizing knowledge, and this can be achieved through online activity. More specifically, the higher their share of online sales, the longer they remain in business during a crisis, and resilient businesses are more likely to sell directly to international markets (Onjewu et al., 2022). Furthermore, resilience helps SMEs to be more adaptable, responsive and competitive in global markets, which eventually increases export performance (Onjewu et al., 2022). Apart from SMEs, EC and DM tools helped also some multinational firms to expand in new markets worldwide and increase their export share (Jeong et al., 2022), thus overcoming the challenging effects of the pandemic. In addition to the online sales through EC, DM tools helped exporting firms in more ways. They enabled them to conduct B2B activities online, namely to search for new suppliers and customers without having to travel abroad or attend international exhibitions, like they used to do in the past, and to maintain customer relationships and sales (Hayakawa et al., 2021; Lee et al., 2023).

### *The Role of the Government*

Apart from the research on the digitalization of firms as a reaction to the pandemic challenges, there are many studies analyzing the role of government policies in this process (Qiu et al., 2022, Chen et al., 2022, Caporale et al., 2023). It is found that when governments invest in digitalization, it encourages firms, including exporting firms, to also digitalize their operations (Caporale et al., 2023; Eslami Andargoli et al., 2022) and engage in cross-border EC B2B transactions (Qiu et al., 2022). More specifically, higher government subsidies, tax incentives, investment in EC infrastructure, talent introduction and training, improvements in payment systems and government supervision in an appropriate manner, promote the adoption of international EC (Qiu et al., 2022). China is a case that reflects the above since it has attached great importance in developing the cross-border EC industry, even before the pandemic. In recent years, the cross-border EC industry developed fast in the scale of international trade, supported by the “dual circulation” measure taken by the government, leading to a 40.1% increase in EC exports in 2020 (Chen et al., 2022).

Furthermore, Eslami Andargoli et al. (2022) show that government support of digitalization is found to be important for firm innovation also and, hence, for export performance. Government digital support has a significant positive effect on the enterprise introduction of new and improved products and services, thereby enhancing international sales (Eslami Andargoli et al., 2022). However, it is important to note that excessive government supervision of digitalization policies may lead to diminishing enthusiasm of enterprises to participate in international EC (Qiu et al., 2022). In general, government policies promoting digitalization, such as EC adoption, increased trade resilience and helped firms and economies to recover in the short and long run (Caporale et al., 2023).

### **Future Research Directions**

As the COVID-19 crisis is still a very recent event, the current IB literature studying its impacts is still emerging. Hence, there are some interesting research paths for future scholars to follow. For example, according to the literature, EC platforms helped exporting firms to continue their operations during the lockdown restrictions, facilitating them with online sales and new ways to find customers. Scholars could research if exporting firms continued to use these digital tools for their operations in the post-pandemic era or if they returned to the methods they used in the past. Moreover, future research should investigate the long-term effects of the DM strategies and EC practices adopted by exporting firms during the pandemic. Researchers should examine how the introduction of these strategies and practices has influenced firms’ competitiveness, market positioning and overall performance beyond the immediate crisis period.

Moreover, future research could analyze the usefulness of specific DM tools, and examine the impact of social media marketing, influencer marketing, content marketing and other DM methods on customer acquisition, brand awareness and sales performance. It would be beneficial for both IB scholars and practitioners around the world to identify the actually helpful digital tools exporting firms could use for their international marketing efforts during similar crises.

Finally, industry-specific studies should be conducted to explore how the unique challenges and opportunities were confronted by exporting firms in different sectors. It would be of great interest to investigate how employing DM strategies and EC practices varied across industries and to identify industry-specific best practices for digitalization and international market growth. By addressing these research areas, scholars can further deepen our understanding of the implications of the COVID-19 pandemic on exporting firms, uncover new insights into the effectiveness of digital strategies and contribute to the development of practical recommendations for firms to navigate future disruptions and drive sustainable growth in the digital age.

### **Conclusions and Limitations**

The COVID-19 pandemic had a profound impact on businesses worldwide and exporting firms have faced significant challenges. This literature review brought to light that exporting firms adopted DM strategies and EC practices in response to the pandemic. The findings shed light on the various approaches and outcomes observed in the literature.

One notable finding is that most exporting firms faced disruptions in their supply chains and experienced reduced demand due to lockdown measures and economic uncertainty caused by the pandemic (Caporale et al., 2023). To mitigate these challenges, firms turned to digital transformation practices (Khan, 2022; Lee et al., 2023; Jeong et al., 2023; Hayakawa et al., 2021). Digitalization played a crucial role in enabling firms to adapt to the new business environment and maintain their operations (Lee et al., 2023). Moreover, firms increasingly leveraged EC platforms to facilitate online sales and expand their customer base beyond traditional boundaries (Khan, 2022; Hayakawa et al., 2021). This shift towards digital channels allowed exporting firms to overcome

geographical limitations and connect with customers worldwide (Onjewu et al., 2022; Fan et al., 2023). Digitalization and the adoption of EC practices and DM strategies not only enabled firms to survive during the pandemic but also offered opportunities for growth and innovation (Eslami Andargoli et al., 2022). For instance, firms that embraced technology and implemented robust online platforms experienced increased market reach and enhanced strategic performance (Khan, 2022). Digitalization also helped firms to digitalize their operations, optimize supply chains and enhance overall efficiency (Lee et al., 2023). Overall, our findings suggest that exporting firms have adopted various digitalization practices, such as EC practices, to cope with the challenges of the pandemic by helping them to continue their operations, maintain customer relationships and increase their sales.

However, it is important to note that the success of digital practices was not uniform across all firms. SMEs faced additional challenges, such as limited resources, digital skills and infrastructure, in adopting and implementing digital solutions (Caporale et al., 2023). Nevertheless, EC adoption by SMEs can reduce their costs, help them improve business processes, achieve a closer relationship with clients (Huy & Filiatrault, 2006), allow them to compete with large businesses, provide ease of communication as well as location and time independence (Grandon & Pearson, 2004). Therefore, overcoming such barriers related to the adoption of digital solutions remains a critical factor for SMEs to fully leverage the benefits of digitalization. In addition, studies have highlighted the importance of government policies and support for firms' digitalization. When governments provide adequate incentives, they encourage exporting firms to adopt digital transformation and EC practices (Caporale et al., 2023; Qiu et al., 2022; Eslami Andargoli et al., 2022).

Of course, this study is not without limitations. It is important to acknowledge them as they provide opportunities for further research and indicate areas where future studies can contribute to a more comprehensive understanding of the topic. The main limitation emanates from the restriction of reviewing the 11 studies identified. Nevertheless, this is not unusual in literature review articles because of the emerging nature of the topic (Yaghmaie and Vanhaverbeke, 2019). Moreover, due to the nature of the literature review, the findings represent a snapshot of the current state of research. The impacts of COVID-19 and the responses of exporting firms continue to evolve, and future studies may reveal additional insights or changes in the patterns observed, and thus provide further findings and future research directions.

Furthermore, the studies included in this systematic literature review were selected based on specific inclusion criteria and may not encompass the entire breadth of research on the topic. Future studies could use different or broader criteria and identify more relevant papers and thus provide more findings regarding the subject. Finally, the literature review relied solely on existing studies and did not involve primary data collection. While this approach provides a comprehensive overview of existing knowledge, it limits the ability to delve deeper into specific research questions or explore nuances that can only be captured through primary research.

In conclusion, the findings of this literature review highlight the transformative role of digitalization, DM strategies and EC practices in helping exporting firms navigate the challenges that emerged due to the COVID-19 pandemic. These strategies and practices have enabled firms to adapt to the new normal, expand their market presence and enhance their competitive advantage. Moving forward, it is crucial for exporting firms to continue investing in digital capabilities and remain agile in responding to evolving international business dynamics.

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### References

- Abed, S. S., Dwivedi, Y. K., & Williams, M. D. (2015). Social media as a bridge to e-commerce adoption in SMEs: A systematic literature review. *The Marketing Review*, 15(1), 39-57.
- Aga, G., & Maemir, H. (2022). COVID-19 and Sub-Saharan Africa Firms: Impact and Coping Strategies. *The Journal of Development Studies*, 58(12), 2415-2443.
- Caporale, G. M., Lodigiani, E., & Nandy, M. (2023). The impact of COVID-19 on stock market volatility: Evidence from global developed and emerging economies. *International Review of Financial Analysis*, 76, 101874.
- Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1), 3-16.
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing: Strategy, implementation and practice*. Pearson.
- Che, Y., Liu, W., Zhangb, Y., & Zhao, L. (2021). China's Exports during the Global COVID-19 Pandemic. *Frontiers of Economics in China*, 15(4), 541-574

- Cheong, I., Yoo, J. H., Hong, K. and Lee, P. T.-W. (2022). Impact of the COVID-19 pandemic on global value chain and implications for the Belt and Road Initiative. *International Journal of Shipping and Transport Logistics*, 14(4), 371–394.
- Deng, Z., & Wang, Z. (2016). Early-mover advantages at cross-border business-to-business e-commerce portals. *Journal of Business Research*, 69(12), 6002–6011.
- Eslami Andargoli, A., Gholipour, H. F., & Farzanegan, M. R. (2022). Government's support for adoption of digital technologies and firms' innovation during the COVID-19 pandemic. *Applied Economics*, 1-10.
- Gupta, A. (2014). E-Commerce: Role of E-Commerce in today's business. *International Journal of Computing and Corporate Research*, 4(1), 1-8.
- Kampouri, K., & Hajidimitriou, Y. (2022). COVID and challenges in the context of family firms internationalisation: a review and emerging research pathways. *Critical Perspectives on International Business*, (ahead-of-print).
- Haleem, A., Javaid, M., Vaishya, R., & Deshmukh, S. G. (2020). Areas of academic research with the impact of COVID-19. *American Journal of Emergency Medicine*, 38(7), 1524-1526.
- Hoffman, D. L., & Fodor, M. (2010). Can you measure the ROI of your social media marketing?. *MIT Sloan management review*.
- Jean, R. J. B., Kim, D., Kim, D., & Cavusgil, E. (2020). Antecedents and outcomes of digital platform risk for international new ventures' internationalization. *Journal of World Business*, 55(1), 1–9.
- Jin, H., & Hurd, F. (2018). Exploring the impact of digital platforms on SME internationalization: New Zealand SMEs use of the Alibaba platform for Chinese market entry. *Journal of Asia-Pacific Business*, 19(2), 72–95.
- Laudon, K. C., & Traver, C. G. (2020). E-commerce: Business, technology, society. Pearson.
- Lee, J. Y., Yang, Y. S., & Ghauri, P. N. (2023). E-commerce Policy Environment, Digital Platform, and Internationalization of Chinese New Ventures: The Moderating Effects of Covid-19 Pandemic. *Management International Review*, 63(1), 57-90.
- Li, C. and Lin, X. (2021). COVID-19 and trade: Simulated asymmetric loss. *Journal of Asian Economics*, 75, 101327.
- Liang, X., & Huang, L. (2021). E-commerce development and management: Emerging issues and trends. *International Journal of Information Management*, 57, 102348.
- Liu, Y., Chen, D. Q., & Gao, W. (2020). How does customer orientation (in)congruence affect B2B electronic commerce platform firms' performance? *Industrial Marketing Management*, 87, 18–30.
- Onjewu, M. I., Umaru, J. I., & Achimugu, A. I. (2022). Digital marketing adoption and firm performance in emerging economies: A resource-based perspective. *International Journal of Information Management*, 62, 102388.
- Pappas, N., Vlachopoulou, M., & Owusu, G. (2021). Digital marketing strategies, COVID-19 pandemic, and business performance: Evidence from hospitality firms. *International Journal of Hospitality Management*, 93, 102764.
- Paul, J. and Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know?. *International Business Review*, 29(4), 101717.
- Pezderka, N., & Sinkovics, R. R. (2011). A conceptualization of e-risk perceptions and implications for small firm active online internationalization. *International Business Review*, 20(4), 409–422.
- Pham, T. H., & Tran, A. T. (2021). The COVID-19 pandemic and firm performance: Evidence from Vietnam. *Research in International Business and Finance*, 59, 101456.
- Qi, X., Chan, J. H., Hu, J., & Li, Y. (2020). Motivations for selecting cross-border e-commerce as a foreign market entry mode. *Industrial Marketing Management*, 89, 50–60.
- Rizov, M., Crotti, R., & Hanrahan, K. (2021). COVID-19 and food supply chains: Disruptions and implications for exports-oriented agricultural sectors. *Food Policy*, 101, 102072. doi: 10.1016/j.foodpol.2020.102072
- Ryan, D., & Jones, C. (2019). *Understanding digital marketing: Marketing strategies for engaging the digital generation*. Kogan Page.
- Stolterman, E., & Fors, A. C. (2004). Information technology and the good life. *Information systems research: relevant theory and informed practice*, 687-692.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333-339
- Turban, E., Outland, J., King, D., Lee, J., & Liang, T. (2018). *Electronic commerce: A managerial and social networks perspective*. Springer.
- Urbach, N., & Röglinger, M. (2018). Introduction to digitalization cases: how organizations rethink their business for the digital age. In *digitalization cases: how organizations rethink their business for the digital age* (pp. 1-12). Cham: Springer International Publishing.
- Vrontis, D., & Christofi, M. (2019). R&D internationalization and innovation: A systematic review, integrative framework and future research directions. *Journal of Business Research*, 128, 812-823

- Yaghmaie, P., & Vanhaverbeke, W. (2020). Identifying and describing constituents of innovation ecosystems: A systematic review of the literature. *EuroMed Journal of Business*, 15(3), 283-314.
- Wang, C. L., & Li, D. (2021). The COVID-19 pandemic: A review. *Recent Advances in Organizational Behavior and Decision Making*, 1, 104–114.
- Zahoor, N., & Lew, Y. K. (2023). Enhancing international marketing capability and export performance of emerging market SMEs in crises: strategic flexibility and digital technologies. *International Marketing Review*, (ahead-of-print).

# Entrepreneurship



## **Reviewing the critical factors of business performance of freelance language service providers' entrepreneurial activity**

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### **Abstract**

#### **Scope and Research Objectives**

The objective of this working paper in the framework of the doctoral research, is to highlight the factors that affect the business performance of translators and interpreters who are self-employed or exert entrepreneurial activity by enriching and expanding the competency models for self-employed language professionals in terms of the entrepreneurship component. More specific objectives of the research are to: enrich and expand competence models for self-employed language professionals in terms of the entrepreneurship component; combine theory and knowledge at a practical level with translators and interpreters' business or self-employment issues; record the business performance factors; investigate the effect of factors on business performance; contribute to the international literature with the production of original content; integrate business studies/skills into the curricula at universities; empower students to engage in innovation and entrepreneurship; clarify the business performance factors with the aim to improve understanding on the part of students while improving their employability; identify the dynamics of the environment in which translators and interpreters exert entrepreneurial activity in Greece.

#### **Theoretical Background**

Entrepreneurship is a multifaceted concept, which is studied by many different scientific perspectives. A fact that is also observed in the literature as there is a multitude of alternative approaches in the existing theoretical framework, which is a result of the differentiation of purposes, objectives, main questions and different units of analysis used by theorists depending on the field they approach entrepreneurship (Low and MacMillan, 1988; Shane & Venkataraman, 2000; Ireland, Hitt, & Sirmon, 2003). According to the definition of the Commission of the European Communities (2003 in: Stefanescu and Ona (2012), entrepreneurship is defined as "the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing economic organization". This research in progress is based on two main theoretical approaches: one is the theory of entrepreneurial competencies and the other is translation competence models and how these affect the performance of entrepreneurial activities of self-employed language professionals. The competency theory is important for determining the role of the entrepreneur in the performance or competitiveness of his business. Entrepreneurial skills include personality traits, skills and accumulated knowledge and the substantial overall ability of the entrepreneur to fulfil his role effectively (Man et al., 2002). Thus, the study of entrepreneurial personality traits and behaviour is related to their skills and provides important information to improve the understanding of business success. It also explains why some entrepreneurs can develop their business ventures faster (Mitchelmore and Rowley, 2010).

#### **Translation Competence Models**

Competency-oriented program designs have been available for the Translation and Interpreting department at university. Such concepts as knowledge, skills, ability and proficiency determine the qualities that a translator must have in order to translate texts. These qualities meet separate but complementary needs in translation competence, which is an inclusive term that encompasses all of them. The models of translation competence that study the concept as a multi-componential term are often divided into two: Models that arise from the needs of translation education and those of the translation sector. The most well-known theoretical and

pragmatic models of Translation Competence are PACTE, TransComp and EMT. They serve as a starting point for the further discussion of the sub-competences forming Translation Competence. They were chosen as starting points for the development of the Translation Competence model because their frameworks are of a detailed format, they approach the issue of Translation Competence from a didactic and professional point of view. In terms of translation education, there are translation competence models developed by individual researchers such as Neubert (Neubert, 2000: 3), Schäffner (Schäffner, 2000: 146-148) and Yazıcı (Yazıcı, 2007: 139) and research projects; such as PACTE (Process in the Acquisition of Translation Competence and Evaluation) conducted at the Universitat Autònoma de Barcelona (PACTE, 2003: 60) and TransComp at UniversitätGraz (Göpferich, 2009: 21). They aim to study and improve the concept of translation competence and program designs based on competences. In the translation sector, there are two research projects that stand out as previously mentioned herein: The EMT (European Master's in Translation) project is funded by the European Commission (EMT, 2009: 3) and the European Quality Standard for Translation Services: EN-15038 Project (CEN, 2006: 6-7) is a project in the European Union. These types of projects aim to ensure quality translation services in order to meet the needs of the translation sector in a multilingual/cultural environment in the European Union.

### **Translation Service Provision**

Translation as a service-based business. *"Translation competence is defined as the underlying system of knowledge and skills required to be able to translate."* (PACTE, 2000: 100; PACTE, 2003: 58; PACTE, 2011: 33). As a term, often studied as a multidimensional concept in the literature, it may not cover the necessary skills if considered from an organizational perspective. Although the concept of translation competence consists of knowledge and skills required for translation, the description of the translator's profession in the field of translation goes beyond the formal process of translation from an organizational point of view. Oktay Eser's research (2015) focuses on the need to change the translation competence model to a translator competence model. The need was observed through a translation competency scale conducted in Turkish state universities, which led to the proposed translator competency model. A translator competence model from an educational perspective was proposed, thus paving the way for a more effective training of translators needed to meet expectations in the translation profession field.

### **Entrepreneurial Competencies**

The entrepreneurial dimension of the translator's profession is studied in this working paper with the aim of enriching and re-formulating the translator's competence model through the integration of the business skills of professional translators. Studies have presented research results of the nature of the entrepreneurial potential of students in translation specialization. These results are presented in comparison with the entrepreneurial potential of students of different programs. However, no research has been conducted on the business profile of the self-employed language professionals. The question of entrepreneurship has become a frequently discussed topic during conversations about the path that academic education should take. There is a need to activate a multi-level network of cooperation between academic circles and the labor market, as well as the need to develop entrepreneurial potential among students (Herberger & Hermaszewski 2010; Strojny & Horská 2012; Deszczyński 2007; Borowiec 2008; Piróg 2010). Despite the European strategies that have been adopted to integrate the strengthening of entrepreneurial skills in training, not enough emphasis is placed on its development in the training of translators and interpreters and professional competence in general (Álvarez-Álvarez Álvarez/Arnáiz-Uzquiza 2017; Galán-Mañas 2017; Rodríguez Céspedes 2017; Kuznik 2019). The purpose of this working research is to highlight the factors that affect the entrepreneurial performance of language professionals who are business owners or self-employed [in Greece] as well as how these factors affect their business performance; by enriching and expanding the competence models for translators in terms of the entrepreneurship component as an objective. Thus, EMT translation competence model and its components will be the basis of our research model as it is the only translation competence model that integrates translator's profile & job description competences. Regarding the self-employed language professionals' entrepreneurial activity and performance, the Entrepreneurial Orientation (EO) dimensions will be taken into consideration. For the interpersonal factors i.e. networking and strategic competence, can be combined with PACTE competence model's sub-competence.

### **Methodology**

The research methodology will follow the methodological framework suggested by Saunders et al (2012). The working paper will be based on the philosophy of positivism and the adoption of the productive approach. In particular, a combination of primary exploratory and explanatory approach will be adopted, which is useful for

better understanding the nature of a problem or issue that has not been investigated in depth by previous research, such as in the case of business performance in language professions. Since entrepreneurial performance in language professions and the translation industry has not been researched in depth, it was chosen to conduct descriptive exploratory research. The qualitative approach is basically an exploratory method. Exploratory study is conducted to elicit new knowledge in an area of research (Babbie, 2010). However, the quantitative approach will also be used since a more explanatory approach will be followed in the second phase of the research. As a technique for the first part of the research based on the qualitative approach, the interview based on a semi-structured questionnaire will be distributed. As a technique for data collection, quantitative research is chosen using a structured questionnaire as a tool that is considered appropriate and common practice for conducting exploratory studies. In particular, the findings arising from the questionnaire will be processed statistically with the method of linear regression with the help of IBM SPSS 25.0 software. As the nature of this research is exploratory, our part is based on the principles of grounded theory. "Empirically Grounded Theory is an inductive, theory discovery methodology that allows the researcher to develop a theoretical description of the general features of a topic while grounding it in empirical observations or data" (Glaser & Strauss, 1967, Martin & Turner, 1986, p. 141).

### **Conceptual Model**

The model is a synthesis of the EMT and PACTE translation competence models (from which the strategic dimension was derived and added) to which two more pillars are added. One is the competencies of providing translation services and the other is the business skills of the self-employed language professional. In this way we create a framework for interpreting the business activity of self-employed language professionals. In the first pillar concerning the technical skills of self-employed language professionals, we keep the five skill variables (constructs) of the EMT model [linguistic competence, intercultural competence, information mining competence, thematic competence, technological competence] and add the strategic competence variable from the PACTE model, which is a contribution of the present research to introduce into the translation model the strategic competence, which based on the literature review is a key parameter of the success of the translator's profession. In the second pillar of the model that concerns translation service provision skills, the translation provision service variable of the EMT model was adopted and adapted based on the study of Eser, O. (2015). The reason is that the technical skills part of the translation process (translation competencies) must be considered separately from the part of skills a translator has to provide his services effectively. In the third pillar of the model that concerns the business skills of someone who practices business activity in this case in the field of translation which is studied in this doctoral thesis in progress. The approach to entrepreneurial skills was adopted from the theory of Entrepreneurial Orientation (EO) by Lumpkin and Dess (1996). More specifically, entrepreneurial skills mean the following: Autonomy, Innovation, Risk-taking, Proactivity, Competitive aggressiveness. Since it is evident in the literature that business performance is significantly influenced by variables such as networking and mentoring, in the present model mentoring and networking were adopted as independent variables to be examined in our research. A key contribution of our research is the simultaneous adoption of these three pillars of skills related to the profession and activity of translators in order to create a systematic framework for interpreting the performance of self-employed language professionals' business activity.

### **Questionnaire & Expected Results**

The purpose is with a multivariate linear regression to estimate the statistical significance of all factors simultaneously of the 3 above pillars on the dependent variable which is the performance of business activity. The measurement of the above variables of the three pillars will be achieved by adopting or adapting measurement scales based on an extensive literature review. Demographic items will be adapted based on previous research of Esfandiari, M. R., Shokrpour, N., & Rahimi, F. (2019). An evaluation of the EMT: Compatibility with the professional translator's needs. *Cogent Arts & Humanities*, 6(1), 1601055. The questionnaire consists of two sections, the first section with demographic questions; demographic items will be adapted based on previous research of Esfandiari, M. R., Shokrpour, N., & Rahimi, F. (2019). An evaluation of the EMT: Compatibility with the professional translator's needs. *Cogent Arts & Humanities*, 6(1), 1601055. Nationality, native language/s, age, gender, language pair/s and directionality, field of study, level of education, years of experience. The Second section consists of 61 items covering language, intercultural, information mining, thematic, technological, strategic competence, translation service provision competence, entrepreneurial competences- innovativeness, risk-Taking, proactiveness, competitive aggressiveness, autonomy, and the variables of networking and mentoring.

## Conclusions

The purpose of this working research is to highlight the factors that affect the entrepreneurial performance of language professionals who are business owners or self-employed as well as how these factors affect their business performance; by enriching and expanding the competence models for translators in terms of the entrepreneurship component as an objective. In this way this working paper could have a positive practical impact on the target audience, e.g. translators, and self-employed language professionals. At the same time there will be a contribution to the international literature through the production of original content. Furthermore, there will be an integration of entrepreneurship education in university curricula. This objective will now be achieved through triangulation and a combination of quantitative and qualitative research, which will be addressed to language professionals who exert entrepreneurial activity in Greece.

**Keywords:** *entrepreneurial competencies, translation competence models, business performance, networking, mentoring*

## References

- Álvarez-Álvarez, Susana/Arnáiz-Uzquiza, Vanesa 2017: Translation and Interpreting Graduates under Construction: Do Spanish Translation and Interpreting Studies Curricula Answer the Challenges of Employability? In *The Interpreter and Translator Trainer* 11 (2-3), 139-159.
- Albir, A. H. (2010). Competence, in *Handbook of Translation Studies* ed. by Yves Gambier et. al., Amsterdam/Philadelphia: John Benjamins Publishing Company, 2010
- Babbie R. Earl (2010): "Practice of Social Research", Wadsworth Publishing. Behram J. Hansotia, Paul Wang (1997) "Analytical challenges in customer acquisition" Vol.11, No. 2, pp. 7-19
- Bacigalupo, Margherita/Kampylis, Panagiotis/Punie, Yves/Van den Brande, Godelieve 2016: *EntreComp: The Entrepreneurship Competence Framework* [online].  
<https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfn27939enn.pdf> (accessed 9 February 2020).
- Baker, M. and Maier, C. (2011). Ethics in Interpreter & Translator Training: Critical Perspectives. in *The Interpreter and Translator Trainer* 5(1), 1-14
- Begley, Thomas M., David P. Boyd (1987) "Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses." [In:] *Journal of Business Venturing* 2 (1); 79–93.
- Bell, R. T. (1991). *Translation and Translating: Theory and Practice*. London and New York: Longman
- Buysschaert, J., Fernández-Parra, M., Kerremans, K., Koponen, M., & Van Egdom, G.-W. (2018). Embracing digital disruption in translator training : technology immersion in simulated translation bureaus. *TRADUMATICA-TRADUCCIO I TECNOLOGIES DE LA INFORMACIO I LA COMUNICACIO*, (16), 125–133.
- Buysschaert, Joost/Fernandez-Parra, Maria/Kerremans, Koen/Koponen, Maarit/van Egdom, Gys-Walt 2018: Embracing Digital Disruption in Translator Training: Technology Immersion in Simulated Translation Bureaus. In *Revista Tradumàtica* 16, 125-133.
- CEN (2006). EN-15038 Translation Services –Service Requirements. Brussels
- DeSeCo (2001). Definition and Selection of Competencies: Theoretical and Conceptual Foundations, Background paper, (çevirimiçi, <http://www.oecd.org/education/highereducationandadultlearning/41529556.pdf>).
- EMT expert group (2009). Competences for Professional Translator, Experts in Multilingual and Multimedia Communication. Brussels. (Access <http://ec.europa.eu/emt>, 13 February 2012)
- Eser, O. (2013). *Çeviri Eğitiminde Edinç Kavramının Değerlendirilmesi*, PhD, Istanbul University.
- European Commission 2008: Internal Market, Industry, Entrepreneurship and SMEs. Entrepreneurship in higher education, especially within non-business studies [online]
- European Commission 2013: Entrepreneurship education needs to be boosted. Memo 13/77 [online].  
[https://ec.europa.eu/commission/presscorner/detail/en/MEMO\\_13\\_77](https://ec.europa.eu/commission/presscorner/detail/en/MEMO_13_77) (accessed 15 December 2019).
- European Commission 2020: Entrepreneurship Education. Internal Market, Industry, Entrepreneurship and SMEs [online]. [https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education\\_en](https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education_en) (accessed 9 February 2020).
- European Council 2000: Lisbon European Council 23 and 24 March 2000. Presidency Conclusions [online].  
[https://www.europarl.europa.eu/summits/lis1\\_en.htm](https://www.europarl.europa.eu/summits/lis1_en.htm) (accessed 15 December 2019).
- European Union 2018: Council Recommendation of 22 May 2018 on Key Competences for Lifelong Learning (Text with EEA Relevance.) [online]. In *Official Journal of the European Union* C 189/1, 4.6.2018, 1-13.  
[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C\\_.2018.189.01.0001.01.ENG&toc=OJ%3AC%3A2018%3A189%3ATOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2018.189.01.0001.01.ENG&toc=OJ%3AC%3A2018%3A189%3ATOC) (accessed 9 February 2020).

- Eymen, U. E. (2007). SPSS 15.0 Veri Analiz Yöntemleri, İstatistik Merkezi Yayın No: 1, 2007, Retrieved from <http://www.istatistikmerkezi.com>, 3 November 2012.
- Galán-Mañas, Anabel 2017: Programa para la mejora de la empleabilidad de los egresados en Traducción e Interpretación. Un estudio de caso. In *Conexão Letras* 17, 154-171.
- Galán-Mañas, Anabel 2018: Aprender a emprender en el grado de Traducción e Interpretación. In Tanagua Barceló, María/Velasco, Carmen (eds.), *Evaluación, direccionalidad y orientación profesional en los estudios de Traducción e Interpretación*. Madrid: EDA Libros, 33-55.
- Galán-Mañas, Anabel, Anna Kuznik, and Christian Olalla-Soler. “Entrepreneurship in Translator and Interpreter Training”. *HERMES - Journal of Language and Communication in Business* 600 (July 8, 2020): 7-11. Accessed March 29, 2021. <https://tidsskrift.dk/her/article/view/121307>.
- Gieure, Clara 2016: El traductor e intérprete emprendedor: análisis de la supervivencia de las empresas y los empresarios autónomos. PhD dissertation. Universidad de Alicante.
- Glaser B., & Strauss, A. (1967). *The Discovery of Grounded Theory Strategies for Qualitative Research*. Mill Valley, CA Sociology Press
- Göpferich, S. (2009). Towards a Model of Translation Competence and its Acquisition: The Longitudinal Study of TransComp, Behind the Mind: Methods, Models, and Results in Translation Process Research, ed. by Susanne Göpferich, Arnt Lykke Jakobsen, and Inger M. Mees, Denmark, *Samfundslitteratur*, s.12-39.
- Gouadec, Daniel (2007) *Translation as a Profession*. Amsterdam, Philadelphia: John Benjamins
- Hitt, M. A., Black, Stewart, J., and Porter, L. W. (2009). *Management*. 2nd. Edition, New Jersey: Pearson Education, Inc.
- [https://ec.europa.eu/growth/content/entrepreneurship-higher-education-especially-within-non-business-studies-0\\_nn](https://ec.europa.eu/growth/content/entrepreneurship-higher-education-especially-within-non-business-studies-0_nn)
- Jonnaert, P. et. al. (2006). *Revisiting the Concept of Competence as an Organizing principle for Programs of Study: From Competence to Competent Action*, Geneva: International Bureau of Education, IBE/UNESCO.
- Katz, R. L. (1974). Skills of an Effective Administrator, *Harvard Business Review*, September/ October, pp. 90–102.
- Kilby, P., 1971. *Entrepreneurship and economic development*. Macmillan, New York.
- Kiraly, D. C. (2003). From Instruction to Collaborative Conduction: A Passing Fad or the Promise of a Paradigm Shift in Translator Education. *Rethinking Translation Pedagogy*. ed. by Brian James Baerand Geoffrey S. Coby, Volume XII, Amsterdam and Philadelphia: John Benjamins Publishing Company, 2003, pp. 3-27.
- Kirby, David A. 2004: *Entrepreneurship Education: Can Business Schools Meet the Challenge?* In *Education and Training* 46 (8/9), 510-519.
- Klimkowska Katarzyna (2014) “Entrepreneurial Potential of the Students of Applied Linguistics Programme, Majoring in Translation” [In:] *Academic Journal of Modern Philology* (3); 17-26
- Klimkowski, Konrad 2015: Entrepreneurial training in translator and interpreter education. In *Roczniki Humanistyczne* 63 (11), 67-83.
- Krueger, Norris F., Deborah V. Brazeal (1994) “Entrepreneurial Potential and Potential Entrepreneurs.” [In:] *Entrepreneurship Theory and Practice* 18 (3); 91–104.
- Kuznik, Anna 2010: El contenido de los puestos de trabajo de los traductores. El caso de los traductores internos en las empresas de traducción de Barcelona. PhD dissertation. Universitat Autònoma de Barcelona. [online]. <http://tdx.cat/handle/10803/5279> (accessed 9 February 2020).
- Kuznik, Anna 2019: Entre la traduction intralinguale et intersémiotique. L’innovation dans les services de traduction vue par les responsables des entreprises de traduction françaises. In *Meta* 64 (1), 194–214.
- Lackeus, Martin 2015: *Entrepreneurship in Education. What, Why, When, How* [online]. [https://www.oecd.org/cfe/leed/BGP\\_Entrepreneurship-in-Education.pdf](https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf) (accessed 9 February 2020).
- Low, M.B., MacMillan, I.C., 1988. Entrepreneurship: Past Research and Future Challenges. *Journal of Management* 14, 139–161. <https://doi.org/10.1177/014920638801400202>
- Man, T.W.Y., Lau, T., Chan, K.F., 2002. The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing* 17, 123–142. [https://doi.org/10.1016/S0883-9026\(00\)00058-6](https://doi.org/10.1016/S0883-9026(00)00058-6)
- Martin P.Y. and Turner, B.A.(1986). *Grounded Theory and Organizational Research*, *The Journal of Applied Behavioral Science* 22(2): 141–157
- Metcalfe, Robert 2013: *Can Entrepreneurship Be Taught?* In *Texas Education Review* 1 (1), 119-131.
- Meyer, N., & de Jongh, J. (2018). The Importance of Entrepreneurship as a Contributing Factor to Economic Growth and Development: The Case of Selected European Countries. *Journal of Economics and Behavioral Studies*, 10(4(J)), 287-299. [https://doi.org/10.22610/jeb.v10i4\(J\).2428](https://doi.org/10.22610/jeb.v10i4(J).2428)
- Mirze, S. K. (2010). *İşletme*. İstanbul: Literatür

- Neubert, A. (2000). Competence in Language, in Languages, and in Translation. *Developing Translation Competence*. Ed. by Schäffner, Christina and Adab Beverly, Amsterdam and Philadelphia, John Benjamins, 2000, pp:3-18.
- Olalla-Soler, Christian 2019: Bridging the Gap between Translation and Interpreting Students and Freelance Professionals. *The Mentoring Programme of the Professional Association of Translators and Interpreters of Catalonia*. In *The Interpreter and Translator Trainer* 13 (1), 64-85.
- PACTE Group (2000). *Acquiring Translation Competence: Hypotheses and Methodological Problems in a Research Project*. *Investigating Translation*. ed. by A. Beeby, D. Ensinger, M. Presas, Amsterdam, John Benjamins, pp.99-106.
- PACTE Group (2003). *Building a Translation Competence Model*. *Triangulating Translation: Perspectives in Process Oriented Research*. ed. by E.Alves, Amsterdam, John Benjamins, s.43-66.
- PACTE Group (2005). *Investigating Translation Competence: Conceptual and Methodological Issues*. *Meta*, 50 (2), 609-619.
- PACTE Group (2011). *Results of the Validation of the PACTE Translation Competence Model: Translation Project and Dynamic Translation Index*. *Cognitive Explorations of Translation*, Ed. by Sharon O'Brien, London and New York, Continuum International Publishing Group, s.30-53.
- QAA 2012. *Entreprise and entrepreneurship education: Guidance for UK higher education providers*. Gloucester: The Quality Assurance Agency for Higher Education. [online]. [https://www.qaa.ac.uk/docs/qaas/enhancement-and-development/enterprise-and-entrepreneurship-education-2018.pdf?sfvrsn=15f1f981\\_8](https://www.qaa.ac.uk/docs/qaas/enhancement-and-development/enterprise-and-entrepreneurship-education-2018.pdf?sfvrsn=15f1f981_8) (accessed 9 February 2020).
- Rodríguez Céspedes, Begoña 2017: *Addressing Employability and Enterprise Responsibilities in the Translation Curriculum*. In *The Interpreter and Translator Trainer* 11 (2-3), 107-122.
- Rychen, D. S. (2003). *Investing in Competencies - but which competencies and for what? A contribution to the ANCLI/AEA Conference on Assessment Challenges for Democratic Society (Conference paper)*. Lyon: OECD Project DeSeCo,.
- Saunders, M., Lewis, P., Thornhill, A., 2011. *Research methods for business students*, fifth. ed. Pearson Education.
- Schäffner, C. (2000). *Running before Walking? Designing a Translation Programme at Undergraduate Level*. *Developing Translation Competence*. ed. by Schäffner, Christina and Adab Beverly, Amsterdam and Philadelphia, John Benjamins, pp:143-156.
- Schneckenberg, D. and Johannes W. (2006). "Understanding the Concept of Ecompetence for Academic Staff", in *The Challenge of eCompetence in Academic Staff Development*, (Eds.) Mac Labhrainn, I., McDonald Legg, C., Schneckenberg, D., Wildt, J., Galway: CELT, (Access <http://www.ecompetence.info/uploads/media/ch3.pdf>, erişim, 24 Eylül 2012)
- Shaw, E., Carter, S., Brierton, J., 2001. *Unequal entrepreneurship: Why female entrepreneurship is an uphill business*. Industrial Society, London.
- Solomon, G.T., Winslow, E.K., 1988. *Toward A Descriptive Profile of The Entrepreneur*. *The Journal of Creative Behavior* 22, 162-171. <https://doi.org/10.1002/j.2162-6057.1988.tb00493.x>
- Stevenson, H.H., Jarillo, J.C., 1990. *A Paradigm of Entrepreneurship: Entrepreneurial Management*. *Strategic Management Journal* 11, 17-27. <https://doi.org/10.2307/2486667>
- Weinert, F. E. (1999). *Concept of Competence*, Munich, Germany: Max Plank Institute for Psychological research
- Yazıcı, M. (2007). *Yazılı Çeviri Edinci*. İstanbul: MULTILINGUAL

## **Cultivating the next generation of African business leaders through language**

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Research conducted by the United States Bureau of Labor Statistics has shown that approximately 20 % of new businesses fail within the first two years of opening, 45% during the first 5 years, and 65% within the first 10 years (BLS, 2022).

These statistics may be discouraging to some, but in a country such as Ghana where only 10% of students find jobs a year after graduation, and it may take as long as 10 years for some graduates to be employed (ISSER, 2020), these daunting figures represent more hope than the alternative.

These scant employment opportunities and corruption among other factors have made entrepreneurship a more promising form of employment in Ghana and other African countries than seeking employment in established organizations. Many university graduates find themselves jobless after completing school because they do not have the network necessary to acquire a position in the workforce. Unfortunately the adage, “it’s about who you know, not what you know” is the norm more than the exception in many developing countries.

Data published by the Institute of Statistics, Social and Economic Research of the University of Ghana, Legon, revealed lack of employable skills, unavailability of funding for entrepreneurship and a low capacity of organizations to absorb the huge number of graduate students as sources of this depressed rate of employment (ISSER,2017). This paper addresses an issue related to the lack of employable skills; the decreasing number of Ghanaians speaking the local languages and thus losing a competitive advantage they once had over foreigners seeking employment in the country.

We argue that language is vital to how individuals connect with others. This is more so in countries where multiple languages are spoken. The ability to communicate with someone in his or her native tongue creates a connection, which leads to relationship building. Relationships induce trust, which in turn leads to increased exchanges and business.

Thus, natives of a country who are unable to communicate in the local language, lose an essential opportunity to create bonds with other locals. They consciously or unconsciously separate themselves from others, making them outsiders in their own countries of origin.

In embracing the foreign official language as their sole language of communication – they lose a significant competitive advantage that they can have over foreigners – their ability to communicate with foreign employers as well as the locals in their country.

These self-imposed monolinguals have failed to recognize multilingualism or even bilingualism as a marketable skill. In doing so they have disposed of one of the major traits that make hiring local managers more astute than bringing in expatriates.

We adopt a sociological approach, using Ghana as the country of reference. We begin with a review of past literature on how entrepreneurs develop, then examine the situation in developing countries. We then review the literature on the impact of multilingualism on personal and professional development. We proceed to illustrate that multilingualism can play a major role in cultivating the next generation of African business leaders.

*Keywords: Entrepreneurship, Marketable skills, multilingualism, Africa and Ghana*

# **Fashion Marketing**



# **THE Contribution of Sustainable Fashion co-Creation Process to Hedonic and Eudemonic Well-Being**

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**Keywords:** Co-creation, Hedonic Well-Being, Eudemonic Well-Being, Fashion Sector

## **Introduction**

The fashion industry plays a significant role in shaping our society, but it is also one of the most resource-intensive and environmentally damaging sectors (Clube and Tennant, 2020). In recent years, there has been a growing emphasis on sustainability in the fashion industry, with a focus on reducing waste, minimizing environmental impact, and promoting ethical practices. Alongside this, the concept of co-creation has gained recognition as a powerful approach to engage consumers in the design and production process.

Co-creation involves active collaboration and participation between brands and consumers, allowing individuals to contribute their ideas, preferences, and values to shape the products and services they consume. This collaborative approach has the potential to not only enhance the sustainability of the fashion industry but also positively impact the well-being of both consumers and society at large.

The co-creation process can facilitate interactivity and connectedness, allowing consumers to have a sense of ownership and empowerment over their choices. By involving consumers in sustainable actions, initiatives, and campaigns, the co-creation process promotes a sense of purpose, engagement, and social connectedness, which are essential components of well-being. This synergy between sustainable co-creation, well-being, and the fashion sector holds great promise for fostering a more sustainable and fulfilling relationship between consumers and fashion, where both the environment and individuals can thrive.

## **Sustainable Co-creation in fashion and the relationship with Well-being**

The co-creation is considered as a process of interaction and influencing among different parties (Sarassuo, 2022) and can have a positive impact on both hedonic and eudemonic well-being through various channels. Being part of a group and engaging in communication with others can shift people's focus away from themselves and reduce self-centeredness. This aspect holds significant importance in pro-environmental behavior, which prioritizes achieving social benefits rather than personal ones (Thiermann & Shiate, 2021). Although co-creation events are typically organized to benefit companies or society (Chou and Yuan, 2015), these actions also hold value for customers by enhancing their individual well-being and fostering a higher level of hedonism and eudaimonia feelings (Sharma, 2017). Co-creating sustainable actions through the joint engagement of fashion brands and consumers in activities, initiatives, and campaigns profoundly impacts consumers' hedonic well-being (HWB) and eudemonic well-being (EWB).

### *Hedonic Well-being*

Hedonic well-being, characterized by pleasure, happiness, and positive emotions, can be enhanced when individuals engage in co-creation in two separate ways. The first one is through enjoyment and flow: Co-creation involves active participation, creativity, and collaboration, allowing individuals to engage in enjoyable and meaningful activities such as contributing ideas, problem-solving, or designing new products/services. Sweeney et al. (2015) suggested that when customers invest more effort in co-creating value through engaging activities and experiences, it enhances their state of well-being. This can lead to a sense of pleasure and enjoyment. Moreover, experiencing a state of flow, where individuals are fully immersed and focused on the co-

creation task, can generate positive emotions and a feeling of fulfillment. Actively participating in co-creation by utilizing acquired information and skills has been found to improve well-being (Guo et al., 2013). Secondly, through social connections: Co-creation often entails interaction and mental connection with others, leading to the development of relationships and social connections. Spiritual and emotional features can be viewed as endogenous mental stimuli that can drive consumers to involvement (Zhao et al, 2021) and dissimilar levels of spiritual and emotional involvement drive alternative types of engagement (Swani et al., 2020). This can contribute to positive emotions, a sense of belonging, and increased social support. These social aspects of co-creation foster hedonic well-being by providing opportunities for social engagement and positive interpersonal experiences.

Hedonic values that arise from fashion purchases, encompass internal aspects that aim to fulfill needs related to an individual's lifestyle, including pleasure, happiness, seeking experiences, fun, enthusiasm, and social interaction throughout the purchasing process, as noted by Mamuaya et al. (2018). Additionally, certain psychological and social factors, such as optimistic feelings, a sense of ultimate control, and the ability to influence others, can significantly influence the behavior of young consumers in the desired direction, and recent research indicates a positive association between hedonic values and impulsive buying behavior (Evangelin et al., 2021). When purchasing fashion items, feelings of pleasure and enjoyment, the pleasure of mind, emotional gratification, personal fulfillment, socialization, expression of social status, and generation of positive mood are some of the hedonic feelings that arise (Sholeh, 2017; Mamuaya et al, 2018) and lead consumers to fast fashion buying behavior.

#### Eudemonic Well-being

Similarly, co-creation supports eudemonic well-being, which relates to a sense of purpose, personal growth, and fulfillment. Co-creation empowers individuals to actively participate and contribute their unique skills, knowledge, and perspectives. This sense of autonomy and mastery fosters personal growth and a feeling of competence, which are essential elements of eudemonic well-being. By engaging in sustainable initiatives, individuals experience a sense of control over their environment (Plaud and Guillemot, 2015), as they actively shape and contribute to positive change. When individuals experience ownership and competence in their co-creation efforts, it can lead to increased self-esteem, self-efficacy, and personal fulfillment. Also, co-creation often involves the creation of something meaningful and contributing to a larger purpose. Engaging in collaborative activities aligned with personal values and positively impacting the well-being of others or the community provides individuals with a sense of meaning and fulfillment. Perceiving co-creation efforts as purposeful and impactful can contribute to eudemonic well-being by connecting individuals to something greater than themselves. This perception of empowerment fosters feelings of self-worth, competence, and personal growth (Bandura, 1977).

From the eudemonic side of view, the co-creation of sustainable activities in the fashion sector, allows consumers to connect with a larger cause, such as environmental sustainability, promoting a sense of social responsibility and contributing to the well-being of the planet and future generations. By involving consumers in the co-creation process, brands empower individuals to actively contribute to sustainability efforts, fostering a sense of purpose, meaning, and accomplishment, enhancing that way their eudemonia levels. Companies can encourage sustainable engagement by connecting clients with volunteer actions or donations and enhancing interactions, co-creation, and product creativity (Chen et al, 2016).

Co-creation activities, provided by fashion brands, open opportunities for consumers to learn new skills, acquire knowledge about sustainable practices, and develop a deeper understanding of their role in creating a more sustainable world. These aspects of eudemonic well-being contribute to individuals' self-actualization, self-realization, and fulfillment of their potential. It allows them to feel that their skills and capabilities are valuable, thereby positively influencing their eudemonic well-being. As customers share knowledge and actively participate in joint co-creation goals, it strengthens the individual and leads to enhanced eudemonic well-being (Sharma, 2017). Eudemonic well-being is more connected to social structures and sustainability compared to hedonic well-being (Lima and Mariano, 2022). This is reinforced by the similarities between eudemonic well-being and Sustainable Development Goals, which share a focus on individual empowerment and global concerns (Lamb and Steinberger, 2017).

In summary, the co-creation process promotes both hedonic and eudemonic well-being by facilitating positive emotions, social connections, enjoyment, autonomy, mastery, meaning, and contribution. Actively participating in co-creation activities enables individuals to experience pleasure, happiness, personal growth, and fulfillment, ultimately enhancing their overall well-being.

Reviewing the literature confirms that research on eudemonic well-being still has significant gaps, particularly in quantitative empirical studies, unlike hedonic well-being (Lima and Mariano, 2022). This may be attributed to the greater difficulty in measuring eudemonic well-being compared to hedonic well-being (Lima and Mariano, 2022).

#### **Research Avenues**

It is evident that co-creating sustainable actions could strengthen the bond between brands and consumers. Collaborative efforts, by making use of technology and Earned Media, can foster a sense of belonging, trust, and shared values, which positively impact consumers' well-being. When individuals feel that their opinions and contributions are valued and recognized by brands, it enhances their sense of self-worth and strengthens their emotional connection to the brand. This emotional attachment translates into increased customer satisfaction, loyalty, and overall well-being. By actively involving consumers in sustainable initiatives, brands could enable individuals to contribute to a greater purpose, experience positive emotions, and foster personal growth. This collaborative approach builds stronger relationships between brands and consumers, creating a win-win situation where both sustainability and well-being are prioritized. A great way of engaging consumers, especially Generation Z which is of great power, is by using Earned Media and take advantage of technology and recent trends.

Future research on how earned media can promote sustainable fashion behavior among Generation Z is crucial for several reasons. Firstly, Generation Z is a key demographic that holds significant potential for driving change towards sustainable practices in the fashion industry. Understanding how earned media, such as social media platforms and user-generated content, can effectively influence their behavior is essential for designing targeted interventions and communication strategies. Secondly, earned media has emerged as a powerful tool for shaping consumer perceptions and behaviors. Exploring its impact on sustainable fashion behavior can provide insights into the most effective channels and messaging approaches for engaging and motivating Generation Z towards more sustainable fashion choices. Such research can inform industry practices and contribute to the development of sustainable fashion initiatives that resonate with the values and preferences of this influential consumer group.

### Conclusions

Co-creation plays a significant role in enhancing the overall well-being of individuals and fostering engagement with sustainable fashion. Through the active involvement of customers in the co-creation process, positive experiences and emotions such as happiness, joy, and a sense of control over the environment can be cultivated. This aligns with the hedonistic view of well-being, where individuals seek pleasurable and satisfying experiences. Additionally, co-creation contributes to eudemonic well-being by enabling participants to recognize their capabilities, fostering a sense of competence, and enhancing self-efficacy perceptions. This highlights the importance of co-creation as a means to promote both hedonic and eudemonic aspects of well-being.

In the context of sustainable fashion, co-creation becomes particularly relevant. By involving customers in the co-creation of sustainable fashion products and experiences, brands can tap into their knowledge, preferences, and values. This not only leads to more tailored and meaningful offerings but also creates a sense of ownership and pride among consumers. Engaging in co-creative activities empowers individuals to contribute to a larger cause, such as environmental sustainability, thereby promoting a sense of purpose and connection to something beyond themselves. This shift from self-centeredness to considering social benefits is crucial for fostering pro-environmental behaviors and supporting sustainable practices.

Furthermore, co-creation in sustainable fashion can strengthen the bond between customers and brands. Through collaborative efforts, customers feel valued, heard, and acknowledged, resulting in enhanced customer satisfaction and loyalty. Co-creation also encourages knowledge-sharing and active engagement, which can lead to increased well-being for individuals as they acquire new skills and expertise.

The integration of sustainability and well-being through co-creation is a promising avenue for research and practice. By aligning these concepts, we can gain a more comprehensive understanding of happiness and well-being while simultaneously addressing the environmental and social challenges associated with the fashion industry. Emphasizing the importance of co-creation in the context of sustainable fashion can foster a more sustainable and inclusive industry that prioritizes the well-being of both individuals and the planet.

### References

1. Bandura, A. (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co.
2. Chen, Z. & Berger, J. (2016), "How Content Acquisition Method Affects Word of Mouth", *Journal of Consumer Research*, vol. 43, no. 1, pp. 86-102.
3. Clube, R.K.M. & Tennant, M. (2020), "Exploring garment rental as a sustainable business model in the fashion industry: Does contamination impact the consumption experience?", *Journal of Consumer Behaviour*, vol. 19, no. 4, pp. 359-370.
4. Evangelin, M.R.; Sulthana, A.N.; Vasantha, S. (2021), The Effect of Hedonic Motivation towards Online Impulsive Buying with the Moderating Effect of Age. *Qual. Access Success* 2021, 22, 247–253
5. Guo, L., Arnould, E.J., Gruen, T.W., Tang, C. (2013), Socializing to co-roduce pathways to consumers 'financial well-being, *Journal of Service Research*, 16 (4) (2013), pp. 549-563

6. Lamb, W.F., Steinberger, J.K., (2017), Human well-being and climate change mitigation Wiley *Interdiscip. Rev.: Clim. Change*, 8 (6) (2017), pp. 1-16
7. Lima, P.A.B. & Mariano, E.B. (2022), "Eudaimonia in the relationship between human and nature: A systematic literature review", *Cleaner Production Letters*, vol. 2.
8. Mamuaya, Ch. I., Pandowo, Aditya, (2018) The effect of the situational factor, store atmosphere, and sales promotion on hedonic shopping motivation and its implication on supermarket consumer impulsive buying in Manado city, *JBRMR*, Volume 13 Issue 02, 06 Dec 2018
9. Plaud, C., Guillemot, S. (2015), Service interactions and subjective well-being in later life, *Journal of Services Marketing* 29(4):245-254
10. Sarasvuo, S., Rindell, A. & Kovalchuk, M. (2022), "Toward a conceptual understanding of co-creation in branding", *Journal of Business Research*, vol. 139, pp. 543-563.
11. Sharma, S., Conduit, J. & Rao Hill, S. (2017), "Hedonic and eudaimonic well-being outcomes from co-creation roles: a study of vulnerable customers", *Journal of Services Marketing*, vol. 31, no. 4, pp. 397-411.
12. Sholeh, A., (2017), The Relationship among Hedonistic Lifestyle, Life Satisfaction, and Happiness on College Students, *International Journal of Social Science and Humanity*, Vol. 7, No. 9, September 2017
13. Swani, K. & Labrecque, L.I. (2020), "Like, Comment, or Share? Self-presentation vs. brand relationships as drivers of social media engagement choices", *Marketing Letters*, vol. 31, no. 2, pp. 279-298.
14. Sweeney, J.C., Danaher, T.S. & McColl-Kennedy, J. (2015), "Customer Effort in Value Cocreation Activities: Improving Quality of Life and Behavioral Intentions of Health Care Customers", *Journal of Service Research*, vol. 18, no. 3, pp. 318-335.
15. Thiermann, U.B.; Sheate, W.R. (2021), The way forward in mindfulness and sustainability: A critical review and research agenda. *J. Cogn. Enhanc.* 2021, 5, 118–139.
16. Zhao Y, Zheng Z, Pan C, Zhou L. (2021), Self-Esteem and Academic Engagement Among Adolescents: A Moderated Mediation Model. *Front Psychol.* 2021 Jun 3;12: 690828.

## Global luxury fashion branding: a systematic literature review

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### Abstract

Although luxury fashion brands have been the subject of considerable interest from scholars, business practitioners, and consumers in recent years, the present study is the first endeavor to systematically gather and examine existing studies on this subject. Using the PRISMA framework, this systematic literature review examines a collection of 128 empirical and conceptual articles published up until the beginning of 2023, providing a comprehensive analysis of the topic. Overall, the findings suggest that luxury fashion brands use a plethora of appealing branding strategies to positively affect consumers' attitude and behaviour, and that consumers exhibit a variety of behavioural patterns when purchasing luxury goods. Notably, social media play a key role in the luxury fashion industry, enabling brands to reach a broader audience, yet putting luxury brand experience and the essence of luxuriousness into jeopardy.

**Keywords:** *global luxury fashion branding; branding; global fashion brands; luxury fashion purchase intention; systematic literature review (SLR); research agenda*

### Introduction

Currently, the luxury goods market demonstrates revenues that approach US\$354.80bn, while it is expected to grow annually by 3.38%. Notably, the market's largest segment is the luxury fashion that amounts to US\$111.50bn in 2023 (Statista 2023). Although there are specific strategies applied by marketing managers in order to build the luxurious profile of a brand (i.e., offer high quality, craftsmanship, prestigious image, high aesthetics and so forth, Han et al. 2010), the conceptualization of a brand as luxurious lies mainly on consumers' evaluations (Ko, Costello, and Taylor 2019). In a similar vein, successful branding emerges as the pivotal factor in determining the success of a fashion brand (Choi, 2014). For instance, enhancing brand loyalty, staying in touch with ever-evolving and changing trends, while smoothly incorporating new additions to a luxury brand's strategic planning is of vital importance (Ott, 2018).

Although the global luxury fashion industry may not have been the primary focus of academic researchers initially, it has evidently garnered significant attention from scholars with diverse academic and research backgrounds, indicating extensive preliminary efforts in this field. Nevertheless, there is a consistent lack of explanation of the determinants of consumer intention and behaviour towards the luxury fashion industry (Soh et al., 2017). Applying a systematic literature review and a compilation of research conducted up to 2022, the current paper provides a number of results that best describe the scholarly interest in the luxury fashion branding environment and future directions for research. Around the subject of luxury in the fashion industry and how branding affects each brand's practices three relevant questions are the focus of this review.

RQ1: What are the most used branding strategies in luxury fashion?

RQ2: Do consumers make deliberate purchases when it comes to luxury brands?

RQ3: How have social media changed the context of luxury fashion branding?

### Methodological Approach

Using the PRISMA framework, this systematic literature review seeks to delve into luxury fashion branding. The PRISMA technique uses a four-phase flow diagram and an evidence-based checklist to provide transparency and clarity when reporting systematic literature reviews. The PRISMA method increases the

accuracy of the data analysis, reduces chance effects, and lowers bias (Figure 1). Scopus and Google Scholar databases were first used to discover papers to be included in the systematic review due to their large coverage and multidisciplinary character. Following the steps of the Prisma framework and the adoption of various inclusion and exclusion criteria, 128 papers were selected for review and further analyzed using a range of criteria to gain a deeper understanding of the subject at hand. Once the relevant articles have been identified, they are then read in full and analyzed using both a descriptive and a thematic analysis.

### **Descriptive Analysis**

The year of publication, the publishing journal, the number of citations each paper received, the target nation(s) of each research, and the methodological approach applied in each study were all considered during the analysis. The examination of literature published during the initial 22 years of the 21st century, specifically focusing on the period between 2008 and 2022, has revealed a significant surge in scholarly attention towards the luxury fashion industry. This observation is particularly pertinent to the year of publication. A substantial portion of publications emerged within the past five years, indicating a consistent upward trend. Prior to 2010, there was a notable dearth of published papers on the subject. The Journal of Fashion Marketing and Management emerges as the leading contributor with 23 articles, constituting approximately 18% of the total publications. Additionally, the Journal of Global Fashion Marketing published 20 articles, accounting for around 16% of the overall corpus. Notably, the Journal of Business Research also features prominently with 19 papers, representing nearly 15% of the total publications. Conversely, the Journal of Advertising and Business Horizon exhibits a comparatively lower number of publications, which is a noteworthy observation.

To enhance the comprehensiveness of the literature review, we conducted a citation analysis as of November 2022. This study presents a compilation of the top 15 articles that received the highest number of references. Kim and Ko's (2012) research paper titled "Do Social Media Marketing Activities Enhance Customer Equity?" published in the Journal of Business Research has garnered the highest number of citations, reaching 1000. The remaining articles published in the Journal of Business Research received fewer than 300 citations each.

The extensive literature analysis encompasses 31 countries across five continents. The United States of America, with a total of 28 papers to the review, is the first nation with the greatest interest in the subject. Italy, with a long history in luxury fashion, comes in second place, with 13 papers. The United Kingdom ranks third with a total of 12 articles whereas India and China round out the top five, each with 10 papers that offer a glimpse of Eastern perspective on luxury fashion. We observe a wide range of both Western and Eastern civilizations, in locations 6 through 10, as well as variations in culture and market behaviors among them. It is worth noting that out of the 128 articles included in the literature review, only 11 articles (8.59% of the review) adopted a theoretical approach. In contrast, the majority of the remaining studies (91.41%) were empirical in nature.

### **Thematic Analysis**

The thematic analysis involves a more in-depth review of each article. This type of analysis examines the specific research questions addressed by the articles and emphasizes on whether they provide any insights or answers to these questions. It also looks at the implications of the research for the specific topic under review and any potential implications for the overall review.

Among the reviewed articles, some recurring issues were discussed, besides the topics of our research questions. Nevertheless, those topics are not irrelevant to the research since they are either connected to the questions at hand or are a direct outcome of them. Through this systematic literature review, 6 topics have emerged (Table 1). More specifically, it appears that 20 articles (15.63%) focus on brands' case studies. Nineteen articles (14.84%) are related to the topic of economic climate, while 17 articles (13.28%) examine the topic of Generations. The topic of Counterfeit Products gathers 12 articles (9.38%). Around the topic of Sustainability, 9 articles (7.03%) were identified, while 8 articles (6.25%) examine the topic of co-branding.

### **Answering the Research Questions**

Taking into consideration the recurring themes as well as the extensive literature, we can safely deduce the answer to the previously set research questions.

#### *RQ1: What are some branding strategies used in luxury fashion?*

The present literature review discusses five branding strategies that are commonly applied by luxury fashion brands, namely storytelling, personalization, experiential marketing, city branding, and masstige. Storytelling is a communication approach that luxury firms use to develop relationships with their clients (Larrauffie et al., 2014; Woodside and Fine, 2019). Storytelling is about creating integrated narratives rather than the disclosure of a brand's history (Donze and Wubs, 2019). As Indvik (2012) suggests, it constitutes a symbolic event that fosters a bond between the community and the brand. Consumers can also drive the narrative in different ways (Üçök Hughes et al., 2016), allowing storytelling to evolve into story-giving, where the brand's communities

form on an independent microsite and have dialogues about the brand that occur indirectly through user-generated stories. Personalization represents another branding strategy that luxury brands use to cater to the individualized meanings of consumers (Barker, 2007). The meaning of luxury differs from one consumer to another, while personalized cultural frames of reference play a key role in shaping luxury brands perceptions (Kim et. al, 2016). Importantly, personalization is important in constructing successful luxury brands associated with personal imagery and hedonism (Kim and Kwon, 2017). In the context luxury fashion industry, Hoang, Kousi, and Martinez (2022) suggest that personalization is expressed through instant and responsive online service delivery or through the time dedicated to customers. Experiential marketing is another branding strategy that creates immersive experiences that encourage consumers to interact with luxury brands (Atwal et. al, 2019). As far as it concerns luxury fashion brands, Atwal and Williams (2019) claim that experiential marketing is associated with sensory, emotional, cognitive and relational values, that are generated from customer experiences. Finally, *masstige* is a branding strategy that targets middle-class consumers by offering luxury products at affordable prices (Mrad et al., 2019). Co-branding (Xue and Chawdhary, 2023) and horizontal product line extensions (Lee and Cho, 2023) constitute two of the most popular *masstige* strategies in the luxury fashion industry.

*RQ2: Do consumers make deliberate purchases when it comes to luxury brands?*

The intentions of luxury brand consumers are affected by both intrinsic (i.e., high quality, self-directed pleasure, and hedonism) and extrinsic (status, snobbery and conspicuousness) qualities (Shao, Grace, and Ross 2019). As for the luxury fashion industry, among others, brand consciousness, perceived quality, social influences, vanity qualities, and the need for uniqueness all influence purchase behavior of luxury fashion products, particularly for Gen Y consumers (McColl and Moore, 2011). In the same vein, Angshuman and Sanjeev (2013) underline that the motivation of luxury brand consumption is driven by conspicuous, hedonic consumption, and self-expression motives. It is noteworthy that symbolic luxury value has previously been attributed to prominent value, social value, unique value, and hedonic value or to collective (social) and subjective (individual) worth. The antecedents of luxury purchase intention such as a craving for uniqueness, self-identity, vanity, and materialism have been extensively studied before, while several studies have focused on socially orientated antecedents of status and ostentatious consumption (Sheetal, Mohammed Naved, and Sita 2015). Status consumption and materialism are important factors to consider in understanding the purchase behavior of luxury fashion products (Eastman and Eastman, 2015), too. Materialism is described as “the significance a consumer has to worldly possessions” (Wiedmann et al., 2009). Consumers that have a high materialistic tendency seek to purchase luxury products to demonstrate their strength, independence, and success (Park et al., 2008). Seeking uniqueness is also an important factor in the purchase behavior of luxury fashion products (Shukla, 2012). Consumers that want uniqueness to seek out uncommon, distinct products that improve their image in society (Aliyev and Wagner, 2017). Importantly, according to Chu et al. (2013), there is a positive association between brand awareness and consumer purchase intentions for luxury items. Along a similar vein, consumers that are brand conscious are more likely to acquire premium products (Sharda and Bhat, 2019). Theng et al. (2013) suggest that luxury brands should emphasize on enhancing customers’ emotional attachment which in turn positively affect brand loyalty.

*RQ3: How has social media changed the context of luxury fashion branding?*

Social media plays a crucial role in luxury brand communication by providing a platform for luxury firms to connect with their consumers and promote their products (Thakur and Kaur, 2016). Luxury brand communication online includes both tangible and intangible components, such as product integrity, brand signature, premium pricing, exclusivity, experience, and stakeholder commitment (Yu et al., 2019). However, there appears to be conflicting evidence as to whether luxury firms should engage in highly interactive, community-building social media tactics or strive to maintain a psychological distance from consumers to retain an impression of exclusivity (Park et al., 2020).

The nature of luxury offerings is a crucial determinant of the relationships established between customers and luxury firms on social media. While Millennials are broadly receptive to luxury businesses' remote approach to social media, such as producing material without seeking engagement with users, luxury brands' social media approach should aim to convey an aspirational ideal including unique behind-the-scenes access and information via their social media presence (Athwal et al., 2019). Influencers have become a recent trend in strategic social media communications for luxury brands (Leban et al., 2021). They use a range of narrative methods in their social media communications, including advising, inspiring, educating, applauding, entertaining, and assembling (Zhou et al., 2020). User-influencer contact boosts luxury brand perception and buy intent once the brand is established (Park et al., 2020). However, luxury brands must strike a balance between cultivating long-lasting relationships with their online, mass audiences and maintaining control over the communication of their message (Mazzoli et al., 2019).

## Conclusion

Applying the PRISMA framework, this systematic literature review was conducted to examine the topic of luxury fashion branding. The findings from the descriptive analysis effectively capture the level of scholarly interest in the field. Notably, there has been a substantial and consistent growth in research activity over the span of ten years, with the number of articles increasing significantly. While academics from Western countries exhibited the highest level of research involvement, emerging fashion markets such as China and India also displayed significant interest. The review focused on three specific research questions addressing branding strategies in luxury fashion, consumers behavior with respect to luxury brand purchases and the effect of social media on luxury fashion branding.

The findings of this extensive literature analysis suggest that consumers exhibit diverse intentions and behavioral patterns when making purchases of luxury products. Additionally, luxury fashion companies employ various branding strategies to attract customers. The advent of social media has had a profound impact on the luxury fashion industry, enabling brands to reach a broader audience. However, it has also led to a potential dilution of the luxury brand experience. The findings of this review offer valuable insights for practitioners, providing them with evidence that can inform their branding strategies in the luxury fashion industry. Furthermore, it underscores the importance of conducting further in-depth academic research on luxury fashion branding, considering the dynamic and evolving nature of the sector.

## References

### References

- Aliyev, F., & Wagner, R. (5 2018). Cultural Influence on Luxury Value Perceptions: Collectivist vs. Individualist Luxury Perceptions. *Journal of International Consumer Marketing*, 30, 158–172. doi:10.1080/08961530.2017.1381872
- Athwal, N., Wells, V. K., Carrigan, M., & Henninger, C. E. (10 2019). Sustainable Luxury Marketing: A Synthesis and Research Agenda. *International Journal of Management Reviews*, 21, 405–426. doi:10.1111/ijmr.12195
- Chu, S.-C., Kamal, S., & Kim, Y. (6 2013). Understanding consumers' responses toward social media advertising and purchase intention toward luxury products. *Journal of Global Fashion Marketing*, 4, 158–174. doi:10.1080/20932685.2013.790709
- Donzé, P. Y., & Wubs, B. (2019). Storytelling and the making of a global luxury fashion brand: Christian Dior. *International Journal of Fashion Studies*, 6(1), 83-102.
- Eastman, J. K., Iyer, R., Shepherd, C. D., Heugel, A., & Faulk, D. (3 2018). Do they shop to stand out or fit in? The luxury fashion purchase intentions of young adults. *Psychology & Marketing*, 35, 220–236. doi:10.1002/mar.21082
- Han, Y. J., Nunes, J. C., & Drèze, X. (7 2010). Signaling Status with Luxury Goods: The Role of Brand Prominence. *Journal of Marketing*, 74, 15–30. doi:10.1509/jmkg.74.4.15
- Kim, C., Ko, E., & Koh, J. (1 2016). Consumer attitudes and purchase intentions toward fashion counterfeits: Moderating the effects of types of counterfeit goods and consumer characteristics. *Journal of Global Fashion Marketing*, 7, 15–29. doi:10.1080/20932685.2015.1105109
- Kim, H. Y., & Kwon, Y. J. (5 2017). Blurring production-consumption boundaries: Making my own luxury bag. *Journal of Business Research*, 74, 120–125. doi:10.1016/j.jbusres.2016.10.022
- Ko, E., Costello, J. P., & Taylor, C. R. (2019). What is a luxury brand? A new definition and review of the literature. *Journal of Business Research*, 99, 405-413.
- Mazzoli, V., Grazzini, L., Donvito, R., & Aiello, G. (1 2019). Luxury and Twitter: an issue of the right words. *Qualitative Market Research: An International Journal*, 22, 33–49. doi:10.1108/QMR-01-2017-0051
- McCull, J., & Moore, C. (2011). An exploration of fashion retailer own brand strategies. *Journal of Fashion Marketing and Management*, 15.
- Mrad, M., Farah, M. F., & Haddad, S. (9 2019). From Karl Lagerfeld to Erdem: a series of collaborations between designer luxury brands and fast-fashion brands. *Journal of Brand Management*, 26, 567–582. doi:10.1057/s41262-018-00146-2
- Narang, R. (2011). Examining the role of various psychographic characteristics in in apparel store selection: a study on indian youth. *Young Consumers*, 12.
- Park, H., Rabolt, N. J., & Jeon, K. S. (2008). Purchasing global luxury brands among young Korean consumers. *Journal of Fashion Marketing and Management: An International Journal*, 12, 244–259. doi:10.1108/1361202081087491
- Park, M., Im, H., & Kim, H.-Y. (9 2020). “You are too friendly!” The negative effects of social media marketing on value perceptions of luxury fashion brands. *Journal of Business Research*, 117, 529–542. doi:10.1016/j.jbusres.2018.07.026



Soh, C. Q. Y., Rezaei, S., & Gu, M.-L. (6 2017). A structural model of the antecedents and consequences of Generation Y luxury fashion goods purchase decisions. *Young Consumers*, 18, 180–204. doi:10.1108/YC-12-2016-00654

Statista. (2023). Luxury goods - Worldwide. <https://www.statista.com/outlook/cmo/luxury-goods/worldwide>. Accessed 09 April 2023.

Thakur, A., & Kaur, R. (2016). "An Empirical Examination of Relationship Between Emotional Attachment and Attitudinal Brand Loyalty Towards Luxury Fashion Brands ". *DLSU Business & Economics Review*, 26, 70–80.

So, J. T., Parsons, A. G., & Yap, S. (9 2013). Corporate branding, emotional attachment and brand loyalty: the case of luxury fashion branding. *Journal of Fashion Marketing and Management: An International Journal*, Vol. 17, pp. 403–423. doi:10.1108/JFMM-03-2013-0032

Tungate, M. (2005). *Fashion Brands: Branding Style from Armani to Zara*. Kogan Page

Tynan, C., McKechnie, S., & Chhuon, C. (11 2010). Co-creating value for luxury brands. *Journal of Business Research*, 63, 1156–1163. doi:10.1016/j.jbusres.2009.10.012

Wiedmann, K.-P., Hennigs, N., & Siebels, A. (7 2009). Value-based segmentation of luxury consumption behavior. *Psychology and Marketing*, 26, 625–651. doi:10.1002/mar.20292

Woodside, A. G., & Fine, M. B. (2019). Sustainable fashion themes in luxury brand storytelling: The sustainability fashion research grid. *Journal of Global Fashion Marketing*, 10(2), 111-128.

Yu, H., Rahman, O., & Yan, Y. (1 2019). Branding strategies in transitional economy: The case of Aimer. *Journal of Global Fashion Marketing*, 10, 93–109. doi:10.1080/20932685.2018.1513811

## Appendix

Figure 1: Flow Diagram for the selection of the systematic literature review based on the PRISMA Framework  
**PRISMA 2020 flow diagram for updated systematic reviews which included searches of databases and registers only**

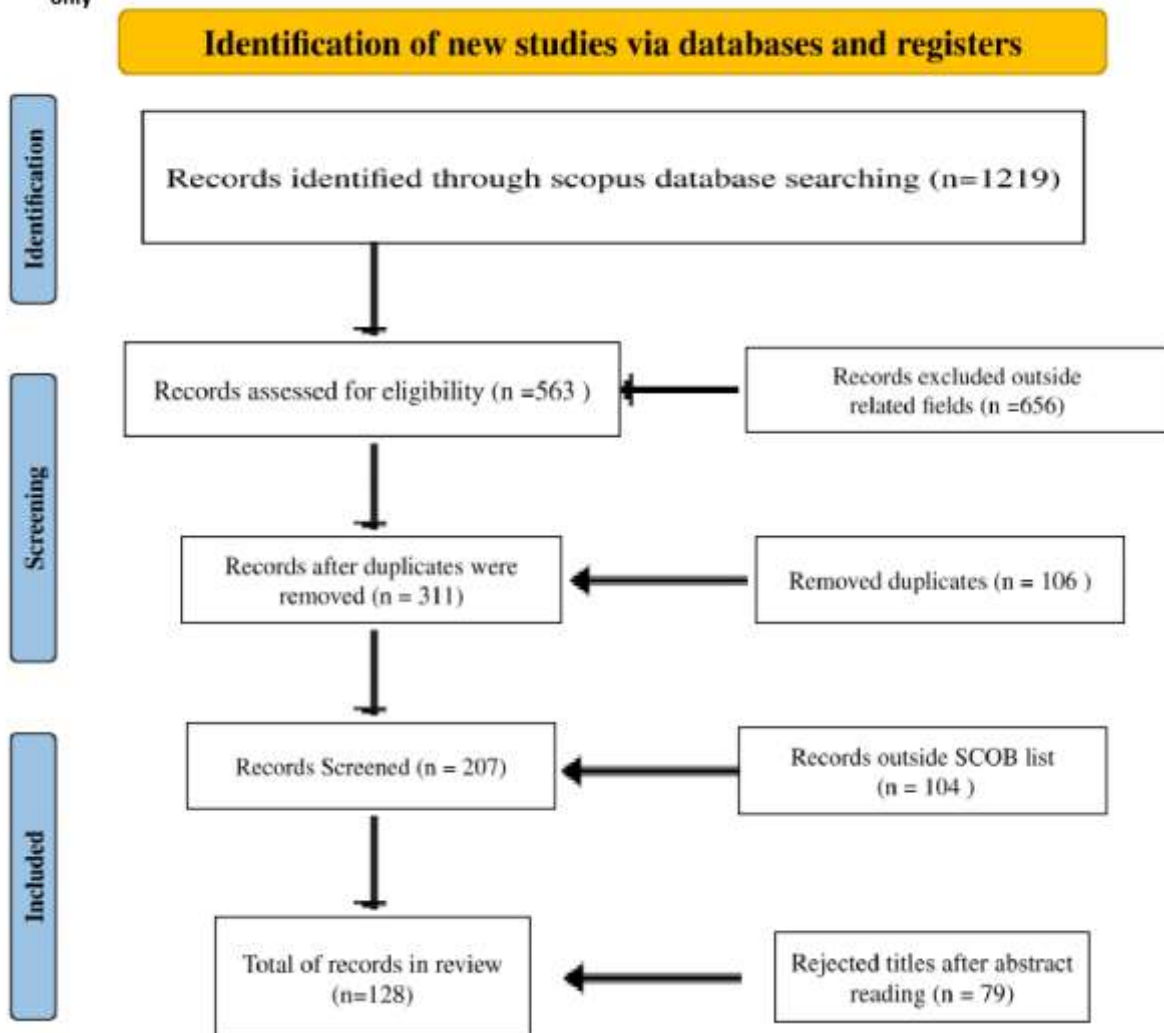


Table 1: Thematic Analysis mostly researched topics

<b>Topic</b>	<b>No. Articles</b>	<b>%</b>
Sustainability	9	7,03%
Co-Branding	8	6,25%
Economic Climate	19	14,84%
Counterfeit Products	12	9,38%
Case Studies on Brands	20	15,63%
Generations	17	13,28%

# General

## **Perceived competence of Special Education Teachers in the use of Information Communication Technology (ICT) for teaching students with disabilities.**

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Abstract:+

Information Communication Technology (ICT) has become a crucial component of the teaching and learning process in many contexts. Especially in the area of special education ICT is extensively used to provide students with special needs the opportunity to engage in activities that they would not otherwise have access to. The use of ICT improves the quality of life of people with disabilities and limits the possibility of social exclusion since it increases their participation in the educational process. However, the effective use of ICT in special education depends on the proper technological training of special education teachers in the use of ICT as an educational tool for students with disabilities. The purpose of this study is to investigate the perceived competency of Special Education Teachers regarding the use of Information Communication Technology (ICT) for teaching students with disabilities. A survey was administered to a sample of 100 special education teachers throughout Greece. Findings show that the perceived competence level of special education teachers in the use of ICTs for students with Learning Disabilities is low to moderate, whereas it is inadequate for deaf students and satisfactory for students with emotional-behavioral disorders. Also, women appear to have a greater level of perceived competence, compared to men. Implications, limitations and suggestions for further research are discussed.

**Keywords:** Information and Communication Technolog (ICT), perceived competence, Special Education, disabilities.

### **Introduction**

Information and Communication Technology (ICT) is commonly defined, in school education, as a set of diverse technological tools and components used to communicate, create, disseminate, store and manage information (Ratheeswari, 2018). Many countries have integrated ICT into their education system because it enables the creation of rich, multisensory, interactive environments with almost limitless teaching and learning possibilities (Jung, 2005). ICT has various benefits for both students and teachers (Bouck et. al., 2012; Foutsitzi & Caridakis, 2019; Das, 2019). Its proper utilization facilitates active, flexible, and adapted learning. It also enhances student participation and communication in the classroom, enabling equal participation for all, regardless of ability. However, researchers highlight the lack of training of teaching staff, ineffective management and implementation of technology, and lack of motivation of teachers to adopt ICT (Hernandez, 2017).

The main goal of applying ICT in the context of special education is to address the obstacles and difficulties faced by students with special educational needs in their learning environment (Margalit, 2012). The use of ICT can help special education students to engage in activities that they would not otherwise have access to but it can also create new barriers, excluding them even more from the learning process (Turner-Cmuchal & Aitken, 2016). The level of competence of teachers in using ICT makes a big difference in their effective use in special education.

The purpose of this study is to investigate the perceived competence of Special Education Teachers regarding the use of Information Communication Technology (ICT) for teaching students with disabilities.

### **Theoretical background**

ICTs include PCs, Internet access, transmission technologies, and mobile phones, both hardware (eg computers, digital cameras) and software. ICT has advantages for both students and teachers. Unwin (2005) argues that computers and the Internet can be used to expand teachers' basic skills and subject matter knowledge, provide evidence that can later be used in the classroom, and help teachers become familiar with specific teaching approaches. On the other hand, ICT can accelerate, extend and develop students' skills, motivate them, help them relate the school experience to the real environment outside the school, and improve teaching and learning outcomes (BECTA, 2010). However, as Timotheou and Hennessy (2021) point out, ICT alone is not enough to enhance learning, but the way it is integrated into learning activities plays an important role.

As a result, ICT has become a crucial component of the teaching and learning process in many contexts. Especially in the area of special education, ICT is extensively used to provide students with special needs the opportunity to engage in activities that they would not otherwise have access to. For example, in the case of people with severe visual impairments, appropriate hardware and software is required to access digital information and services (Hardy, 2000). Text should be translated into audio form by specially designed screen readers or made accessible with printed Braille text. People with dyslexia or cognitive impairments may benefit from the use of simpler language or alternative text formats (eg Easy Read), as well as the clear and logical arrangement of a cluttered information structure. Hearing-impaired people, who communicate through sign language, may also find plain language essential, and people with motor dexterity problems may find it easier to navigate with a specially designed-keyboard than with a mouse (Resnick, 2002).

All devices and services that aim to improve or maintain the abilities of a person with a disability are ICTs that assist special education students and so they are described as assistive technologies (Dell et al., 2012). Assistive technology assists students with special educational needs through applications that convert text to speech (e.g. Kurzweil 3000) or speech to text (e.g. Dragon Naturally Speaking), predict words (e.g. WordQ), and organize graphics (eg Inspiration) (Dell et al., 2012). Assistive technology can provide significant assistance to students with disabilities to develop, grow, and continue their academic careers (Watson, Ito, Smith, & Andersen, 2010). In particular, assistive technology helps in two ways, it supports learning, and helps to bypass difficulties. Specifically, assistive ICTs have various benefits for students and for teachers.

Students with special needs can have independent access to education through computers; can complete tasks at their own pace; can access written information in case of vision problems, can overcome learning disabilities and communicate more easily, can gain confidence in school and communities from using voice communication aids, and can be motivated to use the Internet at home for school work and in their free time (Bouck et. al., 2012; Foutsitzi & Caridakis, 2019; Das, 2019). On the other hand, teachers feel less isolated because they can communicate electronically with the wider educational community, exchange experiences and thoughts, exchange views with their peers on professional practice, and their professional development is enhanced (Bouck et. al., 2012; Foutsitzi & Caridakis, 2019; Das, 2019).

One factor that makes a difference in effective ICT use is the proper technological training of special education teachers in the use of ICT as an educational tool for students with disabilities. The proper preparation of special education teachers familiarizes them with the characteristics of assistive technology (Erdem, 2017), allowing them to meet the unique needs of each student, by applying the appropriate technological means and the appropriate teaching practice. As special education is a sensitive and complex issue, requiring the maximum participation of special educators in the active learning process (Holstein, McLaren & Aleven, 2017), training programs must adequately prepare special education teachers and develop their technological skills, to meet the challenges involved in teaching students with disabilities (Saleem, Sajjad & Rauf, 2019). However, training of teachers is not extensive and many times teachers do not believe in their ability to use ICT in special education.

The purpose of this study is to investigate the perceived competence of Special Education Teachers regarding the use of Information Communication Technology (ICT) for teaching students with disabilities.

Specifically, we investigate:

1. What is the level of perceived competence of special education teachers in the use of assistive ICT for teaching students with different disabilities?
2. What is the effect of gender on the level of perceived competence of special education teachers in the use of assistive ICT for teaching students with different disabilities?

## Methodology

### *Instrument -Sample-Procedure*

The study was quantitative in nature based on a survey using a structured questionnaire. The final questionnaire used to collect the research data consists of three parts. Section A sought demographic information of respondents, Section B with 4 items focused on the sample's education, and Section C focused on teachers' ability to use six different dimensions of assistive ICTs for teaching students with the following disabilities/disorders: Learning disabilities (10 questions), Speech disorders (3 questions), Blindness-amblyopia (6 questions), Deafness (6 questions), motor disability (2 questions), and emotional-behavioral disorder (2 questions). The questionnaire consists of 29 questions under six subscales. A five-point Likert - type scale ranging from 1–totally disagree to 5 –totally agree was used. The sample included 100 teachers (33 males and 67 females) in Special Education Schools in Greece.

Questionnaires were distributed and collected electronically, using Google Forms, and their completion by participants was anonymous. More specifically, the questionnaires were forwarded to various groups of teachers through popular platforms such as Facebook and Instagram as well as through the network of the University of the Peloponnese network. A snowball methodology was used.

Data was analyzed with SPSS. Initially, descriptive statistics were used to analyze socio-demographic data, and the perceived competence in using ICT in teaching students with 6 types of disabilities. Also, gender differences for the different subscales were examined using multivariate analyses of variance.

## Results

### *Socio-demographic data*

The age of the sample was mostly between 31 and 40 years old (46%) and between 41 and 50 years old (38%). Regarding the years of experience in special education, the majority of respondents had limited experience up to 1 year (56%), while 27% had 2 to 3 years, whereas only 4% had 4 to 5 years and 13% had more than 5 years. Regarding the education of the sample, the majority (40%) have a master's degree, 34% are university graduates, 4% have a second degree and 2% have a Ph.D. Regarding the seminars that special education teachers have attended, in 48% of all cases they have attended annual seminars of more than 400 hours. Finally, regarding the certified knowledge of special education teachers in the IT field, 83% have ECDL certification, 17% have a B level certification, and 8% have an A level certification.

### *Descriptive statistics on the perceived competence in use of ICT in 6 types of disabilities*

The perceived competence level of the special education teachers who took part in the survey regarding the use of ICT for teaching students with Learning Disabilities, Speech disorders, blindness-amblyopia, and motor disabilities is, on average, low to moderate, whereas it is inadequate for deaf students and satisfactory for students with emotional-behavioral disorders (see Table 1).

In particular, teachers' perceived competence in using assistive ICT is higher for students with Learning Disabilities. Specifically teachers feel more competent in PC use, mobile technology use (tablet, ipad, smartphone) and audio book use. Also, perceived competence is higher for emotional-behavioral disorders and the skills include learning games with educational software and using systems of visual reproduction. In contrast, the lower perceived competence is observed in the use of ICT for teaching deaf students where teachers seem to be better than average only in taking notes with the help of a computer.

### *Gender differences between subscale means*

In general, the results of the multivariate analysis of variance showed that women appear to have a greater level of perceived competence, compared to men, in the use of ICT for teaching students with Learning Difficulties ( $p<.049$ ), Speech Disorders ( $p<.027$ ), Blindness ( $p<.026$ ), Deafness ( $p<.030$ ), and Motor Disabilities ( $p<.001$ ). (see Table 1)

**Table 1:** Perceived competence of special education teachers in the use of ICT in teaching students with 6 types of disabilities

Factors	Males	Females	M (S.D.)	p
	M (S.D.)	M (S.D.)		
Learning disabilities	2.82 (.98)	3.33 (1.29)	3.16 (1.18)	.049
Speech disorders	2.79 (.93)	3.33 (1.01)	3.13 (.98)	.027
Blindness	2.73 (.20)	3.29 (.14)	3.09 (.17)	.026
Deafness	2.39 (1,03)	2.93 (1,18)	2.94 (1.12)	.030
Motor disability	2.30(1.21)	3.27 (1.23)	3.00 (1.22)	.001
Emotional-behavioral disorder	3.45 (.81)	3.46 (.99)	3.46 (.90)	ns

### Discussion - Implications

The purpose of this study is to explore the perceived competence of special education teachers in the use of ICT for teaching students with 6 types of disabilities. Results show that the level of perceived competence of participants is small to moderate for teaching students with all types of disabilities. Teachers do not feel that they are particularly skilled in the use of ICT and deaf students are the worst category.

The moderate level of perceived competence of teachers in the use of ICT within the educational context has also been highlighted by other studies. For example, Tautkevičienė and Bulotaitė (2009), also point out that more than half of teachers surveyed did not use ICT with their students because they did not have appropriate training. Also,

Ribeiro, Moreira, and Almeida (2011) find that the level of ICT use is low due to lack of training. The issue of adequate technology training for special education teachers has also been highlighted by Lawless and Pellegrino (2007) and Chukwuemeka and Samaila (2020), who suggest that professional development is important to ensure teachers' adoption of changes in the school environment in order to cover the growing needs of students with disabilities. Moreover, Nordin et al. (2015) highlight that teachers believe that ICT courses are not offered in special education schools due to insufficient computer equipment and teachers' busy schedules. Finally, gender differences in the use of assistive ICT are not surprising since girls seem to be more ICT literate than boys (Siddiq & Scherer, 2019).

In light of the findings of this study, it is recommended that the government makes assistive ICT applications accessible to both school districts and parents of students with special educational needs. In addition, there is a pressing need for training, refresher courses, and capacity building for teachers in the use of assistive ICT. Teachers should be encouraged and motivated to upgrade their level of competence in using ICT for students with speech disorders, visual impairments, hearing impairments, physical disabilities, and emotional and behavioral disorders. Finally, the training program for special education teachers should include the technical skills required for the design, production, use, and evaluation of assistive ICTs in the context of special education.

### Limitations – further research

The present research is a cross sectional study conducted on a relatively small sample of special education teachers. It would be useful to extend this study with a larger sample and in different countries. Also, it will be useful to investigate the attitudes and constraints of teachers towards the use of ICT in special education.

### References

- Adam, T. & Tatnall, A. (2008). *Using ICT to improve the education of students with learning disabilities*. In IFIP World Computer Congress, TC 3 (pp. 63-70). Springer, Boston, MA.
- Alanazy, M. M., & Alrusaiyes, R. F. (2021). Saudi Pre-Service Special Education Teachers' Knowledge and Perceptions Toward Using Computer Technology. *International Education Studies*, 14(3), 125-137. doi:10.5539/ies.v14n3p125
- BECTA (2010). *Harnessing Technology: Schools Survey 2008*. <http://www.becta.org.uk/research>
- Bouck, E. C., Flanagan, S., Miller, B., & Bassette, L. (2012). Technology in action. *Journal of Special Education Technology*, 27(4), 47-57. <https://doi.org/10.1177/01626434120270040> (accessed on 18 April 2023)
- Cagiltay, K., Cakir, H., Karasu, N., Islim, O. F., & Cicek, F. (2019). Use of educational technology in special education: Perceptions of teachers. *Participatory Educational Research*, 6(2), 189-205. <https://doi.org/10.17275/per.19.21.6.2>

- Chukwuemeka, E. J., & Samaila, D. (2020). Teachers' perception and factors limiting the use of high-tech assistive technology in special education schools in North-West Nigeria. *Contemporary Educational Technology*, 11(1), 99-109. <https://doi.org/10.30935/cet.646841>
- Das, K. (2019). The role and impact of ICT in improving the quality of education: An overview. *International Journal of Innovative Studies in Sociology and Humanities*, 4(6), 97-103. ISSN 2456-4931 <https://ijissh.org/storage/Volume4/Issue6/IJISSH-040611.pdf> (accessed on 19 April 2023)
- Dell, A. G., Newton, D. A., & Petroff, J. G. (2016). *Assistive technology in the classroom: Enhancing the school experiences of students with disabilities*. Upper Saddle River, NJ: Pearson Merrill Prentice Hall
- Erdem, R. (2017). Students with special educational needs and assistive technologies: A literature review. *Turkish Online Journal of Educational Technology-TOJET*, 16(1), 128-146. <https://files.eric.ed.gov/fulltext/EJ1124910.pdf> (accessed on 22 April 2023)
- Flanagan, S., Bouck, E. C., & Richardson, J. (2013). Middle school special education teachers' perceptions and use of assistive technology in literacy instruction. *Assistive Technology*, 25(1), 24-30. <https://doi.org/10.1080/10400435.2012.682697>
- Foutsitzi, S., & Caridakis, G. (2019). *ICT in education: Benefits, challenges and new directions*. In 2019 10th International Conference on Information, Intelligence, Systems and Applications (IISA) (pp. 1-8). IEEE. DOI: 10.1109/IISA.2019.8900666
- Hardy, C. A. (2000). *Information and communications technology for all*. David Fulton Pub.
- Hernandez, R. M. (2017). Impact of ICT on Education: Challenges and Perspectives. *Journal of Educational Psychology-Propositos y Representaciones*, 5(1), 337-347. <http://dx.doi.org/10.20511/pyr2017.v5n1.149>
- Holstein, K., McLaren, B. M., & Aleven, V. (2017). *Intelligent tutors as teachers' aides: exploring teacher needs for real-time analytics in blended classrooms*. In Proceedings of the seventh international learning analytics & knowledge conference (pp. 257-266). DOI: <http://dx.doi.org/10.1145/3027385.3027451>
- Jung, I. (2005). ICT-pedagogy integration in teacher training: Application cases worldwide. *Journal of Educational Technology & Society*, 8(2), 94-101.
- Lawless, K. A., & Pellegrino, J. W. (2007). Professional development in integrating technology into teaching and learning: Knowns, unknowns, and ways to pursue better questions and answers. *Review of Educational Research*, 77(4), 575-614. DOI: 10.3102/0034654307309921
- Margalit, M. (2012). *Effective technology integration for disabled children: The family perspective*. Springer Science & Business Media.
- Mohamed, A. H. H. (2018). Attitudes of special education teachers towards using technology in inclusive classrooms: a mixed-methods study. *Journal of Research in Special Educational Needs*, 18(4), 278-288. <https://doi.org/10.1111/1471-3802.12411>
- Nordin, N., Yunus, M. M., Zaharudin, R., Salehi, H., Yasin, M. H. M. & Embi, M. A. (2015). Identifying the challenges and barriers hearing-impaired learners face with using ICT education courses. *Journal of Theoretical and Applied Information Technology*, 78 (3), 327-35. E-ISSN: 1817-3195 (accessed on 22 April 2023)
- Onivehu, A. O., Ohawuiro, O. E., & Oyeniran, B. J. (2017). Teachers' Attitude and Competence in the Use of Assistive Technologies in Special Needs Schools. *Acta Didactica Napocensia*, 10(4), 21-32. <https://files.eric.ed.gov/fulltext/EJ1164985.pdf> (accessed on 22 April 2023)
- Ratheeswari, K. (2018). Information communication technology in education. *Journal of Applied and Advanced research*, 3(1), 45-47. <https://dx.doi.org/10.21839/jaar.2018.v3S1.169>
- Resnick, M. (2002). *Rethinking Learning in the Digital Age*. In G. Kirkman (Ed.), *The Global Information Technology Report: Readiness for the Networked World* (pp. 32-37). Oxford: Oxford University Press.
- Ribeiro, J. M., Moreira, A., & Almeida, A. M. P. (2009). *Preparing special education frontline professionals for a new teaching experience*. The United States: National Council on Disability. ISSN 1887-1542
- Saleem, S., Sajjad, S., & Rauf, M. B. (2019). Training facilities provided by special education schools to students with visual impairment and teachers to use assistive technology. *Training*, 10(1), 91-100. DOI: 10.7176/JESD
- Siddiq, F., & Scherer, R. (2019). Is there a gender gap? A meta-analysis of the gender differences in students' ICT literacy. *Educational research review*, 27, 205-217. <https://doi.org/10.1016/j.edurev.2019.03.007>
- Tautkevičienė, G., & Bulotaitė, D. (2009). Teachers' attitudes towards the use of information and communication technologies and application of software to educate children with disability in special educational institutions of Kaunas. *Special Education (1)*.
- Timotheou, M. M., & Hennessy, S. (2021). Understanding technology integration into the classroom as a systemic and socially situated initiative. *International Journal on E-Learning*, 20(1), 59-81. ISSN: 15372456 <https://eric.ed.gov/?id=EJ1282417> (accessed on 22 April 2023)
- Turner-Cmucha, M., & Aitken, S. (2016). *ICT as a tool for supporting inclusive learning opportunities. In Implementing inclusive education: Issues in Bridging the Policy-Practice Gap*. Emerald Group Publishing Limited. doi/10.1108/S1479-36362016000008010/full/html



- Unwin, T. (2005). Towards a framework for the use of ICT in teacher training in Africa. *Open Learning: The Journal of Open, Distance and e-Learning*, 20(2), 113-129. <https://doi.org/10.1080/02680510500094124>
- Watson, A. H., Ito, M., Smith, R. O., & Andersen, L. T. (2010). Effect of assistive technology in a public school setting. *The American Journal of Occupational Therapy*, 64(1), 18-29. <https://doi.org/10.5014/ajot.64.1.18>

# The Impact of ISO 17679 Service Requirements on Customer Satisfaction and Behavioral Intentions in Wellness Spas: A Sequential Mediation Analysis

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## ABSTRACT

This research investigates the implementation of Service Requirements based on ISO 17679 in 5-star thermal hotels' wellness spas and its impact on Customer Satisfaction and Behavioral Intentions.

Given the lack of prior research examining the sequential mediation relationship starting with Service Requirements in the context of spa services, this study develops a comprehensive theoretical and empirical model to examine the direct and indirect relationships among Service Requirements, Servicescape, Service Quality, Customer Satisfaction, and Behavioral Intentions. The study aims to bridge this research gap by integrating the operational standards proposed by ISO 17679, which suggest that adhering to ISO 17679 in providing service requirements and supporting processes positively affects the quality of service provided to clients, with previous studies investigating the factors influencing the Customer Satisfaction and the Behavioral Intentions.

A Convenience Sampling technique is used, involving 397 customers who have experienced wellness spa services in thermal hotels located in Muscat, Sultanate of Oman. The collected data was analyzed using Structural Equation Modeling (SEM).

The findings indicate a high level of ISO 17679 implementation in thermal hotels in Muscat. They emphasize the importance of meeting Service Requirements in enhancing Customer Satisfaction and influencing Behavioral Intentions. Additionally, the results highlight the mediating roles of Servicescape and Service Quality in the relationship between Service Requirements and Customer Satisfaction. Furthermore, the study confirms that Servicescape and Service Quality partially mediate the association between Service Requirements and Customer Satisfaction in 5-star thermal hotels' wellness spas in the context of the Sultanate of Oman. Moreover, it validates the direct impact of Customer Satisfaction on Behavioral Intentions.

From a theoretical perspective, this research contributes to the existing literature on spa service requirements by illuminating the foundational role of Service Requirements in shaping Customer Satisfaction and subsequently influencing Behavioral Intentions, with Servicescape and Service Quality serving as mediating factors. Through exploring a sequential mediation relationship, this study enhances our understanding of the connections between Service Requirements and Customer Satisfaction, uncovering the mediators involved in this sequential chain.

From a practical standpoint, the research underscores the importance of adhering to ISO 17679-based Service Requirements. Spa managers are advised to prioritize meeting these requirements to ensure the delivery of high-quality services, as they, directly and indirectly, impact Customer Satisfaction and Behavioral Intentions.

**Keywords:** service requirements; iso 17679; customer satisfaction; behavioral intentions; servicescape; service quality; structural equation modeling; wellness spas; thermal hotels; Muscat; Oman

## **From PESTEL to PESTELI: It is high time we analyzed the Internet separately**

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### **Abstract:**

PESTEL (or PESTLE) analysis has provided for decades a valuable framework for analyzing the external business environment; it started with four dimensions and as the idea grew popular, two more dimensions were added. The emergence of the Internet and the disruption it brought to every aspect of everyday life raises the question of another addition. Drawing on framing theory and the concept of inattention blindness, this paper argues that examining the Internet within the technological environment is not optimal for two reasons: a) the Internet is exclusively framed as a technology which limits the width of the respective analysis, and b) other important technological advancements are being sidelined. To account for the importance of the Internet, the addition of a new dimension in the PESTEL framework is proposed. The new dimensions examines the online environment and covers four main areas: Consumers; Doing Business; Social Media; and Omnichannel Integration. The proposed addition is still work-in-progress. Further research should seek empirical evidence to support the hypotheses about the two biases and attempt to measure the respective effects. Moreover, qualitative research should be used to better define research topics in the proposed areas of analysis for the online environment.

**Keywords:** *PESTEL Analysis, Internet, Framing Theory, Inattention Blindness*

### **Introduction**

PESTEL (or PESTLE) analysis has provided for decades a valuable framework for analyzing the external business environment and it has been applied in various industries and projects. Researchers and practitioners frequently use it to identify changes, trends, opportunities and threats both on a macro (e.g. an industry on a national or a continental level) and a micro level (e.g. a particular company or a particular project) and in a variety of business scenarios (e.g. strategic and/or marketing planning). The earliest known reference of the concept is found in Francis J. Aguilar's (1967) book "Scanning the Business Environment" where he discusses four dimensions of the external business environment, namely Economic, Technical, Political and Social, which form the acronym "ETPS". Different ordering of these dimensions can be found in the literature (e.g. PEST and STEP); as the idea grew popular, two more dimensions were added (Ecological and Legal), thus forming PESTEL. Such additions represent significant changes in the relative importance of different elements and/or the emergence of new critical ones. This paper argues that the Internet is also an important development that calls for one further addition to the framework.

Shortly, after the Internet emerged as a disruptive technological advancement, it became the focus of the technological dimension in the PESTEL analysis. For example, a leading textbook on Strategic Management twenty-two years ago (Hitt et al., 2001) covered the technological segment of the PESTEL analysis in nine paragraphs. The first one was introductory; the second revolved around the technology of the yo-yo toy; the third highlighted the importance of technology in general; the remaining six paragraphs discussed the Internet. Ever since, its effect has grown and it is now so overwhelming that occasionally, it is the primary technology being examined and discussed.

This is not optimal for two reasons: a) the Internet is exclusively framed as a technology which limits the width of the respective analysis, and b) other important technological advancements are being sidelined. Therefore, it would be beneficial to both researchers and practitioners if a new dimension were added to the PESTEL framework to address changes, trends, opportunities and threats that occur online and/or are related to it. A suitable choice for the revised acronym could be PESTELI (I for Internet); PESTELO (O for Online) would be a valid option as well.

### **Framing Theory**

Framing theory suggests that the way something is presented to someone (frame) has an impact on their interpretation and their respective decisions and/or choices (Borah, 2011). There are two main theoretical perspectives and research areas on the subject: sociological and psychological. Goffman (1974) was the first to refer to frames as “schemata of interpretation”, which connect separate pieces of information to create something meaningful, allowing people to organize stimuli in their everyday lives. Kahneman and Tversky (1979; 1984) explored how different presentation of the same information can affect the decision making process of individuals; thus addressing the “equivalency” perspective (Borah, 2011). There is also the “emphasis” perspective, which draws on the work of Druckman (2011) and shows that highlighting certain aspects of a message leads people to concentrate in them and to ignore others. The psychology perspective (equivalency and emphasis) is better known as the “framing effect”. Examining the Internet within the technological dimension of the PESTEL analysis most likely leads to such an effect.

Initially, the Internet was indeed a disruptive technology; nevertheless, it has since grown into so much more. It has widely advanced the information revolution which radically affected every aspect of everyday life; business, education, work, science, economy, socializing, communication, recreation, entertainment, exercising, personal development, even friendship and romantic relationships. Such has been the effect that a distinction between online and offline environments is valid in every research area (Lieberman & Schroeder, 2018; Neubaum & Krämer, 2018; Puncheva-Michelotti et al., 2018; Hult et al., 2019; Pei & Wu, 2019; Goldberg et al., 2022). The Covid-19 pandemic enabled IT to further transform education, work and life (Dwivedi et al., 2020). Therefore, examining the Internet as part of the technological dimension of the PESTEL analysis is likely to create a framing effect both for those who conduct the analysis (e.g. researchers) and those who use the analysis as a basis for their decisions (e.g. policy makers). According to the “emphasis” perspective, there is a bias towards including information that is somehow connected or relevant with the technological dimension of the Internet. Moreover, according to the “equivalency perspective” a further bias affects the interpretation of the information provided and its use in the decision making process. The “Technological dimension” becomes a schema of interpretation that directs the perception of individuals.

### **Inattentional Blindness**

Inattentional blindness describes a phenomenon where individuals fail to notice a clearly visible but unexpected object because their attention was focused on something else. The term was introduced by psychologists Arien Mack and Irvin Rock (1998) who discovered this phenomenon while conducting a number of experiments to study perceptions under conditions of inattention (Rock et al., 1992). Other researchers further explored the concept and found supportive evidence in various experiments, not limited to visual stimuli (Rees et al., 1999; Simons, & Chabris, 1999; Simons, 2000). Consequently, it is valid to argue that the same “blindness” may occur with cognitive stimuli; in other words while searching for trends, opportunities and threats in the external business environment. If the researchers/analysts are focused on the overwhelming effects of the Internet while exploring the technological dimension of PESTEL, they run the risk of missing important developments in less discussed technologies and/or emerging ones. However, if the broader effect of the Internet (i.e. the online environment) is separately analyzed, then only the purely technological dimension of the Internet will remain. This will diminish its importance within this specific dimension of PESTEL and will leave room for other technologies.

### **Adding a new dimension to PESTEL**

To address the effects of framing and inattentional blindness, a separate analysis of the online environment is proposed. The Internet may have started as a new technology (the TCP/IP protocol back in the 1970s), but has led to a new age, the information age. In this era, a parallel to the physical world was created, the online environment. The debate on whether the latter will replace the former has been vivid since the 1990s. For the past decade, co-existence seems the more viable option and research has been seeking some kind of integration between the physical and the online world (Bell et al., 2014; Lazaris & Vrechopoulos, 2014). In the literature of marketing specifically, omnichannel marketing has been one of the most discussed topics currently focusing on customer experience (Gerea et al., 2021; Rahman et al., 2022). The covid-19 pandemic created even more incentive for such integration (Watanabe et al., 2021; Cocco et al., 2022) as well as concerns related to privacy and trust (Chatterjee et al., 2022). Consumers who were previously reluctant to adopt online shopping, have been forced to do so during the pandemic thus creating a segment of consumers who may be easier targets of fraud (Buil-Gil et al., 2021; Fei & McKinnon, 2021). Therefore, online environment has become far too important not to be studied as a separate dimension of the business external environment.

The analysis of the online environment needs to address four main areas: Consumers; Doing Business; Social Media; and Omnichannel Integration (Picture 1).

Information about consumers covers topics such as:

- Demographic trends of online shoppers.
- Online customer journey.
- Online customer experience.

Information about doing business focuses on areas such as:

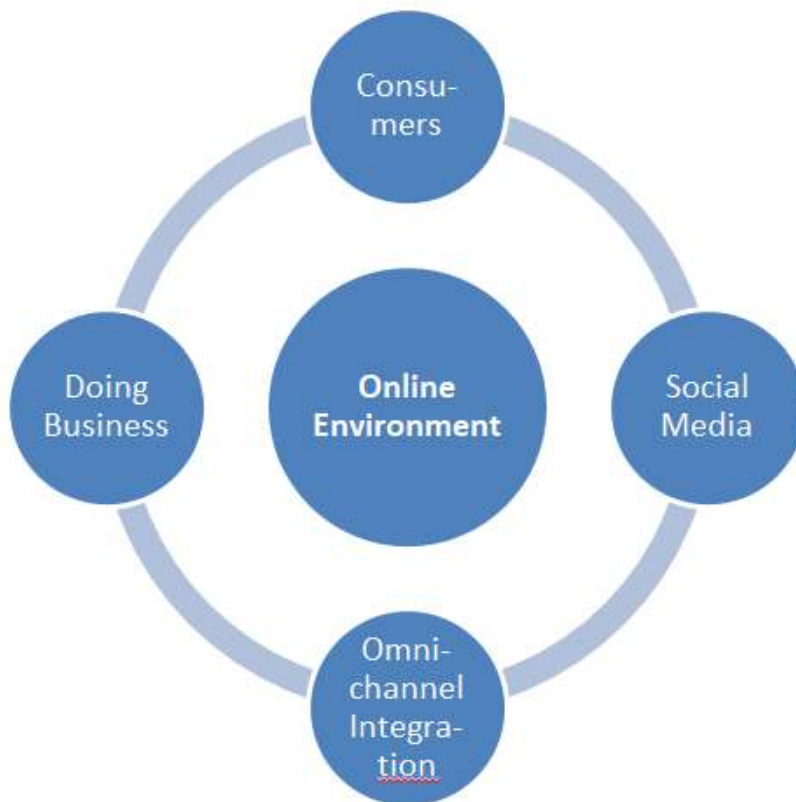
- Online competition demographics and areas of competition (e.g. information, transactions, delivery).
- How is it different to offline competition?
- Networking potential.
- B2B opportunities.
- Communication and transactions with authorities and/or the government.

Social Media research covers both consumer trends and business opportunities:

- Demographics of consumers.
- Word of mouth communication.
- Privacy concerns.
- What business purpose are they used for (e.g. information, transactions)

Omnichannel integration explores the co-existence of the online and offline environments:

- How integrated is the consumer experience?
- How integrated is the business operation?
- How integrated are the two environments for the workforce?



*Picture 1: Areas of analysis for the online environment*

### **Conclusion and Further Research**

PESTEL is used to identify trends, opportunities and threats in the market. Marketing executives that fail to take full advantage of the information available both in terms of identifying it and interpreting it properly face the risk of missing important developments in their external environment. Examining the Internet within the technological dimension is challenging in that direction and runs the risk of ignoring significant signs both in the online environment as well as in the broader technological environment. Two biases have been identified as the primary threats: the framing effect and the inattentive blindness effect. They can both be addressed by examining the Internet and the online environment as a separate dimension in the external business environment analysis. This will allow researchers and practitioners to study more thoroughly both the technological

environment and the online environment. This will result in data of better quality as well as identifying promptly the respective trends, opportunities and threats.

Further research should seek empirical evidence to support the hypotheses about the two biases and to measure the respective effects. Moreover, qualitative research should be used to better define research topics in the proposed areas of analysis for the online environment.

### References:

- Aguilar, F. J. (1967). *Scanning the Business Environment*. McMillan.
- Bell, D., Gallino, S., & Moreno, A. (2014). How to win in an Omnichannel world. *MIT Sloan Management Review*, 56(1), 14. <https://dialnet.unirioja.es/servlet/articulo?codigo=5130848>
- Borah, P. (2011). Conceptual Issues in Framing Theory: A Systematic Examination of a Decade's Literature. *Journal of Communication*, 61(2), 246–263. <https://doi.org/10.1111/j.1460-2466.2011.01539.x>
- Buil-Gil, D., Miró-Llinares, F., Moneva, A., Kemp, S., & Díaz-Castaño, N. (2021). Cybercrime and shifts in opportunities during COVID-19: a preliminary analysis in the UK. *European Societies*, 23(sup1), S47–S59. <https://doi.org/10.1080/14616696.2020.1804973>
- Cocco, H., & De-Juan-Vigaray, M. D. (2022). A typology of omnichannel retailer activities during the COVID-19 pandemic. *International Journal of Retail & Distribution Management*, 50(8/9), 1062–1094. <https://doi.org/10.1108/ijrdm-10-2021-0506>
- Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2021). Examining the global retail apocalypse during the COVID-19 pandemic using strategic omnichannel management: a consumers' data privacy and data security perspective. *Journal of Strategic Marketing*, 29(7), 617–632. <https://doi.org/10.1080/0965254x.2021.1936132>
- Druckman, J. (2001). The implications of framing effects for citizen competence. *Political Behavior*, 23(3), 225–256.
- Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., Gupta, B., Lal, B., Misra, S., Prashant, P., Raman, R., Rana, N. P., Sharma, S. K., & Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management*, 55, 102–211. <https://doi.org/10.1016/j.ijinfomgt.2020.102211>
- Gahler, M., Klein, J. F., & Paul, M. (2022). Customer Experience: Conceptualization, Measurement, and Application in Omnichannel Environments. *Journal of Service Research*, (online only) <https://doi.org/10.1177/10946705221126590>
- Gerea, C., Gonzalez-Lopez, F., & Herskovic, V. (2021). Omnichannel Customer Experience and Management: An Integrative Review and Research Agenda. *Sustainability*, 13(5), 2824. <https://doi.org/10.3390/su13052824>
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press.
- Goldberg, S., Yeshua-Katz, D. & Marciano, A. (2022). Online construction of romantic relationships on social media. *Journal of Social and Personal Relationships*. 36(9), 1839-1862. <https://doi.org/10.1177/02654075211067814>
- Fei, K. W., MA, & McKinnon, T. (2021). COVID-19 and cyber fraud: emerging threats during the pandemic. *Journal of Financial Crime*, 29(2), 433–446. <https://doi.org/10.1108/jfc-01-2021-0016>
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2001). *Strategic Management: Competitiveness and Globalization* (pp. 63–65). Southwestern.
- Hult, G. T. M., Sharma, P. N., Morgeson, F. V., & Zhang, Y. (2019). Antecedents and Consequences of Customer Satisfaction: Do They Differ Across Online and Offline Purchases? *Journal of Retailing*, 95(1), 10–23. <https://doi.org/10.1016/j.jretai.2018.10.003>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–292.
- Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39(4), 341–350.
- Lazaris, C., & Vrechopoulos, A. (2014, June). From multichannel to “omnichannel” retailing: review of the literature and calls for research. In *2nd International Conference on Contemporary Marketing Issues, (ICMI)* (Vol. 6, pp. 1-6).
- Lieberman, A., & Schroeder, J. (2020). Two social lives: How differences between online and offline interaction influence social outcomes. *Current Opinion in Psychology*, 31, 16–21. <https://doi.org/10.1016/j.copsyc.2019.06.022>
- Neubaum, G., & Krämer, N. C. (2018). What Do We Fear? Expected Sanctions for Expressing Minority Opinions in Offline and Online Communication. *Communication Research*, 45(2), 139–164. <https://doi.org/10.1177/0093650215623837>

- Pei, L., & Wu, H. (2019). Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. *Medical Education Online*, 24(1), 1666538. <https://doi.org/10.1080/10872981.2019.1666538>
- Puncheva-Michelotti, P., Hudson, S. P., & Jin, G. (2018). Employer branding and CSR communication in online recruitment advertising. *Business Horizons*, 61(4), 643–651. <https://doi.org/10.1016/j.bushor.2018.04.003>
- Rahman, S. M., Carlson, J., Gudergan, S. P., Wetzels, M., & Grewal, D. (2022). Perceived Omnichannel Customer Experience (OCX): Concept, measurement, and impact. *Journal of Retailing*, 98(4), 611–632. <https://doi.org/10.1016/j.jretai.2022.03.003>
- Rees, G., Russell, C., Frith, C. D., & Driver, J. (1999). Inattentional Blindness Versus Inattentional Amnesia for Fixated But Ignored Words. *Science*, 286(5449), 2504–2507. <https://doi.org/10.1126/science.286.5449.2504>
- Rock, I., Linnett, C. M., Grant, P. M., & Mack, A. (1992). Perception without attention: Results of a new method. *Cognitive Psychology*, 24(4), 502–534. [https://doi.org/10.1016/0010-0285\(92\)90017-v](https://doi.org/10.1016/0010-0285(92)90017-v)
- Rock I, Mack A. (1998). *Inattentional Blindness*. MIT Press.
- Simons, D. J., & Chabris, C. F. (1999). Gorillas in Our Midst: Sustained Inattentional Blindness for Dynamic Events. *Perception*, 28(9), 1059–1074. <https://doi.org/10.1068/p281059>
- Simons, D. J. (2000). Current approaches to change blindness. *Visual Cognition*, 7(1-3), 1–15. <https://doi.org/10.1080/135062800394658>
- Watanabe, C., Akhtar, W., Tou, Y., & Neittaanmäki, P. (2021). Amazon's New Supra-Omnichannel: Realizing Growing Seamless Switching for Apparel During COVID-19. *Technology in Society*, 66, 101645. <https://doi.org/10.1016/j.techsoc.2021.101645>

## **Technology or Entertainment can accelerate gen Z intentions to stay at smart hotels? The role of personal data concerns**

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### **Abstract**

Smart technologies offer numerous benefits to the hospitality industry, enhancing guest satisfaction, operational efficiency, and overall competitiveness in the market. However, they also raise concerns about personal data privacy and security. This study aims to develop an integrative model that extends the Technology Acceptance Model (TAM) with the entertainment construct and personal data concerns as well, in order to determine how these influence GEN Z behavioral intentions toward smart hotels. A total of 2,057 participants took part in the study. The analyses of the data were conducted via SPSS v.17 and AMOS v.20. The main finding of this study is that TAM is not adequate to explain young consumers' intentions to adapt in advanced technologies for services related to their travel and leisure experiences. Moreover, young consumers are more concerned about providing personal data. Thus, hotel managers who wish to overcome consumers' concerns need to emphasize on both the usefulness of the smart applications and entertainment that smart hotel customers have while using the applications.

**Keywords:** *Smart hotel, Generation Z, Technology Acceptance Model (TAM), Entertainment, Personal Data Concerns*

### **Introduction**

The hospitality industry has witnessed significant advancements in smart technologies in recent years. These technologies aim to enhance the overall guest experience, streamline operations, improve efficiency, and provide personalized services.

Hotels are incorporating smart devices and systems in guest rooms to provide convenience and personalization, including smart thermostats, lighting systems, and entertainment systems that can be controlled through a smartphone or voice commands. Moreover, guests can use their smartphones to check-in remotely, bypassing the traditional front desk process. Keyless entry systems allow guests to unlock their rooms using their smartphones, eliminating the need for physical keys or key cards. IoT technology enables connectivity between various devices and systems within a hotel, allowing for automated control and monitoring. Smart sensors can detect occupancy and adjust lighting, temperature, and energy usage accordingly, optimizing energy efficiency. Furthermore, hotels are implementing virtual assistants and chatbots to provide 24/7 customer support and assistance. These AI-powered systems are increasingly being used in the hospitality industry to handle customer inquiries, provide recommendations, and assist with reservations. They can also offer real-time updates on weather, flight information, and local events. These chatbots can offer 24/7 customer support and can be integrated with messaging platforms or hotel websites.



These are just a few examples of the smart technologies being utilized in the hospitality industry. All those smart technologies have also a significant impact on entertainment experiences for customers and especially for Generation Z (Gen Z). Generation Z, often referred to as Gen Z, is the demographic cohort following Millennials and typically includes individuals born between the late 1990s and the early 2010s. Gen Z is often characterized as the first truly digital-native generation, growing up with technology at their fingertips from an early age. Gen Z's relationship with technology is characterized by their fluency in digital tools, their reliance on social media and mobile devices, and their ability to leverage technology for self-expression. They enjoy streaming services like Netflix, YouTube, and Spotify, which provide a wide range of movies, music, and podcasts, they enjoy interactive and gamified experiences and they appreciate personalized experiences that cater to their specific preferences. In addition, Gen Z can connect, engage with content creators, participate in fandoms, and contribute to discussions and collaborations. This sense of community and belonging enhances their entertainment experience.

Thus, smart hotels leverage technology to offer customized entertainment options. They usually offer high-speed internet access, smart TVs with streaming capabilities, and in-room entertainment systems that allow guests to access their favorite digital content. For instance, they may provide in-room tablets or smart devices that allow guests to control room temperature, lighting, and entertainment systems according to their preferences offer high-speed internet access, smart TVs with streaming capabilities, and in-room entertainment systems that allow guests to access their favorite digital content and many others services that create engaging and memorable experiences that align with Gen Z's entertainment preferences.

It is obvious, that smart technologies offer numerous benefits to the hospitality industry, enhancing guest satisfaction, operational efficiency, and overall competitiveness in the market. However, they also raise concerns about personal data privacy and security. Smart technologies, such as mobile apps, IoT devices, and facial recognition systems, often collect large amounts of personal data, including names, contact details, preferences, and behavioral patterns. Moreover, they often involve sharing personal data with third-party service providers, such as cloud storage providers, analytics platforms, or marketing agencies. There is also a concern that extensive profiling and personalization based on collected data could lead to intrusive targeting or discrimination.

While Gen Z is generally comfortable with technology, they are also highly aware of privacy and data security issues. So personal data concerns could impact Gen Z's willingness to use smart hotels.

This study seeks to make a contribution to the specific area, given that it is the first study, to the best of our knowledge, to test Technology Acceptance Model (TAM), concerning smart hotels. This paper aims to develop an integrative model that extends the Technology Acceptance Model (TAM) with the entertainment construct and personal data concerns as well, in order to determine how these influence GEN Z behavioral intentions toward smart hotels.

By understanding customers' perceptions of usefulness, ease of use, and other influencing factors, smart hotels can design and implement technologies that align with customers' needs, preferences, and concerns. This can facilitate greater acceptance and usage of smart hotel technologies, ultimately enhancing the overall guest experience.

### **Theoretical background**

The Technology Acceptance Model (TAM) is a widely used framework to understand customers' acceptance and usage of technology (Davis, 1985). The TAM suggests that perceived usefulness (PU) and perceived ease of use (PEOU) are the key factors that influence an individual's intention to use a technology. According to the model, users are more likely to accept and use a technology if they perceive it to be useful and easy to use (Davis, 1989).

While the Technology Acceptance Model (TAM) has effectively clarified the adoption and utilization of information technology in various contexts, numerous adaptations to the initial TAM have been suggested in order to enhance comprehension of user acceptance patterns in particular settings. However, few works have applied TAM to customers of smart hotels. When TAM used with smart hotel customers, can offer valuable information about how they perceive and intend to use smart hotel technologies (Zhong et al., 2021).

More specifically, the Perceived Usefulness assesses the extent to which customers perceive that using smart hotel technologies will enhance their overall hotel experience. The second factor, Perceived Ease of Use examines the customers' perception of the ease with which they can use smart hotel technologies. Based on these factors, the TAM predicts customers' behavioral intentions to use smart hotel technologies, which can be influenced by their perceptions of usefulness and ease of use.

Several additional factors can also impact customers' acceptance. Gao and Huang 2019 extended the TAM model with the additional antecedents Communication, Personalization and Co-creation. They found that communication and personalization affect positively the TAM variables while co-creation influences just perceived usefulness. Huang et al., (2019) develop an integrative model that extends the Technology Acceptance Model (TAM) replacing attitudes with an Experience multi-construct which including entertainment to examine consumer behavioral intentions toward mobile app usage. Kim et al., (2020) extensively investigated how consumers perceive the performance of a smart hotel and examined its impact on the development of attitudes and intentions to recommend. Moreover, their study encompassed the examination of key factors such as technology readiness (optimism and innovativeness) as important moderating variables. The findings from the analysis validated that people's positive attitudes and intention to recommend a smart hotel are heavily influenced by their perception of its performance.

Finally, Users' personal concerns including invasion of privacy and other harms was found to have a negative impact on usefulness and intentions to use a specific technology in smart hotels (Kim and Bernand 2014).

Based on the above theroteical foundations and previous results the following hypotheses were set:

H1: Perceived Usefulness affects Attitudes

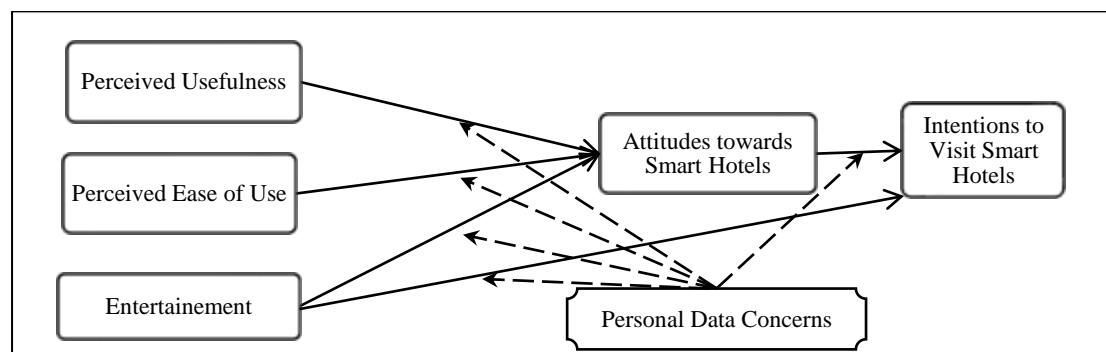
H2: Ease of Use affects Attitudes

H3: Attitudes affect Visit Intentions

H4: Entertainment affect Attitudes

H5: Entertainment affect Intentions

H6: Personal Data Concerns moderate all relationships of the conceptual model



**Figure 1: Conceptual Model**

## Methodology

### Sampling

An online survey was conducted with structured google docs questionnaires. The population of the study was the students of the Greek public universities and comes to 359,682 population units (H.S.A, 2019). The data were collected by senior marketing students of the International Hellenic University. The online questionnaire was distributed students in each university via personal emails and posted in social media groups (Facebook) of the university assigned to each marketing student conducting the fieldwork. In order to collect proportional data, the quota sampling was applied. The population distribution in gender and university of studies served for the quota's calculation. The final sample after controlling for the university and gender comes to 2,057 cases.

### Variables Measurement

The variables of the theoretical framework were all adopted or adapted for the specific subject from the literature (see Table 1). The questionnaire included the following variables: Perceived Usefulness (PU) and Ease of Use (EU) with 3 items each; Attitudes (A) with 4 items; Visit Intentions (VI) with 2 items; Entertainment (E) with 3 items; Personal Data Concerns (PDC) with 3 items adapted from Kim and Bernhard, (2014). As for the scales used, all variables were measured on 7-point Likert scales from 1=Very much disagree to 7=Very much agree except for Attitudes which were measured on 7-point semantic differential scales with opposite adjectives as endpoints from 1=Very negative adjective to 7=Very positive adjective (see Table 1). Finally, four demographics were entered in the questionnaire namely Gender, University of attendance, Annual Family

Income and Family Place of residence. The relevant scales were adopted from the Hellenic Statistical Authority (H.S.A., 2022).

## Results

The sample consists of 1,011 male (49.1%) and 1,046 (50.9%) female students. More than half of the students (58.4%) stated that their family income is less than 15,000€. More than half of the sample (54.7%) comes from families residing in big cities with more than 50,000 inhabitants.

The analyses of the data were conducted via SPSS v.17 and AMOS v.20. The data examination did not indicate missing values and outliers.

### Measurement Model

The Goodness of Fit (GOF) values obtained in the Measurement Model indicate that the model fits the data very well. Construct validity of all types were assessed (Hair et al., 2010) as all factor loadings were greater than 0.70, Average Variance Extracted (AVE) were all greater than 0.50, Construct Reliabilities were all greater than 0.80 and the square root of the AVE values were greater than the respective correlation coefficients (Table 1). These results indicate that the measurement model is valid, so the structural model followed.

**Table 1: Measurement Model**

GOF: $\chi^2=314.068$ , $df=77$ , $p<0.000$ , $\chi^2/df=4.079$ , $RMSEA=0.054$ , $CFI=0.980$ , $TLI=0.973$ Thresholds (Hair et al. 2010): $RMSEA < 0.08$ , $CFI > 0.90$ , $TLI > 0.90$						
		Range	Mean	Alpha values	Factor Loadings	CR
<b>Perceived Usefulness (PU)</b> (Huang et al., 2019)		3 – 21	15.00	0.834		0.851
PU1	Advanced technologies of a smart hotel would be useful to get information during my stay				0.824	
PU2	Advanced technologies of a smart hotel would help me organize my activities during my stay				0.881	
PU3	Advanced technologies of a smart hotel will improve my accommodation experience				0.718	
<b>Ease of Use (EU)</b> (Huang et al., 2019)		3 – 21	15.71	0.871		0.911
EU1	I think that the advanced technologies of a smart hotel are simple				0.819	
EU2	It will be easy for me to learn how to use the advanced technologies of a smart hotel				0.865	
EU3	I will quickly become skillful in using smart hotel technologies				0.950	
<b>Entertainment (E)</b> (Kim et al., 2021)		3 – 21	15.50	0.882		0.898
Ent1	Using advanced technology products and services provided at a smart hotel would be an enjoyable experience				0.874	
Ent2	I am excited to get new experience by using advanced technologies and robots at a smart hotel				0.889	
Ent3	It seems fun interacting with advanced technologies and robots, such as artificial intelligence and chatting with robots available at a smart hotel				0.826	
<b>Attitudes (A)</b> (Kim and Han, 2020) Staying at smart hotels is:		4 – 28	21.74	0.888		0.896
At1	Bad – Good				0.820	
At2	Unpleasant—Pleasant				0.824	
At3	Boring – Exciting				0.761	
At4	Undesirable – Desirable				0.896	
<b>Visit Intentions (VI)</b> (Tilikidou and Delistavrou, 2015)		2 – 14	9.25	0.900		0.909
VI1	I intend to visit a smart hotel at my next trip				0.922	
VI2	I plan to stay at a smart hotel at my next trip				0.904	
	<b>PU</b>					$\sqrt{AVE}$
	<b>Perceived Usefulness (PU)</b>					0.810
	<b>Ease of Use (EU)</b>	0.716				0.880
	<b>Entertainment (E)</b>	0.768	0.645			0.827
	<b>Attitudes (A)</b>	0.539	0.404	0.727		0.863
	<b>Visit Intentions (VI)</b>	0.633	0.487	0.713	0.669	0.913

CR: Construct Reliability, AVE: Average Variance Extracted

### Structural Model

The structural model fits the data very well as GOF values were all better than the recommended thresholds (Table 2). Statistically significant structural relationships were detected between PU and A, A and VI, E and A, E and VI providing support for the acceptance of H1, H3, H4, and H5. The relationship between EU and A was found to be statistically non-significant so the H2 is rejected. The coefficient of determination ( $R^2$ ) indicates that the proposed model is able to explain 67% of the variance in Greek students' intentions to visit smart hotels.

### Moderated Model

The hypothesized moderating role of Personal Data Concerns in the structural relationships of the model was tested by multi-group analysis via AMOS. The sample was divided in two groups in terms of scores in PDC, e.g. below and above the Mean. The students with scores in PDC below the Mean were 848 and above the Mean were 1209.

The moderation analysis resulted in acceptable GOF values and the critical ratios of the differences between the two groups for each relationship indicated statistically significant results (ratio greater  $\pm 1.96$ ) in all relationships except the one rejected in the structural model (Table 2). The coefficients of determination ( $R^2$ ) indicated that the model explained higher percentage of VI's variance explained by the model in the group of students with higher (above the Mean) concerns for personal data provision (71.3%) than in the group with lower (below the Mean) Personal Data Concerns (63.9%).

**Table 2: Structural model and hypotheses testing**

	Structural Model		Moderated Model		Hypotheses
	GOFs	Hypotheses	GOFs		
$\chi^2$	519.629 ***		607.042 ***		
df	79		158		
$\chi^2/df$	6.578		3.842		
RMSEA	0.052		0.037		
CFI	0.980		0.980		
TLI	0.973		0.973		
<b>Paths</b>	<b><math>\beta</math></b>			<b><math>\beta</math></b>	
			<b>&lt; Mean</b>	<b>&gt; Mean</b>	
<i>PU</i> → <i>Attitudes</i>	0.223***	H <sub>1</sub> : Accepted	ns	0.391***	
<i>Critical ratio</i>			4.733		H <sub>6</sub> : Accepted
<i>EU</i> → <i>Attitudes</i>	ns	H <sub>2</sub> : Rejected	ns	ns	
<i>Critical ratio</i>			0.250		H <sub>6</sub> : Rejected
<i>A</i> → <i>Visit Intentions</i>	0.463***	H <sub>3</sub> : Accepted	0.258***	0.696***	
<i>Critical ratio</i>			6.847		H <sub>6</sub> : Accepted
<i>E</i> → <i>Attitudes</i>	0.544***	H <sub>4</sub> : Accepted	0.490***	0.475***	
<i>Critical ratio</i>			2.155		H <sub>6</sub> : Accepted
<i>E</i> → <i>Visit Intentions</i>	0.428***	H <sub>5</sub> : Accepted	0.623***	0.178***	
<i>Critical ratio</i>			-6.138		H <sub>6</sub> : Accepted
<b>R<sup>2</sup></b>	0.670		0.639	0.713	

\*\*  $p < 0.05$ , \*\*\*  $p < 0.001$ ,  $\beta$ : standardized regression weights

### Discussion

The main finding of this study is that TAM is not adequate to explain young consumers' intentions to adapt in advanced technologies for services related to their travel and leisure experiences. When smart technologies contribute to increase pleasure while visiting a hotel, the consumers' perceived entertainment is a stronger incentive than TAM's factors. This finding verifies this study's claim that rational factors are less effective in explaining behaviors that incorporate strong and positive experiences. Although usefulness still affects the relevant attitudes, especially for consumers with increased concerns about personal data provision, the expected entertainment is a stronger influence on both consumers' attitudes and intentions towards smart hotels. Generation Z consumers' perceived ease of use of advanced technologies do not affect their attitudes towards smart hotels. This result may imply that the literacy of this generation in mobile applications "all the time" may have vanished the perceptions of difficulty in adapting to new technologies. It is an everyday experience the adaptation and usage of new applications in almost all human activities e.g. communication, entertainment, education, transportation, commerce etc.

Personal data concerns moderate all statistically significant relationships of the proposed model. More interestingly these concerns minimize the relationship between entertainment and intentions to visit smart hotels

and increase the influence of attitudes on willingness to choose a smart hotel. Personal data concerns increase also the influence of usefulness on attitudes. It may be claimed that the frightful side-effects of the advanced technologies increase the power of the advanced technology usefulness to explain attitudes and intentions to adopt smart hotel technologies.

### Conclusions and Implications

Generation Z travelers in Greece who would most probably visit smart hotels are those who perceive that advance technologies in smart hotels are useful and “fun” and they believe that visiting smart hotels is good, pleasant, desirable and exciting. Nevertheless, young consumers more concerned about providing personal data via the smart hotel applications are more affected by their attitudes which are formulated by both perceptions of usefulness and perceptions of having fun when using the smart hotel applications than those, who do not mind about personal data provision. The latter are more influenced by their perceived entertainment than by their attitudes which might imply that indifferent to personal data students are more focused on the experience-side of visiting a smart hotel than on the side of technology and its consequences.

Hotel managers who wish to overcome consumers’ concerns about provision of their personal data via the smart applications, besides securing their information systems, need to emphasize on both the usefulness of the smart applications and entertainment that smart hotel customers have while using the applications. Promotional efforts should aim at reducing concerns about personal data provision as well as emphasizing on the smart applications’ usefulness in the entertaining experience of staying at smart hotels.

### References

- Davis, F.D. (1985), “A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results”, Massachusetts Institute of Technology, Massachusetts.
- Davis, F.D. (1989), “Perceived usefulness, perceived ease of use, and user acceptance of information technology”, *MIS Quarterly*, Vol. 13 No. 3, pp. 319-340.
- Gao, B. and Huang, L. (2019), “Understanding interactive user behavior in smart media content service: An integration of TAM and smart service belief factors” *Heliyon*, Vol. 5, Issue 12, e02983, doi.org/10.1016/j.heliyon.2019.e02983.
- Hair, J. F., Black, W. C., Balin, B. J. & Anderson, R. E. (2010). *Multivariate Data Analysis*. Maxwell Macmillan International Editions.
- Huang, Y-C., Chang, L. L., Yu, C.-P. & Chen J. (2019). Examining an extended technology acceptance model with experience construct on hotel consumers’ adoption of mobile applications. *Journal of Hospitality Marketing & Management*, 28(8), 957-980. DOI: 10.1080/19368623.2019.1580172
- Kim, J. & Bernhard, B. (2014). Factors influencing hotel customers’ intention to use a fingerprint system. *Journal of Hospitality and Tourism Technology*, 5(2), 98-125. DOI: 10.1108/JHTT-11-2013-0031
- Kim, J. J., & Han, H. (2020) Hotel of the future: exploring the attributes of a smart hotel adopting a mixed-methods approach, *Journal of Travel & Tourism Marketing*, 37(7), 804-822, DOI: 10.1080/10548408.2020.1835788
- Kim, J. J., Montes, A. A. & Han, H. (2021). The Role of expected benefits towards smart hotels in shaping customer behavior: comparison by age and gender. *Sustainability*, 13, 1698. DOI: 10.3390/su13041698
- Kim, J.J.; Lee, M.J.; Han, H. (2020), “Smart Hotels and Sustainable Consumer Behavior: Testing the Effect of Perceived Performance, Attitude, and Technology Readiness on Word-of-Mouth. *Int. J. Environ. Res. Public Health*, 17, 7455. <https://doi.org/10.3390/ijerph17207455>
- Kim, J.J.; Montes, A.A.; Han, H. (2021), “The Role of Expected Benefifits towards Smart Hotels in Shaping Customer Behavior: Comparison by Age and Gender. *Sustainability*, 13, 1698. <https://doi.org/10.3390/su13041698>
- Tilikidou, I. & Delistavrou, A. (2015). Preferring green and rejecting “unethical” hotels”. *EuroMed Journal of Business*, 10(3), 285-296. DOI: 10.1108/EMJB-09-2014-0026
- Zhong, L., Zhang, X., Rong, J., Chan, H.K., Xiao, J. and Kong, H. (2021), "Construction and empirical research on acceptance model of service robots applied in hotel industry", *Industrial Management & Data Systems*, Vol. 121 No. 6, pp. 1325-1352. <https://doi.org/10.1108/IMDS-11-2019-0603>

# **Hospitality Marketing and Management**

## **Workforce diversity: Could it contribute to sustainable growth in the luxury hospitality industry of Greece?**

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### **Abstract**

As a ubiquitous feature of the corporate environment, diversity gains ground at an exponential rate in the workforce of hospitality firms. In the constantly evolving and unpredictable hospitality markets of today, the effective utilization of diverse human resources is of vital importance for firms to succeed. In the contemporary era, the Greek industry has witnessed an unprecedented labor crisis; to achieve success in this context, firms must prioritize the attraction, retention, and effective use of a diverse workforce. This study endeavors to provide valuable insights into the definition, theoretical framework, and impact of diversity in the context of the luxury hospitality industry through an extensive review of relevant literature and one-to-one interviews with esteemed HR professionals, luxury hotel managers, and well-known scholars. The findings of this study emphasize that luxury hospitality firms seeking growth, sustainability, enhanced job satisfaction, effective decision-making and a positive brand image must adopt a proactive approach towards workforce diversity. It is unanimously agreed by all participants that organizations promoting diversity and inclusivity, tend to exhibit higher levels of productivity and growth. However, effective management of such an environment is of paramount importance as mismanagement could potentially have adverse effects on the entity of the organization. The findings of this research provide valuable insights that add to the current body of knowledge in the discipline and exert significant managerial implications.

*Keywords: Workforce Diversity, Sustainable Growth, Luxury Hospitality Industry, Greece*

### **Introduction**

The concept of workforce diversity pertains to the presence of shared attributes and distinctions among individuals regarding factors such as race, religion, gender, age, sexual orientation, socioeconomic status, ethnic lineage, physical capacities and limitations, values, and social and psychological aptitudes (Goel, 2018). The degree of diversification present or absent, determines whether the workforce exhibits heterogeneity or homogeneity.

The contemporary era has witnessed a surge in workplace diversity, primarily attributed to the rapidly changing and dynamic nature of business environments. Globalization is omnipresent and new demographic trends and migration patterns have subsequently emerged; cross-border trade and investment have increased dramatically. Consequently, the labor force has exhibited greater diversity, mirroring the heterogeneous population composition worldwide. The labor force in the global business industry is significantly impacted by demographic shifts, emphasizing the importance of managing diversity. The impact of demographic shifts is significant, as evidenced by the heightened probability of two randomly selected individuals belonging to distinct ethnic or racial categories since 2010 (Bureau, 2022). According to Statista's (2022) latest forecast, the proportion of individuals categorized as minorities within the United States population is expected to exceed 55% within the next 58 years. Given the growing diversity of the workforce and the industry's pivotal position, understanding the influence of diversity on the growth and sustainability of the luxury hospitality industry is of utmost importance. Nowadays, employees, customers, and society prioritize diversity initiatives in organizations more than ever.

The luxury hospitality industry is part of the travel and tourism sector and offers customers attractive and hedonic services. The hospitality and tourism industries are the largest and fastest-growing worldwide (Walker, 2021). Prior to the pandemic, the Travel & Tourism industry's revenue would account for the 10.4 percent of global GDP (US\$9.2 trillion) and provided employment to 10.6 percent of the total workforce (334 million), thereby accounting for one in four new jobs created worldwide (Travel & Tourism Economic Impact | World Travel & Tourism Council (WTTC), 2021). The World Travel & Tourism Council (WTTC) estimated in the same report that international travelers spent \$1.7 trillion in 2019.

Currently, the hotel industry in Greece is experiencing a severe, unforeseen labor shortage. The industry is in a frenzy, both for employees and customers with customers tending to expect more from the hotel sector, despite the limited resources. According to Ikkos et al. (2022), 1 out of 5 positions were left vacant during the previous season in all kinds of hospitality services. To surmount this obstacle, businesses must develop innovative recruitment and retention strategies for attracting and retaining talent. It is noteworthy that although this topic is immensely pertinent to contemporary society, there appears to be a dearth of literature that pertains to the luxury hospitality industry in Greece. Fostering a more welcoming and inclusive workplace culture that encourages diversity could be one step towards this direction.

Therefore, this study explores the viewpoints of prominent business executives who engage in business operations in Greece, with a specific focus on the luxury hospitality sector, regarding the effect of diversity on sustainable growth. The objective of this research is to explore top management's perspectives on diversity in the workplace and scrutinize its ramifications for the luxury hospitality sector. Furthermore, the study examines whether specific attributes of diversity present more significant challenges for managerial practices, whether diversity policies are driven by political correctness, and whether the government provides incentives to regional businesses to integrate diversity into the workforce.

## Literature Review

Diversity has been defined in various ways, with surface and deep-level diversity being the two unique levels identified by Mok (2002). Surface-level diversity is characterized by qualities such as gender, race, age, and sexual orientation, while subsidiary dimensions include education, marital status, employment experience, and functional background. In contrast, deep-level diversity refers to cognitive capital, which is not immediately apparent and thus difficult to quantify. Kim (2006), on the other hand, defines diversity as a multidimensional perspective that assumes people differ in several dimensions.

Diversity has been associated with numerous benefits for organizations. Gehrels and Suleri (2016) found that the success and longevity of a hotel business in the twenty-first century is increasingly contingent on its diversity and inclusion policies. In a survey of 3645 restaurants, airlines, hotels, casinos, and cruise lines, it was discovered that an improvement in total diversity performance significantly impacts future financial performance (Singal, 2014). The same is true for performance based on diversity strengths (Singal, 2014). Furthermore, well-known CEOs have recognized the multiple benefits of diversity. Hilton Worldwide CEO, Christopher Nassetta, has stated unequivocally that "*diversity and inclusion are the future, a crucial component of Hilton's past, and critical to the company's success*" (Nassetta, 2013).

Jha (2009) argues that a corporation's most valuable resource is its varied workforce, as it is competent at problem-solving and produces original and innovative solutions that give any organization a strategic advantage. Diversification that is successfully managed can help firms improve organizational performance by maximizing individual potential, integrating unique strengths, increasing efficiency, and encouraging innovation (Kim, 2006). McKinsey & Company (2015) reports that businesses with a diverse workforce outperformed the national industry median by 15 to 35 percent. A second study three years later supported the above findings: organizations with gender diversity at the executive level were 21% more profitable than those with less diversity, while companies with culturally diverse executive teams outperformed their competitors by 33% (McKinsey & Company 2018).

Another significant advantage of a more inclusive organizational culture is that a homogeneous workforce is unlikely to devise unique solutions to problems encountered in a national and global market composed of people of multiple races, nations, and religions (Kim, 2006). Moreover, group diversity in terms of age, gender, and skill enhances the influence of diversity-focused human resource practices on job engagement (Luu et al., 2019). There is a strong correlation between overall workplace happiness and contentment with workforce diversity, as indicated in the same study. Research examining employee satisfaction in the workplace demonstrated that job satisfaction is significantly related to customer satisfaction, particularly in service-oriented businesses (Matzler & Renzl, 2007).

In addition, it is imperative for organizations to prioritize not only diversity but also inclusion, which encompasses establishing a workplace atmosphere that fosters a sense of worth, esteem, and backing for all staff members (Cox and Blake, 1991). Gehrels and Suleri (2016) suggest that the implementation of inclusive policies and practices can serve as a means of alleviating the adverse consequences associated with diversity mismanagement, including low group cohesiveness and conflict. It is noteworthy that the advantages of diversity may not manifest immediately and may necessitate persistent endeavors to foster and sustain a diverse and inclusive work environment. The implementation of consistent employee training and education programs, along with continuous assessment and enhancement of diversity and inclusion policies, may be deemed necessary (Cox and Blake, 1991).

Robert and Van Dick's (2010) study suggests that diversity can enhance creativity, problem-solving, and innovation in the workforce. However, the research also highlights potential negative consequences such as increased conflict, reduced group performance, and decreased group cohesiveness if not properly managed.



According to Gehrels and Suleri (2016), failure to adequately address diversity and inclusion may lead to a negative perception of the organization among stakeholders, ultimately resulting in a decline in business. According to Kim (2006), mismanagement of diversity may result in personnel and productivity losses for managers, potentially leading to legal action against the organization. In contemporary business practices, diversity and inclusion are fundamental elements that play a crucial role in attaining sustainable growth and longevity (Gehrels and Suleri, 2016). To harness the advantages of diversity and mitigate potential adverse outcomes resulting from inadequate management of diversity, it is imperative for organizations to actively pursue initiatives that promote a work environment that is both diverse and inclusive.

Taking the above research findings into consideration, it seems that a heterogeneous workforce offers a multitude of benefits that can foster substantial and enduring growth for a business. The management of such workplaces is a crucial matter that warrants careful consideration, as it has the potential to adversely impact the integrity of the organization. Therefore, shedding additional light on the subject matter could refine our existing understanding and set the foundation for the development of effective human resource policies in the hospitality sector.

## Methodology

After conducting a thorough analysis of the methods utilized by other researchers to study workforce diversity, a qualitative methodology was chosen to address the purpose of this study. Highly esteemed professionals within the hospitality industry were interviewed in one-to-one sessions. Purposive sampling was used to recruit participants for this study, a method that involves selecting participants who are believed to have relevant experiences and knowledge related to the research topic. The study's selection criteria necessitated that each participant possess a minimum of seven years of experience in the hospitality industry and currently hold a managerial position. Participants were selected from a variety of locations in Greece and had diverse educational and professional backgrounds. The total sample comprised of eleven participants (six males and five females). Table I exhibits each participant's profile as well as their given nickname to ensure their privacy.

The study commenced with the distribution of an email invitation to each participant, requesting their participation in the study. If they consented, they later received an indicative discussion guide, a list of sixteen questions, with several sub-questions based on the study's purpose, that would be discussed during the interview.

The interview questions were structured around three subcategories: sociodemographic background, general managerial viewpoints, and perspectives regarding workforce diversity. The questions were open-ended and allowed for in-depth responses, providing rich data and multiple angles in the research topic. The mode of interview was either face-to-face or online, based on the participant's geographical location and accessibility. The interviews were conducted in the English language, with a duration of approximately 45 minutes each.

The data collected through the interviews were analyzed using a thematic analysis approach, a common qualitative data analysis technique. The employed technique facilitated the detection of recurring structures and motifs within the gathered information, thereby enabling a comprehensive understanding of the subject under investigation (Nowell et al., 2017)

. The analysis process involved transcribing the interviews verbatim, familiarization with the content, and assigning codes to the data. The coding process was based on the research questions and the themes that emerged from the interviews.

Nickname	Age Group	Location	Education
John	35-44	Dubai / GR / UK	GCE
George	35-44	Greece / Switzerland	Bachelor's
Mary	35-44	Greece / Spain	Master's
Stephanie	45-54	UK / Greece	Bachelor's
Nick	35-44	Greece	Bachelor's
Alicia	45-54	Greece / USA	Master's
Chris	45-54	Greece / UK	Bachelor's
Alex	65-75	Greece	No studies
Sophia	35-44	Switzerland / Greece	Master's
Irene	45-54	Greece	Bachelor's
Mike	45-54	GR / UK / Switzerland	PhD

*Table 1 – Participants' Profiles*

## Findings

### ***The Concept of Workforce Diversity***

Over the years, the term "diversity" has undergone a significant transformation and has come to encompass a broad range of concepts in the workplace. Specifically, in the context of this study, workforce diversity refers to the existence of specific characteristics in work units that are fundamental to group members (DiTomaso et al., 2007). The interviewees identified a diverse range of distinct categories, including but not limited to, ethnic origin, gender, age, education, sexual orientation, and functional backgrounds. As participants emphasized, workforce diversity may relate to any difference that has a substantial influence on how individuals interact in a group, whether based on color, physical ability, or religion. Given the significance of diversity management, it has become an increasingly vital issue for organizations to navigate successfully. The rapid expansion of diversity in the workplace has presented organizations with new and complex challenges. As Mike aptly suggested: *"Managing diversity efficiently is crucial, given the continuous fluctuations in a company's culture and the diverse personal opinions of employees"*. Moreover, as George astutely noted: *"Managing heterogeneity is three times more complex than managing staff homogeneity, particularly when it comes to effectively utilizing human resources."*

### ***The Benefits of Diversified Workforce***

Businesses that embrace diversity as a wise business strategy can derive several benefits, according to the participants: Growth, a broader pool of talent to draw from, sustainability, no groupthink & effective decision-making, increased job satisfaction, and a better public image.

#### **Growth**

*"Well-managed diversity may assist firms in increasing organizational performance by maximizing individual potentials, integrating unique competencies, boosting efficiency, and promoting innovation,"* John noted. Companies with a diverse workforce can compete more successfully in foreign marketplaces. As hotel companies expand their operations across the world, their customer base becomes increasingly diverse. To better understand the different demands of a global consumer, hospitality firms should elicit feedback from both inside and outside their own borders. Mary observes that: *"Diversified businesses have a substantial edge and can grow larger when competing worldwide because they can better adapt to the cultural variety of the nations in which they do business."*

#### **Broader Pool of talent to draw from**

All participants argued that due to the high turnover rate in the hotel sector, it has been difficult for many years to attract quality staff to fulfill the increased demand for service standards and client connection, particularly in the Food and Beverage domain. Hoteliers currently recognize that there was a severe shortage during and soon after the COVID-19 crisis. Mary shared that *"by forming a broader web and attracting a diverse variety of candidates, organizations gain access to a more robust pool of talent."*

#### **Sustainability**

An inclusive workforce that reflects the demographics of the community it serves is essential for ensuring successful long-term growth. Sophie added that *"This not only makes good in a business sense, but it also helps to foster greater social cohesion and inclusion."* Nearly all participants agreed that economic growth and sustainability were both critical to an organization's survival, with a few of them considering growth to be more important. *"When we talk about sustainability, we need to think beyond the –very important – environmental concerns. An – in all fields – sustainable business requires a good culture, respect, and cooperation. All these qualities can be fostered by embracing a more diverse workforce"*, according to John. Alex believes that: *"Instead of focusing on short-term gains, the goal should be to exist over time, and sustainability should be a priority in every area for owners, management, shareholders, and professionals to be honest."*

#### **No Groupthink & Effective Decision-Making**

The social psychologist Irving Janis, first coined the term "groupthink" to describe the tendency of members of cohesive groups to accept a perspective or decision that represents a perceived common agreement, regardless of whether the team members believe this viewpoint is accurate or ideal (Bang, et al, 2017). According to John, *"groupthink hinders the process of collective problem-solving"*. Fundamentally, groupthink happens when a group makes poor or wasteful decisions just to achieve consensus. Stephanie argued that *"Different kinds of diversity reduce the impacts of groupthink by making it more difficult for groups to form homogeneous subgroups. It allows organizations to diversify their perspectives rather than being bound to groupthink, which is often 'benign' but ineffective."* Thus, diversified groups will rarely come up with stale ideas that could hinder the organization's goals.

#### **Increased Job Satisfaction and Financial Performance**

The potential for career advancement and professional development, thereby increasing employee engagement and job satisfaction can increase by promoting diversity and inclusion initiatives within an organization. George pointed out that *"employers in companies with advanced such initiatives are more likely to*

*feel loyal to their organization, engage in innovative work, and be devoted to exceptional performance*". Sophia added that *"a strong commitment to diversity today involves building an excellent work environment where each person's contribution is valued, and each employee is given every opportunity to flourish"*. Employees in such a company are motivated to strive for excellence because their efforts are recognized and rewarded. Nearly all participants agreed that work environments that foster and manage diversity have the potential to boost employee productivity and satisfaction, and so, when job satisfaction rises, so does financial performance.

### **Better Public Image**

In today's image-centric society, optics are extremely important in the business world. Customers form opinions and attitudes that impact their purchasing behavior about an organization based on information they gather from employees, other customers, the press, and other sources. Nowadays, consumers value the positive public image of an organization, which can be shaped by sustainability and diversity policies. All participants felt that building and sustaining a business image that welcomes diversity in an effort to achieve profitability and growth is critical. Failure to incorporate minorities in human resources can lead to legal action by employees.. *"Institutional racism leaves a lasting impact on any business, so who would want to take that risk?"* asked Mike. Long legal battles may not necessarily financially debilitate a corporation, but they can have a long-term impact on the company's reputation. *"A negative public image can obstruct further funding, can lead to financial loss of a magnitude that could be detrimental to the entity of the organization"*, he concluded.

### **The Challenges of Workforce Diversity**

According to the participants' statements, leveraging the benefits of workplace diversity is not without difficulties. Businesses may face a variety of issues, including barriers to effective communication, instances of discrimination and personnel loss.

#### **Miscommunication**

All participants agreed that the presence of staff members from various countries and cultures, speaking different native languages, could pose difficulties in fostering cohesion and collaboration among them. Even when sharing a common language, word meanings differ, as seen in the differences between British and American English. As a result, communication between groups could become unclear or lost due to poor translation. Not only verbal communication is an issue needing to be taken care of, but also nonverbal communication is a major concern. The act of making eye contact between individuals, for example, varies in terms of its occurrence, duration, and mode of execution. In some cultures, such as Asian and Native American, could be considered impolite or even disrespectful. Thus, women, who are more likely to be harassed and objectified in the workplace, may be advised to avoid eye contact for fear of being perceived as sexually interested and arrogant (Kellie et al., 2019). When critical objectives are not communicated effectively, communication issues, both verbal and nonverbal, have the potential to create significant organizational challenges, such as decreased teamwork and morale. Diversity initiatives must overcome obstacles such as misconceptions about different cultures and languages in order to pay dividends.

#### **Discrimination**

The more diverse a team becomes, the more common it is to observe an increase in discrimination and prejudice. As Stephanie has pointed out, *"ineffective management can lead to workplace discrimination based on age, race, gender, or sexual orientation."* Negative workplace attitudes and behaviors can prevent employees from expressing their true selves, stifling innovation, creativity, and collaboration. Such behaviors can also sever working relationships, lower morale, and reduce productivity, all of which can impede organizational diversity. Nick suggested that *this could be resolved by emphasizing the value of diversity and inclusion during recruitment, onboarding, and team meetings, as well as discussing any targets and progress.* It is of vital importance for everyone to understand the value of diversity and inclusion, as well as that no form of prejudice will be tolerated.

#### **Personnel losses**

It is common that some employees may feel so uncomfortable in a diverse workplace that they choose to resign rather than try to adapt. Businesses incur costs as a result of this behavior, whether labeled "bias," "racism," or other derogatory terms, because they must train new employees to replace those who have left. Alex believes that the old saying "sometimes you win, sometimes you lose" applies in that unfortunate case. He claims that *"while the prohibition of discrimination has improved the economy, adhering to ethical standards comes at a cost."*

### **Employees' Special Characteristics**

One of the topics discussed with the participants pertained to identifying traits that may present greater challenges in terms of their management. The viewpoints expressed by the interviewees exhibited significant divergence, as they debated the veracity of the aforementioned statement. The majority of them believe that all the characteristics could be equally distressing and intimidating in the absence of effective management

strategies. However, they acknowledged that certain issues may pose greater challenges in terms of management. Certain characteristics, such as religion, require consideration when managing a workforce that includes individuals of Muslim or Hebrew religions. This may include accommodating prayer times and dietary restrictions. Conversely, characteristics such as homosexuality do not necessitate special considerations in the workplace. Mike conflicts this viewpoint and asserts that the categories of gender and sexual orientation pose the greatest challenges to him. This is because individuals like him, who were brought up with a binary construct of gender, experience discord. On the contrary, according to John, *"there is no quality - and I use the term quality because all attributes of an individual can be qualities - that is greater than the other."* Effective management of a diverse workforce necessitates an egalitarian attitude and the capacity to adapt and communicate with each individual in a productive manner, taking into account their unique characteristics.

### ***Political Correctness in Greece***

The next matter debated with the participants was about managers weaponizing diversity merely to showcase political correctness, and whether they believed that this is a trend that will fade away. Answers varied for the first part of the question; none of the interviewees agreed with the second part. On the one hand, Chris stated that *"I agree that most companies use diversity management to signal political correctness which is why laws should be enforced to protect people. However, I don't agree with the second part; it won't fade away. HR is now more than ever tied with diversity."* On the other hand, George suggested that: *"Employers exercise diversity management as there is no other way to hire qualified human resources, especially during and in the aftermath of the COVID-19 crisis, when many employees switched career orientation due to financial reasons. So, do I believe that this is a trend that will fade away? No, since there is no alternative."* Another interesting viewpoint is that of Alicia's: *"I agree with the statement, but even if managers use it just to improve the firm's image, still, it's beneficial for the society and won't fade away"*.

### ***Motivation from the Greek state***

The next topic of discussion was the incentives businesses are given from the Greek state at the moment in order to consider diversity during recruitment and human resource management. There was a total homophony to this question, with all participants stating that there is absolutely no motivation from the government to do so. Nick mentioned that *"There is no motivation at all from the government at the moment, but I am inclined to believe that in the foreseeable future, some kind of progress will appear."*

### ***Reasons for Diversity Management Failures***

Some companies witnessed poor results when it comes to managing diversity, despite increased awareness of its potential benefits. Companies in the hotel industry may be able to manage diversity more effectively if they understand why similar efforts have failed. Past failures, according to the participants, may be traced to three primary causes: Discrimination, incompetent management and fear, and resistance to change.

#### **Discrimination**

Discrimination, as already indicated, may be observed with diversity, but it's also a symptom of diversity management failure. Irene suggests that: *"I'm not sure if all organizations and all individuals are ready or want to cope with diversity. Even today we experience discrimination in the workplace; managers in charge of organizations that theoretically consider diversity, will publish a job posting asking for young, blonde, good-looking females to be their secretaries. This is a major problem in Greece, some people still believe that this is the norm but all they do is harass and discriminate against people."*

#### **Incompetent management**

Many leaders wish to embrace diversity but lack the competence, persistence, and commitment required to implement the organizational transformation required to make diversity a reality. Mary stated that *"Managers often use as a counterargument to hire someone from a minority the fact that "they (cc: the non-diversified) are the ones that are good for the job, or these are the ones that will fit with the rest of the team" but the real case is that "I don't know how to manage this, and I am afraid of diversity". However, there are positions that do require specific skills, but generally I would say it's mostly fear and being ignorant on how to effectively manage a diverse workforce"*.

#### **Resistance to change**

Employee resistance to change is a prevalent challenge when it comes to executing diversity and inclusion projects. This might be because they believe no change is possible or because they perceive change as a threat to their status or power within the organization. According to Chris, *"Resistance to change is an issue that has to be discussed. All these years that I deal with diversity and its management, I have seen individuals not being fond of diversity, but most of them come from a specific group of people. I am talking about individuals who were white, middle aged, straight males, often in good paying positions, to even make fun of diversity."*

### ***Predictions for the “Greek Future”***

Participants were asked to consider the future regarding diversity in the workforce. All participants agreed that everything will change for the better as society progresses. John shared that: *“Things will change, and the norms will change, as society progresses, like many other norms that have now been displaced, with the help of regulations that will protect individuals from discrimination”*. Mary added that *“the more the time passes, the more we’ll experience protection of diversity becoming even more widespread in Europe. Greece is not going to mirror the American example yet, but slowly and gradually we will get there.”*

### **Discussion**

The findings of the study indicate that the perspectives recorded by the executives interviewed were in line with prior studies and were positive towards diversity management for businesses as a tool to achieve sustainable growth. Goel (2018) and Luu et al. (2019) have reported that workforce diversity has the potential to enhance creativity and innovation in the workplace, which is consistent with the results indicating increased productivity. Kim (2006) identified benefits that include enhanced decision-making, while Singal (2014) found that diversity management has a significant impact on an organization's economic growth, which both align with the aforementioned findings. Mok (2002) acknowledged a number of challenges that are associated with workforce diversity, including communication barriers and resistance to change. This finding is consistent with the broader literature on the subject, which also highlights the challenges that can arise in the context of workforce diversity when mismanaged.

This research has revealed useful insights that organizations operating in the Greek luxury hospitality context could consider. The study's findings suggest that businesses should foster policies that facilitate diversity and inclusion initiatives to build an organizational culture that ensures a safe and welcoming workplace for everyone. To fully reap all the benefits they sowed by implementing such protocols, businesses should provide their employees with opportunities to appreciate and embrace diversity through diversity training. Needless to say, organizations should always monitor and evaluate their programs to accommodate their employees' needs, evaluate performance and ensure that there is progress toward a more inclusive future. Even though certain characteristics may prove to be more challenging to manage than others, effective management requires deep knowledge and an egalitarian focus. Thus, managers must always remain adaptable and willing to interact with each individual differently, taking their background and unique features into consideration. However, diversity management programs could fail due to numerous reasons such as discrimination, incompetent management, and fear. Managers could take appropriate measures to resolve them, such as adhering to anti-discrimination laws, infusing a culture of acceptance, investing in constant training, and overcoming aversion to change. Companies shouldn't forget that diversity and inclusion management are in the interest of the societies they serve, and contribute to their role as responsible actors in the community.

### **Limitations & Future Research**

The main limitation of the study lies in the small sample size. Around seventeen professionals were reached to participate in this research, with eleven of them finally agreeing to participate. The other six didn't have the time to take part in this study, since this was a recruitment period, and thus very hectic for them. In addition, the study focused on a specific industry; that of the Greek luxury hospitality, so the findings of the study should be interpreted with caution and cannot be generalized in other industries. Further research is needed to explore diversity issues in other sectors of the economy. Future studies could also consider the consumer's perspective, investigating the importance of diversity for them, analyzing the characteristics of consumers who care about diversity, and determining the extent to which such consumers are willing to choose their accommodation considering the existence of diversity policies in the organization. Another interesting angle to explore could be the incorporation and management of diversity in smaller-scale family hotels that occupy a smaller number of employees. Finally, future research could examine how an organization deals with the challenges that could pose when implementing diversity and inclusion initiatives.

### **Conclusion**

A diverse workforce reflects a dynamically changing world and market. It contributes to the development of a workplace in which employees and customers from minorities feel welcome, safe, and included. Managing diversity requires more than merely recognizing individual different characteristics; It entails valuing these differences, addressing prejudice and bias, and promoting inclusion. This paper has examined workforce diversity and its contribution to sustainable growth in Greece's luxury hospitality industry, as well as the challenges faced related to it. To avoid any challenges posed by the adoption of diversity and

inclusion initiatives, organizations could foster a healthy culture of appreciation and respect that enables everyone to flourish and achieve their fullest potential. Looking forward, increasing awareness of the benefits of diversity and social sustainability point to a promising future in the hospitality industry. As Greek society progresses, norms surrounding diversity will shift, and more individuals and organizations are expected to recognize the importance of promoting diversity and inclusion. Utilizing workforce diversity, is not only a moral imperative, but also a means of achieving sustainable growth in today's globalized economy. Thus, embracing one's differences, equals to embracing diversity — which based on the research — could be a step towards evolution.

## Bibliography

- Bang, D., & Frith, C. D. (2017, August). Making better decisions in groups. *Royal Society Open Science*, 4(8), 170193. <https://doi.org/10.1098/rsos.170193>
- Bureau, U. C. (2022, June 10). *The Chance That Two People Chosen at Random Are of Different Race or Ethnicity Groups Has Increased Since 2010*. Census.gov. <https://www.census.gov/library/stories/2021/08/2020-united-states-population-more-racially-ethnically-diverse-than-2010.html>
- Bureau of Labor Statistics. (2014). Persons with a disability: Labor force characteristics.
- Cox, T. H., & Blake, S. (1991, March). Managing cultural diversity: implications for organizational competitiveness. *Academy of Management Perspectives*, 5(3), 45–56. <https://doi.org/10.5465/ame.1991.4274465DiTomaso>
- Tomaso, N., Post, C., & Parks-Yancy, R. (2007, August 1). Workforce Diversity and Inequality: Power, Status, and Numbers. *Annual Review of Sociology*, 33(1), 473–501. <https://doi.org/10.1146/annurev.soc.33.040406.131805>
- Gehrels, S., & Suleri, J. (2016, January 2). Diversity and inclusion as indicators of sustainable human resources management in the international hospitality industry. *Research in Hospitality Management*, 6(1), 61–67. <https://doi.org/10.2989/rhm.2016.6.1.8.1296>
- Goel. (2018). THE IMPACT OF WORKPLACE DIVERSITY–BENEFITS AND CHALLENGES. *International Journal of Research and Analytical Reviews*, 5(2), 2207–2209.
- Grobelna, A. (2015, September 1). Intercultural Challenges Facing the Hospitality Industry. Implications for Education and Hospitality Management. *Journal of Intercultural Management*, 7(3), 101–117. <https://doi.org/10.1515/joim-2015-0023>
- Hayat, K., & Walton, S. (2012, October). Delivering Equality and Diversity Training Within a University Setting Through Drama-Based Training. *Journal of Psychological Issues in Organizational Culture*, 3(3), 59–74. <https://doi.org/10.1002/jpoc.21061>
- Hilton, & Nassetta. (2013). *Diversity And Inclusion, Hilton Worldwide* [Video]. [Http://www.youtube.com/watch?v=IgauzKSoykk&hd=1](http://www.youtube.com/watch?v=IgauzKSoykk&hd=1)
- Hunt, V., Layton, D., & Prince, S. (2015). Diversity matters. McKinsey & Company, 1(1), 15-29.
- Hunt, Yee, Prince, & Dixon-Fyle. (2018, January 18). Delivering through diversity. McKinsey & Company.
- Ikkos, Rasouli, & INSETE . (2022). Απασχόληση και ελλείψεις εργατικού δυναμικού στα ελληνικά ξενοδοχεία στην αιχμή της θερινής σεζόν 2022. Insete Intelligence, 7. [https://insete.gr/wp-content/uploads/2023/03/23-03\\_Apasxolhsh\\_Eleipseis\\_2022.pdf](https://insete.gr/wp-content/uploads/2023/03/23-03_Apasxolhsh_Eleipseis_2022.pdf)
- Kellie, D. J., Blake, K. R., & Brooks, R. C. (2019, August 23). What drives female objectification? An investigation of appearance-based interpersonal perceptions and the objectification of women. *PLOS ONE*, 14(8), e0221388. <https://doi.org/10.1371/journal.pone.0221388>
- Kim, B. Y. (2006, August 7). Managing Workforce Diversity. *Journal of Human Resources in Hospitality & Tourism*, 5(2), 69–90. [https://doi.org/10.1300/j171v05n02\\_05](https://doi.org/10.1300/j171v05n02_05)
- Luu, T. T., Rowley, C., & Vo, T. T. (2019, February). Addressing employee diversity to foster their work engagement. *Journal of Business Research*, 95, 303–315. <https://doi.org/10.1016/j.jbusres.2018.08.017>
- Matzler, K., & Renzl, B. (2007, August). Assessing asymmetric effects in the formation of employee satisfaction. *Tourism Management*, 28(4), 1093–1103. <https://doi.org/10.1016/j.tourman.2006.07.009>
- Mok, C. (2002). Managing diversity in hospitality organizations. *Human resource management: International perspectives in hospitality and tourism*, 212-224.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017, October 2). Thematic Analysis. *International Journal of Qualitative Methods*, 16(1), 160940691773384. <https://doi.org/10.1177/1609406917733847>
- Roberge, M. L., & van Dick, R. (2010, December). Recognizing the benefits of diversity: When and how does diversity increase group performance? *Human Resource Management Review*, 20(4), 295–308. <https://doi.org/10.1016/j.hrmr.2009.09.002>
- Singal, M. (2014, July). The business case for diversity management in the hospitality industry. *International Journal of Hospitality Management*, 40, 10–19. <https://doi.org/10.1016/j.ijhm.2014.02.009>

*Travel & Tourism Economic Impact | World Travel & Tourism Council (WTTC)*. (n.d.). Travel & Tourism Economic Impact | World Travel & Tourism Council (WTTC). <https://wtcc.org/Research/Economic-Impact>

*Share of U.S. population 2016 and 2060, by race and Hispanic origin | Statista*. (n.d.). Statista. <https://www.statista.com/statistics/270272/percentage-of-us-population-by-ethnicities/>

Walker, J. R. (2021). *Introduction to hospitality*. United Kingdom: Pearson.

# **Integrating circular economy principles in the tourism and the hospitality industry: making suggestions for the Ionian Islands, Greece**

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## **Abstract**

Tourism has an important role to play in the Circular Economy transition, as the industry is deeply interlinked with, and dependent upon, multiple key resource flows, asset and commodity value chains in society. The present research examines the integration of Circular Economy principles in the hospitality industry.

At the beginning, the concept of sustainable tourism is introduced, and then the concept of Circular Economy is discussed in connection to sustainable tourism, with a specific focus on the hospitality industry. The paper then discusses the integration of Circular Economy principles to the hospitality industry in Greece, first by using Creta Maris Beach Resort as an example of good practice and, afterwards, by making suggestions –mostly from the perspectives of governance and technical practices– for the Region of Ionian Islands.

The theoretical discussion is based on literature review: on documents published by international organizations, and on independent researches. The presentation of the example of Creta Maris Beach Resort derives information from the company's website, while the discussion of the hospitality industry in the Region of Ionian Islands is based on in-situ observations.

It is suggested that integrating the Circular Economy vision for the tourism industry offers a pathway towards a sustainable and resilient tourism ecosystem. It is further noted that hotels can act as enablers of circularity and benefit from shared circular value creation and value capture within relevant value chains, especially nowadays that more resources are considered critical, and resource depletion is becoming more threatening.

The integration of circular economy principles in the hospitality industry in Greece let alone in the region of the Ionian Islands is a largely underexplored research topic; the contribution of the paper could be seen in this context. At the same time, a large number of hospitality professionals in Greece do not systematically integrate Circular Economy practices in their businesses and their everyday practices; the paper attempts to place the responsibility for changing the paradigm, as well as a part of the solution to the problem, in their hands.

***Keywords:** sustainable tourism, circular economy, hotel industry, Greece, Ionian Islands*

## **1. Sustainable Tourism**

The tourism sector is dependent on the environment. The environment is an attribute of the product offered, an input of tourism activity; at the same time, however, tourism has significant environmental impacts, and uses a wide range of natural resources. According to the World Tourism Organization (UNWTO and UNEP, 2005), sustainable tourism is **"tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities"**. Tourism has the potential to contribute to all 17 Sustainable Development Goals approved by the United Nations in 2005 to be achieved by 2030 (UNWTO, 2020). Sustainable tourism is often also referred as responsible tourism, which tends to put more emphasis on the responsibility of the tourism industry through a series of actions such as: generating greater economic benefits and enhancing the well-being of the host communities; improving working conditions; involving local people in decisions that affect their lives and life chances; making positive contributions to the safeguarding of natural and cultural heritage; providing access for physically challenged people; and encouraging respect between tourists and hosts. Responsible tourism also strives to minimize negative social, economic and environmental impacts ([Green Ideas for Tourism for Europe](#)). Sustainable tourism does not only provide socio-economic benefits for the host communities and does not only help towards the safeguarding of heritage, but also creates memorable tourist experiences (Poulios, Nastou, Kourgiannidis, 2015). Sustainable tourism, therefore, is about bringing tourists and local communities together for mutual benefit.



## **2. Linking Circular Economy to Sustainable Tourism and the Hospitality Industry**

### **2.1. Linear Economy**

There is only one planet Earth, yet by 2050 the world will be consuming as if there were three (United Nations, 2020). Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next forty years (OECD, 2018), while annual waste generation is projected to increase by 70% by 2050 (World Bank Group, 2018). Economic activity today is still based on a linear model of production and consumption: extract / produce and consume / throw, which exhausts natural resources and generates waste. This linear economy neither optimizes materials nor favours their recycling, reuse, and recovery. This economic model, known as take-make-use-dispose, is becoming unsustainable due to the spasmodic use of resources, generated by the growth of the population and the associated high level of consumption. This model assumes that there is an unlimited supply of natural resources and that the environment has an unlimited capacity to absorb waste and pollution. Regarding the tourism and the hospitality industry, the linear economy causes significant environmental and social negative impacts, and generates great pressure on local resources. According to the European Environment Agency, tourism is responsible for 6.8% of the waste generated in Europe and twice more garbage than a resident (Ellen MacArthur Foundation, 2019). The hospitality industry, together with the transportation one, represents the highest source of emissions and pollution in the tourism industry. Hotels, in particular, are one of the most energy-intensive building types due to their multi-usage functions and around-the-clock operations. The hotels, to respond to the pressing tourist demand, are forced to make a spasmodic use of resources, causing irreversible environmental damage that includes pollution, CO<sub>2</sub> emissions, high waste production, and depletion of resources. This linear consumption is believed to reach its limits in the foreseeable future (Ellen MacArthur Foundation, 2019) – a belief that originates from the fact that the amount of resources available for use declines and will continue to decline steadily over the following years and decades, leaving little to play with for future use (Mentink, 2014).

### **2.2. Circular Economy**

To minimize the aforementioned negative impacts on the tourism industry, it is critical to move towards a different tourism model. Not to overshoot the planet's ecological ceiling through the polluting linear practices, while at the same time ensuring that tourism remains an important economic and social driver. In this context, it seems necessary to find a more holistic model of production that eliminates planned obsolescence through the transformation of 'products' into 'systems', where the equation production cost—environmental damage—product price is optimized, generating environmental benefits, profitability for companies and low prices for consumers. In view of this, the Circular Economy concept arises, which aims at building a sustainable society through changing the current linear 'take, make, and dispose' economy to a closed-loop society where no waste exists (European Commission 2019).

The aim is to implement a new economy, circular and not linear, based on the principle of 'close the cycle of life' of products, services, waste, materials, water and energy, rethinking waste as new resources capable of being reused in the system.

Circular Economy, as a new economic model, has its origins in Environmental Economics, whose aim is the integration of science into sustainability and sustainable development (Andersen, 2007). The concept of Circular Economy has received increasing attention between policymakers and stakeholders worldwide. However, the literature on Circular Economy was mainly developed for the manufacturing sector, and only a few references are found on the tourism sector even though it is a sector where huge consumption of energy and water, food waste, congestion problems and CO<sub>2</sub> emissions take place. A definition: "A circular economy describes an economic system that is based on business models which replace the "end-of-life" concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operational at the micro level (products, companies, consumers), macro level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations" (Kirchherr, 2017). Circular economy is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. Circular economy practices are known to be governed by the "3Rs", namely Reduce, Reuse, and Recycle, which are the major strategies used for promoting the circulation of products and materials, thereby lowering waste and pollution, and aiding to regenerate nature.

Circular economy represents a strategic approach for the tourism sector, notably from the point of view of minimizing its environmental impacts, including waste and pollution as well as CO<sub>2</sub> emissions, given the potential of a circular economy to decouple economic growth from resource use. For the tourism destinations, circular economy offers the opportunity to enhance the sustainable development impacts of tourism, generating wellbeing for the local population through the creation of new jobs and more inclusive local value chains, thus creating a virtuous circle between businesses and territories. To the tourists, circular economy brings an opportunity to leave a positive footprint, to travel with purpose, and can lead to multiplier effects when it comes

to the transformation of the whole tourism ecosystem through behaviour change. EU's transition to a circular economy is expected to reduce the pressure on natural resources and create sustainable growth, is estimated to create around 700 000 new jobs by 2030 (Cambridge Econometrics, 2018) and is necessary to achieve EU's 2050 climate neutrality target and to halt biodiversity loss.

Moving away from the linear "take-make-use-dispose" model and transitioning to a regenerative growth model is essential to keep resource consumption within planetary boundaries. By using and consuming in a more circular way, the impacts of human economic activities on the environment, including on biodiversity, can be substantially reduced. To accelerate EU's transition to a circular economy, the European Commission adopted the new circular economy action plan in March 2020. The circular economy will help towards decoupling the economic growth from resource use, protecting Europe's natural resources while boosting sustainable growth. It will help EU to strive to reduce its consumption footprint and double its circular material use rate in the coming decade. The main goal of a Circular Economy is to regenerate stocks of natural, human and social capital through production and consumption models and strategies that can operate within social and planetary boundaries.

Regarding the tourism and the hospitality industry, hotels can act as enablers of circularity and benefit from shared circular value creation and value capture within relevant value chains, especially nowadays that more resources are being defined as critical, and resource depletion is getting more threatening (European Commission, 2019). On this basis, a series of initiatives have been proposed in the context of the Circular Economy to improve the environmental performance of hotels: the use of international standards, environmental certifications, sustainable labels, and international tourism guidelines, such as the example of the "circular hotels". The objective of the circular hotels is to create a closed-loop for the tourist experience. Circular hotels seek to modify their business plans, reviewing supply chains, and engaging stakeholders. Finally, they aim to destroy the conventional concept of waste, considering it as a source of other activities or products (Sganbati, Acampora, Martucci, 2021). Regarding waste generation, tourism plays an important role, not only because of the large number of tourists worldwide, but also because of the higher volume of waste per capita of tourists compared to the resident population. In this context, the extensive and transversal value chain of tourism offers numerous opportunities to think how can we make longer, better, more circular use of the materials and products that we utilize to deliver our service, creating value and partnerships, and bringing landfill waste as close to zero as possible.

### **3. Integrating Circular Economy Principles to the Hospitality Industry in Greece: The Example of Creta Maris Beach Resort**

An example of successful integration of Circular Economy principles in the hospitality industry implementing policies through strong supplier collaboration and lifecycle approach is Creta Maris Beach Resort (Greta Maris Sustainability Report, 2021). Creta Maris is a 5 Star all-inclusive resort for families and couples in the Hersonissos of Crete, which combines tradition, elegance, and authentic Cretan hospitality in a safe and sustainable environment, and is also equipped with an organic farm whose products are used in one of its themed restaurants. The annual Sustainable Development Report of Creta Maris outlines the responsible business practices as well as the results of the programmes implemented in the context of its Sustainable Development strategy for the financial year 2021, by incorporating Environmental, Social, and Governance criteria into its business philosophy. Some of the key Creta Maris' sustainable practices in the context of Circular Economy are the following:

- reduction of carbon footprint, thanks to the operation of a photovoltaic power system, the installation of electric vehicle charging station and the installation of panels for solar water heating.
- reducing water consumption through a drip irrigation system to improve water flow control, the use of licensed water boreholes, automated watering of hotel green areas at night (so as to avoid the morning sun, which causes water loss due to evaporation). Also, the 'Wash on Demand' policy regarding the hotel cleaning service for towels and sheets calls on guests to contribute to reducing water consumption.
- zero waste, by joining WWF's "Hotel Kitchen" programme, aimed at reducing food waste in the hotel sector and by monitoring food waste levels on a daily basis during the preparation, presentation and serving of the food. Furthermore, in support of the zero waste to landfill production system, organic waste from hotel kitchens is transferred to the Bioenergy Crete facilities and converted into biogas for power generation. Organic kitchen waste is transferred to resort gardens and, together with garden waste, are composted.
- reduce, reuse, recycling: reducing the use of plastic and paper, and replacing plastic straws and cups with paper products, disposable products at restaurants and bars with wooden products, plastic bottles at restaurants and bars with glass bottles; also by reducing paper consumption by removing most printed information (indicatively: welcome card, room menus, notes page and envelopes) and by creating electronic information programmes via television.
- sustainable hotel farming: cultivating through sustainable practices in its organic farm herbs, fruits and nuts, and vegetables.

- respecting the natural ecosystem: being awarded the “Costa Nostrum –Sustainable Beaches” certification.
- supporting the local market: collaborating with 22 local food & beverage producers, and implementing the “Sustainable Supplies–Initiative for a sustainable future” programme in collaboration with local food experts.

Creta Maris continues to invest steadily through its activities in order to assist and support the sustainable development of the local communities and to contribute to the domestic tourism product. It recognizes key urgent needs and emerging global needs. To this end, it has developed a personalised guide to building and implementing Sustainable Governance with a ‘think global – act local’ mindset and a 2030 horizon.

#### **4. Suggestions for Integrating Circular Economy Principles to the Hospitality Industry of the Region of Ionian Islands, Greece**

The importance of tourism sector for the region is reflected on the number of tourism accommodations and arrivals, compared to the region’ size in terms of population and land area. In the region 1,011 hotels operate, with 52,862 rooms and approximately 105,496 beds in 2022, compare to 10,087 hotels, 443,835 rooms and 885,624 beds respectively for the entire country (Hellenic Chamber of Hotels, 2022). The region represents 12% of the hotel bed capacity of Greece and it is considered as one of the most popular destination of the country.

**The region receives approximately 3 million visitors each tourist season.** Tourism in Ionian Islands has a positive impact on the economy of the local community, 77.00% of the GDP of the region is generated through tourism and booming tourism economy has kept per capita income up and unemployment down (Insete intelligence, 2019). Yet, tourism has significant environmental consequences as well. The rapid growth and investment in the hospitality industry in Ionian Islands, with operation of large resort hotel units, led to destination carrying capacity saturation, environmental degradation, climate change, overtourism and a number of other negative consequences for local communities. The production of pollution and waste from transportation, tourism, health, and commercial activities increases during the tourist season, while polluting emissions from transportation and facilities are also high in the region.

For this aforementioned reality to change, the hospitality industry of Ionian Islands needs to embrace sustainable tourism model by moving away from linear economy and towards Circular Economy. To this end, a series of practices, mostly from the perspective of governance, should be implemented such as:

- The hotel sector is a major consumer of resources and a generator of waste. Therefore, the regional government needs to support circular tourism and focus on defining circular strategies and designing circular certifications for hotel establishments. In addition, tourists have to be aware of the importance of this transition to a CE model. Awareness programs for tourists should be designed, and hotels should advertise their good environmental practices to their guests (Rontrigez, Florido, Jacob, 2020).
- The most impactful CE practices that hotels could implement fall under the responsibility of hotel owners and not hotel managers, as they require significant investment in the hotel infrastructure (e.g., solar panel installation, and recycling grey water).
- The destinations and businesses of the region are required to adapt their operation and work together to provide integrated sustainable experiences to travellers, protect the future of destinations and, of course, conform to a stricter regulatory framework. Reducing the environmental footprint, clean technologies, sustainable practices, supporting local communities, protecting the environment, developing alternative destinations, and managing flows are some of the priorities for all parties involved. Within this new context, region governments are urged to take action and implement policies in order to promote changes.
- Competitiveness and resilience are two closely related concepts and key pillars of the sustainability of Ionian Islands tourism. The improvement of destination management through effective policies and governance, exploiting digitalization with respect for biodiversity and nature conservation, in combination with innovation and the diversification of domestic products in order to achieve customized and individualized benefits, can contribute towards the resilience and competitiveness of hotel industry in all islands.
- The carrying capacity of domestic destinations and generation of negative externalities are acute, real challenges that need serious, level-headed considerations from all tourism industry stakeholders (UNWTO, 2019). Consequently, these discussions must sit at the top of the industry’s list of priorities for the municipal authorities in all Ionian Islands.
- To calculate the environmental footprint of tourism in the region, energy and water consumption, waste production, greenhouse gas emissions, and biodiversity loss need to be considered. **The preparation of environmental impact reports with the participation of relevant authorities, individuals, and residents** will help to form a comprehensive picture of the island's environmental condition and to take corresponding measures.

- **Education and information for tourists are equally important.** Tourists should learn about the environmental impacts of their travels and learn best practices for waste reduction, energy and water conservation, as well as the preservation of natural landscapes and biodiversity.
- The regional authorities can provide incentives and guidance to hotel industry to adopt more sustainable practices for managing pollution and waste and promote sustainable products and services for tourists.

On a more technical level, the following practices could be taken (these are broadly accepted practices but care of particular relevance to the needs of the specific region):

- Use of renewable energy sources such as photovoltaic power system, biogas, wind energy.
- Use of licensed water boreholes Reverse osmosis and filtration units.
- Implement drip irrigation systems to improve water flow control.
- Automated watering of hotel green areas at night so as to avoid the morning sun, which causes water loss due to evaporation.
- Implement ‘Wash on Demand’ policy regarding the hotel cleaning service for towels and sheets, calling on guests to contribute to reducing water consumption, through special signs.
- Check and maintenance the quality of water, wherever it is used (certification standards ISO).
- Manual or robotic cleaning of swimming pools to avoid frequent replacement of fresh water.
- Train personnel in water-saving techniques.
- Replace or install new energy recovery systems from air conditioning and ventilation of internal common areas, aiming at heating or cooling water for use.
- Replace of incandescent and economy light bulbs with LED light bulbs.
- Implement Building Energy Management System (BEMS), which controls the most important operating parameters in order to optimize operations and have better control over energy consumption Magnetic cards in all rooms, ensuring that all electrical appliances (except refrigerators) are turned off when guests leave their rooms.
- Replace or install energy efficient electrical equipment in all sectors, such as A+++ air-conditioning systems, refrigerators, computers, photocopiers.
- Establish procedures for the maintenance and proper cleaning of all energy installations.
- Measure and record food waste levels on a daily basis.
- Implement various food waste prevention strategies during the preparation and serving of the food.
- Natural composting is an inexpensive and effective way of reducing organic kitchen waste (food leftovers, paper towels, etc.) and garden waste (clippings, grass, etc.).
- Replace plastic straws and cups with paper products, disposable products at restaurants and bars with wooden products, plastic bottles at restaurants and bars with glass bottles.
- Recycle or reduce paper consumption by removing most printed information (indicatively: welcome card, room menus, notes page, envelopes, etc.) and creating electronic information programmes via television.
- Use environmentally friendly paper (FSC) for all the Resort’s printouts.
- Implement monitoring systems for direct and indirect greenhouse gas emissions and monitoring of the steady reduction of these emissions.

## 5. Conclusion

Integrating the Circular Economy vision for the tourism industry offers a pathway towards a sustainable and resilient tourism ecosystem. To this end, policymakers play a central role to foster the transition. A series of suggestions from the perspective of governance are outlined through a PESTEL Analysis as follows (Economic Commission for Europe, 2022):

- **On a political level**, the growing willingness of governmental bodies to move towards circular economy provides the needed context for environmental policymakers. For instance, the “EU taxonomy for sustainable activities”, established to meet the 2030 climate and energy targets of the EU, names “the transition to a circular economy” as one out of six key objectives (European Union Taxonomy,2020).
- **On an economic level**, the increasing scarcity of resources coupled with fluctuating commodity prices, provide strong incentives for companies to leverage CE principles for higher resource efficiency and higher value retention of materials.
- **On a social level**, the raising environmental awareness of society (especially tourists, employees, shareholders, and residents) creates pressures to move towards a more circular economic model. For instance, in the latest research study from Booking.com, 83% of tourists think sustainable travel is crucial and 49% mentioning that there are not enough sustainable travel options available(Booking.com, 2021).
- **On a technological level**, technological advancements have the potential to support the transition. For example, advancements in data-driven technologies (sensors, artificial intelligence) provide increasing

transparency for better circular decision making (e.g., by assessing lifetime values of materials) and for automation (e.g., making “closing the loop activities”).

- **On an environmental level**, climate change puts pressure on society and companies to act. On a legal level, efforts to establish a legal foundation is a key promoter.
- **On a legal level**, efforts to establish a legal foundation is a key promoter. While environmental policymaker can influence legislation, it is still an external factor. Successfully transitioning to a more sustainable and resilient tourism model through the application of circular economy principles will depend on active public private collaboration and partnerships, inter-governmental cooperation, effective policies and policy instruments, plans and projects.

The role of the hospitality industry is vital. Hotels can act as enablers of circularity and benefit from shared circular value creation and value capture within relevant value chains, especially nowadays that more resources are considered critical, and resource depletion is becoming more threatening (European Union, 2019).

This report presents a generic, conceptual vision for a resilient, sustainable tourism industry built upon Circular Economy (CE) principles. The road to circularity in hotels is still long, but many structures have already decided to follow it. The focus on this topic has increased in recent years due to climate change and environmental disasters caused by the tourism sector. For this reason, many international organizations and governments are aiming to introduce circular activities in the tourism and hospitality sector. Specifically, hotels must change their approach, as their actively contribute to resource depletion, pollution, and excessive consumption in tourist destinations.

However, circular hotels in Greece represent a research topic still underexplored because CE approach in tourism is still under development. Also, the academic literature and the absence of specific international standards about circularity within hotel business, force the players of the sector to improvise without regulatory references. The CE offers a compelling concept and set of tools to guide an innovative, resilient and sustainable tourism industry development that is fit for the 21st century. The compilation of a targeted development plan that will trigger a series of key structural changes and show the course of action for the future ought to be among the priorities of tourism stakeholders.

## **References**

- Andersen, M.S. (2007). *An introductory note on the environmental economics of the circular economy*. Sustainability science.
- Bank of Greece. (2020). Travel Services Report. Available online: <https://www.bankofgreece.gr/en/statistics/external-sector/balance-of-payments/travel-services>.
- Booking.com.(2021).<https://globalnews.booking.com/bookingcoms-2021-sustainable-travel-report-affirms-potential-watershed-moment-for-industry-and-consumers/>
- Cambridge Econometrics, Trinomics, and ICF. (2018), *Impacts of circular economy policies on the labour market*.
- Creta Maris Hotel. (2021). Sustainability Report, <https://www.cretamaris.gr>.
- Economic Commission. (2022). Committee on Environmental Policy Special session, *Applying principles of circular economy to sustainable tourism background thematic document.*, the Ninth Environment for Europe Ministerial Conference: Substantive thematic documents, Information paper No.3 5 May 2022, note by the secretariat Geneva.
- Ellen MacArthur Foundation. (2013). “Towards the Circular Economy. An economic and business rationale for an accelerated transition”. <https://www.ellenmacarthurfoundation.org/publications/towards-the-circular-economy-vol-1-an-economic-and-business-rationale-for-an-accelerated-transition>.
- Ellen MacArthur Foundation. (2019). *Towards the Circular economy, Opportunities for the Consumer Goods Sector*. Available online: <https://www.ellenmacarthurfoundation.org/> (accessed on 20 November 2019).
- European Environment Agency. (2010). *European Environment, State and Outlook*. EEA: Copenhagen, Denmark, 2010; ISBN 978-92-9213-155-5. Available online: <http://www.ab.gov.tr/files/ardb/evt/>

[lavrupa\\_birligi/16\\_raporlar/13\\_diger/environment/eea\\_2010the\\_european\\_environment\\_synthesis.pdf](#) (accessed on 9 January 2020).

- European Union. (2022). *Culture and Creativity, Sustainable cultural tourism*, <https://www.culture.ec.europa.eu/cultural-heritage>.
- European Commission. (2019). *Report on Critical Raw Materials for the EU*. Available online: [https://ec.europa.eu/info/index\\_en](https://ec.europa.eu/info/index_en) (accessed on 15 November 2019).
- European Union. (2018). European Regional Development Fund, *Sustainable tourism: an opportunity for regions to benefit from their cultural and natural heritage*.
- European Union Taxonomy. (2020). [https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities\\_en](https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en).
- *Green Ideas for Tourism for Europe*. (2015). *Sustainable Tourism, agreement n. 2015-1-BG01-KA202-014314, Erasmus+ project*. <http://www.greentourism.eu>.
- Green Industry Platform Why Sustainable Tourism Matters, <https://www.greenindustryplatform.org/blog/why-sustainable-tourism-matters>.
- Hellenic Statistical Authority. (2022). *Population and Social Conditions*, Greece.
- Hellenic Chamber of Hotels (2022). *Hotel Dynamic of Greece-Announcement*, Athens, Greece. Available online: [https://www.grhotels.gr/app/uploads/2023/01/01\\_Hotels\\_2022\\_Total.pdf](https://www.grhotels.gr/app/uploads/2023/01/01_Hotels_2022_Total.pdf).
- Kirchherr, J.; Reike, D.; Hekkert, M. (2017). *Conceptualizing the circular economy: An analysis of 114 definitions*. *Resources, Conservation, Recycling*. 127, 221–232, review.
- Mentink, B. (2014). *Circular Business Model Innovation: A Process Framework and a Tool for Business Model Innovation in a Circular Economy*. Delft University of Technology: Delft, The Netherlands.
- Insete Intelligence. (2021). *Tourism in 2040. The prevailing trends that will shape the path of tourism, executive summary*.
- Insete. (2021). *Greek Tourism Action Plans 2030*, executive summary.
- Newton, Adrian C. (2015). *Defining the green economy and the potential role of green tourism*. In *Tourism in the Green Economy*. Edited by Maharaj Vijay Reddy and Keith Wilkes. London and New York: Routledge.
- Organization for Economic Co-operation and Development, OECD. (2018). *Global Material Resources Outlook to 2060*.
- Poullos I., Nastou D. & Kourgiannidis E. (2015). *Bridging the Distance between Heritage Conservation and Business Management: Heritage as a Customer 'Experience' – A Case Study of the Acropolis Museum in Athens*. In: N. Karachalis & I. Poullos (eds.), *Athens, Modern Capital and Historic City: Challenges for Heritage Management at Times of Crisis*, PHAROS (Netherlands Institute of Athens), XXI.1, 97–122. Open access: [https://poj.peeters-leuven.be/content.php?url=article.php&id=3146865&journal\\_code=PHA](https://poj.peeters-leuven.be/content.php?url=article.php&id=3146865&journal_code=PHA)
- Rontrigez C., Florido C., Jacob M. (2020). *Circular Economy Contributions to the Tourism Sector: A Critical Literature Review Sustainability*, <https://doi.org/10.3390/su12114338>.
- Sana I. Pirani and Hassan A. Arafat. (2014). “*Solid waste management in the hospitality industry: A review*”, *Journal of Environmental Management*, vol. 146 (December 2014).
- Sgambati M, Acampora A., Martucci O, Lucchetti M. (2021). *The Integration of Circular Economy in the Tourism Industry: A Framework for the Implementation of Circular Hotels*, Roma Tre University, Italy, USF M3 Publishing.
- World Tourism Organization, UNWTO. (2020). *International Tourism Highlights*, 2020 edition.
- UNWTO. (2020). *Integrating Circular Economy Principles in Tourism*.

- UNWTO. (2020). “*Global and regional tourism performance*”. <https://www.unwto.org/global-and-regional-tourism-performance>.
- UNWTO. (2020). *Circular Economy in Travel and Tourism*.
- UNWTO. (2020). World Tourism Organization. *Tourism and the Sustainable Development Goals*. Available online: <https://www.unwto.org/> (accessed on 13 January 2020).
- UNWTO. (2019). *Increasing the Circularity of Hotel Textiles*, Denmark.
- UNWTO. (2019). *Baseline Report on the Integration of Sustainable Consumption and Production Patterns into Tourism Policies*. Madrid: World Tourism Organization.
- UNWTO and UNEP. (2005). *Making Tourism More Sustainable - A Guide for Policy Makers*, <http://www.unep.fr/shared/publications/pdf/DTIx0592xPA-TourismPolicyEN.pdf>.
- United Nations. (2021). Environment Programme, <https://www.unep.org/circularity>.
- United Nations (2021). Economic and Social Council Economic Commission for Europe, Committee on Environmental Policy, *Draft assessment of applying principles of circular economy to sustainable tourism in the pan-European region*, Eighteenth session, October 2021, Geneva.
- United Nations. (2020). <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>
- World Bank Group. (2018). *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*.

## Management of Online Comments and Reputation in Hotels in Greece

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### **Abstract:**

Online Reputation Management is an emerging topic that helps to create tools and methods and address challenges that arise through the social media and the businesses that are involved. The role of e-WOM (Worth of Mouth) on e-Reputation is something considered a new challenge. WOM is defined as the exchange of marketing information between consumers in such a way that it plays a fundamental role in shaping their behaviour and in alternating attitudes toward products and services (Huete-Alcocer, 2017). Today, due to the growth of electronic platforms, e-WOM is growing at a high rate. This form of communication has taken on special importance with the emergence of online platforms, which have made it one of the most influential information sources on the Web (Abubakar and Ilkan, 2016), for instance, in the tourism industry (Sotiriadis and Van Zyl, 2013).

The paper presents the results of a survey conducted in early 2023 concerning the effect of travellers' comments and reviews on hotels in Greece and the reputation management, on the hotel side. Key research objectives were to investigate, how important are for the hotels the traveller's reviews and if negative reviews affect future bookings. Who manages/responds to reviews, and how they react to positive or negative reviews. And also, if there is a policy followed by the hotel regarding online reputation management and how the hotels assess the skills of the online reputation and comments/reviews manager.

In more detail the research hypotheses in relation to online reputation management through e-WOM, was four. Q1: Do managers understand the risk of negative feedback and its impact on their business? Q2: Is there knowledge, information, training, strategic planning and investment for Reputation and Communication Crises in hotels? Q3: How can bad/good Reputation Management affect their business? Q4: Do they understand the importance and value of the correct use of the new networking media and communication channels? These questions were related to characteristics of the hotel, such as size, category, occupancy, and seasonality.

In the survey participated mainly small hotel, showing (probably) the hesitancy of large hotels to provide information on the specific topic. Consequently, the results of the research concern mainly small hotel companies with a capacity of up to 100 beds. However, the survey showed that the majority look at customer feedback and only 10% do not collect customer feedback data, while 80% of hotels monitor, among other sources, the comments on TripAdvisor.

About 70% of hotels respond to positive comments, while in negative comments the response and communication with the customer is greater at a rate of 75%. But half of the hotels who took part in the survey do not have a specific complain management policy and almost half of hotels do not invest in staff training to deal with reviews and online reputation.

Concluding, the survey showed that there is generally a high interest of hotel-managers for the online reviews of their hotel customers in Greece. But the level of knowledge in dealing with comments and especially negative comments is low. The survey also showed that this field is relatively new, and most hotels are not well prepared in reputation management, but at the same time these recognize its great importance for the hotel efficiency.

**Keywords:** *e-WOM, e-Reputation, Reviews, Hotel, Greece,*



# **International Business**

## **Reshoring and the decision-making process: case study of European MNEs**

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*"Quietly, France has deindustrialized, it has pushed the offshoring of its value chains to the limit. It is difficult, even in a war economy, to mobilize non-existent capacity and evaporated know-how."* - French economist Philippe Aghion lamenting the excessive "deindustrialization, offshoring, extended value chains," in his country, in an op-ed for Les Echos (cited by Hanke Vela 2020, in Politico).

Offshoring - the trend of MNEs supporting their operations by locating internationally, has come to represent one of the most considerable actions executed by firms worldwide over the last 50 years. Indeed, firms have outsourced their internal activities in order to exploit location advantages (Dunning 1998) and seek better firm performance (Wagner, 2011) by situating their operations in a range of global locations (Jain et al., 2016). The extensive literature on offshoring reflects the importance of this topic as an area of academic inquiry (see Mihalache & Mihalache, 2016).

The off-shoring phenomenon has significantly modified international production chains and has compelled firms to consider whether the benefits of foreign operations outweigh their costs. Increasingly issues such as rising costs of labor and production, quality of the goods produced, cultural distance issues and geopolitical risks among others, have sought to motivate firms to consider reshoring their operations back home in order to also take advantage of the proximity to the end consumers as well as and home government incentives (Fratocchi et al. 2016, Wiesmann et al. 2017). In recent years, market leaders have initiated a re-examination of their offshoring and outsourcing decisions and in some cases have sought to reshore or relocate their value creation activities from their offshore locations to geographically proxemic locations such as the home country or nearshore countries (Martínez-Mora & Merino, 2014; Foerstl et al.). "*Reshoring* is defined as the relocation of value creation tasks from offshore locations to geographically closer locations such as domestic or nearshore countries" (Foerstl et al. 2016, p. 495). This definition implies that companies can decide between "backshoring", which describes the shift back to the company's home country, and "nearshoring", which refers to the shift to a region in proximity to the firm's home country, but not to the home country itself (Di Mauro et al. 2018)

In a recent survey, by Buck Consultants International (BCI) sixty per cent of European and US firms were looking over the next three years to reshore some of their production activities from Asia back to Europe or the US (Supply Chain Movement, 2022). Supply chain disruptions related to Covid-19, including a shortage of products and components when needed, and increasing cost of ocean freight, have compelled many companies to reconsider their manufacturing operation in Asia. According to the survey it is issues of agility and flexibility that are now the driving force behind value chains and it is less about low-cost locations (Supply Chain Movement, 2022). The topicality of the reshoring phenomenon and its relevance for the economics of firms engaging in international business cannot be ignored, as pointed out Patrick Haex, Partner from Global Supply Chain Solutions at BCI, "the results clearly show that reshoring is a hot topic on the agenda in the boardrooms of international companies" (Supply Chain Movement, 2022).

It is not just about the economic, the increasing political ramifications of offshoring and reshoring cannot also be ignored. The growing nationalistic tendencies among politicians (Delis et al. 2019), including a "policy-driven de-globalisation agenda such as Brexit, a "US First" policy agenda with regards to trade such as the *Advanced Manufacturing National Program (AMPSC)* (Dachs et al. 2019) are all indicative of a growing rhetoric among politicians of the need to temper and restrict the unabated growth in globalization and the outsourcing phenomenon. In a similar vein as the Covid-19 crisis deepened in Europe, the EU's Internal Market Commissioner Thierry Breton suggested that Europe may have gone "too far in globalization" and had become overly reliant on "one country, one continent." German Chancellor Angela Merkel argued that the pandemic

revealed the need for a "certain sovereignty here" which required a "pillar of domestic production" (Hanke Vela, 2020)

Literature in “the field of reshoring is still emerging” (Wiesmann et al. 2017, p. 21) and “reliable coverage on reshoring remains at its infancy” (Wiesmann et al., 2017, p. 16). Research has mainly focused on the “why” perspective investigating push and pull motivations and drivers for reshoring (Wiesman et al. 2017), whereas the question of “how” the decision to reshore comes about as part of a decision-making process has not been researched extensively. As pointed out by Wiesmann et al. (2017) the “decision-making processes with regard to reshoring generally appear to be under researched.” In addressing this lacuna, this study sought to investigate through a qualitative multiple case study of European firms, their reshoring decision-making process, by addressing the following research question: *How does the decision-making process for reshoring unfold?* This study tracked a range of firm executives from when they first considered the reshoring option to its ultimate execution, which proved to be very insightful (Rasel et. al 2020) in better informing our understanding of the reshoring phenomenon.

**Theoretical Underpinning of the Study.**

This paper addresses our research question by adopting Buckley and Casson’s (1976) Internalisation Theory as the theoretical lens for the study, by especially focusing on the decision-making process of European multinational firms looking to reshore their operations back to their home country. Internalisation theory draws upon three axioms by which to investigate the establishment of overseas operations; firms look to maximise profits in a world of imperfect markets; they look to bypass imperfect markets by internalising operations within the firm and this then enables the establishment of the MNE across national boundaries (Buckley & Casson 1976). In the case of this paper Internalisation theory is used to explain the reshoring phenomenon and not the initial off-shoring decision that created the MNE. Internalisation theory is based on the concept of rational action modelling (Buckley & Casson 2009). It presumes that agents, in this case firm executives, act rationally and look to internalise markets once the anticipated profits surpass the estimated costs (Buckley & Casson 2009). This means that profit-oriented executives “will internalise intermediate product markets up to the margin where the benefits and costs of internalisation are equalised. Within this margin, firms will derive an economic rent from their exploitation of the internalisation option, equal to the excess of the benefit over the cost” (Buckley & Casson 2009).

With respect to internalisation theory, rationality means that the individual that makes a decision is able to determine a range of alternatives, and arrange them in order of priority, define the number one option and choose it, provided that this decision-maker pursues a target which supports that process. It is important to clarify that rationality is not characterised by complete information, in the case of this study, decision-makers gathered as much information as possible around the reshoring option for the potential benefits to outweigh the costs but always cognisant that failure is within the realm of possibility (Buckley & Casson 2009).

**Reshoring decision-making and implementation process**

Bals *et al.* (2016) provide an overview and synthesis of already existing research frameworks concerning decision-making (McIvor 2010; Handley 2012) and implementation (Jensen *et al.* 2013) processes of multinational firms. As shown in *Fig. 1*, the decision-making process is divided into five stages, which are characterized by the specification of the present boundary of the company, the investigation of the firm’s present-day performance capacity, the collection of data regarding alternatives data evaluation and the establishment of solutions and finally the shoring sourcing decision. The implementation process is sectioned into three phases, which are represented by the disengagement from the prior location, the change of location and the resettlement in order to integrate into further value-added operations (Barbieri *et al.* 2018, Bals *et al.* 2016)

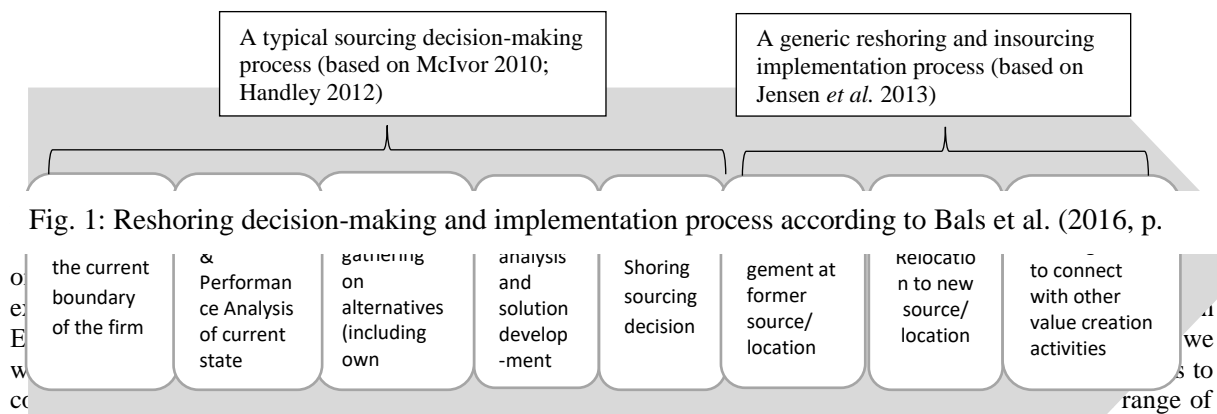


Fig. 1: Reshoring decision-making and implementation process according to Bals et al. (2016, p.

industries and countries, and within the firms, interviews were conducted with only those directly involved in the reshoring process, for example, owners and managers of the firm. Eight cases were selected for in-depth interviews to ensure reasonable sampling and therewith strengthen the informational richness of the data to be collected.

The eight cases chosen were: Case A: Austria/ Energy; Case B: Austria/ Information technology; Case C: Norway/ Construction; Case D: Germany/ Electronics; Case E: Poland/ Electronics; Case F: Finland/ Transport; Case G: Italy/ Information technology; Case H: Austria/ Electrical engineering. Interviewees had given consent to being interviewed and their identity remained anonymous. Guided interviews underpinned by a schedule of open questions (Gläser & Laudel 2009) were conducted and recorded via Skype and Zoom. The recorded interviews, were subsequently transcribed.

The data were analyzed through content analysis involving data identification, coding, and categorization of primary thematic patterns from the interview data (Tharenou et al., 2007). Coding was classified into First Cycle and Second Cycle coding (Saldaña, 2013). The data from the interviews were arranged into single data chunks paragraph by paragraph and therewith the data was investigated. First order cycle codes were determined and allotted to the data chunks and where required this process continued to second order cycle codes and the creation of third order aggregate dimensions. Furthermore, process coding – through the use of “action coding”, using gerunds (“-ing” words) to connote “action in the data” (Saldaña 2013) was used to structure the visual representation of the single decision-making processes generated through interview data.

**Findings**

The findings from our within-case analysis discussed in this section reveal the different phases of the decision-making process undertaken by firms’ reshoring their operations. Two of the cases (A and C) are highlighted below through a brief description of the motives behind the reshoring decision and via visual table presentation of the phases of the decision-making process and the various triggers that impacted them.

**Case A** is headquartered in Austria and operates in the energy industry with facilities in Belgium and the USA, whereby the location in Belgium assumes distribution activities and the site in America undertakes assembling operations. In the year 2017 the company offshored the production of an essential product component to China due to cost and technology availability factors. The main motive for the relocation decision from China back to Austria was the firm wanted to gain control over the manufacturing and quality of its final products and to achieve independence from the external Chinese supplier. The relocation back to Austria saw the firm increase manufacturing volume, local jobs and reduce shipping times for European customers.

The reshoring decision-making process involved four individuals, the two CEOs and the two owners of the company. All decisions constituted group decisions and in addition an external expert, (an academic researching reshoring) was consulted. The decision-making process was represented by a mixture of rational and intuitive or emotional decisions. Figure 2 depicts the process and the various triggers that underpin the various phases over the five months it took to reach the final decision to re-shore.

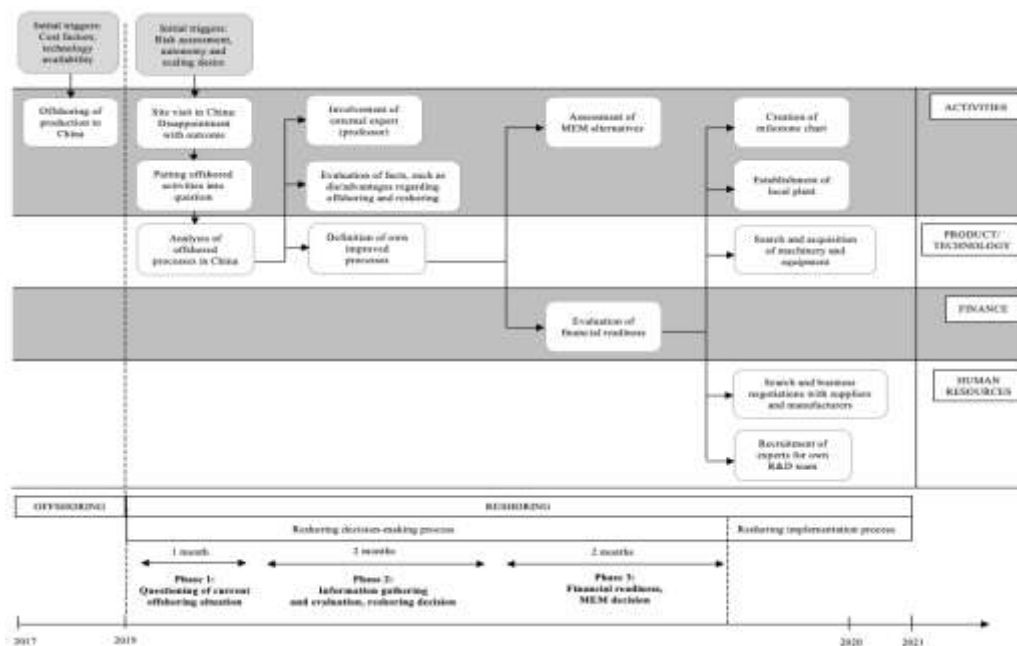


Figure 2: Decision-making process flowchart of Case A

**Case C** is a Norwegian based company that operates in the construction sector. Twenty years ago, the firm offshored the manufacturing of its products to a third-party producer in Poland, to take advantage of cost savings. In 2016 the Norwegian company decided to reshore the previously offshored product manufacturing back to Norway, by establishing a new production facility. The reshoring decision was based on the loss of cost advantages in Poland and customer demand for environment-friendly products. The reshoring decision-making process, was undertaken by the board of directors, the management group, the steering committee and the project group and where disagreement, arose the final decision was still assumed by the firm’s CEO. Ten consultants with specialised competences and know-how were hired by the firm to support the reshoring decision making process which across its different phases took 12 months (see Figure 3).

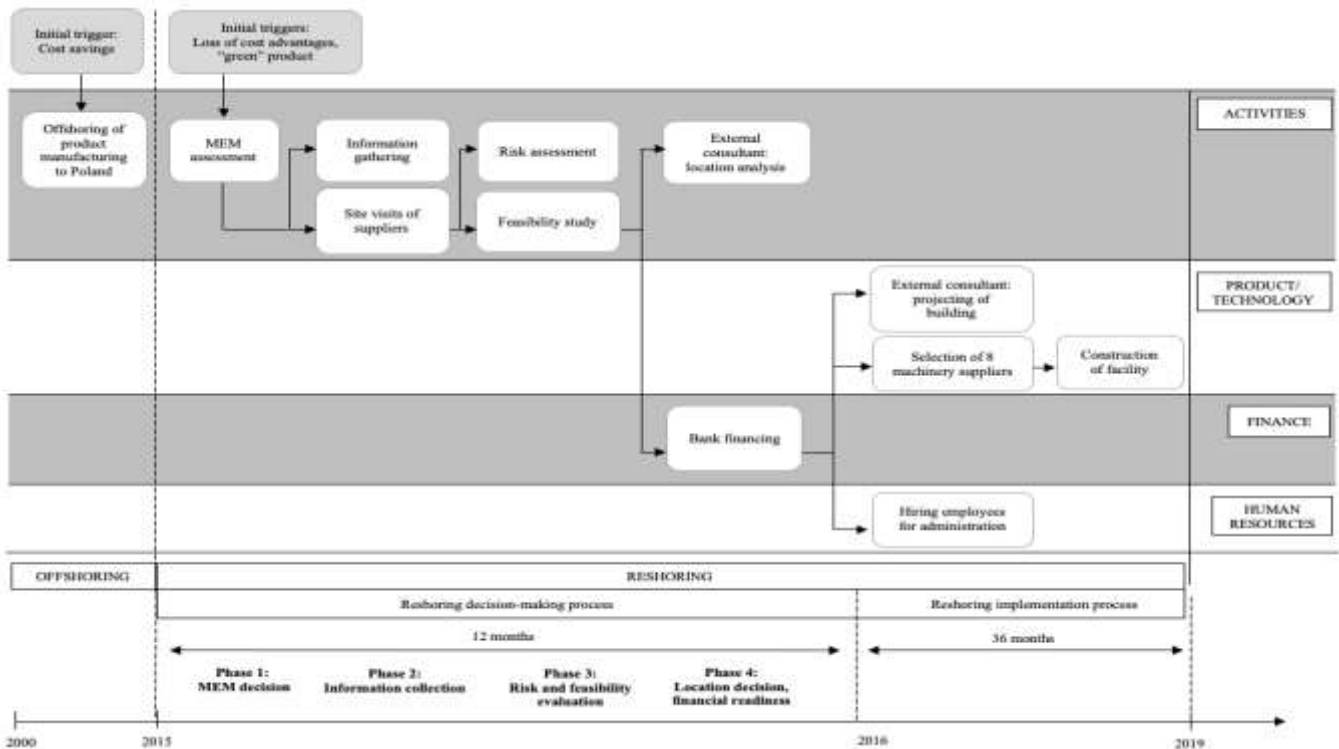


Figure 3: Process flowchart of Case C

On the basis of the within case analysis, we subsequently developed a cross-case analysis, and found consensus among the firms that the decision to reshore was a positive one and a good decision which had a number of advantages including working with shorter lead times, better control of CO<sub>2</sub> emissions and environmental concerns. We also found that four factors were influential in the actual process of decision-making with regards to reshoring, these being *group decision*, *rationality and intuition*, *external expert support* and *offshoring and reshoring process similarity*. Each factor is subsequently discussed with a sample of key quotes from the case interviews that underpin the identified factor.

**Group decision**

Consensus existed among all the eight cases that decisions regarding the reshoring process constitute group decisions in which several individuals are involved. Interviewee A1 from Austria confirms this view by stating that the two CEOs as well as the two owners always make these decisions together, because each of them contributes different strengths:

*“It’s always the four of us. There is none who is the “big boss” and who decides everything, it is a topic for the four of us and each of us contributes focus, strengths and weaknesses and then decisions are made out of it.”* (Interviewee A1)

In addition, Interviewee C1 from Norway explains that group consensus dominates within the firm, but he as the CEO of the company has to take the final decision in case of disagreements, which account for 10 to 20% of total decisions:

*“In Norway, there is always somebody... who is in charge, you know, so as the Managing Director I had the final call, but, ...in ... normal it’s the Manager or CEO, and group decision.... in Norway that would be mostly, sort of, group consensus, but there will be, maybe 20% of the time or something, or maybe a*

*little bit less, 10 to 20% of the time there will be different opinions, and then of course, I had to make the decision. That's life.*" (Interviewee C1)

Interviewee G1 from Italy indicated that three founders of the firm participated in the decision-making process and reached an agreement with respect to the reshoring:

*"Yes, it was more like a group decision, we agree with each other, the other founders, one is the CEO of the company, but is not directly interacting with the developers, so I was the one who was mainly interacting with all this entire thing about India,... At the end it was a shared decision we agreed upon."* (Interviewee G1)

### **Rationality and intuition**

All cases were also in agreement that decisions regarding reshoring are characterized by rationality, but a number of cases also felt that intuition has a role to play. For Interviewee E1:

*"Rational, it's business, we are rational people. We just calculate what is most beneficial in terms of costs and profits, period. I mean, it's not romantic novel, it's just how to earn money and how to be competitive on the market."* (Interviewee E1)

On the other hand, there are managers that support the idea of deciding by means of a mixture of initial intuition, Interviewee D1 from Germany points out:

*"We do not take intuitive decisions, or more precisely, at the beginning every decision is intuitive and then you have to empirically prove it, yes, and we then calculated."* (Interviewee D1)

Moreover, Interviewee B2 from Austria reports that a mixture of intuition and rationality works quite well, because generally decisions are taken rationally, but with growing business experience intuition becomes an increasingly important partner:

*"... it is a mixture of both. I try to take my decisions rationally, but if you have been working some time in business, you also rely upon your gut feeling, or rather upon the experiences you have made. It usually works fairly well, the mixture."* (Interviewee B2)

### **External expert support**

External expert support was identified in two cases. External consultants played a very important role in the reshoring decision-making process. Interviewee A1 from Austria states that the company consulted a professor who already accompanied other reshoring projects:

*"We consulted an external expert, professor [name], who implemented such projects and based on the actual facts, I think three months later, we decided together that we ourselves would like to put this topic into practice and we would like to reshore (Interviewee A1)"*

Furthermore, Interviewee C1 from Norway revealed the firm hired up to 10 consultants during the whole reshoring process, each of them specialist in different business areas. This was due to the fact that the Norwegian company did not have this expertise itself:

*"... maybe I think up to 10 consultants, I guess, were working for us during that project with different things, you know, specialist for that, ... so yeah we had to take in specialised competence to do that, because we didn't have that competence ourselves."* (Interviewee C1)

### **Offshoring and reshoring process similarity**

Interviewees were also asked whether the offshoring and the reshoring process resemble each other, different opinions emerged. Interviewee A1 from Austria is opined that the same set of questions were asked during the two processes and therewith the processes resemble each other:

*"I feel like in general the same questions are asked, yes, and depending on the situation you decide like this or like that."* (Interviewee A1)

In contrast, Interviewee E1 from Poland says that the two processes do not resemble each other, since offshoring includes accepting uncertainties, whereas reshoring is associated with knowing the place you relocate to in terms of possibilities and capabilities:

*"...when you're offshoring a lot of times, it means going into the new place and making something happen in the new place... so there are a lot of issues..., you don't know the local situation over there.... And reshoring it means just cleaning the mess most of the time... reshoring, you just you know your own place,...I know the possibilities and capabilities of our company in Poland... Reshoring means that you are going back to the place you know. That's the difference, right."* (Interviewee E1)

### **Discussion and Contribution**

Consensus exists among the eight cases in terms of evaluating the reshoring decision as a positive and good decision. The reshoring decision had many advantages, especially regarding lead times, CO<sub>2</sub> emissions and environmental aspects. The market demands on the part of the customers, show a recent move towards more environment-friendly and socially responsible companies, which should compel firms to re-examine their

strategy and objectives. Reshoring company activities might help to stay competitive in this regard, since younger consumers pay more and more attention to environmental factors when they buy products

What is clear from the findings of this study, is that there is no standard decision-making process of reshoring. Each of the European MNEs had initially different offshoring experiences, and differing reshoring motives and decision-making processes. Thus, it is difficult to draw generalisations about the decision-making process around the reshoring phenomenon. What is however evident from the study's finding is a move by firms towards the internalisation of company activities through reshoring regardless of the type of offshoring activity the firms initially engaged in. It seems that companies are keen to take back control of their operations, a finding in line with the investigations by Wan *et al.* (2019b).

What this study also found is that in essence how firm decision making unfolds with regards to the reshoring process confirms the existing frameworks proposed by McIvor (2010) and Handley (2012) and highlighted in Figure 1 above. There is some variation in terms of the nuance and what is considered in the decision making process around reshoring but fundamentally what we found is that the decision revolves around a number of phases – what is the current state of play with regards to the outsourced operations in terms of performance, the need to gather and evaluate more information to inform the final decision and finally the need to make a decision with regards to the future of the outsourced operation and its location, whether it will stay put or look to relocate by reshoring. We found this decision-making process can take anything from a few months to at least a year before a final decision is made. What our findings also revealed is that the decision to re-shore is a group decision. A number of factors are likely to explain this, including the high degree of complexity surrounding such a decision which may potentially result in an internalization of operations within the firm and the need for a diffusion of responsibility by senior management so that one individual is not held solely responsible.

The study also highlighted that most interviewees experienced that the reshoring decision-making process is one based on rational decision-making process but at times intuition can also influence the decision, aligning with similar findings by Boffelli *et al.* (2020). What this study also revealed was the importance some firms placed on the use of expert advice in helping them reach a decision which we feel has significant implications for practice. As reshoring represents a complex process for which the multinational firms may lack the appropriate expertise, the use of consultants may help firms streamline and simplify the reshoring process.

Also revelatory in the study were the differences found in consideration of the decision to offshore operations compared to reshoring. Offshoring required different factors to be considered as firms were heading into uncertainty and the 'unknown' compared to reshoring which was associated with knowing the place of relocation (often home) its capabilities and potential. This greater certainty coupled with a post Corona pandemic reflection, about the security of essential supplies and the need for uninterrupted supply chains, suggests that firms will continue to seriously consider the feasibility of relocating operations back to the home country.

## References

- Bals, L., Kirchoff, J. F., & Foerstl, K. 2016. Exploring the Reshoring and Insourcing Decision Making Process: Toward an Agenda for Future Research. *Operations Management Research*, 9(3-4), 102-116.
- Barbieri, P., Ciabuschi, F., Fratocchi, L., & Vignoli, M. 2018. What do we know about manufacturing reshoring? *Journal of Global Operations and Strategic Sourcing*, 11(1), 79-122.
- Basias, N., & Pollalis, Y. 2018. Quantitative and Qualitative Research in Business & Technology: Justifying a Suitable Research Methodology. *Review of Integrative Business and Economics Research*, 7(1), 91-105.
- Boffelli, A., Golini R., Guido Orzes G., Dotti S. (2020) "Open the box: A behavioural perspective on the reshoring decision-making and implementation process. *Journal of Purchasing and Supply Management* Vol 26, Iss 3
- Buckley, P. J. & Casson, M. C. 1976. *The Future of the Multinational Enterprise*. London: Macmillan Press Ltd
- Dachs, B., Kinkel, S., & Jäger, A. 2019. Bringing it all back home? Backshoring of manufacturing activities and the adoption of Industry 4.0 technologies. *Journal of World Business*, 54(6), 1-15.
- Delis, A., Driffield, N., & Temouri, Y. 2019. The global recession and the shift to re-shoring: Myth or reality? *Journal of Business Research*, 103, 632-643.
- Di Mauro, C., Fratocchi, L., Orzes, G., & Sartor, M. 2018. Offshoring and backshoring: A multiple case study analysis. *Journal of Purchasing and Supply Management*, 24(2), 108-134.
- Dunning, J.H 1998 Location and the multinational enterprise: a neglected factor. *Journal of International Business Studies*, 29 (1), 45-66

- Foerstl, K., Kirchoff, J. F., & Bals, L. 2016. Reshoring and Insourcing: Drivers and Future Research Directions. *International Journal of Physical Distribution and Logistics Management*, 46(5), 492-515.
- Fratocchi, L., Di Mauro, C., Barbieri, P., Nassimbeni, G., & Zanoni, A. 2014. When manufacturing moves back: Concepts and questions. *Journal of Purchasing and Supply Management*, 20(1), 54-59.
- Gläser, J., & Laudel, G. 2009. *Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen*. 3<sup>rd</sup> edition. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Handley, S. M. 2012. The perilous effects of capability loss on outsourcing management and performance. *Journal of Operations Management*, 30(1-2), 152-165.
- Hanke Vela, J. 2020. "Coronavirus won't kill globalization but will clip its wings" in Politico April 7, 2020, <https://www.politico.eu/article/coronavirus-wont-kill-globalization-but-will-clip-its-wings/> Accessed 12/02/21
- Jain, N., Kothari, T., & Kumar, V. 2016. Location choice research: Proposing new agenda. *Management International Review*, 56(3), 303-324
- Jensen, P. D. Ø., Larsen, M. M., & Pedersen, T. 2013. The organizational design of offshoring: Taking stock and moving forward. *Journal of International Management*, 19(4), 315-323.
- Pan, Y., & Tse, D. 2000. The Hierarchical Model of Market Entry Modes. *Journal of International Business Studies* 31, 535–554.
- McIvor, R. 2010. *Global services outsourcing*. Cambridge: Cambridge University Press.
- Martínez-Mora, C., & Merino, F. 2014. Offshoring in the Spanish footwear industry: A return journey? *Journal of Purchasing and Supply Management*, 20(4), 225-237.
- Mihalache, M., & Mihalache, O. R. 2016. A decisional framework of offshoring: integrating insights from 25 years of research to provide direction for future. *Decision Sciences*, 47(6), 1103-1149.
- Rasel, S., Abdulhak, I., Kalfadellis, P., Heyden, M. L. M. 2020 "Coming home and (not) moving in? Examining reshoring firms' subnational location choices in the United States" *Regional Studies*, Vol. 55 (5), pp. 704-718
- Saldaña, J. 2013. *The Coding Manual for Qualitative Researchers*. 2<sup>nd</sup> edition. Thousand Oaks: Sage Publications.
- Schellenberg, M., Harker, M. J., & Jafari, A. 2018. International market entry mode – a systematic literature review. *Journal of Strategic Marketing*, 26(7), 601-627.
- Supply Chain Movement 2022 <https://www.supplychainmovement.com/strong-rise-predicted-in-reshoring-of-critical-parts-and-final-assembly-to-europe-and-us/> 24 February 2022
- Tharenou P, Donohue R, Cooper B. 2007. *Management Research Methods*. Cambridge University Press: New York.
- Wagner, J. 2011. Offshoring and firm performance: self-selection, effects on performance, or both? *Review of World Economics*, 147(2), 217-247.
- Wan, L., Orzes, G., Sartor, M., Di Mauro, C., & Nassimbeni, G. 2019b. Entry modes in reshoring strategies: An empirical analysis. *Journal of Purchasing and Supply Management*, 25(3), 1-10.
- Wiesmann, B., Snoei, J. R., Hilletoft, P., & Eriksson, D. 2017. Drivers and barriers to reshoring: a literature review on offshoring in reverse. *European Business Review*, 29(1), 15-42.



# Social Identity and Information Sharing: Unpacking Multiple Layers of Language in Virtual Teams of a Telecommunications MNC

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## 1. Introduction

This purpose of this study is to investigate the role of language in information sharing in virtual teams of MNCs. According to Chidlow (2014) language is the principle of human life, a sign of membership creating connections between people (Giles & Johnson, 1987 as cited in Hansen & Liu, 1997, p. 568; Piekkari & Tietze, 2011) and influencing information sharing. While language is important for the functioning of any MNC, it has only recently attracted the attention of academic scholarship (Tenzer et al, 2017). Likewise, language can facilitate or impede effective communication, hindering the smooth functioning of teams within MNCs. There is scarce literature on the topic of how language shapes information sharing among teams of MNCs as well as how social identity (driven by language) is reflected on the information sharing process (Tenzer, et al., 2014; Flanagan, et al., 2014; Piekkari, et al., 2015). To address this gap, we ask the following questions: 1) *How does social identity shape information sharing?* 2) *How does language diversity influence information sharing in virtual teams?*, and 3) *How does code-switching influence information sharing in virtual teams?*

This study considers language as a multi-layered phenomenon concentrating on the mother tongue, lingua Franca and jargon “layers” used in an MNC. It draws from Social Identity Theory (SIT) (see also Tenzer et al., 2017; Tenzer et al., 2014) given the connection between linguistic identity and social identity (Lauring & Selmer, 2012; Piekkari, et al., 2015; Henderson, 2005). We utilize a single case study design and investigate an MNC in the telecommunications industry in Hungary. We draw evidence from multiple sources of data, namely qualitative interviews with participants of multilingual project teams as well as netnography that adapts traditional ethnographic techniques such as observation to the study of behaviour in virtual environments (Kozinets, 2010). These data sources allowed us to capture collective daily work and communication of such teams in the MNC. In doing so, we were able to provide a comprehensive view of the role of language on information sharing at both individual and team levels in the investigated MNC. This study contributes to the literature by establishing a link between language diversity, code-switching, and information sharing in virtual teams under the lenses of Social Identity Theory. It further unpacks the complexity of language in an MNC by considering its multiple layers, namely mother tongue, lingua Franca and jargon (Tenzer et al., 2014). Finally, it investigates language in a virtual environment, where interpersonal interactions that rely on language skills are underscored and therefore important to be investigated. As such, language serves an essential role in a virtual environment (Lauring & Klitmøller, 2014), and managed effectively, it contributes to team building (Henderson, 2005).

This study focuses on project teams by conducting interviews and monitoring them. These teams use language only as a source to connect to their foreign environment. The way in which individuals communicate, including their fluency in the corporate language, and the vocabulary use, has an influence on interpersonal interactions (Lauring & Klitmøller, 2014). This research is extending previous research by providing an additional factor: virtual teams.

## 2. Theoretical background and Key Concepts

### 2.1 Social Identity Theory (SIT)

SIT captures the interaction between personal and social identities. According to Tajfel (1974), the process of social categorization divides the world into “them” and “us” and includes three mental processes, namely, social categorization (self-categorization), social identification and social comparison. We categorise individuals including ourselves to make sense of social surroundings. Categorization refers to the individuals’ perceptions of themselves vis-à-vis other social categories (Brown & Capozza, 2000, p. ix; Ellemers, 2020). In particular, we

find out things about ourselves by knowing what categories we belong to and define appropriate behaviour based on these categories and reference groups. In the second stage, namely social identification, we adopt the behaviour of the group we belong to. There will be an emotional significance to the individuals' identification with a group, and their self-esteem will become bound up with group membership. The third stage of social comparison assumes that individuals identifying with the group (Ellemers, 2020) compare in-group and out-group participation, leading to "competition for positive identity" (Islam, 2014, p. 1782) and resulting in homogeneity within the group (Hansen & Liu, 1997).

## 2.2 Language diversity

Language diversity is the cross-linguistic contact between individuals through a shared language, that helps to improve possibilities for communication (Lauring & Selmer, 2012, p. 158). Shared language serves as a "systems of meanings which are central to the process of constructing organizational, social and global realities [...] source through which the 'connecting' of different socio-cultural, institutional and individual worlds occurs" (Piekkari & Tietze, 2011, p. 267). Giles and Johnson connect language with identity, describing it as a marker of group membership (Giles and Johnson, 1981, as cited in Hansen & Liu, 1997, p. 568; Giles & Johnson, 1987). According to Henderson (2005), language diversity is a valuable resource for the functioning of MNCs, since it enhances information sharing by cultivating tolerance and acceptance between individuals (Lauring & Klitmøller, 2014; Lauring & Selmer, 2012; Piekkari & Tietze, 2011). It is a key aspect of human interaction given the fact that the work is no longer executed in a single place, but requires people to travel, causing a "barrier to effectiveness and to doing International Business due to communication problems" (Jonsen, et al., 2011, p. 48; Tenzer, et al., 2014). Therefore, this study investigates language diversity by breaking it down into its layers: Mother tongue, Lingua franca, and Jargon. *Mother tongue* serves as the fundamental layer and is the spoken language that an individual grows up with. In the case of multinational organizations, where national boundaries are becoming less relevant, teams are considered „language-diverse" (Henderson, 2005, p. 69; Lauring & Klitmøller, 2017). *Lingua franca*, also known as the corporate language of a company, is a type of language adopted by two or more communication partners with different mother tongues. English has become the globally accepted lingua franca of International Business through „language standardization" (Anglemark & John, 2018; Brannen, et al., 2014; Marschan, et al., 1997, p. 591; Hinds, et al., 2014). It is a complex phenomenon, consisting of the know-how of business-specific understanding and the competence of the corporate speech, building trust among individuals. *Jargon* on the other hand, is the language used within a specific group that is not identity-driven but rather specialization-driven (Bullock, et al., 2019). It is a collection of specific terms, abbreviations, and expressions that might be a challenge also for native speakers of the lingua franca. It is considered as a tacit knowledge that must be mastered in order to facilitate communication within and across teams (Kankaanranta & Louhiala-Salminen, 2013). Research on the effect of the use of Jargon on communication show an adverse effect of Jargon on information sharing due to lack of comprehension (Mellor, 2018 as cited in Bullock, et al., 2019; Sharon & Baram-Tsabari, 2013). These layers of language, which is the phenomenon of the study might be embedded in one another. At this point, given the fact that the layers show different type of identity, this connection between social identity and language becomes apparent, therefore worthy of being explored together.

## 2.3 Code-switching

Code-switching, or also known as a code for communication, is the use of more than one language within a conversation, while moving back and forth between languages, and the language layers, simplifying communication (Lauring & Klitmøller, 2014; Ahmad & Barner-Rasmussen, 2019). It shows the family background, group- and local identities (Hansen & Liu, 1997). Hence, it does not end with the language, it includes everything surrounding it (Hansen & Liu, 1997; Tenzer & Pudelko, 2015). The virtual group is defined by its language, how team members express their feelings, needs and will, shaping the international environment (Lauring & Klitmøller, 2014). Therefore, it is connected to SIT (Gumperz, 1982, p. 66). In their research Tenzer, Pudelko and Harzing (2014) showed its negative effect among team members. It can cause anxiety, thus influencing information sharing.

## 2.4 Information sharing

"Information is the data that have been analyzed and/or contextualized, carries a message, and makes a difference as perceived by the receiver (Ahituiv and Neumann, 1986 as cited in Rafaeli & Raban, 2005, p. 63). Information sharing is the process by which information is provided to others in a way that affects the other person in decision making (Mesmer-Magnus & DeChurch, 2009). The emergence of communication technologies has made information sharing easier; however, the efficiency of information sharing depends on the language used (Brannen, et al., 2014; Pilerot & Limberg, 2011). In their paper Brannen, Piekkari, and Tietze (2014) approach it from an emotional perspective, arguing that language might increase the psychic distance between team members, thus influencing trust formation and preventing information sharing from reaching

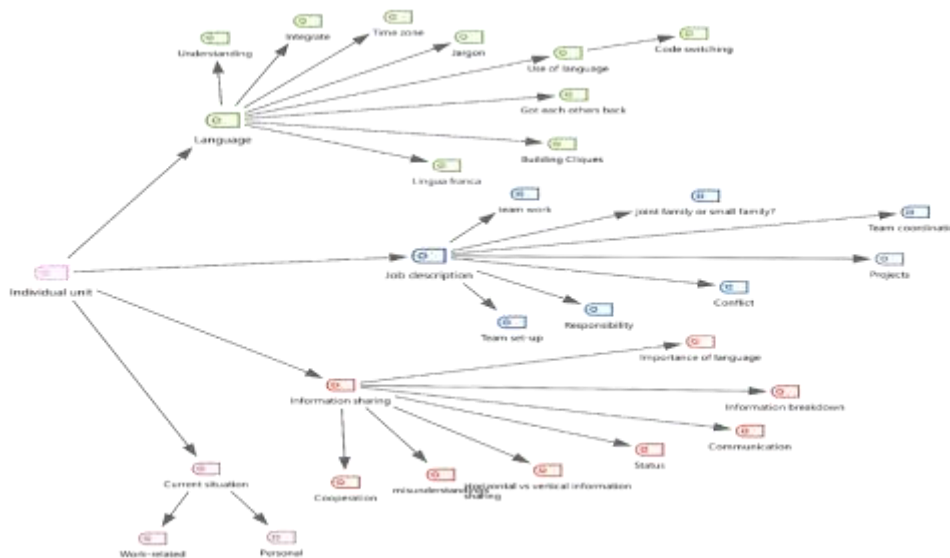
organizational decision makers. A mutual understanding and common code system are, however, essential (Pilerot & Limberg, 2011). Therefore, language should be investigated on the team level (Brannen, et al., 2014). In the case of MNCs, communication also takes place across units in international networks through the corporate language (Ahmad & Barner-Rasmussen, 2019). A focal point of information sharing is virtual teams (Marschan-Piekkari, et al., 1999).

### 3. Methodology

We used qualitative case study to investigate the role of language in information sharing in a single MNC in an attempt “to retain the holistic and meaningful characteristics of real-life events - individual life cycles, organizational and managerial processes [...]” (Yin, 2003, p. 1f.). Our aim was to build theory by drawing on individual and group experiences in the rich context of the virtual environment of the MNC (Dyer & Wilkins, 1991; Welch, et al., 2010). The case study firm, a leading MNC in the telecommunication industry was selected for theoretical purposes. In particular, it allowed us to investigate layers of mother tongue and lingua franca due to its global reach as well as the corporate jargon of a high technology sector. We employed a single-embedded case study designed as we treated the investigated MNC as a whole with embedded units, namely the 20 virtual teams.

Our data sources included qualitative interviews and netnography. First, we conducted in-depth interviews with ten managers and employees with different linguistic backgrounds from China, India, Hungary, Germany, Spain, England, Finland, France and Portugal. These interviews were conducted in German, Hungarian and English language following the preference of the participants (Andrews, 1995, as cited in Welch & Piekkari, 2006, p. 425). Interviews were prepared, conducted, and analyzed following Kvale’s seven stages, namely thematizing, designing, interviewing, transcribing, analyzing, verifying and reporting. All interviews were type-recorded, transcribed and translated into English as per the recommendations of Chidlow et al., (2014) for cross-language scholarship. The interview accounts were enriched by netnographic research during which the authros attended meetings of the investigated teams in a virtual environment for a period of 8 months (Schutt, 2012, p. 335). We utilized Kozinets’ (2010) stages to netnographic research: 1) formulating the research questions; 2) identifying the case study organization; and 3) taking part at the day-to-day life of the organization in its natural setting.

Netnography is used to see how a team operates and qualitative interviews are used to gain an insight into the individual’s perception. Although these two methods are considered separately, it is inevitable that will end up being mixed. Observations fill the void left by interview questions. An opportunity to observe the discussions that take place online, monitoring how actors are behaving, participating, and most importantly, observing the different languages spoken, and the option of code-switching allows us to observe and answer the question of how comfortable they are with using different languages. In this study the codes are connected with different colors to easily identify them. Text data emerging from qualitative interviews and netnographic (observational) data transformed into text data were analysed using MaxQDA, a software for qualitative data analysis (Welch & Piekkari, 2006). Coding combined inductive and deductive aspects (Swain, 2018) and captured both the individual level, namely analysis of qualitative interviews, and the team level, namely through netnography notes.

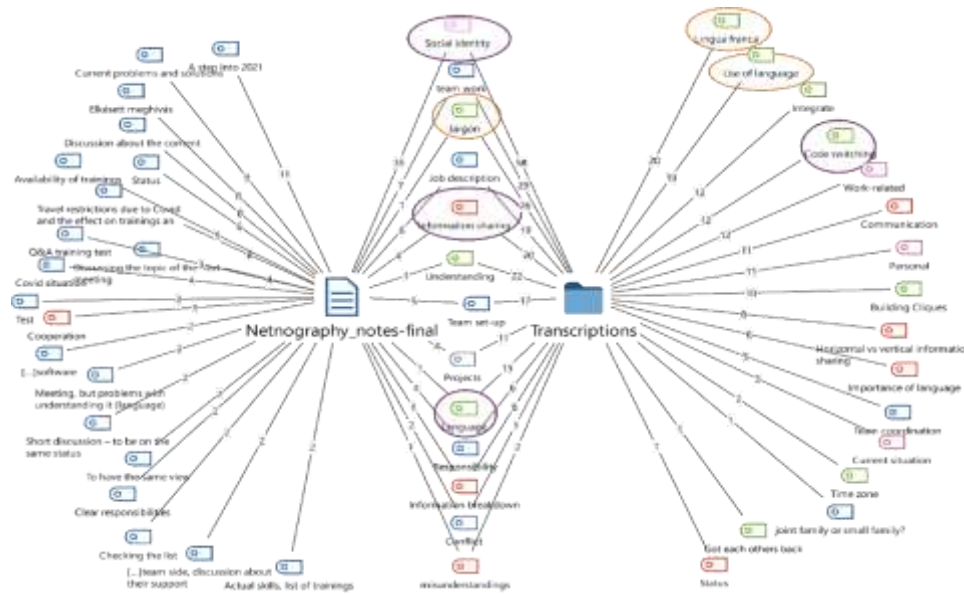


3. Figure Hierarchical code system (own illustration)

We employed Spiggle’s (1994) recommendations for thematic coding that involves the phases of categorization, abstraction, comparison, dimensionalization, integration, iteration, and refutation in different phases of examining the data. Figure 1 offers an illustration of the coding structure of the interviews. First, data was categorized into themes (e.g. “conflict”, “teamwork”, “jargon”, “lingua franca”) which were further abstracted to broader theoretical categories (e.g. “information sharing”). While qualitative interviews explored individual perceptions, interview respondents were also invited to reflect on the virtual team level. Spiggle’s (1994) approach to data analysis was also used for the netnography that concentrated primarily on generating insights for the virtual team. Both data sources were coded and compared as shown on Figure 2 that illustrates the connection of social identity, and language through the subcodes on both units of analysis (namely individual and team levels).

#### 4. Presentation of Findings

In order to address research question 1, i.e. *how does social identity shape information sharing?* We aim at focusing on the interaction between personal and social identities. Our study shows that building strong connections between the team and the individual reduces misunderstandings and communication barriers that can lead to information breakdown. This required a sense of common purpose together with clearly defined roles and responsibilities in the daily workflow. Our findings showed that team members established group identity and acceptance when they were feeling close to one another and that social distance imposed by the pandemic created conflicts. While one-on-one meetings were organized in a virtual environment to help individuals integrate into the team, this proved to be sometimes challenging. According to our findings, the virtual set-up and the time zone difference made collaboration difficult, weakening the group cohesion. We



4. Figure Two-source model - highlighted codes (own illustration)

membership relates to emotional values. Based on this study we suggest putting emphasis on team building and having a common goal, because people’s perception of themselves and others has a huge impact on the way how they share information. Nevertheless, since the main component of information sharing is communication, the most important pillar of communication, language has to be examined next.

As far as research question 2, namely *how does language diversity influence information sharing in virtual teams?* we approached language as a multi-layered phenomenon consisting of mother tongue, lingua franca, and jargon. Our findings show that these layers of language generate challenges to information sharing within the group. Interview participants spoke a variety of mother tongues, yet those with the same country background sometimes preferred to talk in the shared mother tongue during meetings. This was also evident during the netnography, namely the use of a mother tongue by a “dominant” group created a stronger sense of belonging between this group but also fragmented communication and caused information asymmetries with other team members. While English as Lingua franca enhanced participants’ sense of belonging to the company and the group, it also created difficulties. According to the study, the individual’s mother tongue can shape the use of the lingua franca. It can also influence the flow of arguments and the pronunciation of the Lingua Franca generating misunderstandings within the inter-group communication. The netnography showed a struggle within

suggest that by restructuring human resources, the deficiency can be filled in the short run. However, this research shows that in the long run personal ties can reduce this deficiency, because

group participants to cope with multiple accents in virtual meetings which hindered understanding and thus the exchange of information.

The “language of the subculture”, namely jargon distinguished between managers and engineers. Our research shows differences in information sharing depending on whether it takes place between manager-manager, engineer-engineer, or manager-engineer level, affecting inter-group communication. Group communication is different and largely relies on membership. The existence of boundary spanners, namely individuals who work or have been working in different positions in the organization facilitate information dissemination within and across groups. Our findings suggest that the use of jargon, being a sign of identity, creates a common ground for information sharing and therefore more emphasis must be placed on this competence in multinational corporations.

Concerning, research question 3 that explored *how code-switching influences information sharing* in virtual teams our findings suggest that code-switching entailed switching between the layers of language, namely mother tongue, lingua Franca and jargon. Code-switching improved the communication and information exchange between team members, since they no longer had to concentrate on the way they speak, but on the exact information they shared. We claim that at this stage the border between in-group and out-group is no longer observable. According to the study, code-switching was also used to as a means to enhance inter-personal contact and make clarification so as to overcome communication challenges of the virtual environment. We found that code-switching as the interaction between the language layers creates inter-group relations and is an enabler of the information sharing process. It also assisted in making people feel comfortable when dealing with foreign languages.

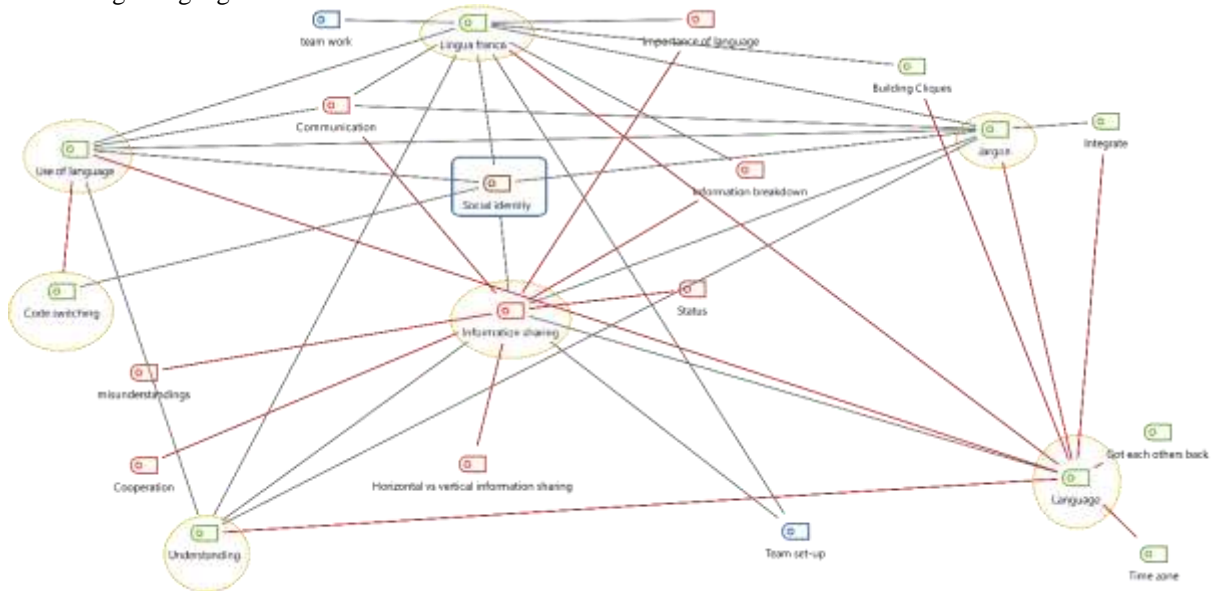


Figure 5 Connection between social identity, the language layers and information sharing (own illustration)

### 5 Discussion and Conclusions

This purpose of this study was to investigate the role of language in information sharing in virtual teams of MNCs by addressing how social identity, language identity and code-switching shape information sharing in virtual teams. According to Ellemers (2020), social identity signals similar thinking, values, or characteristics, which establish a sense of belonging in a team. Our research shows that building strong connections between the teams and among the individuals within them in an MNC can reduce the negative effects of information breakdowns caused by misunderstandings due to poor communication. This is important as teams intertwine depending on the task. Therefore, we argue that in order to maintain the team identity personal meetings and communication are necessary, despite the challenges of the virtual environment. Constant communication is a key factor and in established group identity language is a critical tool (Tenzer, et al., 2017; Tenzer, et al., 2021). Based on the findings of our study identities of individuals are blended as the group identity emerges. Furthermore, jargon creates a feeling of belonging and facilitates information sharing and common understanding, reinforcing the common interest of the group.

Based on our findings, individuals socialize based on the native language they speak. The three layers of language served as category markers that allow group participants to select groups and enact their identities. Different layers of language can compensate for each other to assist efficient communication. For instance, mother tongue language diversity was counter-balanced by jargon. Interestingly, we found that pronunciation

challenges of lingua franca within the investigated MNC hindered information flow. Based on that we suggest the usage of written communication channels, like email or chat, to solve the pronunciation problem and promote shared understanding.

Based on the findings, we claim that code-switching eliminates linguist boundaries and facilitates communication and information sharing. This insight contracts the extant literature that concentrates on the disadvantages of code-switching. Our study shows that code-switching that takes place across different language layers enhanced the feeling on belongingness in the group serving as a “safety net” that allowed individuals to feel more reassured with their language skills in the communication process. Hence, we argue that code-switching has an easing effect on communication by reducing the linguistic gap between team members and the sharp line between teams, leading to a smooth flow of information.

To conclude our study investigates information sharing in virtual environment of a large MNC in the telecommunications industry. Future research can delve deeper into the role of organizational context as well as culture and their influence on language choices and code-switching. It would be further interesting to unpack the role of code-switching in the communication processes of multi-lingual teams given that the literature offers conflicting evidence. Finally, it would be interesting to study language-related phenomena in SMEs given that such organizations often lack resources and language structures and policies that mitigate linguistic challenges.

### 3 References

- Ahmad, F. & Barner-Rasmussen, W., 2019. False foe? When and how code switching practices can support knowledge sharing in multinational corporations. *Journal of International Management*, September, 25(3).
- Anglemark, L. & John, A., 2018. The Use of English-Language Business and Finance Terms in European Languages. *International Journal of Business Communication*, 29 May, 55(3), pp. 406-440.
- Brannen, M. Y., Piekkari, R. & Tietze, S., 2014. The multifaceted role of language in international business: Unpacking the forms, functions and features of a critical challenge to MNC theory and performance. *Journal of International Business Studies*, 45(5), pp. 495-507.
- Brown, R. & Capozza, D., 2000. Introduction: Social Identity Theory in Retrospect and Prospect. In: *Social Identity Processes*. London: SAGE Publications Ltd, pp. vii-xv.
- Bullock, O. M., Colón Amill, D., Shulman, H. C. & Dixon, G. N., 2019. Jargon as a barrier to effective science communication: Evidence from metacognition. *Public Understanding of Science*, 1 October, 28(7), pp. 845-853.
- Chidlow, A., Plakoyiannaki, E. & Welch, C., 2014. Translation in cross-language international business research: Beyond equivalence. *Journal of International Business Studies*, 2 January, 45(5), pp. 1-21.
- Dyer, G. W. J. & Wilkins, A. L., 1991. Better stories; not better Constructs to generate better theory: A rejoinder to Eisenhardt. *Academy of Management Review*, 16(3), pp. 613-619.
- Ellemers, N., 2020. *Encyclopedia Britannica*. [Online] Available at: <https://www.britannica.com/topic/social-identity-theory> [Accessed 3 May 2019].
- Flanagin, A. J., Hocevar, K. P. & Samahito, S. N., 2014. Connecting with the user-generated Web: how group identification impacts online information sharing and evaluation. *Information, Communication & Society*, 17(6), pp. 683-694.
- Giles, H. & Johnson, P., 1987. Ethnolinguistic identity theory: a social psychological approach to language maintenance. *International Journal of the Sociology of Language*, January, Volume 68, pp. 69-100.
- Gumperz, J. J., 1982. Conversational Code Switching. In: *Discourse Strategies*. Cambridge: Cambridge University Press, pp. 59-99.
- Hansen, J. G. & Liu, J., 1997. Social Identity and Language: Theoretical and Methodological Issues. *TESOL Quarterly*, 31(3), pp. 567-576.
- Henderson, J. K., 2005. Language Diversity in International Management Teams. *International Studies of Management & Organization*, 35(1), pp. 66-82.

- Hinds, P. J., Neeley, T. B. & Cramton, C. D., 2014. Language as a lightning rod: Power contests, emotion regulation, and subgroup dynamics in global teams. *Journal of International Business Studies*, June/July, 45(5), pp. 536-561.
- Islam, G., 2014. Social Identity Theory. In: *Encyclopedia of Critical Psychology*. s.l.:Springer-Verlag, pp. 1781-1783.
- Jonsen, K., Maznevski, M. L. & Schneider, S. C., 2011. Diversity and Its Not So Diverse Literature: An International Perspective. *International Journal of Cross Cultural Management*, April, 11(1), pp. 35-62.
- Kankaanranta, A. & Louhiala-Salminen, L., 2013. 'What Language Does Global Business Speak?'-The Concept and Development of BELF. *Revista de la Asociación Europea de Lenguas para Fines Específicos/ Journal of the European Association of Languages for Specific Purposes (AELFE)*, 26(26), pp. 17-34.
- Kozinets, R. V., 2010. *Netnography: Doing Ethnographic Research Online*. 2. ed. s.l.:SAGE.
- Lauring, J. & Klitmøller, A., 2014. Creativity and Performance in MNCs: The Power of Inclusive Language Use. *Academy of Management Proceedings*, Issue 1, pp. 11800-11800.
- Lauring, J. & Klitmøller, A., 2017. Inclusive Language Use in Multicultural Business Organizations: The Effect on Creativity and Performance. *International Journal of Business Communication*, 1 July, 54(3), pp. 306-324.
- Lauring, J. & Selmer, J., 2012. International language management and diversity climate in multicultural organizations. *International Business Review*, April, 21(2), pp. 156-166.
- Marschan-Piekkari, R., Welch, D. & Welch, L., 1999. In the shadow: the impact of language on structure, power and communication in the multinational. *International Business Review*, August, 8(4), pp. 421-440.
- Marschan, R., Welch, D. & Welch, L., 1997. Language: The Forgotten Factor in Multinational Management. *European Management Journal*, 8(4), pp. 591-598.
- Mesmer-Magnus, J. R. & DeChurch, L. A., 2009. Information Sharing and Team Performance: A Meta-Analysis. *Journal of Applied Psychology*, 94(2), pp. 535-546.
- Piekkari, R., Oxelheim, L. & Randøy, T., 2015. The Silent Board: How Language Diversity May Influence the Work Processes of Corporate Boards. *An International Review*, 23(1), pp. 25-41.
- Piekkari, R. & Tietze, S., 2011. A world of languages: Implications for international management research and practice. *Journal of World Business*, July, 46(3), pp. 267-269.
- Pilerot, O. & Limberg, L., 2011. Information sharing as a means to reach collective understanding: A study of design scholars' information practices. *Journal of Documentation*, 8 March, 67(2), pp. 312-333.
- Rafaeli, S. & Raban, D. R., 2005. Information sharing online: A research challenge. *International Journal of Knowledge and Learning*, January, 1(1), pp. 62-97.
- Schutt, R. K., 2012. Qualitative Data Analysis. In: *Investigating the Social World. The Process and Practice of Research*. 7. ed. s.l.:SAGE Publications, pp. 320-357.
- Sharon, A. J. & Baram-Tsabari, A., 2013. Measuring mumbo jumbo: A preliminary quantification of the use of jargon in science communication. *Public Understanding of Science*, 21 January, 23(5), pp. 528-546.
- Spiggle, S., 1994. Analysis and Interpretation of Qualitative Data in Consumer Research. *Journal of Consumer Research*, December, 21(3), pp. 491-503.
- Swain, J., 2018. *A Hybrid Approach to Thematic Analysis in Qualitative Research: Using a Practical Example*. London: SAGE Publications, Ltd..
- Tajfel, H., 1974. Social Identity and intergroup behaviour. *Social Sciences Information / Information sur les Sciences Sociales*, 13(2), pp. 65-93.
- Tenzer, H. & Pudelko, M., 2015. Leading across language barriers: Managing language-induced emotions in multinational teams. *The Leadership Quarterly*, August, 26(4), pp. 606-625.

- Tenzer, H., Pudelko, M. & Harzing, A.-W., 2014. The impact of language barriers on trust formation in multinational teams. *Journal of International Business Studies*, 45(5), pp. 508-535.
- Tenzer, H., Pudelko, M. & Zellmer-Bruhn, M., 2021. The impact of language barriers on knowledge processing in multinational teams. *Journal of World Business*, February, 56(2).
- Tenzer, H., Terjesen, S. & Harzing, A.-W., 2017. Language in International Business: A Review and Agenda for Future Research. *Management International Review*, 1 June, 57(6), pp. 815-854.
- Welch, C. & Piekkari, R., 2006. Crossing Language Boundaries: Qualitative Interviewing in International Business. *Management International Review*, 46(4), pp. 417-437.
- Welch, C., Piekkari, R., Plakoyiannaki, E. & Paavilainen-Mäntymäki, E., 2010. Theorising from case studies: Towards a pluralist future for international business research. *Journal of International Business Studies*, 16 December, 42(5), pp. 740-762.
- Yin, R. K., 2003. *Case Study Research. Design and Methods*. 3. ed. United States of America: Sage Publications.



# Management/Marketing

## **Artificial intelligence shaping the future of business management: A way forward for university students**

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**Abstract:**

**Purpose:** Artificial Intelligence has changed the way we manage our businesses. This presentation will highlight various examples of management where AI has disrupted what we learn in traditional business courses. The examples given will be from various sectors and will help you rethink your concepts of what AI can do by sensitizing you with what AI is already doing.

**Methodology:** Online available data was collected on how businesses in various sectors are incorporating AI to improve their functions and what are the challenges they are facing. From this information, a way forward was developed for the students to prepare a “future proof” career in business management.

**Findings:** Major finding is that the universities need to improve the way they are preparing their students for the future of business. The presentation will also help you rethink your career path in light of emerging trends in business management.

**Research limitations:** This study is a generalized study and gives an overall state of affair instead of giving a detailed AI adoption in a particular country.

**Practical Implications:** This presentation will help undergraduate students in rethinking their strategy as they prepare for a career in business management.

**Originality:** This presentation will share some business ideas to inspire your entrepreneurial thinking.

Keywords:

*Keywords:: Artificial Intelligence, Management, Business*

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## **Recruitment and retention in HEIs: Salience of University Attributes in Student Decision-Making and their relationship with Student Attitudes**

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### **Abstract:**

Understanding the factors that influence student attitudes is of paramount importance for universities. This study aims to investigate the salience of specific university attributes and their association with student attitudes. The research question guiding this study is: What attributes are more salient in shaping student attitudes? To address this question, four hypotheses were formulated. First, it was hypothesized that university image would have a positive association with institutional commitment, degree commitment, social integration, and academic integration. Second, it was proposed that education cost would be positively associated with institutional commitment, degree commitment, social integration, and academic integration. Lastly, the hypothesis stated that physical aspects of the university would be positively associated with institutional commitment, degree commitment, social integration, and academic integration. Additionally, employment opportunities were expected to positively influence institutional commitment and degree commitment. To test these hypotheses, a comprehensive 45-item questionnaire was administered to students, assessing the salience and importance of various university attributes. The attributes included university image, education cost, physical aspects, and employment opportunities. Student attitudes were measured through four dimensions: institutional commitment, degree commitment, social integration, and academic integration. The findings of this study provide insights into the perceived salience of university attributes and their impact on student attitudes. Specifically, university image was found to have a positive association with institutional commitment, degree commitment, social integration, and academic integration. Education cost, physical aspects, and employment opportunities also exhibited positive associations with various dimensions of student attitudes. These results emphasize the significance of strategic considerations related to university attributes in shaping student attitudes. Higher education institutions can leverage these findings to develop effective recruitment and communication strategies that resonate with students and meet their needs.

**Keywords:** organisational communication, image, reputation,

## **Breaking the silence in the healthcare sector: The relationship between empowering leadership and employee silence towards patient safety via psychological empowerment**

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**Abstract:** Healthcare professionals can identify incidents that threaten patient safety by providing medical support. However, there are occasions when they choose to keep silent over speaking out, which can be harmful to patients. Addressing the reasons for such a silence has become difficult for healthcare professionals. To address this gap, this study highlights the beneficial role of empowering leadership in reducing employee silence towards patient safety via psychological empowerment. Data collected from a sample of 131 nurses working in a Greek hospital supported that empowering leadership is associated with psychological empowerment and the latter is related to employee silence towards patient safety. Taken together, we tried to provide a more nuanced understanding of this relationship by emphasizing psychological empowerment as an underlying mechanism in the association between empowering leadership and employee silence towards patient safety. Theoretical and practical implications are also discussed.

**Keywords:** *empowering leadership, psychological empowerment, employee silence, mediation, health*

## **Leadership styles during crisis in public organizations**

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The main purpose of this paper is to investigate (i) the predominant type of leadership exercised by senior managers in all public organizations, and military organizations in particular (Armed Forces), (ii) the impact of various emergencies (such as Covid-19, natural disasters, and state of war), economic crises, and geopolitical crises on the smooth operation of military organizations during such times, (iii) the difficulties and problems that senior leaders need to anticipate in the face of these crises, (iv) the managerial and leadership skills required for effectively handling issues that arise in the midst of a crisis and for managing effectively junior officers during such situations and (v) the appropriate leadership style(s) required for the smooth operation of military organizations in times of crisis.

Armed forces are representative of public organizations. This investigation becomes critical as their leadership bears the ultimate responsibility of dealing with various crises that may escalate into armed conflicts in accordance with government directives. Additionally, Armed Forces, as public organizations, increasingly provide assistance to authorities during emergencies like natural disasters, economic crises, and geopolitical crises.

To conduct this investigation, qualitative research was carried out. Twelve (12) senior and junior officers from all three branches of the Armed Forces (army, navy, and air force) were interviewed. Three respondents were at the senior level, while the other nine were from intermediate administrative levels (middle management). A semi-structured questionnaire was used to guide and facilitate the interviewing process. This qualitative research aims to identify leadership-related parameters and parameters of interest within the target population. Moreover, it highlights a model of appropriate leadership for the effective management of employees in military organizations during a crisis.

The results of this research in military organizations during crises underline the perception gap between management, top leadership and those serving under their command. It also sheds light on the inability of numerous military leaders to motivate, inspire, and create a clear vision those serving under their command. To successfully lead their organizations into the next decade and adapt to the demands of a changing environment, senior military leaders will need to find a balance between various paradoxes, conflicts, and contradictions arising from both external and internal factors during times of crisis.

**Key words:** senior leadership, senior management, military management, change management, public organizations, crisis, emergencies

# Exploring the green aspect of total quality management: Evidence from the maritime industry

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## Abstract

The purpose of the current study is to analyze total quality management (TQM) by considering its green aspect, as well as by evaluating its contribution to competitiveness in the context of maritime companies. Specifically, the current study focuses on a specific soft TQM dimension and assess its impact on competitive advantage by drawing evidence from Greek shipping companies. The focus is on employee green training, which reflects the association of employee training with environmental management and addresses the development and implementation of training activities in order to lead to heightened environmental awareness of employees. An empirical study was conducted in shipping companies in Greece and a structured questionnaire was administered to managers. The measurement instruments of the examined constructs were from relevant research studies. The collected data were analyzed with the use of partial least squares structural equation modelling (PLS-SEM). The findings reveal the direct, significant and positive effect of employee green training on competitive advantage. The paper concludes with implications from a theoretical and practical viewpoint.

*Keywords: Soft total quality management, green training, competitive advantage, shipping, maritime*

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## Introduction

Total Quality Management (TQM) is a management philosophy that targets continuous improvement. This management philosophy is accompanied by certain practices that encourage employee involvement and teamwork, without disregarding customer satisfaction for improved performance (Powell, 1995). In the TQM discourse, recent studies have highlighted the importance of soft TQM in order to achieve organizational excellence (Cavallone and Palumbo, 2022) and to gain an advantage over competitors (El Shenawy et al., 2007). In addition, TQM has been linked with various green outcomes, such as green organizational results (e.g. Abbas, 2020), green practices (Hassan and Jaaron, 2021) or green growth (Le, 2022). However, most relevant studies seem to uncover the green consequences of TQM without considering how TQM dimensions could incorporate a green aspect and how they eventually could offer an advantage over competitors. The present study aims to fill this gap in the literature. To do so, it focuses on the human resource management aspect of soft TQM and examines a specific dimension, through the simultaneous consideration of its green character (i.e. employee green training), attempting to investigate its influence on competitiveness. This empirical investigation is conducted through drawing evidence from the maritime industry. The maritime industry offers an appropriate context, as relevant studies are quite limited in the transportation sector (eg. Harvey et al., 2013). Also, the maritime industry is regulated by a strict environmental framework, so exploring the potential positive implications of soft and green TQM dimensions could enrich academic research, but also provide useful insights for professionals.

## Literature review and formulation of hypothesis

Soft TQM practices differ from hard TQM practices in that the former emphasize the behavioral or human aspects of TQM. While hard TQM practices mainly involve statistical methods and tools, computer based technologies, just-in-time principles, technology utilization (e.g. Babatunde, 2021; Rahman and Bullock,

2005), soft TQM includes workforce commitment, shared vision, customer focus, use of teams, personnel training, cooperative supplier relations, human resource focus, quality culture, motivational leadership, employee training and learning, employee involvement, teamwork, empowerment, appraisal systems/recognition or rewards for quality (e.g. Ali and Johl; 2022; Glaveli et al., 2022; Dubey and Gunasekaran, 2015; Rahman and Bullock 2005). Also, in an earlier study, Fotopoulos and Psomas (2009) referred to the following hard TQM factors: cause and effect diagram, scatter diagram, affinity diagram, relations diagram, force-field analysis, run charts, control charts, quality function deployment, failure mode and effects analysis, while they identified the following soft TQM elements: top management commitment, strategic quality planning, employee involvement, supplier management, customer focus, process orientation, continuous improvement, fact-based decision making human resource development. Despite the existence of a variety of elements that reflect soft TQM, most studies uncover the human resource management aspects as being rather important for TQM.

Since the aim of the present study is to bring a green aspect on soft TQM, and specifically on the human resource management aspect, the focus is on employee green training. The objective of employee green training practice is to improve the abilities and knowledge of employees as far as environmental management is concerned. Through green training, employees are given the opportunity to advance their environmental awareness, to participate in educational programs on environmental protection and to adopt green values (Jia et al., 2018). In general, when human resource management practices include environmental consciousness, various benefits for the organization can be realized (Anwar et al., 2020). For instance, Roscoe et al. (2019) proved that a firm could experience improvements in its environmental performance when it implements certain human resource practices, such as green training, job description, performance assessment etc. Mousa and Othman (2020) demonstrated that sustainable performance is influenced by green hiring, green training and involvement, and green performance management and compensation, while the positive effect of these dimensions on social performance was corroborated by Zaid et al. (2018). Furthermore, some recent studies have focused specifically on employee green training and argued that it positively impacts in-role green performance of employees (Pham et al., 2020), environmental performance (Abuelhassan and Elsayed, 2020) or green supply chain management (Teixeira et al., 2016).

However, the implementation of employee green training could also be associated with gaining an advantage over competitors. This argument is built on the premise that human resource management practices with a green focus lead to a firm's competitive advantage (Gharbi et al., 2022; Carmona-Moreno et al., 2012; Muisyo et al., 2022). Generally, a competitive advantage is derived from a firm's superior and out-performing position in the market when compared to its competitors (Porter, 1985). This advantage can be associated with differentiation when customers think of the company's offerings as being superiors than those of other competing firms (Porter, 1985). More specifically, a market differentiation advantage reflects the firm's ability to create a unique market image and ensure customer loyalty through satisfying customer needs, while an innovation differentiation advantage is obtained through creating and successfully bringing to the market new products and services. (Zhou et al., 2009). Organizations that develop green employee practices, such as green training, recruitment, performance reward may experience an advantage in cost or differentiation (Carmona-Moreno et al., 2012; Mishra, 2017), or have a green competitive advantage (Muisyo et al., 2022). Based on the above discussion, the following hypothesis is formulated. This hypothesis is further substantiated by the resource-based view (RBV) of the firm (Barney, 1991), as employees are important and critical resources for a firm (Singh et al., 2020; Akbari et al., 2019).

Hypothesis 1 (H1): Employee green training has a positive influence on competitive advantage in shipping companies.

## **Methodology**

The methodology of the present study included an empirical investigation of the Greek shipping industry. Greece ranks at the top of fleet ownership countries (as per deadweight tonnage), and it is included among the top three a ship-owning countries (as per commercial value). A structured questionnaire was distributed to shipping managers, and 109 usable (for further analysis) responses were collected. Almost half of the shipping companies in the sample belong to the dry bulk sector, about one third of them manage a variety of vessels and the remaining ones operate in other shipping sectors. For the measurement of employee green training, 3 items were used (Paillé et al., 2020), i.e. "Our company develops training programs in environment management to increase environmental awareness, skills and expertise of employees.", "Our company has integrated training to create the emotional involvement of employees in environmental management.", "Our company has green knowledge management (link environmental education and knowledge to behaviors to develop preventative solutions)". Competitive advantage was measured along two factors, i.e., innovation differentiation advantage (e.g. "We are constantly investing in generating new capabilities that give us an

advantage compared to our competitors.”) and market differentiation advantage (e.g. “Our advantages are embodied in the company and not in individuals — nobody can copy us by stealing our employees away from us.”), with the use of 2 and 5 items respectively, which were found in Zhou et al. (2009). All items were measured on a 7-point Likert type scale ranging from 1: Strongly disagree to 7: Strongly agree. Partial least squares structural equation modelling (PLS-SEM) was performed in order to analyze the data (Ringle et al., 2022), as it is a frequently-used statistical modelling technique in management studies (Hair et al., 2022).

## Results and discussion

For the purposes of the analysis, competitive advantage was treated as a second-order construct (the lower-order constructs were innovation differentiation and market differentiation) and employee green training was treated as first-order construct. Regarding measurement model evaluation, composite reliability and validity (convergent and discriminant) were established. Then, the structural model was assessed. Table 1 below shows the path coefficient of the relationship in the structural model. So, the examined hypothesis is supported, as employee green training has a positive and statistically significant influence on competitive advantage in shipping companies.

Table 1: Hypothesis testing

	Path coefficient	t value	95% confidence interval*	Significance (p <0.05)?	
Employee green training -> Competitive advantage	0.468	5.432	(0.297 – 0.632)	Yes	H1 Supported

\* Bootstrap confidence intervals for significance testing

The current study examines the effect of employee green training on competitive advantage (innovation differentiation and market differentiation) by drawing evidence from the Greek maritime industry. The study’s results reveal the determinant role of employee green training in achieving competitive advantage. The findings indicate that maritime companies that develop training programs, which are linked with environmental management, can have benefits in terms of competitive advantage, viewed both as an innovation and market differentiation advantage. These maritime companies are more likely to develop new organizational capabilities to overcome competition and offer unique services to their customers through building a strong reputation, a solid culture and unique processes.

## Conclusions

The positive contribution of TQM on organizational results and firm competitiveness has been long ago recognized in the literature. However, empirical evidence on the way soft TQM dimensions, viewed from a green aspect, could bring positive results in terms of competitive advantage is missing. The present study investigates the direct influence of employee green training on competitive advantage in the context of maritime companies. Specifically, the main focus to assess the extent to which the development and implementation of employee green training practices in the context of shipping companies, have the potential to contribute to the attainment of a competitive advantage has a positive and significant impact on both types of advantages in shipping companies. This finding implies that the more maritime companies tie their employee training activities with environmental management, the more likely they are to gain a strong competitive advantage in terms of innovation and market differentiation. From a theoretical viewpoint, the current study contributes to the TQM discourse and enriches empirical evidence as far as the implications of green practices are concerned. Also, by conducted an empirical study in the Greek maritime sector, the present study contributes to the literature through exploring relevant practices and their implications in different organizational service environments (Tanova and Bayighomog, 2022). From a practical viewpoint, the present study suggests to shipping managers that green practices that concern employees and their management could be a vehicle for ensuring competitiveness in the challenging maritime business environment. Considering that the maritime sector is under pressure for mitigating the environmental consequences of its operations and for shifting to environmentally friendly practices, this study could assist to maritime firms in their efforts to achieve a competitive advantage.

## References

Abbas, J. (2020). Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production*, 242, 118458.



- Abuelhassan, A. E., & Elsayed, Y. N. M. (2020). The impact of employee green training on hotel environmental performance in the Egyptian hotels. *International Journal on Recent Trends in Business and Tourism (IJRTBT)*, 4(1), 24-33.
- Akbari, M., Azbari, M. E., & Chajjani, M. H. (2019). Performance of the firms in a free-trade zone: The role of institutional factors and resources. *European Management Review*, 16(2), 363-378.
- Ali, K., & Johl, S. K. (2022). Soft and hard TQM practices: future research agenda for industry 4.0. *Total Quality Management & Business Excellence*, 33(13-14), 1625-1655.
- Anwar, N., Mahmood, N. H. N., Yusliza, M. Y., Ramayah, T., Faezah, J. N., & Khalid, W. (2020). Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus. *Journal of Cleaner Production*, 256, 120401.
- Babatunde, O. K. (2021). Mapping the implications and competencies for Industry 4.0 to hard and soft total quality management. *The TQM Journal*, 33(4), 896-914.
- Barney, J.B., 1991, Firm resources and competitive advantage. *Journal of Management*, 17: 99–120.
- Carmona-Moreno, E., Céspedes-Lorente, J., & Martínez-del-Río, J. (2012). Environmental human resource management and competitive advantage. *Management Research: Journal of the Iberoamerican Academy of Management*, 10(2), 125-142.
- Cavallone, M., & Palumbo, R. (2022). Delving into the soft side of TQM: an analysis of the implications of employee involvement on management practices. *The TQM Journal*, 34(5), 1096-1115.
- Dubey, R., & Gunasekaran, A. (2015). Exploring soft TQM dimensions and their impact on firm performance: some exploratory empirical results. *International Journal of Production Research*, 53(2), 371-382.
- El Shenawy, E., Baker, T., & Lemak, D. J. (2007). A meta-analysis of the effect of TQM on competitive advantage. *International Journal of Quality & Reliability Management*, 24(5), 442-471.
- Fotopoulos, C.B. and Psomas, E.L. (2009). The impact of “soft” and “hard” TQM elements on quality management results. *International Journal of Quality & Reliability Management*. 26(2), 150-163.
- Gharbi, H., Sobaih, A. E. E., Aliane, N., & Almubarak, A. (2022). The Role of Innovation Capacities in the Relationship between Green Human Resource Management and Competitive Advantage in the Saudi Food Industry: Does Gender of Entrepreneurs Really Matter?. *Agriculture*, 12(6), 857.
- Glaveli, N., Vouzas, F., & Roumeliotou, M. (2022). The soft side of TQM and teachers job satisfaction: an empirical investigation in primary and secondary education. *The TQM Journal*, 34(5), 922-938.
- Hair Jr, J. F., G. T. M. Hult, C. M. Ringle and M. Sarstedt, 2022. A primer on partial least squares structural equation modeling (PLS-SEM). London: Sage Publications.
- Harvey, G., Williams, K., & Probert, J. (2013). Greening the airline pilot: HRM and the green performance of airlines in the UK. *The International Journal of Human Resource Management*, 24(1), 152-166.
- Hassan, A. S., & Jaaron, A. A. (2021). Total quality management for enhancing organizational performance: The mediating role of green manufacturing practices. *Journal of Cleaner Production*, 308, 127366.
- Jia, J., Liu, H., Chin, T., & Hu, D. (2018). The continuous mediating effects of GHRM on employees' green passion via transformational leadership and green creativity. *Sustainability*, 10(9), 3237.
- Le, T. T. (2022). The boosting of the total quality management on corporate green growth in emerging markets: the mediating roles of corporate social responsibility and customer loyalty. *Benchmarking: An International Journal*, (ahead-of-print).
- Mishra, P., 2017. Green human resource management: A framework for sustainable organizational development in an emerging economy. *International Journal of Organizational Analysis*, 25(5): 762-788.
- Mousa, S. K., & Othman, M. (2020). The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. *Journal of Cleaner Production*, 243, 118595.

- Muisyo, P., Su, Q., Ho, T. H., Julius, M. M., & Usmani, M. S. (2022). Implications of green HRM on the firm's green competitive advantage: the mediating role of enablers of green culture. *Journal of Manufacturing Technology Management*, 33(2), 308-333.
- Paillé, P., Valéau, P., & Renwick, D. W. (2020). Leveraging green human resource practices to achieve environmental sustainability. *Journal of Cleaner Production*, 260, 121137.
- Pham, N. T., Vo-Thanh, T., Shahbaz, M., Huynh, T. L. D., & Usman, M. (2020). Managing environmental challenges: Training as a solution to improve employee green performance. *Journal of Environmental Management*, 269, 110781.
- Porter M., 1985. *Competitive Advantage*. New York: Free Press.
- Powell, T. C. (1995). Total quality management as competitive advantage: a review and empirical study. *Strategic management journal*, 16(1), 15-37.
- Rahman, S. U., & Bullock, P. (2005). Soft TQM, hard TQM, and organisational performance relationships: an empirical investigation. *Omega*, 33(1), 73-83.
- Ringle, C.M., S. Wende and J.-M Becker, 2022, SmartPLS 4. Oststeinbek: SmartPLS GmbH, <http://www.smartpls.com>.
- Roscoe, S., Subramanian, N., Jabbour, C. J., & Chong, T. (2019). Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development. *Business Strategy and the Environment*, 28(5), 737-749.
- Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological forecasting and social change*, 150, 119762.
- Tanova, C., & Bayighomog, S. W. (2022). Green human resource management in service industries: the construct, antecedents, consequences, and outlook. *The Service Industries Journal*, 42(5-6), 412-452.
- Teixeira, A. A., Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Latan, H., & De Oliveira, J. H. C. (2016). Green training and green supply chain management: evidence from Brazilian firms. *Journal of Cleaner Production*, 116, 170-176.
- Zaid, A. A., Jaaron, A. A., & Bon, A. T. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *Journal of cleaner production*, 204, 965-979.
- Zhou, K. Z., Brown, J. R., & Dev, C. S. (2009). Market orientation, competitive advantage, and performance: A demand-based perspective. *Journal of business research*, 62(11), 1063-1070.

## **International marketing mix standardisation vs. adaptation debate: literature, review, research propositions and integrative framework**

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**Abstract:** The degree to which the various elements of the marketing mix should be standardised or adapted is an issue that has engaged marketing scholars and practitioners since 1960s. Interestingly, over five decades later, the debate on standardising marketing internationally, is ongoing. The paper introduces an integrative framework of factors that affect international marketing mix standardisation and performance implications. This decomposes the determinants of the international marketing mix decision into two constructs: the cultural factors producing the centrifugal forces for international localisation and the corporate factors producing the centripetal forces for global standardisation. We develop research propositions in an attempt to establish a research agenda on the standardisation issue. This paper provides a conceptual framework for gaining insights into the standardisation issue. It offers an overview of all important factors that influence marketing mix standardisation in international markets.

**Keywords::** *International marketing, Standardisation, Adaptation, Marketing Mix*

## 1. Introduction

The globalisation of marketing has received a lot of attention by both academics and practitioners and has produced a wide array of divergent viewpoints. It has been argued that the worldwide marketplace has become so homogenized that multinational corporations can standardise their products and services globally, by identical strategies, with resultant lower costs and higher margins (Jain, 1989). Supporters of standardisation stipulate that consumers needs, wants and requirements do not vary significantly across markets or nations (Levitt, 1983; Buzzell, 1968; Yip, 1995). Standardised marketing programs enable firms to capitalize on economies of scale in production, marketing, and R&D (Levitt, 1983; Yip, 1995); shorten the time to market for new product innovations (Neff, 1999); and exploit promising products, ideas, and practices in multiple markets (Maljers, 1992; Ozsomer & Prussia, 2000), all of which lead to the creation of an international brand (Levitt, 1983; Tedlow and Abdelal, 2003) and increase their overall performance (Mandler et al., 2021).

The adaptation perspective, on the other hand, stresses the persistent differences between nations such as divergent cultures and stages of economic and industrial development. Supporters of adaptation highlight the difficulties in using a standardised approach and support market tailoring and adaptation to fit the “unique dimensions” of different international markets (Kashani, 1989; Papavassiliou and Stathakopoulos, 1997; Paliwoda and Thomas, 1999; Szymanski et al., 1993; Thrassou and Vrontis, 2006).

A third approach has emerged from the literature, the contingency perspective, which holds that the best approach depends on the specific situation (Agrawal, 1995). Rather than focusing on total standardisation or adaptation, the contingency approach arises as a middle ground view in the standardisation vs. adaptation debate, suggesting that neither standardisation strategy nor adaptation strategy should be set apart from each other (İpek, 2021; Agrawal, 1995; Hofer et al., 2019; Zou et al., 1997). This school of thought is fundamentally dependent on the notion that a firm’s international marketing strategy is contingent on the interplay of different forces, including organizational (e.g. firm size, international experience, and firm resources and capabilities) and environmental dynamics (e.g. competitive tension, industry concentration and market demand) (Katsikeas et al., 2006; Theodosiou and Leonidou, 2003; Hultman et al., 2011). Supporters of this perspective stress the importance of the right balance between standardisation and adaptation, which is strictly intertwined with the nature of specific situations at a certain time (Agrawal, 1995; Theodosiou and Leonidou, 2003; Vrontis et al., 2009).

Interestingly, the standardisation issue is not new. Whether to standardise or to customise has been a vexing question with which international marketers have wrestled since the 1960s (for comprehensive reviews, see Jain, 1989; Agrawal, 1995; Schilke et al., 2011; Mandler et al., 2021). The issue is of strategic and financial importance to business since excessive localisation imposes loss of control and extra costs while rigid standardisation threatens local customer appeal and global market share. The performance consequences of marketing standardisation remain controversial. Predictions of the “homogenization of markets” (Levitt, 1983) and the emergence of “global consumers” who express uniform needs and wants (Jain, 1989) have not been fully realized in modern markets. Contemporary marketplaces, spanning multiple countries and continents, continue to differ substantially in economic, political, legal, cultural, competitive, and infrastructural conditions, as well as in terms of local consumers’ needs and wants (Mandler et al., 2021). These cross-national differences suggest that firms may need to adapt their marketing activities to better appeal to local consumer tastes and preferences and/or to comply with local laws and regulations (Westjohn & Magnusson, 2017) to achieve their consumer- and product-market related goals (e.g., satisfaction, sales, market share).

The currency and importance of the debate has attracted many writers although much of the writing is expository and concentrates on either the product or advertising component (Melewar and Saunders, 1998). Kapferer (2012) has shown that the pressures for global standardisation vary greatly across the marketing mix, product class and country of origin. This means that rather than facing the decision whether to standardise or not, companies face a standardisation decision for each marketing mix element for each target market. For a company like Unilever, with thousands of products marketed in hundreds of countries, using a many dimensioned marketing mix means millions of standardisation decisions (Maljers, 1992).

Against this background, the aim of this research study is to escape from looking at individual standardisation decisions by developing a theoretical model of international marketing mix standardisation that integrates the determinants of standardisation decisions and their performance outcomes. The relationships between the constructs are identified. Because empirical detection requires a theoretical base, this article is an attempt to provide a conceptual framework for gaining insights into the standardisation issue. Hypotheses are presented in the form of propositions. Ideas for testing these hypotheses are given. In brief, an attempt is made to establish a research agenda on the standardisation issue.

## 2. Theoretical Background

The debate over standardisation vs. adaptation has influenced the international marketing literature since Elinder’s (1961) work on standardisation of advertising. While advertising appears to be the most attractive

marketing mix element for standardisation (Jain, 1989; Leonidou et al., 2002), standardisation of the entire marketing program (i.e., product, promotion, price, and place) applications across various international markets, has also attracted considerable attention among researchers (Katsikeas et al., 2006; Vrontis et al., 2009; Samiee and Chirapanda, 2019; Tan & Sousa, 2013; Buzzell, 1968). While authors typically have identified discreet constructs that impact on one element of the marketing mix, the last few years there is an increasing number of studies that present standardisation decisions through all the elements of the marketing mix. Interestingly, Mandler et al. (2021) recently noted that 41.2% of all studies on marketing standardisation encompass the entire marketing mix. In addition, three meta-analyses that synthesise existing empirical findings on marketing standardisation and their performance implications (Leonidou et al., 2002; Shoham, 2003; Tan & Sousa, 2013) all adopt a holistic perspective on the entire marketing mix. In this context, another area that has also received attention is the standardisation of brand-related attributes such as the brand name (Alashban et al. 2002; Erdoğan et al., 2010; Samiee and Roth, 1992).

Many authors identify the target market characteristics as the key influence of standardisation decisions (Baalbaki and Malhotra, 1993; Chung, 2003, 2005; Hill and Still, 1984; Jain, 1989; Johansson and Yip, 1994; Roth, 1992). Specifically, the emergence of cross-cultural market segments and intensity of competition are studied very frequently in the relevant literature (Craig and Douglas, 2000; Douglas et al., 2001; Levitt, 1983; Blackwell et al., 1991). Global market segments that share the same demographic and social-cultural characteristics with homogenous needs and similar media habits – that is, convergence of customer behavior in target markets – is considered an important factor driving standardised brand practices (Tai, 1997; Dunn, 1966; Craig and Douglas, 2000; Ozsomer and Simonin, 2004; Samiee and Roth, 1992). Another target market characteristic that is frequently discussed as affecting practices of standardisation is intensity of competition in target markets. Competitive pressures may necessitate adaptation so that local conditions are matched and competitive advantage is gained over rivals (Baalbaki and Malhotra, 1993; Zou and Cavusgil, 2002; Cavusgil and Zou, 1994; Cavusgil et al., 1993; Hill and Still, 1984; Johnson and Arunthanes, 1995; Samiee and Roth, 1992; Kapferer, 2012).

In addition to this body of literature, other studies have examined the influence of the other variables of the destination country and the mix element itself on standardisation. Specifically, some studies focused on the influence of political and economic forces (Hovell and Walters, 1972; Westjohn & Magnusson, 2017), product characteristics (Hill and Still, 1984), distribution and promotion (Sorenson and Wiechmann, 1975), technology, product nature (Blackwell et al., 1991; Zou and Cavusgil, 1996), elite consumers, teenage consumers, increased wealth, widespread travel (Hassan and Katsanis, 1991), creative expression, media allocation (Tai, 1997), brand name (Alashban et al. 2002; Whitelock and Pimblett, 1997), retail price (Cavusgil, 1996), packaging, sale promotions and sale force (Barker and Aydin, 1991) and public relations (Riesenbeck and Freeling, 1991). Jain (1989) changed the focus of research with the recognition that the international marketing standardisation decision is influenced by the culture and orientation of the source company as well as the destination country. Against these are the localising forces of customs and traditions, language, media, regulations (Roostal, 1963) and other macro-environmental factors, such as climate, race, topography, occupations, taste, law, culture, technology, consumer tastes, disposable income, taxation, nationalism, local labour costs, literacy and levels of education (Czinkota and Ronkainen, 2012; Paliwoda and Thomas, 1999). These influences indicate difficulties in using a standardised approach and therefore support market tailoring and adaptation to fit the “unique dimensions” of different international markets (Thrassou and Vrontis, 2006).

Next, the extant literature focuses most prominently on three product characteristics as affecting standardisation. Several authors have noted that it may be easier to standardise marketing strategies when products entail such characteristics as technological intensity (Cavusgil et al., 1993; Cavusgil and Zou, 1994; Zou and Cavusgil, 1996; Erdoğan et al., 2010), universal appeal, i.e. the extent to which the product caters to the specific needs of people regardless of their culture (Britt, 1974; Cavusgil et al., 1993; Craig and Douglas, 2000; Quelch and Hoff, 1986), and luxuriousness, i.e. the extent to which a product is conducive to sumptuous living rather than necessity, entailing delicacy, elegance, or refinement (Kapferer, 2012; Moore et al., 2000; Douglas and Wind, 1987; Liu et al., 2016).

Firm characteristics and strategic resources are also theorized to influence standardisation of the marketing mix. Whereas it is a fact that company dynamics must back up and align with the standardisation process, certain firm characteristics and resources such as decision-making structure, innovativeness, quality focus; and customer focus, which relate strongly to improved learning are likely to inhibit such processes (Chung, 2009; Erdoğan et al., 2010; Cavusgil and Zou, 1994; Collis, 1991; Craig and Douglas, 2000).

Buzzell (1968) was the first to examine how a set of factors influences the international standardisation of several marketing mix elements. Other comprehensive studies have followed (e.g. Jain, 1989) but the scale of these means that each can only consider a few influences on standardisation. Therefore, there is need for a comprehensive framework to encompass the factors thought to influence the standardisation decision.

### 3. Conceptual Model and Research Propositions

#### 3.1. Determinants of International Marketing Mix Standardisation

Presenting an integrative perspective, the standardisation influences in the literature can be conceptualised as either centripetal or centrifugal (Melewar and Saunders, 1998). **Centripetal company-level forces** pull an organisation to standardise marketing programs. Centripetal forces include company-level factors such as control, centralization, scale economies, and switching costs. Strong centripetal forces will, therefore, increase marketing mix standardisation (e.g. Samiee and Roth, 1992, Jain, 1989; Tai, 1997; Papavassiliou and Stathakopoulos, 1997; Backhaus and van Doorn, 2007; Viswanathan and Dickson, 2007; Yip, 1995; Vrontis, 2003; Leonidou et al., 2002; Pae et al., 2002). In the opposite direction are **centrifugal country-level forces** that push an organisation to customise marketing programmes. The country-level variables include values, national identity, economic heterogeneity (e.g. economic development, taxation, trade barriers), traditions, product life cycle, and create a varying degree of cultural distance between the domestic and target countries. Thus, strong centrifugal forces will decrease marketing mix standardisation (e.g. Jain, 1989; Levitt, 1983; Blackwell et al., 1991; Erdoğan et al., 2010; Douglas et al., 2001; Tai, 1997; Samiee and Roth, 1992; Liu et al., 2016; Hill and Still, 1984; Viswanathan and Dickson, 2007; Cavusgil and Zou, 1994). Thus, the following propositions:

P1: Strong centrifugal forces will decrease marketing mix standardisation.

P2: Strong centripetal force will increase marketing mix standardisation.

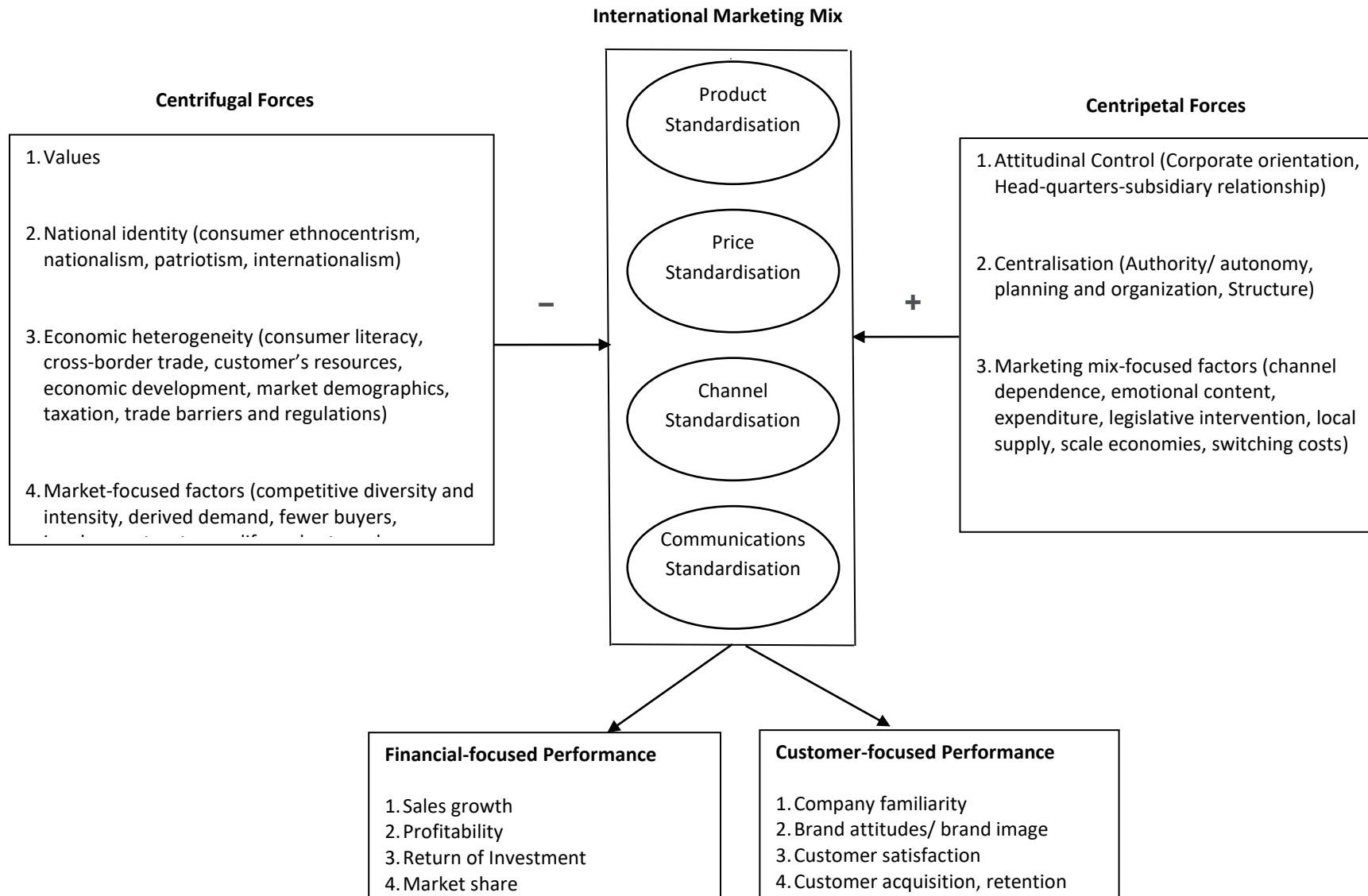
#### 3.2. Standardisation and Performance

In the final analysis, the decision on standardisation should be based on economic payoff, which includes financial and non-financial performance measures. Performance as a direct or indirect outcome of standardisation/ adaptation is conceptualised and operationalised in various ways. Most studies consider financial performance using measures such as sales growth, profitability, market share, and return on investment, or product-market performance (e.g. new product sales) (for a recent review see Mandler et al., 2021). Prior research also considers customer-focused performance using measures such as company familiarity (Melewar & Saunders, 1998), brand attitudes (e.g., Busnaina & Woodall, 2015), or customer satisfaction (e.g., Schilke, Reimann, & Thomas, 2009), and measure that reflect customer behavior (e.g., acquisition, retention), and customer-level performance (e.g., share of wallet, lifetime value) (Katsikeas et al., 2016). While there is an increasing number of studies that use multiple indicators (Mandler et al., 2021), variables that reflect customer-focused performance and financial market performance, generally, do not appear in combination. For example, Melewar and Saunders (1998) are the only authors to include investment ratings as a dependent variable, along with eight operational and organizational performance measures. Expanding the range of performance measures would account better for customer-related effects of marketing standardisation/adaptation and also potentially address conflicting effects. For example, marketing standardisation might enhance profitability through lower costs, but it could have simultaneously detrimental effects on consumer mindset metrics, due to unfavorable perceptions of mass-produced or insufficiently tailored brand offerings.

Interestingly, three meta-analyses that summarise empirical evidence about this topic indicate significant direct effects of marketing standardisation/adaptation on performance, however their findings are not consistent. In particular, while Leonidou et al. (2002) suggest that marketing adaptations relate positively to (overall) export performance, Shoham (2003) and Tan and Sousa (2013) found that the standardisation of different elements of the marketing mix (product, price, distribution, communication) have different effects (positive or negative) on performance measures or even non-significant effects. The results therefore vary. Clearly, there is no consensus in the literature on the performance outcomes of marketing mix standardisation and hence this is an area that requires more research.

To this end, based on the above discussion, we can conceptualise a general model relevant to making standardisation decisions across the whole marketing program (Figure 1). The model decomposes the determinants of the international marketing mix decision into two main constructs; the cultural factors producing the centrifugal forces for adaptation and the corporate factors producing the centripetal forces for global standardisation. Established centrifugal and centripetal constructs exist but the linkages between standardisation decisions and performance outcomes worth further research. The aims of the study are to explore the two constructs (i.e. centripetal or centrifugal forces) and evaluate the relevancy of the model to identify the integrative context of international standardisation across marketing activities.

**Figure 6: An Integrative Model of International Marketing Mix Standardisation**



#### 4. Implications and Directions for Future Research

A primary contribution to marketing knowledge of this research study is the development of a holistic conceptualisation of the forces and outcomes of international marketing mix decisions. The model recognises that the forces behave uniformly across the various features of the marketing mix elements, however, these forces operate differently in each of the marketing feature. Another major contribution of this research project is that this study and particularly the model developed will aid in managing complex interactions of brands, companies and countries in the context of a whole host of marketing mix decisions. This reductionist perspective will allow managers to make systematic recommendations particularly decisions on world-wide marketing expenditure. The identification of the entire marketing mix as the unit of analysis emphasised that the marketing mix elements are neither discreet items nor separate entities items rather more of a continuum of items when it comes down to decisions about standardisation vs adaptation in international markets. In other words, this study parameterises as well as unify the marketing mix elements.

Our study has some limitations that offer opportunities for future research. First, the present study is conceptual. Future research can empirically test the conceptual framework and the underlying research propositions to allow generalisations on the determinants of marketing mix standardisation. Though research in standardisation/ adaptation has made significant progresses during the last decades we still find a lot of white spots. We recommend that continued studies leverage this effective method to explore the dependencies among different (standardised or adapted) marketing mix elements and determine their effects on financial and non-financial performance outcomes simultaneously. In addition, future researchers can develop the framework further by including multiple predictors, moderators, mediators, control variables, and outcomes, and also examine potential interaction between predictors. Our review of the theoretical foundations of this research field may inform the design of a wider scale and more complex empirical study, which we hope ultimately may establish a timely, consistent basis for understanding the drivers and the performance outcomes of marketing standardisation/adaptation.

#### 5. References

- Agrawal, M. (1995). Review of a 40-year debate in international advertising: practitioner and academician perspectives to the standardization/adaptation issue. *International marketing review*, 12(1), 26-48
- Alashban, A. A., Hayes, L. A., Zinkhan, G. M., & Balazs, A. L. (2002). International brand-name standardization/adaptation: Antecedents and consequences. *Journal of international marketing*, 10(3), 22-48.
- Baalbaki, I. B., & Malhotra, N. K. (1993). Marketing management bases for international market segmentation: an alternate look at the standardization/customization debate. *International Marketing Review*, 10(1).
- Backhaus, K., & Van Doorn, J. (2007). Consumer Perceptions of Advertising Standardization: A Cross-Country Study of Different Advertising Categories. *International Management Review*, 3(4).
- Barker, A. T., & Aydin, N. (1991). Implications of standardization in global markets. *Journal of International Consumer Marketing*, 3(4), 15-34.
- Blackwell, R., Ajami, R., & Stephan, K. (1991). Winning the global advertising race: Planning globally, acting locally. *Journal of International Consumer Marketing*, 3(2), 97-120.
- Britt, S. H. (1974). Standardizing Marketing for International Market. *Columbia Journal of World Business*, 9(4), 39-45.
- Busnaina, I., & Woodall, T. (2015). Doing business in Libya: Assessing the nature and effectiveness of international marketing programs in an evolving economy. *International Business Review*, 24(5), 781-797.
- Buzzell, R. D. (1968). Can you standardize multinational marketing?. *Harvard business review*, 46(102-113).
- Cavusgil, S. T. (1996). Pricing for global markets. *The Columbia Journal of World Business*, 31(4), 66-78.
- Cavusgil, S. T., & Zou, S. (1994). Marketing strategy-performance relationship: an investigation of the empirical link in export market ventures. *Journal of marketing*, 58(1), 1-21.
- Cavusgil, S. T., Zou, S., & Naidu, G. M. (1993). Product and promotion adaptation in export ventures: an empirical investigation. *Journal of International Business Studies*, 24, 479-506.
- Chung, H. F. (2003). International standardization strategies: The experiences of Australian and New Zealand firms operating in the greater China markets. *Journal of International Marketing*, 11(3), 48-82.
- Chung, H. F. (2005). An investigation of crossmarket standardisation strategies: experiences in the European Union. *European Journal of Marketing*, 39(11/12), 1345-1371.
- Chung, H. F. (2009). Structure of marketing decision making and international marketing standardisation strategies. *European Journal of Marketing*, 43(5/6), 794-825.
- Collis, D. J. (1991). A resource-based analysis of global competition: the case of the bearings industry. *Strategic management journal*, 12(S1), 49-68.



- Craig, C. S., & Douglas, S. P. (2000). Building global brands in the 21st century. *Japan & The World Economy*, 3(12), 273-283.
- Czinkota, M.R. and Ronkainen, I.A. (2012). *International Marketing* (10<sup>th</sup> ed.). Cengage Learning
- Douglas, S. P., Craig, C. S., & Nijssen, E. J. (2001). Executive insights: Integrating branding strategy across markets: Building international brand architecture. *Journal of International Marketing*, 9(2), 97-114.
- Douglas, S. P., & Wind, Y. (1987). The myth of globalization. *Columbia Journal of world business*, 22(4), 19-29.
- Dunn, S. W. (1966). The case study approach in cross-cultural research. *Journal of Marketing Research*, 3(1), 26-31.
- Elinder, E. (1965). How international can European advertising be?. *Journal of Marketing*, 29(2), 7-11.
- Erdoğan, İ.E., Bodur, M., & Yılmaz, C. (2010). International strategies of emerging market firms: Standardization in brand management revisited. *European Journal of Marketing*, 44(9/10), 1410-1436.
- Hassan, S. S., & Katsanis, L. P. (1991). Identification of global consumer segments: a behavioral framework. *Journal of International Consumer Marketing*, 3(2), 11-28.
- Hill, J. S., & Still, R. R. (1984). Adapting products to LDC tastes. *Harvard Business Review*, 62(2), 92-101.
- Hofer, K. M., Niehoff-Hoekner, L. M., & Totzek, D. (2019). Organizing and implementing export pricing: performance effects and moderating factors. *Journal of International Marketing*, 27(1), 74-94.
- Hovell, P. J., & Walters, P. G. (1972). International marketing presentations: some options. *European Journal of Marketing*, 6(2), 69-79.
- Hultman, M., Katsikeas, C. S., & Robson, M. J. (2011). Export promotion strategy and performance: The role of international experience. *Journal of international marketing*, 19(4), 17-39.
- İpek, İ. (2021). The relevance of international marketing strategy to emerging-market exporting firms: from a systematic review towards a conceptual framework. *International Marketing Review*, 38(2), 205-248.
- Jain, S. C. (1989). Standardization of international marketing strategy: some research hypotheses. *Journal of marketing*, 53(1), 70-79.
- Johansson, J. K., & Yip, G. S. (1994). Exploiting globalization potential: US and Japanese strategies. *Strategic Management Journal*, 15(8), 579-601.
- Johnson, J. L., & Arunthanes, W. (1995). Ideal and actual product adaptation in US exporting firms: market-related determinants and impact on performance. *International Marketing Review*, 12(3), 31-46.
- Kapferer, J. N. (2012). *New strategic Brand Management: Advanced insights and strategic thinking* (5th ed.). London, GBR: Kogan Page Ltd.
- Kashani, K. (1989). Beware the pitfalls of global marketing. *Harvard Business Review*, September/October, 91-8.
- Katsikeas, C. S., Samiee, S., & Theodosiou, M. (2006). Strategy fit and performance consequences of international marketing standardization. *Strategic management journal*, 27(9), 867-890.
- Leonidou, L. C., Katsikeas, C. S., & Samiee, S. (2002). Marketing strategy determinants of export performance: a meta-analysis. *Journal of Business research*, 55(1), 51-67.
- Levitt, T. (1983). The globalization of markets. *Harvard Business Review*, 61(3), 92-102
- Liu, S., Perry, P., Moore, C., & Warnaby, G. (2016). The standardization-localization dilemma of brand communications for luxury fashion retailers' internationalization into China. *Journal of Business Research*, 69(1), 357-364.
- Melewar, T. C., & Saunders, J. (1998). Global corporate visual identity systems: Standardization, control and benefits. *International marketing review*, 15(4), 291-308.
- Maljers, F. A. (1992). Inside Unilever: The evolving transnational company. *Harvard Business Review*, 70(5), 46-52.
- Mandler, T., Sezen, B., Chen, J., & Özsoy, A. (2021). Performance consequences of marketing standardization/adaptation: A systematic literature review and future research agenda. *Journal of Business Research*, 125, 416-435.
- Moore, C. M., Fernie, J., & Burt, S. (2000). Brands without boundaries—the internationalisation of the designer retailer's brand. *European Journal of Marketing*, 34(8), 919-937.
- Neff, J. (1999). P&G and Unilever's giant headaches. *Advertising Age*, 70(22), 22-28.
- Özsoy, A., & Prussia, G. E. (2000). Competing perspectives in international marketing strategy: contingency and process models. *Journal of International Marketing*, 8(1), 27-50.
- Özsoy, A., & Simonin, B. L. (2004). Marketing program standardization: A cross-country exploration. *International Journal of Research in Marketing*, 21(4), 397-419.
- Pae, J. H., Samiee, S., & Tai, S. (2002). Global advertising strategy: The moderating role of brand familiarity and execution style. *International Marketing Review*, 19(2), 176-189.
- Paliwoda, S.J. and Thomas, M.J. (1999). *International Marketing*. 3rd ed., Butterworth-Heinemann, Oxford.
- Papavassiliou, N., & Stathakopoulos, V. (1997). Standardization versus adaptation of international advertising strategies: Towards a framework. *European Journal of Marketing*, 31(7), 504-527.

- Quelch, J.A. and Hoff, E.J. (1986). Customizing global marketing. *Harvard Business Review*, May-June, 59-68
- Riesenbeck, H., & Freeling, A. (1991). How global are global brands?. *The McKinsey Quarterly*, (4), 3-19.
- Roostal, I. (1963). Standardization of advertising for Western Europe. *Journal of Marketing*, 27(4), 15-20.
- Roth, M. S. (1992). Depth versus breadth strategies for global brand image management. *Journal of Advertising*, 21(2), 25-36.
- Samiee, S., & Chirapanda, S. (2019). International marketing strategy in emerging-market exporting firms. *Journal of International Marketing*, 27(1), 20-37.
- Samiee, S., & Roth, K. (1992). The influence of global marketing standardization on performance. *Journal of marketing*, 56(2), 1-17.
- Schilke, O., Reimann, M., & Thomas, J. S. (2009). When does international marketing standardization matter to firm performance?. *Journal of International Marketing*, 17(4), 24-46.
- Schmid, S., & Kotulla, T. (2011). 50 years of research on international standardization and adaptation: From a systematic literature analysis to a theoretical framework. *International Business Review*, 20(5), 491-507
- Shoham, A. (2003). Standardization of international strategy and export performance: A meta-analysis. *Journal of Global Marketing*, 16(1/2), 97-120.
- Sorenson, R. Z., & Wiechmann, U. E. (1975). Probing opinions. *Harvard Business Review*, 53(3), 38-54.
- Szymanski, D. M., Bharadwaj, S. G., & Varadarajan, P. R. (1993). Standardization versus adaptation of international marketing strategy: an empirical investigation. *Journal of marketing*, 57(4), 1-17.
- Tai, S. H. (1997). Advertising in Asia: localize or regionalize?. *International Journal of Advertising*, 16(1), 48-61.
- Tan, Q., & Sousa, C. M. (2013). International marketing standardization: a meta-analytic estimation of its antecedents and consequences. *Management international review*, 53, 711-739.
- Tedlow, R.S. & Abdelal, R. (2003). Theodore Levitt's 'the globalization of markets': An evaluation after two decades. working paper, Harvard Business School, Boston, MA, 03-082.
- Theodosiou, M., & Leonidou, L. C. (2003). Standardization versus adaptation of international marketing strategy: an integrative assessment of the empirical research. *International business review*, 12(2), 141-171.
- Thrassou, A., & Vrontis, D. (2006). A small services firm marketing communications model for SME-dominated environments. *Journal of Marketing Communications*, 12(3), 183-202.
- Viswanathan, N. K., & Dickson, P. R. (2007). The fundamentals of standardizing global marketing strategy. *International marketing review*, 24(1), 46-63.
- Vrontis, D. (2003). Integrating adaptation and standardisation in international marketing: the AdaptStand modelling process. *Journal of Marketing Management*, 19(3-4), 283-305.
- Vrontis, D., Thrassou, A., & Lamprianou, I. (2009). International marketing adaptation versus standardisation of multinational companies. *International Marketing Review*, 26(4/5), 477-500.
- Yip, G. S. (1995). *Total global strategy*. New Jersey, NY: Prentice-Hall.
- Westjohn, S. A., & Magnusson, P. (2017). Export performance: a focus on discretionary adaptation. *Journal of International Marketing*, 25(4), 70-88.
- Whitelock, J., & Pimblett, C. (1997). The standardisation debate in international marketing. *Journal of Global Marketing*, 10(3), 45-66.
- Zou, S., Andrus, D. M., & Wayne Norvell, D. (1997). Standardization of international marketing strategy by firms from a developing country. *International Marketing Review*, 14(2), 107-123.
- Zou, S., & Cavusgil, S. T. (1996). Global strategy: A review and an integrated conceptual framework. *European Journal of Marketing*, 30(1): 52-69
- Zou, S., & Cavusgil, S. T. (2002). The GMS: A broad conceptualization of global marketing strategy and its effect on firm performance. *Journal of marketing*, 66(4), 40-56.

## **Emotional intelligence and educational leadership. The opinions of the primary education teachers of Achaia**

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### **ABSTARCT**

The purpose of this article is to present the opinions of teachers who serve in Primary Education of Achaia about the emotional intelligence of their principals and the leadership styles they adopt as leaders. More specifically it is being investigated the correlation of educational leadership styles (transformational, transactional, laissez-fair) with the principals' emotional intelligence levels. To conduct the research were used two weighted research tools: the E.Q.I. - Emotional Quotient Inventory and the M.L.Q. - Multifactor Leadership Questionnaire. The results showed that principals have quite satisfactory levels of emotional intelligence and at the same time they adopt the transformational leadership style. A positive and very strong correlation develops between principals' emotional intelligence and transformational leadership style. Finally, male and female elementary school principals do not show statistically significant differences in emotional intelligence levels.

**Key words:** *principals' emotional intelligence, educational leadership, school units' management*

### **1. INTRODUCTION**

Emotional intelligence according to Daniel Goleman (1995) is the persons' ability to understand their own emotions as well as those of others and effectively regulating their behavior and interpersonal relationships. Reuven Bar-On (1997) supported the relationship between emotional intelligence and social intelligence. Within this context are distinguished persons' abilities and skills to achieve their adaptation to the demands and pressures they receive from their environment.

In any case, emotional intelligence is an attribute for the modern leader. Nowadays leader must inspire his colleagues while exercising management at the same time. Based on the above assumption, the leader can manage complaints by turning them into constructive solutions, creating a positive climate for diversity and pursue networked cooperation (Goleman, 1998).

Furthermore, emotional intelligence, as a characteristic of a leader, can lead to outstanding performance while simultaneously ensuring success in upper-level management (Goleman, 1999). The skills of problem-solving, confidence-building, persuasion and argumentation are considered particularly important. According to Goleman (1998), leader should not promote imposition, but utilize the art of persuasion so the subordinates work in a specific direction.

In the field of education, leadership requires special knowledge and flexible handling. According to Dellatolas (2013), middle-level and top-level management roles require high emotional intelligence compared to other abilities and skills. Koula (2011) stated that the failure of many capable leaders is due to the exclusive focus on goals and less on the human factor.

Passiardis (1996) claims that the effective educational leader is the one who understands the value of teachers' emotions and through the exercised emotional influence manages to create a climate of safety - trust. Positive

emotions can significantly motivate teachers to achieve their goals and to increase their work performance (George, 2000). This can only happen if the principal and teachers have developed a common culture, which enables them to communicate effectively, to understand their motivations and colleagues' feelings (Koula, 2011).

According to Stravakou (2003), the principal's emotional intelligence has a catalytic effect on the communication among persons who are involved in the educational process. According to Kampouridis (2002), educational leaders should achieve the goals of the educational system through good communication. Therefore, good interpersonal relationships boost the creativity of the staff, contribute to solving problems, improve the quality of provided education and increase the efficiency of the school units (Koula, 2011).

The dynamic learning environment and the modern requirements presuppose the adoption of a leadership style that promotes collaboration and innovative actions (Balias & Bestias, 2016). Traditionally there has been particular interest in theories that describe the ideal educational leadership style. The common denominator for all theories is the investigated relationship between leader and members of the school community and the observed conditions in it (Balias & Bestias, 2016).

Avolio and Bass (1991) extended Burns' (1978) theory by proposing the FLRT (The Full Range Leadership Model). In this model they included transformational leadership, transactional leadership and laissez-faire leadership. Leithwood and Duke (1999) formulated the best-known typology for educational leadership including six different leadership models. Bush and Glover (2003) added three more leadership models to the above typology and they are summarized as follows: managerial, transformational, participative, interpersonal, transactional, postmodern, moral, instructional, and contingent leadership.

Transformational leadership gives special importance to the influence exerted by the leader both on the work commitment and on the development of members' individual abilities. Mazurkiewicz (2011) states that transformational leadership enables organizational members to transform traditional functions by both diffusing the dynamics of the specific leadership style and enhancing their leadership abilities.

The leader in transactional leadership activates subordinates using a reward system. According to Passiardi (2004) the rewards system aims to motivate employees through various benefits and exchanges.

Finally, laissez fair leadership is considered an extension of transactional's leadership extreme version. In this case, the leader is absent from the activities of the organization, does not assume responsibilities or actions, while giving space to the existing problems. Laissez-fair leadership is characterized as the most ineffective, as there is no leadership at all.

## **2. METHODOLOGY**

### **2.1 Purpose of the research**

The purpose of this article is to present the opinions of teachers who served in Primary Education of Achaia about the emotional intelligence of their principals and the leadership styles they adopt as leaders. More specifically it is being investigated the correlation of educational leadership styles (transformational, transactional, laissez-fair) with the principals' emotional intelligence score. The existence of differentiation in emotional intelligence between men and women in managerial positions is also investigated.

### **2.2 Research questions**

- Which is the score of school principals' emotional intelligence?
- Which leadership style principals adopt?
- Is there a correlation between principals' emotional intelligence and leadership styles?
- Does the emotional intelligence of male and female principals differ?

### **2.3 Methodology and research tool**

The quantitative-sampling research methodology was chosen to conduct the present research. The data collection process was based on a questionnaire with two individual scales. The first was the seven-point Likert scale E.Q.I.-Emotional Quotient Inventory (Rahim et. al., 2002) which investigated the levels of principals' emotional intelligence. The teachers of the sample were asked to complete the questionnaire by indicating their disagreement or their agreement with a number from 1-7.

The second research tool was the five-point scale M.L.Q.- Multifactor Leadership Questionnaire (Avolio & Bass, 2004) which highlighted the most popular educational leadership style adopted by the principals. Teachers

answered based on their agreement on the five-point Likert scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.

The questionnaires were sent and completed digitally through Google Forms in November 2022. Data processing was done through the statistical package SPSS v.27. More specifically were used means, standard deviations, correlations through the Pearson's r coefficient, regression, and the Mann-Whitney test. At this point it should be mentioned that the reliability of the questionnaire was calculated through the Cronbach's alpha coefficient (.974) and it is regarded as excellent.

## 2.4 Sample

The research sample was N=102 teachers (all specializations) who serve in elementary schools of Achaia. The 75.5% were women and the 24.5% were men. Their average age was 39.39 years and 42.2% of them had a master's degree. Teachers were the largest group 67.6%. Finally, there are more female principals 55,9% than male principals 44,1%.

## 3. RESULTS OF THE RESEARCH

### 3.1 Principals' emotional intelligence

According to teachers' opinions, school principals in Achaia have quite satisfactory levels of emotional intelligence (4.86). To make this finding clear, were calculated the means of the five dimensions of emotional intelligence and a general mean of them was extracted. Principals' social skills reported the highest mean (4.95), followed by empathy (4.93), motivation (4.92), self-awareness (4.85) and self-regulation (4.66).

**Table 5 : Principals' emotional intelligence**

	Mean	Standard Deviation
Social skills	4,9534	1,52363
Empathy	4,9338	1,50697
Motivation	4,9275	1,44299
Self-awareness	4,8529	1,45108
Self-regulation	4,6608	1,53114
<b>Principals' emotional intelligence (mean)</b>	<b>4,8657</b>	<b>1,41084</b>

### 3.2 Educational leadership styles

The most popular educational leadership style is considered the transformational as it reports the highest mean (3.44). In the second position is placed the transactional leadership style with a mean of (3) and in the last position is placed the laissez-fair leadership style with a mean of (1.96).

**Table 6 : Educational leadership styles**

	Mean	Standard Deviation
Transformational leadership style	3,4436	,95820
Transactional leadership style	3,0000	,56166
Laissez-fair leadership style	1,9608	,99550

### 3.3 The correlation between educational leadership styles and principals' emotional intelligence

The transformational leadership style is positively and very strongly related to principals' emotional intelligence ( $r = 0.890$  sig = 0.00), weakly and positively related to transactional leadership style ( $r = 0.359$ , sig = 0.00) and moderately and negatively related to laissez-fair leadership style ( $r = -0.536$ , sig = 0.00).

**Table 7 : The correlation between principals' emotional intelligence and educational leadership styles**

		Transformational leadership style	Transactional leadership style	Laissez-fair leadership style
Principles' emotional intelligence	Pearson Correlation	,890**	,359**	-,536**
	Sig. (2-tailed)	,000	,000	,000
	N	102	102	102

In *table 4* transformational leadership shows statistical significance ( $\text{sig}=0.00 < 0.05$ ) in the interpretation of principals' emotional intelligence in contrast to the other forms of leadership.

**Table 8 : Statistical significance of educational leadership styles and principals' emotional intelligence**

Model		Unstandardized Coefficients		Standardized	T	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	,859	,408		2,109	,038
	Transformational leadership	1,249	,098	,849	12,764	,000
	Transactional leadership	-,020	,142	-,008	-,140	,889
	Laissez fair leadership	-,120	,085	-,085	-1,418	,159

The regression model is presented in *table 5*. The transformational leadership style explains 79.2% of principals' emotional intelligence.

**Table 9 : Regression model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,890 <sup>a</sup>	,792	,790	,64618

*Table 6* shows the linear correlation of transformational leadership style and principals' emotional intelligence, which is statistically significant ( $\text{sig}=0.00 < 0.05$ ).

**Table 10 : ANOVA of linear correlation of transformational leadership style and principals' emotional intelligence**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	159,283	1	159,283	381,466	,000 <sup>b</sup>
	Residual	41,755	100	,418		
	Total	201,038	101			

### 3.4 Emotional intelligence and principals' gender

Male principals reported a marginally higher mean of emotional intelligence (4.89) than female principals (4.84). The Mann-Whitney test determined that there are no statistically significant differences in the distribution of male and female principals' emotional intelligence ( $\text{sig} = 0.957 > 0.05$ ).

**Table 11 : Mann-Whitney test for principals' emotional intelligence skills and their gender**

	Principals' emotional intelligence
Mann-Whitney U	1274,500
Wilcoxon W	2927,500
Z	-,054
Asymp. Sig.	,957

## 4. CONCLUSIONS

The principals who serve in the primary schools of Achaia have quite satisfactory levels of emotional intelligence (4.86). Similar findings are observed in numerous surveys conducted in different regional units of Greece (Poulos, 2015; Karagiampa, 2020; Manolaki, 2020). Regarding the five dimensions of principals' emotional intelligence, their social skills are the ones that reporting the highest mean (4.95). After following empathy (4.93), motivation (4.92), self-awareness skills (4.85) and self-regulation skills (4.66).

The principals of Achaia's elementary schools adopt the transformational style, as it reports the highest mean (3.44). Therefore, it is considered the most popular educational leadership style. The same conclusions were found in the research of (Vassiliadou & Dieronitou, 2014 ; Kalliontzi & Iordanidis, 2019 ; Manolaki, 2020). The transactional leadership style is placed in the second position of the ranking reporting mean (3) and in the last position is placed the laissez-fair leadership style reporting mean (1.96). The emergence of the transformational

leadership style, as the most popular, both from the present research and from the others, is a particularly encouraging finding. Bass (1998) claims that the leader who use transformational leadership can prioritize important changes and simultaneously implement them.

From the tests carried out, a positive and very strong correlation between transformational leadership and principals' emotional intelligence was identified ( $r = 0.890$ ,  $\text{sig} = 0.00$ ). This is a result which is confirmed bibliographically by Bass (1998) and also by numerous Greek studies (Manolaki, 2020 ; Kyriakidou, 2011 ; Karypidou, 2018). Transactional leadership style is positively and weakly related to principals' emotional intelligence ( $r = 0.359$ ,  $\text{sig} = 0.00$ ), while laissez-fair leadership style is negatively and moderately related to principals' emotional intelligence ( $r = -0.536$ ,  $\text{sig} = 0.00$ ). All the above findings are in absolute agreement with the conclusions of research conducted by (Aydin et al., 2013 ; Kalavrouzioti, 2019)

Finally, emotional intelligence does not show statistically significant differences for both men and women in managerial positions in the regional unit of Achaia. Male principals show a marginally higher mean at the emotional intelligence (4.89) compared to female principals (4.84). The Mann-Whitney test determined that there are no statistically significant differences in the distribution of male and female principals' emotional intelligence ( $\text{sig} = 0.957 > 0.05$ ).

## REFERENCES

- Avolio, B.J., & Bass, B.M. (1991). *The Full Range Leadership Development Programs Basic and Advanced Manuals*. Bass, Avolio Associates, New York.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor Leadership Questionnaire. Manual and Sampler Set (3rd ed.)*. Redwood City, CA: Mindgarden.
- Aydin, A., Savier, Y., & Uysal, S. (2013). The Effect of School Principals' Styles on Teachers' Organizational Commitment and Job Satisfaction. *Educational Sciences. Theory & Practice*, 13(2), 806-811.
- Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): A test of emotional intelligence*. Toronto, Canada, Multi-Health Systems.
- Bass, B.M. (1998). *Transformational Leadership Industrial, Military, and Educational Impact*. Mahwah, NJ Lawrence Erlbaum Associates.
- Vasiliadou, D. & Dieronitou, E. (2014). The application of transformational leadership in education. *'Erkyna, Review - Scientific Issues*, 3, 92-108.
- Bush, T. & Glover, D. (2003). *School Leadership: Concepts and Evidence*. Nottingham: National College for School Leadership.
- Dellatolas, A. (2013). *Emotional intelligence and transformational leadership in secondary school teachers*. 7<sup>th</sup> International Conference in Open & Distance Learning - November 2013, Athens, Greece – PROCEEDINGS, 18-40.
- George, J. (2000). Emotions & leadership: The role of emotional intelligence. *Human Relations*, 53(8), 1027-1045.
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books.
- Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.
- Goleman, D. (1999). *Emotional Intelligence in the Workplace*. Athens: Greek Letters publications.
- Kalavrouzioti, M. (2019). *Leadership style and job satisfaction: A quantitative investigation of secondary school teachers' views*. Diploma thesis, MSc Education Management : University of Patras.
- Kalliontzi, V. & Iordanidis, G. (2019). Transformational leadership in public secondary education in Greece: exploring teachers' views. *Research in Education*, 8, 112-128.
- Kampouridis, G. (2002). *Organization and Management of School Units*. Athens: Kleidarithmos.
- Karagiampa, H. (2020). *Emotional Intelligence Programs and Teacher Professional Development: challenges and connections in early childhood education*. Diploma Thesis, Volos: University of Thessaly
- Karypidou, T. (2018). *Leadership and emotional intelligence in educational units*. Diplomatic Thesis, Patras: E.A.P.
- Koula, B. (2011). *Interpersonal Relations of Principal and Teachers-Management Theories*. Thessaloniki: Kyriakidis Brothers.
- Kyriakidou, X. (2011). *Emotional intelligence and leadership in Secondary Education teachers*. Diplomatic Thesis, Thessaloniki: University of Macedonia.
- Leithwood, K. & Duke, D.L. (1999). A century's quest to understand school leadership. In J. Murphy & K.S. Louis, (Eds.), *Handbook of Research on Educational Administration: a project of the American Educational Research Association* (pp. 45 - 72). San Francisco: Jossey-Bass.
- Mazurkiewicz, G. (2011). Educational leadership with eyes and hearts wide open. In T. Townsend and J. MacBeath (Eds.), *International Handbook of Leadership Learning, Volume 25*. London: Springer, 1031-1045.

- Manolaki E. (2020). *Emotional Intelligence and Educational Leadership in Secondary Education: The Case of Serres Regional Unit*. Diplomatic Thesis, Patras: E.A.P.
- Balias, E., & Bestias, G. (2016). Educational leadership: its role as a factor promoting reforms in higher education. *ACADEMIA*, 6(1).
- Passiardis, P. (1996). *The evaluation of the work of teachers: Views and positions of the educational officers of Cyprus*. Athens: Grigori Publications.
- Passiardis, P. (2004). *Educational leadership. From the period of benign indifference to the modern era*. Athens: Metaichmio.
- Poulos, M. (2015). Social and emotional skills, teacher-student relationships, and student behavior: Teachers' perceptions. *Hellenic Journal of Psychology*, 12, 129-155
- Rahim, M. A., Psenicka, C., Polychroniou, P., & Zhao, J. H. (2002). A model of emotional intelligence and conflict management strategies: A study in seven countries. *International Journal of Organizational Analysis*, 10(4), 302-326.
- Stravakou, P. (2003). *The Director of a School Unit of Primary and Secondary Education*. Thessaloniki: Kyriakidis Brothers.



## **Factors influencing the under-representation of women in leadership positions in the secondary education sector**

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### **Abstract**

The aim of the study is to investigate the views of female teachers in the Secondary Education sector in relation to the inequalities observed in claiming leadership positions in relation to gender. More specifically, it aims at identifying the most significant inhibiting and encouraging factors which prevent and reinforce respectively the achievement of higher positions and understanding the way women perceive their professional development and whether it is their ambition to be promoted to higher positions. The research was conducted with the use of the quantitative method and the questionnaire was used as the research tool. The sample consists of 95 female teachers in Secondary Education. Based on the research results, the most significant inhibiting factors in claiming leadership positions are: family commitments, the stress caused by positions of higher responsibility, the fact that teaching is more interesting and the lack of connections for the promotion to leadership positions, while the most significant encouraging factors are: the acquisition of additional qualifications through professional development courses in management issues, a relief from family commitments and personal ambitions. As the inhibiting factors increase, female teachers need more motivation to claim leadership positions in Secondary Education.

**Keywords:** *Leadership, Glass ceiling, Gender, Gender stereotypes, Secondary education*

### **1. INTRODUCTION**

In Greece, the teaching profession is mainly represented by the female gender, that is why the teaching profession is characterized as "feminine". On the contrary, in the education administration, the participation rate of women in higher positions is lower. This fact worries the scientific community regarding the existence of unequal opportunities for the two sexes (Νιώτα, 2018). This phenomenon is also observed in several countries around the world (Altinkurt & Yilmaz, 2012; Anastasiou & Oikonomou, 2020). In Secondary Education schools, it is observed that women hold a small percentage of leadership positions (Milian, 2019).

Women face a variety of obstacles. Gender stereotypes are one of the main reasons why women are underrepresented in leadership positions in the field of education. Lack of self-esteem and confidence to claim such positions compounds the problem (Anastasiou & Oikonomou, 2020; Bodalina & Maestry, 2020). At the same time, it has been noted that women do not receive the necessary support and guidance, especially because the prevailing perception is that they do not possess the necessary qualifications for leadership positions (Altinkurt & Yilmaz, 2012).

Women are excluded from leadership positions, as they are characterized by a lack of self-esteem-self-confidence, lack ambitions due to stereotypical perceptions and are often faced with negative emotions. (Anastasiou & Oikonomou, 2020; Weiner & Burton, 2016). On the contrary, men are considered to be better able to cope with a leadership position. The set of obstacles that women encounter when trying to climb into positions of responsibility is attributed to the term "glass ceiling" (Altinkurt & Yilmaz, 2012).

However, in order to deal with this specific phenomenon, positive reinforcement, flexible working hours, the provision of actions designed internally for training, are listed as indicative proposals (Altinkurt & Yilmaz, 2012). However, guidance, support and encouragement from other leaders or mentors are important, as well as

from other persons who are important to them, such as their spouse/partner (Weiner & Burton, 2016; White, 2018; Bodalina & Maestry, 2020).

The purpose of this research is to investigate the views of female teachers who serve in Secondary Education, regarding their professional development. More specific, it aims to identify the obstacles they encounter when claiming leadership positions in public and private schools in Secondary Education and to identify to what extent these obstacles are related to the issue of gender, as well as to examine some proposals that could be implemented so that women are encouraged to claim leadership positions. From the results of the study, an attempt is made to understand the way women perceive their professional development and whether it is their ambition to be promoted to higher positions by identifying the inhibiting and encouraging factors.

## 2. METHODOLOGY

The tool chosen to investigate the objectives of this research was the quantitative approach using a structured questionnaire. The questionnaire that was constructed consisted of four sections. The first section included questions about demographics (age, marital status, education, working place) of teachers. The second section explores the inhibiting factors and obstacles that women face when claiming senior management positions. It includes 16 close-ended questions on a five-point Likert scale. Research subjects are asked to indicate the extent to which they agree ("Strongly disagree", "Disagree", "Neither agree nor disagree", "Agree", "Strongly agree") with the 16 statements. The third section explores the factors that encourage a woman to claim leadership positions. It includes 16 close-ended questions with a five-point Likert scale. Participants are asked to state to what extent they believe that the specific proposals encourage women. Specifically, participants must indicate their degree of agreement on a five-point graded scale ("Strongly disagree = 1", "Disagree = 2", "Neither agree/disagree = 3", "Agree = 4", "Strongly agree = 5"). The second and third section of the questionnaire have been designed by Georgandzia (2018). The fourth section explores the attitude of teachers towards their professional development. It consists of 5 closed type questions (Yes/No). The questionnaire was completed by 95 teachers from secondary schools in Greece.

## 3. RESULTS

According to table 1 most women are interested in their personal development with a mean of 1.17 and a median of 1.00. Most of them have not applied for a position of responsibility. At the level of central tendency, the arithmetic mean is 1.68 and the median is 2.00. However, the majority intend to submit an application immediately with a mean of 1.44 and a median of 1.00. In addition, most women consider that gender does not play a role in professional development (Mean=1.57) Finally, they consider that gender cannot influence their professional development (Mean=1.53).

**Table 1: Teachers' view of their professional development**

	N	Min	Max	Median	Mean	S.D.
1. Are you interested in your professional development?	95	1	2	1.00	1.17	.376
2. Have you ever applied for a position of responsibility?	95	1	2	2.00	1.68	.467
3. Do you intend to apply soon if given the chance?	95	1	2	1.00	1.44	.499
4. Do you think gender plays a role in your career development?	95	1	2	2.00	1.57	.498
5. Do you think gender can affect your career development?	95	1	2	2.00	1.53	.502

Table 2 presents the results of the Friedman test ( $p < 0.001$ ) that ranks the most important obstacles that discourage female Secondary Education teachers from claiming positions in management. Therefore, the most important obstacles to claiming leadership positions are the stress caused by positions of responsibility, family obligations, dealing with others, the fact that teaching is more interesting and the lack of acquaintances to facilitate promotion to leadership positions, while the least important obstacles are the fear of exposure in a public place, the lack of qualifications and the belief that a man can do better.

**Table 2: Ranking of inhibitory factors**

	Mean Rank
1. Managerial positions have a lot of responsibility and stress	11.87
2. Due to family obligations	10.94
3. Engaging with others	10.82
4. Teaching is more interesting	10.75
5. Acquaintances are needed to promote a candidacy	9.57
6. Men are often chosen for management positions	9.25

7. Lack of interest in taking up a higher position	8.79
8. The selection system is unreliable	8.67
9. Because of the "male dominance" in Educational Administration	8.48
10. Fear of constant evaluation	7.99
11. Due to social stereotypes/prejudices	7.91
12. Fear of peer criticism	7.31
13. Lack of knowledge	7.12
14. Fear of public exposure	6.49
15. Lack of qualifications according to the Legislation	6.08
16. A man does better	3.96

Table 3 presents the results of the Friedman test ( $p < 0.001$ ) that ranks the most important enhancing factors that encourage female Secondary Education teachers to claim positions in management. Therefore, the most important motivations for claiming leadership positions are the personal ones, the education related to educational administration, obtaining additional qualifications, the relief from family obligations and the personal ambitions, while the balanced distribution of men and women in senior positions is considered less important, the change of recruitment criteria and the replacement of the interview with objective criteria as well.

**Table 3: Ranking of motivating factors**

	Mean Rank
1. Personal motives	9.86
2. Attending training related to educational administration	9.79
3. The acquisition of qualifications (e.g. ICT Certification. Master's degree)	9.77
4. The relief from family obligations	9.19
5. Personal ambitions for assuming positions of responsibility	9.12
6. The encouragement from the family environment	8.86
7. Change in social stereotypes/prejudices	8.82
8. The children reaching adulthood	8.58
9. Familiarity with administrative tasks	8.52
10. The support from colleagues	8.39
11. Practicing/learning with the help of an instructor	8.31
12. The right professional orientation in schools	7.83
13. The equal participation of women and men in the selection boards	7.82
14. Balanced distribution of men and women in higher positions	7.49
15. Change of selection criteria for directors	6.97
16. Replacing the interview with other types of objective criteria from the selection boards	6.68

The results of the analysis based on the Pearson correlation coefficient between the means of inhibiting and encouraging factors shows positive correlation ( $r = 0.4$   $p < 0.001$ ). Therefore, as the inhibiting factors increase, female teachers need more motivation to claim leadership positions in Secondary Education.

Table 4 shows that female teachers who answered that they are not interested in their professional development (no) find teaching in the classroom more interesting than running for a principal position. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 4: Comparison of means of the Inhibiting factors and the variable "Are you interested in your professional development?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
Teaching is more interesting	3.53	4.06	-2.075	.038

Table 5 shows that female teachers who answered that they have applied for candidacy (yes) think that a man does better. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 5: Comparison of the means of the Inhibiting factors and the variable "Have you ever applied for a position of responsibility?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
A man does better	1.93	1.57	-1.971	<b>.049</b>

Table 6 shows that the female teachers who answered that they are going to apply for a position of responsibility (yes) consider that the fact that men are chosen for leadership positions, social prejudices and the fear of evaluation act as discouraging factors. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 6: Comparison of the means of the Inhibiting factors and the variable "Do you intend to submit soon if given the chance?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
Men are often chosen for management positions	3.36	2.76	-2.063	<b>.039</b>
Due to social stereotypes/prejudices	3.19	2.33	-2.832	<b>.005</b>
Fear of constant evaluation	3.02	2.07	-2.009	<b>.045</b>

Table 7 shows that female teachers answered that gender plays a role in development ("yes"), since they believe that family obligations, stereotypical perceptions about gender, the dominance of men in the field of administration, the lack of acquaintances, the fear of evaluation and the possible lack of qualifications discourage them. They have a higher average in these questions and this difference is statistically significant. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 7: Comparison of the means of the Inhibiting factors and the variable "Do you think gender plays a role in your career development?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
Due to family obligations	4.07	3.20	-3.387	<b>.001</b>
Because of the "male dominance" in Educational Administration	3.56	2.46	-4.066	<b>.000</b>
Fear of public exposure	2.66	2.15	-2.119	<b>.034</b>
Acquaintances are needed to promote a candidacy	3.66	2.93	-2.816	<b>.005</b>
Lack of qualifications according to the Legislation	2.68	2.11	-2.126	<b>.033</b>
Men are often chosen for management positions	3.61	2.70	-3.212	<b>.001</b>
Due to social stereotypes/prejudices	3.46	2.31	-3.767	<b>.000</b>
Fear of constant evaluation	3.17	2.48	-2.516	<b>.012</b>
A man does better	1.98	1.46	-2.768	<b>.006</b>

Table 8 shows that female teachers answered that gender can influence development ("yes") since they believe that family obligations, male dominance in Educational Administration, the existence of acquaintances, lack of qualifications, fear of evaluation and the belief that a man is more capable are related with the theme of gender.

**Table 8: Comparison of the means of the Inhibiting factors and the variable "Do you think gender can affect your career development?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
Due to family obligations	4.00	3.20	-3.103	<b>.002</b>
Because of the "male dominance" in Educational Administration	3.51	2.42	-4.099	<b>.000</b>
Lack of qualifications according to the Legislation	2.71	2.04	-2.622	<b>.009</b>
Men are often chosen for management positions	3.56	2.68	-3.126	<b>.002</b>
Due to social stereotypes/prejudices	3.33	2.34	-3.271	<b>.001</b>
Fear of constant evaluation	3.18	2.42	-2.795	<b>.005</b>
A man does better	1.93	1.46	-2.199	<b>.028</b>

Table 10 shows that female teachers who answered that they are interested in professional development ("yes") find the encouragement from the environment important. They have a higher average for this question and this difference is statistically significant. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 9: Comparison of the means of the of the encouraging factors and the variable "Are you interested in your professional development?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
The encouragement from the family environment	4.14	3.44	-2.701	<b>.007</b>

Table 10 shows that Female teachers who answered that they have not applied for candidacy ("no") find that family obligations, lack of support from colleagues and attending relevant training act as deterrents. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 10: Comparison of the means of the of the encouraging factors and the variable "Have you ever applied for a position of responsibility?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
The support from colleagues	3.63	4.02	-2.214	<b>.027</b>
Attending training related to educational administration	4.03	4.35	-2.073	<b>.038</b>
The relief of family Obligations	3.77	4.20	-2.231	<b>.026</b>

Table 11 shows that female teachers who answered that they are going to apply for candidacy (yes) believe that the encouragement from the family environment and the equal distribution of both sexes in the selection boards influence this decision. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 11: Comparison of the means of the of the encouraging factors and the variable "Would you like to submit soon if given the chance?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
The encouragement from the family environment	4.25	3.76	-2.190	<b>.029</b>
The equal participation of women and men in the selection boards	4.04	3.55	-2.175	<b>.030</b>

Table 12 shows that female teachers who answered that gender plays a role in career development ("yes") believe that encouragement from the family environment, the coming of age of children, the easing of family obligations have an encouraging effect on claiming leadership positions, i.e. they have a higher average on the questions these and this difference is statistically significant. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 12: Comparison of the means of the of the encouraging factors and the variable "Do you consider gender to play a role in your career development"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
The encouragement from the family environment	4.27	3.85	-2.045	<b>.041</b>
The children reaching adulthood	4.27	3.69	-2.897	<b>.004</b>
Balanced distribution of men and women in higher positions	4.12	3.44	-3.129	<b>.002</b>
The relief from family Obligations	4.32	3.87	-2.138	<b>.033</b>
Change in social stereotypes/prejudices	4.20	3.76	-2.081	<b>.037</b>

Table 13 shows that female teachers who answered that gender can influence career development ("yes") believe that the coming of age of children, the easing of family obligations, the equal distribution of both sexes in leadership positions, the change in social stereotypes and learning with the help of an education executive acts encouragingly in claiming leadership positions, they have a higher average in these questions and this difference is statistically significant. There is a statistically significant difference between the means ( $p < 0.05$ ).

**Table 13: Comparison of the means of the encouraging factors and the variable "Do you think gender can affect your career development?"**

	Mean (Yes)	Mean (No)	Z	Asymp. Sig. (2-tailed)
The children reaching adulthood	4.18	3.72	-2.251	<b>.024</b>
Balanced distribution of men and women in higher positions	3.96	3.54	-2.032	<b>.042</b>

The relief from family Obligations	4.33	3.82	-2.565	<b>.010</b>
Practicing/learning with the help of an instructor	4.13	3.76	-2.212	<b>.027</b>
Change in social stereotypes/prejudices	4.16	3.76	-1.981	<b>.048</b>

#### 4. CONCLUSIONS

The most important inhibiting factors in claiming leadership positions according to the participants are: the stress caused by positions of responsibility, family obligations dealing with others, the fact that teaching is more interesting and the lack of acquaintances for promotion to leadership positions, while the least important obstacles are the fear of exposure to public space, the lack of qualifications according to the law and the belief that a man can do better. However, it was found that interest in professional development is influenced by how interesting the woman finds teaching in the classroom. The fact that most have not applied for a position of responsibility is influenced by the belief that a man can do better, by social prejudices and the fear of evaluation. In addition, the female teachers who answered that they are going to apply for candidacy (“yes”) believe that the encouragement from the family environment and the equal distribution of the two sexes in the selection boards influence this decision. Although they consider that gender does not play a role in professional development, it seems that family obligations and the fear of public exposure are female characteristics that act as an obstacle to advancing, in combination with male dominance in the field of management. In addition, although they consider that gender does not play an important role in claiming leadership positions, it seems again that family obligations, the fear of public exposure, the possible lack of qualifications, male dominance in management, the fact that men are chosen for higher positions and the belief that a man can do better combine with the theme of gender.

The most important motivations for seeking leadership positions are personal, education about educational administration, obtaining additional qualifications, easing family obligations and personal ambitions, while the balanced distribution of men and women in senior positions, the change of recruitment criteria and the replacement of the interview with objective criteria. It was found that the interest in personal development is also influenced by the encouragement they receive from their family environment. The fact that they have not submitted an application to assume responsibility has been determined by the support of colleagues, by attending relevant training and by family obligations, while future submission is influenced by the support of the family environment and by the balanced distribution of men and women in management positions. It was found, finally, that although they consider that gender does not affect development, the coming of age of children, family obligations, encouragement from the environment, the balanced distribution of both sexes in leadership positions and practical training with the help of an educational executive are encouraging factors for women. Finally, the more the inhibiting factors increase, the more motivation female teachers need to undertake and claim leadership positions in Secondary Education.

#### References

- Altinkurt, Y., & Yilmaz, K. (2012). Being a female school administrator in Turkey: Views of teachers and administrators. *Energy Education Science and Technology Part B-Social and Educational Studies*, 4(4), 2227–2238.
- Anastasiou S. & Oikonomou, E. (2020). Effectiveness, Leadership style and gender of secondary education school principals in Athens, Greece. *World Journal of Vocational Education and Training*, 2(1), 12-20. DOI: 10.18488/journal.119.2020.21.12.20.
- Bodalina, K. N. & Maestry, R. (2020). A case study of the experiences of woman leaders in senior leadership positions in the education district offices. *Educational Management Administration and Leadership*, XX(X), 1–17.
- Georgandzia, V. (2018). The assertion of positions of responsibility by women teachers as a goal for their professional development. Factors that contribute to encouraging / discouraging them from taking leadership positions. The case of female teachers in public primary schools in western Thessaloniki (MSc Thesis). Hellenic Open University.
- Cohen, L., Manion, L., & Morrison, K. (2008). *Μεθοδολογία εκπαιδευτικής έρευνας*. Αθήνα: Μεταίχμιο
- Milian, E. (2019). Leading ladies lift the glass ceiling: A delphi study about the perceived limitations of women in educational leadership positions within secondary school settings (Doctoral dissertation,). St. Thomas University
- Weiner, J. M., & Burton, L. J. (2016). The double bind for women: Exploring the gendered nature of turnaround leadership in a Principal Preparation Program. *Harvard Educational Review*, 86(3), 339- 365.
- White, S. (2018). Opportunities and Barriers to Female Leadership in Secondary Education: A Qualitative Analysis. Point Park University Conference Proceedings, 133-150.

## **A web-based R Shiny decision-making application for humanitarian logistics operations management**

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### **Abstract:**

The main goal is the development of a web-based Decision-Making Application (DMA), essential for businesses, non-profit organizations and governments that opt for the immediate selection of the location of the Distribution Center (DC) of humanitarian aid, in cases of natural or human-made disasters. The DMA concerns networks that, as a result of a disaster (as network attacks), are unstable and require quick decisions on DC location and distribution plan configuration to achieve immediate response to humanitarian supply network requirements. The operation of the DMA is based on two main pillars. Specifically, in the first pillar all the processes for proposing possible locations for DC installation are performed using a proportion of the total number of the network in question. In the second pillar, all the processes are performed to study the robustness of the network after attacks on links or nodes in order to determine the final decision to select the most suitable node for DC installation in relation to the nodes proposed in the previous pillar. The modeling of the processes of the two pillars is based on a combination of methods and techniques from the fields of Supply Chain Management, Network Science, Artificial Intelligence and Information Theory. The web-based DMA was developed using the R programming language along with other packages for data manipulation, analysis, and visualization. Emphasis is placed on the “Shiny” package for its contribution to the creation of the GUI that enables the user for timely decision-making processes for the support of affected areas with aid in humanitarian logistics networks.

**Keywords:** *Humanitarian Logistics, Centrality Index; Network Attack, Deep Neural Network, Entropy*

### **Introduction**

The delivery of humanitarian aid for the relief of human suffering is of paramount importance to the future of humanity. The impact of calamities resulting from either natural or human-made factors is immense, causing various adverse effects ranging from financial hardship to loss of life. The governmental as well as non-governmental organizations assume a crucial role in addressing these disasters and distributing humanitarian aid (UN OCHA, 2021a). While it is impossible to prevent natural disasters from occurring, their effects can be minimized through proper preparation and timely response during the crisis. Thus, efficient and effective management of logistics operations is critical to the success of Disaster Relief Operations (DROs) (Negi, 2022). The most pressing worldwide challenges is to ensure the acceleration of the distribution of humanitarian aid to affected areas in a timely manner (UN OCHA, 2021b). As a result, and according to various studies (Van Wassenhove, 2006, Day et al., 2012, Lewin et al., 2018, Besiou & Van Wassenhove, 2020), Supply Chain Management (SCM) is considered to be a central component of Humanitarian Operations (HOs) and related decision-making processes in order to effectively manage a humanitarian crisis and provide the necessary aid. The field of Disaster Management (DM) is at the forefront of addressing the humanitarian aspects of emergencies. Thus, research and development of novel and more effective approaches to managing disasters cases are required to minimize adverse impacts (Guha et al., 2022). An effective DM planning relies heavily on Facility Location (FL) modeling, which provides to decision-makers vital information about operations before and after a disaster event. The FL decisions include the location and selection of DCs, warehouses, medical centers, and other facilities (Boonmee et al., 2017). Thus, to address location-allocation problems or complex routing, the Big Data (BD), the Artificial Intelligence (AI) and the intelligent optimization techniques can facilitate with their support. Emphasis is placed on recent developments in Machine Learning (ML) and Deep Learning (DL) techniques that can improve the ability to deal with the severe and often devastating effects of various types of disasters (Dubey et al., 2019, Linardos et al., 2022).

In this research work, we develop a novel web-based DMA for the selection of a suitable node for the installation of the DC during the onset of a humanitarian crisis. An important feature of our work is that it considers networks that, as a result of a destruction, have a volatile form and require quick decisions regarding the location of the DC and the configuration of the distribution plan, in order to achieve an immediate response to the network requirements (Taouktsis & Zikopoulos, 2023).

## **Theoretical Background**

### *Network Analysis and Centrality Indices*

According to literature, there is a diversification in the use of the terms "Graph" and "Network" depending on the cases and the goals of the analysis. With the term "Network" we refer to a system that represents a real problem, and with the term "Graph" we refer to the mathematical representation of a "Network". Similarly, there is a difference in the use of the terms "Nodes" and "Links", which are preferred for "Networks", and the terms "Vertices" and "Edges", which are used for "Graphs". Moreover, depending on the links of the network between the nodes, we have either the presence or the absence of the direction, with the networks being characterized as directed or undirected, respectively. In addition, we have the presence or absence of weights on the links between the connections of the nodes of a network, with the weights being defined according to the case study under question, such as the travel costs from one area to another. The primary goal of Network Analysis (NA) is to measure each node's or link's contribution to the network using a set of metrics known as Centrality Indices (CIs). This kind of analysis focuses on various disciplines where networks are used, including sociology, finance, biology, transportation network management, Humanitarian Logistics (HL) management, and many more (Zhang et al., 2011, Lee, 2012, Bonchi et al., 2016, Barabási & Pósfai, 2016, Lujak & Giordani, 2018, Tacheva & Simpson, 2019, Grando et al., 2019, Rodrigues, 2019, Hua et al., 2019, Wandelt et al., 2020). There are many CIs in literature, but as research in the field evolves, new indices are constantly being created. A summary of the most popular CIs can be found in the "Periodic Table of Network Centrality" (Schoch, 2016). The most important CIs found in literature as well as the CIs chosen to conduct the research are the Degree (DGC), Strength (SC), Closeness (CC), Harmonic (HC), Betweenness (BC), Eigenvector (EC), Laplacian (LC) and Subgraph (SGC). Detailed discussions of these indices can be found in several sources (Koschützki et al., 2005, Estrada & Rodríguez-Velázquez, 2005, Porta et al., 2006, Opsahl et al., 2010, Qi et al., 2012, Lü et al., 2016, Das et al., 2018, Wan et al., 2021).

### *Network Attacks and Entropy*

The concept of "Attacks" on networks starts with a reference to the processes and strategies used to reduce the proper functioning of these networks. The study of "Attacks" is applied to ecology, biology, economics, the design of supply chain networks and the design of road networks to better study their robustness. Furthermore, by studying and analyzing the results of an attack on a network, it is possible to find the vulnerable attributes that could lead to its operational collapse. In the literature, "Attacks" are most often studied by removing nodes and sometimes by removing links. The attacks can either be applied randomly in the network to nodes and links, or targeted to important nodes and links according to some CIs. The use of certain indices such as the Efficiency Index and the study of its change under strategic attacks on nodes or links helps to study the robustness of the network. The Efficiency Index shows the average of reciprocal distances between all pairs of nodes. In addition, the calculation of Entropy (according to Information Theory) can be a useful tool for NA, allowing us to study the variability or randomness in the network. Thus, it helps to measure the complexity and vulnerability of networks and contributes to the robustness of the network under consideration. In particular, calculating the Entropy of a network attribute (such as a CI) can serve as an indicator of the vulnerability of the network under attack by examining the difference in the change of the network attribute from an initial state to a final state (Shannon, 1948, Holme et al., 2002, Schneider et al., 2011, Nie et al., 2014, Joslyn et al., 2014, Julliard et al., 2015, Μακρής, 2015, Lekha & Balakrishnan, 2017, Chen et al., 2017, Bellingeri et al., 2018, Αντωνίου, 2018).

### *Traveling Salesman Problem*

The basic idea behind the Traveling Salesman Problem (TSP) is to minimize the cost of visiting all available nodes (affected areas) of a network only once and then return to the initial node (the DC starting point). We chose Farthest Insertion (FI) Heuristic Algorithms (HA) because according to the related literature (Rosenkrantz et al., 2009, Matai et al., 2010, Kruithof, 2012) it provides better results compared to other Heuristic Algorithms such as, "Cheapest Insertion", "Nearest Insertion" and "Nearest Neighbor". In our approach, we implement a modified TSP approach by converting the initial networks into a complete network. Specifically, we calculate the lengths of pairwise shortest paths from one pair of nodes to another pair of nodes and use the results as a weighted adjacency matrix to build a complete network using virtual links between nodes. Then we implemented the FI algorithm on a complete network and after that we decoded the proposed paths of the links in the initial network, which may involve repeated visits to some nodes that served as part of the virtual links in the complete network (Taouktsis & Zikopoulos, 2023).



### *Artificial intelligence*

In general, AI aims to emulate human intelligence in order to provide solutions in different fields, such as healthcare, environment, engineering, education, energy, management, finance, manufacturing, transportation and distribution, and robotics. Common applications of AI are pattern recognition, prediction, classification, speech recognition, and computer vision. Additional details on AI and its applications can be found in (Tkáč & Verner, 2016, Liu et al., 2017, Abiodun et al., 2018, Abduljabbar et al., 2019, Fan et al., 2020). A subset of AI is ML, which includes Neural Networks (NNs) and DL, and is widely known in the academic and research community for its use in BD analysis. ML refers to the use of statistical methods and algorithms to train and analyze a model using data to solve a problem of a specific task. The idea of NN is inspired by the processes of the human biological nervous system, which it tries to emulate. NN consists of a number of computational nodes, called Hidden Neurons (HNs), which are interconnected as synapses. On the other hand, DL mainly refers to Artificial Neural Networks (ANNs), which have a more complex structure and include several layers of HNs compared to a classic NN, which usually has up to two layers of HNs. As a result, these ANNs perform better in modeling and prediction and are called Deep Neural Networks (DNNs). The most common learning methods in ML are Supervised Learning (SL) and Unsupervised Learning (UL) and they differ in that in the former we use a training dataset that is exploited to reduce the error during the prediction process in regression or classification problems. More details can be found in the related literature, for example in (Bengio, 2009, Lecun et al., 2015, Schmidhuber, 2015, Ravi et al., 2017, Litjens et al., 2017, Ongsulee, 2017, Duan, 2019, Kota et al., 2020, Sengupta et al., 2020, Candel et al., 2022).

### *Binary Classification Problem and Performance Evaluation Metrics*

First of all, to analyze a classification problem, it is important to refer to the number of classes that exist. The classes can be two in the Binary Classification Problem (BCP) or more in the multiclass classification problem. Specifically, in binary classification we categorize data into two different categories according to the problem we are studying. For example, we may have the positive and the negative categories, and after training a model with the appropriate data and algorithms, we can decide which category the new data point belongs to. The classification problem is used in applications such as Anomaly Detection Problems (medical diagnosis, fraud detection, intrusion detection, defect patterns in manufacturing plants, environmental issues), in Marketing, in Text Classification issues, to name a few. Also, in real life scenarios, the data is usually imbalanced between the two different classes, where one is the majority class and the other is the minority class. To examine the results of a classification problem, we use the Confusion Matrix (CM), which can provide performance information with the support of evaluation metrics. More details can be found in the relevant literature, such as (SUN et al., 2009, Krawczyk, 2016, Tharwat, 2021, Chicco & Jurman, 2020). The most well-known and important metrics for evaluating the predictive ability of a BCP according to Chicco & Jurman, 2020 and Tharwat, 2021 are the Accuracy (ACC), F1-score (F1), Matthews Correlation Coefficient (MCC), Precision (PPV) and Sensitivity (TPR). Emphasis should be placed on the MCC metric. Specifically, it is more robust to imbalanced data according to Boughorbel et al., 2017. Also, according to Chicco & Jurman, 2020 and Chicco et al., 2021, it is more reliable and informative and provides more explanatory results in the evaluation of BCPs.

### **Methodology and Results Analysis**

The proposed methodology according to Taouktsis & Zikopoulos, 2023 concerns the development of the DNN decision model and includes a combination of different techniques and principles from various fields, as follows:

- The use of CIs for NA.
- The use of a Heuristic Algorithm (HA) for the TSP to obtain solutions.
- The use of a BCP principles.
- The use of a supervised Deep Neural Network (DNN) that combines all of the above for predictions.

The aim is to reduce the number of candidate DC locations used as starting points for the timely distribution of humanitarian aid to affected areas. We then analyze the proposed DC locations by considering targeted attacks on the maximum values of the nodes of each CI to evaluate the robustness of the network under consideration for the final decision of selecting the most suitable node as a DC. In what follows, we describe the assumptions of the decision model, as well as the overall development stages of the DNN model for the configuration of the DMA for the location of the DC.

### *Decision Model Assumptions*

The HL networks that we are going to examine in our study and apply our methodology are based on the following assumptions:

- Each network consists of 15 nodes (as affected areas).
- Each network is undirected and weighted (as kilometric distance between nodes).

- We select one final DC among the 15 available.
- There is one vehicle that performs the distribution of aid starting from the DC and returns back to it.
- We use FI HA to obtain the TSP solutions (a modified approach).
- We consider acceptable TSP solutions not only the first but also the second lowest distribution distance.

#### *DNN Decision Model Development Stages*

**Stage 1** – We generated a number of synthetic random weighted undirected networks.

**Stage 2** – We calculated certain CIs for each node of each network.

**Stage 3** – We calculated the total distribution distance from a candidate DC and back to it from each node on each network as a possible starting point according to a modified TSP approach. We then mark each node with the labels Select (SL) or Reject (RJ) as DC of each network. Specifically, we mark the first and second lowest total distribution distance as SL and the rest as RJ.

**Stage 4** – We created a dataset by combining the results of the node data for each network from Stage 2 and Stage 3. We end up with an imbalanced dataset with a minority case SL.

**Stage 5** – We developed a supervised DNN prediction model based on the BCP, using the data from Stage 4 as input. In particular, we use the CIs results as independent variables and the SL or RJ classes as decision output to select the DC. In addition, we divide the dataset into training, validation and testing. Specifically, for the training dataset we used a number of Hidden Neuron (HN) scenarios and a number of experiments.

**Stage 6** – We evaluated the performance of the prediction models (by model we refer to each experiment of each HN scenario) on the validation dataset with the support of performance metrics by interpreting a confusion matrix (CM).

**Stage 7** – We performed the process of selecting the candidate DNN prediction models by combining the mean values results for each scenario of each experiment of HNs and the results of one-way Analysis of Variance (ANOVA) between the different scenarios of HNs and each performance metric. The final decision to select candidate models was made according to the most appropriate metric for the imbalanced dataset.

**Stage 8** – We applied the candidate predictive DNN models to the validation dataset now as discrete networks and not as separate data nodes as in Stage 6. The goal was to evaluate whether these models could predict the lowest distribution distance using only one-third of the total number of nodes.

**Stage 9** – We applied the best DNN model to a test dataset. In particular, we implement the methodology of stages 6 and 8 with the goal to observe the performance of the model on unseen network data for the final decision.

For the development and evaluation of the DNN decision model with respect to the previous stages, we used specific features and data, which are presented in **Table 1**.

**Table 1**

The features and data used during the development stages of the DNN decision model.

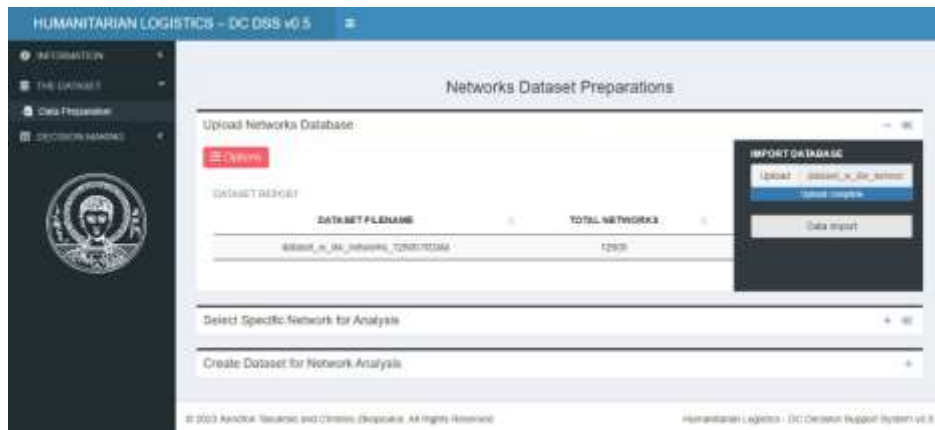
Features	Detailed Information
Total Networks	70000 synthetic random undirected networks
Total Nodes	Networks equivalent to 1050000 nodes
Network Nodes	15
Network Density	Between 0.18 - 0.91
Network Weights	Range of weights per scenario uniformly distributed between 5-520 kilometers
Centrality Indices	DGC, SC, CC, HC, BC, EC, LC, SGC
Hidden Neuron Scenarios	11 different HN scenarios (9, 18, 27, 36, 45, 54, 63, 80, 100, 150 and 200)
Hidden Layers	3
Epochs	Between 1 and 1000
Activation Function	Rectified Linear Unit (ReLU)
Splitted Network Datasets	Training Dataset: 50400 networks,
	Validation Dataset: 12600 networks,
	Test Dataset: 7000 networks
Splitted Node Datasets	Network Datasets equivalent to nodes:
	Training Dataset: 756000 nodes,
	Validation Dataset: 189000 nodes,
Total Experiments	Test Dataset: 105000 nodes
	1100 experiments (100 per HN scenario)

*DNN Decision Model Results Analysis*

Overall, based on the results of both the validation and test dataset of networks according to Taouktsis & Zikopoulos, 2023 the DNN Model performed quite well. In particular, achieved an accuracy of 83.40% and 83.41%, respectively, in proposing and predicting the optimal DC installation node with the lowest possible distribution distance. The next step after the proposal of the DCs is their evaluation according to the percentage change in Entropy and the Efficiency Index for the final decision of the DC selection, taking into account not only the distance but also the robustness of the network under attack for a better service to the affected areas with humanitarian aid distribution.

**The Web-Based Decision-Making Application**

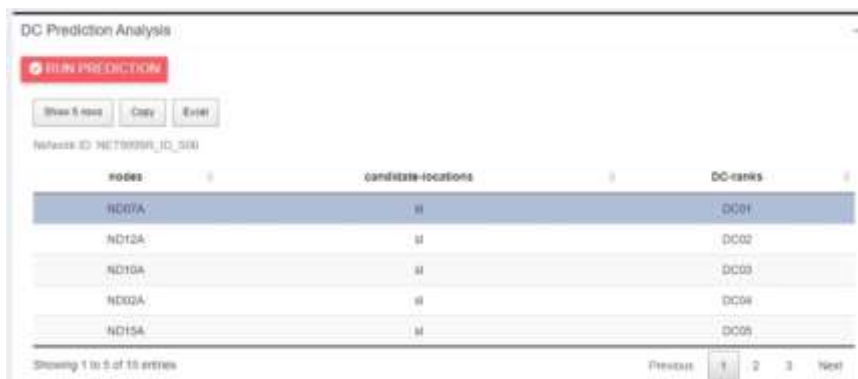
Various tools have contributed for the development of DMA. Specifically, the R programming language (R Core Team, 2019), RStudio (RStudio Team, 2021) and the “Shiny” (Chang et al., 2021) package for the development of a web-based interface. Also, other packages have contributed for data generation, analysis and visualization such as “igraph” (Gabor & Tamas, 2006), “CINNA” (Ashtiani et al., 2019) and “centiserve” for NA. Furthermore, the “TSP” in order to use a HA for obtaining the TSP solutions (Hahsler & Hornik, 2007), the “h2o” for the DNN model development, the “dplyr” (Wickham et al., 2021) for data manipulation and “ggplot2” (Wickham, 2016) for visualization. The following figures illustrate the various features of the DMA. In particular, **Fig. 1-4** illustrate the essential aspects of analysis and prediction from the decision-making.

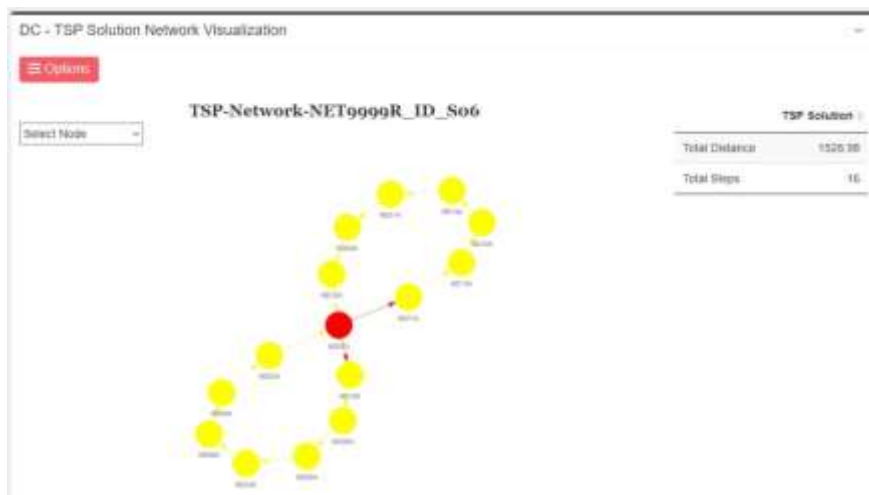


**Fig. 1.** The menu and the upload of the dataset with the networks to be analyzed.



**Fig. 2.** Network selection for analysis using network ID.



**Fig. 3.** The prediction - proposal of DCs from the model.**Fig. 4.** Visualization of a modified TSP solution approach using one of the candidate DCs.

### Conclusion

In the current research, we proposed DMA with a hybrid novel approach to select a suitable node as a DC installation point to minimize the humanitarian aid distribution distance to support the affected areas by using only a proportion of the nodes of the network. Our approach combines methods and techniques from various fields with the perspective of improving the effectiveness and efficiency of HL decision-making processes. We evaluated a number of DNN prediction models after conducting several experiments to achieve the optimal one. Our DNN models use CIs as input, and the output is a binary SL or RJ decision of the candidate node. The model then suggests only one-third of the total nodes in the network under consideration as suitable candidates for DC installation. These candidate nodes are used as input to the FI algorithm to obtain the lowest distribution distance for humanitarian aid operations (Taouktsis & Zikopoulos, 2023). Then, with the support of entropy and efficiency index, we analyzed the robustness of the network to make the final decision of the suitable DC selection considering not only the distance but also the robustness of the network under attack for better service to the affected areas with humanitarian aid distribution.

### References

- Abduljabbar, R., Dia, H., Liyanage, S., & Bagloee, S. A. (2019). Applications of Artificial Intelligence in Transport: An Overview. *Sustainability*, *11*(1), 189. <https://doi.org/10.3390/su11010189>
- Abiodun, O. I., Jantan, A., Omolara, A. E., Dada, K. V., Mohamed, N. A., & Arshad, H. (2018). State-of-the-art in artificial neural network applications: A survey. *Heliyon*, *4*(11), e00938. <https://doi.org/10.1016/j.heliyon.2018.e00938>
- Ashtiani, M., Mirzaie, M., & Jafari, M. (2019). CINNA: an R/CRAN package to decipher Central Informative Nodes in Network Analysis. *Bioinformatics*, *35*(8), 1436–1437. <https://doi.org/10.1093/bioinformatics/bty819>
- Barabási, A. L., & Pósfai, M. A. (2016). *Network Science*. Cambridge University Press. <http://networksciencebook.com>
- Bellingeri, M., Bevacqua, D., Scotognella, F., LU, Z. M., & Cassi, D. (2018). Efficacy of local attack strategies on the Beijing road complex weighted network. In *Physica A: Statistical Mechanics and its Applications* (Vol. 510, pp. 316–328). <https://doi.org/10.1016/j.physa.2018.06.127>
- Bengio, Y. (2009). Learning Deep Architectures for AI. *Foundations and Trends® in Machine Learning*, *2*(1), 1–127. <https://doi.org/10.1561/22000000006>
- Besiou, M., & Van Wassenhove, L. N. (2020). Humanitarian Operations: A World of Opportunity for Relevant and Impactful Research. *Manufacturing & Service Operations Management*, *22*(1), 135–145. <https://doi.org/10.1287/msom.2019.0799>
- Bonchi, F., De Francisci Morales, G., & Riondato, M. (2016). Centrality Measures on Big Graphs. *Proceedings of the 25th International Conference Companion on World Wide Web - WWW '16 Companion*, 1017–1020. <https://doi.org/10.1145/2872518.2891063>
- Boonmee, C., Arimura, M., & Asada, T. (2017). Facility location optimization model for emergency humanitarian logistics. *International Journal of Disaster Risk Reduction*, *24*, 485–498. <https://doi.org/10.1016/j.ijdrr.2017.01.017>
- Boughorbel, S., Jarray, F., & El-Anbari, M. (2017). Optimal classifier for imbalanced data using Matthews

- Correlation Coefficient metric. *PLOS ONE*, 12(6), e0177678.  
<https://doi.org/10.1371/journal.pone.0177678>
- Candel, A., LeDell, E., Parmar, V., & Anisha, A. (2022). Deep learning with H2O. In *H2O. ai Inc* (6th ed., Issue August). H2O. ai Inc.
- Chang, W., Cheng, J., Allaire, J. J., Sievert, C., Schloerke, B., Xie, Y., Allen, J., McPherson, J., Dipert, A., & Borges, B. (2021). *shiny: Web Application Framework for R* (1.6.0). <https://cran.r-project.org/package=shiny>
- Chen, S.-M., Xu, Y.-F., & Nie, S. (2017). Robustness of network controllability in cascading failure. *Physica A: Statistical Mechanics and Its Applications*, 471, 536–539.  
<https://doi.org/https://doi.org/10.1016/j.physa.2016.12.045>
- Chicco, D., & Jurman, G. (2020). The advantages of the Matthews correlation coefficient (MCC) over F1 score and accuracy in binary classification evaluation. *BMC Genomics*, 21(1), 6. <https://doi.org/10.1186/s12864-019-6413-7>
- Chicco, D., Tötsch, N., & Jurman, G. (2021). The Matthews correlation coefficient (MCC) is more reliable than balanced accuracy, bookmaker informedness, and markedness in two-class confusion matrix evaluation. *BioData Mining*, 14(1), 13. <https://doi.org/10.1186/s13040-021-00244-z>
- Das, K., Samanta, S., & Pal, M. (2018). Study on centrality measures in social networks: a survey. *Social Network Analysis and Mining*, 8(1), 13. <https://doi.org/10.1007/s13278-018-0493-2>
- Day, J. M., Melnyk, S. A., Larson, P. D., Davis, E. W., & Whybark, D. C. (2012). Humanitarian and Disaster Relief Supply Chains: A Matter of Life and Death. *Journal of Supply Chain Management*, 48(2), 21–36.  
<https://doi.org/10.1111/j.1745-493X.2012.03267.x>
- Duan, J. (2019). Financial system modeling using deep neural networks (DNNs) for effective risk assessment and prediction. *Journal of the Franklin Institute*, 356(8), 4716–4731.  
<https://doi.org/10.1016/j.jfranklin.2019.01.046>
- Dubey, R., Gunasekaran, A., & Papadopoulos, T. (2019). Disaster relief operations: past, present and future. *Annals of Operations Research*, 283(1–2), 1–8. <https://doi.org/10.1007/s10479-019-03440-7>
- Estrada, E., & Rodríguez-Velázquez, J. A. (2005). Subgraph centrality in complex networks. *Physical Review E*, 71(5), 056103. <https://doi.org/10.1103/PhysRevE.71.056103>
- Fan, J., Fang, L., Wu, J., Guo, Y., & Dai, Q. (2020). From Brain Science to Artificial Intelligence. *Engineering*, 6(3), 248–252. <https://doi.org/10.1016/j.eng.2019.11.012>
- Gabor, C., & Tamas, N. (2006). The igraph software package for complex network research. *InterJournal, Complex Sy*, 1695. <https://igraph.org>
- Grando, F., Granville, L. Z., & Lamb, L. C. (2019). Machine Learning in Network Centrality Measures. *ACM Computing Surveys*, 51(5), 1–32. <https://doi.org/10.1145/3237192>
- Guha, S., Jana, R. K., & Sanyal, M. K. (2022). Artificial neural network approaches for disaster management: A literature review. *International Journal of Disaster Risk Reduction*, 81, 103276.  
<https://doi.org/10.1016/j.ijdrr.2022.103276>
- Hahsler, M., & Hornik, K. (2007). TSP - Infrastructure for the Traveling Salesperson Problem. *Journal of Statistical Software*, 23(2), 1–21. <https://doi.org/10.18637/jss.v023.i02>
- Holme, P., Kim, B. J., Yoon, C. N., & Han, S. K. (2002). Attack vulnerability of complex networks. *Physical Review E*, 65(5), 56109. <https://doi.org/10.1103/PhysRevE.65.056109>
- Hua, J., Huang, M., & Huang, C. (2019). Centrality Metrics' Performance Comparisons on Stock Market Datasets. *Symmetry*, 11(7), 916. <https://doi.org/10.3390/sym11070916>
- Joslyn, L., Croson, C., & Reed, S. (2014). Determining Critical Locations in a Road Network. *SIAM Undergraduate Research Online*, 7. <https://doi.org/10.1137/13S012595>
- Julliard, R., Yun, P. J., & Rado, R. (2015). Robustness of transportation networks: The case of Madagascar's road network. *International Journal of Advancements in Research & Technology*, 4(5), 1–4.  
<https://pdfs.semanticscholar.org/e811/a6787f3acf614566457c9cf78ae399ebbaf1.pdf>
- Koschützki, D., Lehmann, K. A., Peeters, L., Richter, S., Tenfelde-Podehl, D., & Zlotowski, O. (2005). Centrality Indices. In U. Brandes & T. Erlebach (Eds.), *Network Analysis: Methodological Foundations* (pp. 16–61). Springer Berlin Heidelberg. [https://doi.org/10.1007/978-3-540-31955-9\\_3](https://doi.org/10.1007/978-3-540-31955-9_3)
- Kota, V. M., Manoj Kumar, V., & Bharatiraja, C. (2020). Deep Learning – A Review. *IOP Conference Series: Materials Science and Engineering*, 912(3), 032068. <https://doi.org/10.1088/1757-899X/912/3/032068>
- Krawczyk, B. (2016). Learning from imbalanced data: open challenges and future directions. *Progress in Artificial Intelligence*, 5(4), 221–232. <https://doi.org/10.1007/s13748-016-0094-0>
- Kruithof, M. (2012). *Traveling Salesman Problem Comparisons between heuristics, linear and semidefinite programming approximations* (Issue June) [University of Groningen].  
<https://fse.studenttheses.ub.rug.nl/id/eprint/10233>
- Lecun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436–444.  
<https://doi.org/10.1038/nature14539>

- Lee, S. (2012). The role of centrality in ambulance dispatching. *Decision Support Systems*, 54(1), 282–291. <https://doi.org/10.1016/j.dss.2012.05.036>
- Lekha, D. S., & Balakrishnan, K. (2017). Attack Vulnerability of Complex Networks in Center-Based Strategies. *ArXiv Preprint ArXiv:1712.04107*, last revised 12 Dec 2018 (version 2). <http://arxiv.org/abs/1712.04107>
- Lewin, R., Besiou, M., Lamarche, J.-B., Cahill, S., & Guerrero-Garcia, S. (2018). Delivering in a moving world... looking to our supply chains to meet the increasing scale, cost and complexity of humanitarian needs. *Journal of Humanitarian Logistics and Supply Chain Management*, 8(4), 518–532.
- Linardos, V., Drakaki, M., Tzionas, P., & Karnavas, Y. L. (2022). Machine Learning in Disaster Management: Recent Developments in Methods and Applications. *Machine Learning and Knowledge Extraction*, 4(2), 446–473. <https://doi.org/10.3390/make4020020>
- Litjens, G., Kooi, T., Bejnordi, B. E., Setio, A. A. A., Ciompi, F., Ghafoorian, M., van der Laak, J. A. W. M., van Ginneken, B., & Sánchez, C. I. (2017). A survey on deep learning in medical image analysis. *Medical Image Analysis*, 42(December 2012), 60–88. <https://doi.org/10.1016/j.media.2017.07.005>
- Liu, W., Wang, Z., Liu, X., Zeng, N., Liu, Y., & Alsaadi, F. E. (2017). A survey of deep neural network architectures and their applications. *Neurocomputing*, 234(November 2016), 11–26. <https://doi.org/10.1016/j.neucom.2016.12.038>
- Lü, L., Chen, D., Ren, X.-L., Zhang, Q.-M., Zhang, Y.-C., & Zhou, T. (2016). Vital nodes identification in complex networks. *Physics Reports*, 650, 1–63. <https://doi.org/10.1016/j.physrep.2016.06.007>
- Lujak, M., & Giordani, S. (2018). Centrality measures for evacuation: Finding agile evacuation routes. *Future Generation Computer Systems*, 83, 401–412. <https://doi.org/10.1016/j.future.2017.05.014>
- Matai, R., Singh, S., & Lal, M. (2010). Traveling Salesman Problem: an Overview of Applications, Formulations, and Solution Approaches. In D. Davendra (Ed.), *Traveling Salesman Problem, Theory and Applications*. InTech. <https://doi.org/10.5772/12909>
- Negi, S. (2022). Humanitarian logistics challenges in disaster relief operations: A humanitarian organisations' perspective. *Journal of Transport and Supply Chain Management*, 16. <https://doi.org/10.4102/jtscm.v16i0.691>
- Nie, S., Wang, X., Zhang, H., Li, Q., & Wang, B. (2014). Robustness of Controllability for Networks Based on Edge-Attack. *PLOS ONE*, 9(2), e89066. <https://doi.org/10.1371/journal.pone.0089066>
- Ongsulee, P. (2017). Artificial intelligence, machine learning and deep learning. *2017 15th International Conference on ICT and Knowledge Engineering (ICT&KE)*, 1–6. <https://doi.org/10.1109/ICTKE.2017.8259629>
- Opsahl, T., Agneessens, F., & Skvoretz, J. (2010). Node centrality in weighted networks: Generalizing degree and shortest paths. *Social Networks*, 32(3), 245–251. <https://doi.org/10.1016/j.socnet.2010.03.006>
- Porta, S., Crucitti, P., & Latora, V. (2006). The Network Analysis of Urban Streets: A Primal Approach. *Environment and Planning B: Planning and Design*, 33(5), 705–725. <https://doi.org/10.1068/b32045>
- Qi, X., Fuller, E., Wu, Q., Wu, Y., & Zhang, C.-Q. (2012). Laplacian centrality: A new centrality measure for weighted networks. *Information Sciences*, 194, 240–253. <https://doi.org/10.1016/j.ins.2011.12.027>
- R Core Team. (2019). *R: A Language and Environment for Statistical Computing* (3.5.3). R Foundation for Statistical Computing. <https://www.r-project.org/>
- Ravi, D., Wong, C., Deligianni, F., Berthelot, M., Andreu-Perez, J., Lo, B., & Yang, G.-Z. (2017). Deep Learning for Health Informatics. *IEEE Journal of Biomedical and Health Informatics*, 21(1), 4–21. <https://doi.org/10.1109/JBHI.2016.2636665>
- Rodrigues, F. A. (2019). *Network Centrality: An Introduction* (pp. 177–196). [https://doi.org/10.1007/978-3-319-78512-7\\_10](https://doi.org/10.1007/978-3-319-78512-7_10)
- Rosenkrantz, D. J., Stearns, R. E., & Lewis, P. M. (2009). An analysis of several heuristics for the traveling salesman problem. *Fundamental Problems in Computing: Essays in Honor of Professor Daniel J. Rosenkrantz*, 6(3), 45–69. [https://doi.org/10.1007/978-1-4020-9688-4\\_3](https://doi.org/10.1007/978-1-4020-9688-4_3)
- RStudio Team. (2021). *RStudio: Integrated Development Environment (IDE) for R* (1.4.1106). RStudio, PBC. <https://www.rstudio.com/>
- Schmidhuber, J. (2015). Deep Learning in neural networks: An overview. *Neural Networks*, 61, 85–117. <https://doi.org/10.1016/j.neunet.2014.09.003>
- Schneider, C. M., Moreira, A. A., Andrade, J. S., Havlin, S., & Herrmann, H. J. (2011). Mitigation of malicious attacks on networks. *Proceedings of the National Academy of Sciences*, 108(10), 3838 LP – 3841. <https://doi.org/10.1073/pnas.1009440108>
- Schoch, D. (2016). *Periodic Table of Network Centrality*. University of Konstanz. <http://www.schochastics.net/sna/periodic.html>
- Sengupta, S., Basak, S., Saikia, P., Paul, S., Tsalavoutis, V., Atiah, F., Ravi, V., & Peters, A. (2020). A review of deep learning with special emphasis on architectures, applications and recent trends. *Knowledge-Based Systems*, 194, 105596. <https://doi.org/10.1016/j.knsys.2020.105596>

- Shannon, C. E. (1948). A Mathematical Theory of Communication. *Bell System Technical Journal*, 27(3), 379–423. <https://doi.org/10.1002/j.1538-7305.1948.tb01338.x>
- SUN, Y., WONG, A. K. C., & KAMEL, M. S. (2009). CLASSIFICATION OF IMBALANCED DATA: A REVIEW. *International Journal of Pattern Recognition and Artificial Intelligence*, 23(04), 687–719. <https://doi.org/10.1142/S0218001409007326>
- Tacheva, Z., & Simpson, N. (2019). Social network analysis in humanitarian logistics research. *Journal of Humanitarian Logistics and Supply Chain Management*, 9(3), 492–514. <https://doi.org/10.1108/JHLSCM-06-2018-0047>
- Taouktsis, X., & Zikopoulos, C. (2023). *A decision-making tool for the determination of the distribution center location in a humanitarian logistics network [Manuscript submitted for publication]*.
- Tharwat, A. (2021). Classification assessment methods. *Applied Computing and Informatics*, 17(1), 168–192. <https://doi.org/10.1016/j.aci.2018.08.003>
- Tkáč, M., & Verner, R. (2016). Artificial neural networks in business: Two decades of research. *Applied Soft Computing*, 38, 788–804. <https://doi.org/10.1016/j.asoc.2015.09.040>
- UN OCHA. (2021a). *Global Humanitarian Overview 2019*. United Nations. <https://doi.org/10.18356/9789214030768>
- UN OCHA. (2021b). *Global Humanitarian Overview 2022*. United Nations. <https://doi.org/10.18356/9789210012423>
- Van Wassenhove, L. N. (2006). Humanitarian aid logistics: supply chain management in high gear. *Journal of the Operational Research Society*, 57(5), 475–489. <https://doi.org/10.1057/palgrave.jors.2602125>
- Wan, Z., Mahajan, Y., Kang, B. W., Moore, T. J., & Cho, J.-H. (2021). A Survey on Centrality Metrics and Their Network Resilience Analysis. *IEEE Access*, 9, 104773–104819. <https://doi.org/10.1109/ACCESS.2021.3094196>
- Wandelt, S., Shi, X., & Sun, X. (2020). Complex Network Metrics: Can Deep Learning Keep up With Tailor-Made Reference Algorithms? *IEEE Access*, 8, 68114–68123. <https://doi.org/10.1109/ACCESS.2020.2984762>
- Wickham, H. (2016). *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>
- Wickham, H., François, R., Henry, L., & Müller, K. (2021). *dplyr: A Grammar of Data Manipulation*. <https://dplyr.tidyverse.org>
- Zhang, Y., Wang, X., Zeng, P., & Chen, X. (2011). Centrality Characteristics of Road Network Patterns of Traffic Analysis Zones. *Transportation Research Record: Journal of the Transportation Research Board*, 2256(1), 16–24. <https://doi.org/10.3141/2256-03>
- Αντωνίου, Ι. (2018). *Θεωρία Πληροφορίας, Εντροπία, Πολυπλοκότητα - Εξάρτηση από Εντροπία*. ΑΠΘ.
- Μακρής, Γ. Χ. (2015). *Κρυπτογραφία με Χάος* [Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης (ΑΠΘ)]. <http://hdl.handle.net/10442/hedi/37024>

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## **Marketing of Non-Wood Forest Products. Defining their marketing mix in local mountain communities of Greece**

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### **Abstract**

The purpose of this research is to investigate the conditions for the of the marketing mix for Non-Timber Forest Products in Greece. Research questions were studied regarding the characteristics of the NWFPs and the development of marketing strategies at the local level, following the S.A.V.E. (Solution, Access, Value, Education/Engagement) approach, to determine the factors of NWFP's that can create their brand, based on the added value they deliver to local communities based on their needs. The promotion channels of the NWFPs were examined as well as the factors contributing to the creation of a strong brand. The role of the marketing of NWFPs in developing synergies in their value chains and promoting sustainable development and multifunctional management of forest ecosystems was also explored. Useful conclusions were drawn for the NWFPs, their commercialization in local markets and the development of marketing strategies. The markets of NWFPs are mainly located in the mountainous regions of Greece and there are additional possibilities of promoting them and contributing to sustainable development. Their promotion as commercial products of added value will have multiple positive effects for ventures of innovative businesses in mountain areas, with the NWFP's as a reference point.

**Keywords:** *non-wood forest products (NWFPs), marketing mix, NWFPs brand, NWFPs value, Greece*

### **1. Introduction**

Forest areas have cultural, natural and tourism resources that contribute to continued sustainable development and thus to increasing employment in the tertiary sector, while a large part of the primary sector workforce are employed in forestry management positions or in the collection and marketing of Non-Wood Forest Products (NWFP). NWFP's are defined as goods derived from forests that are tangible and natural objects of biological origin, other than wood (FAO, 2015). Most NWFP's in Greece are produced through an outdated institutional framework that does not promote their systematic exploitation and integration into relevant product markets. Despite the fact that the value of NWFP's is globally recognized playing an important factor in supporting local economies with a total market value up to 2.5 billion. euros in the European market, with ever increasing trends for urban areas (F.A.O., 2015), however in Greece very little attention has been given to the development of proposals for an integrated marketing strategy for NWFP's. In sustainable forestry, the role of marketing is to help create better linkages between resource management, processing and end-use. Marketing can enhance sustainable forest management by indicating the type of products and raw materials required and providing income incentives (Koppell, 1995). Different categories of NWFP's require different marketing strategies, making it difficult to establish rules that apply to the entire range of NWFP's, because of the diversity of these products (Arnold, 1995). The development of marketing strategies combined with effective policy interventions and sustainable forest management strategies will improve the participation of local people in forests that will facilitate partnerships with forest managers (Greene et al. 2000). Ownership status, traditional forest management for timber production and forest harvesting regulations affect the marketing potential of NWFP's in different socio-economic contexts. Sustainable wood co-production management and NWFP's should be placed in an integrated context (Pettenella et al. 2007). NWFP's marketing could be developed through a better organization of value chains (Mavsar et al. 2008), taking into account that



the sustainability of NWFP's supply chains in a conceptual framework of sustainable co-production management for multi-product supply from forests, requires long-term research on the biology of species, populations and ecosystems in which NWFP's are developed.

The aim of this research is to investigate the conditions for the development of the marketing mix for Non-Timber Forest Products in Greece.

## 2. Literature review

The use of NWFP's is characterized by a variety of institutional arrangements in terms of access to resources and markets at both local and national levels. There is a wide variation in the extent to which NWFP's are used from region to region and even between households within a community. Because of this variation, it is difficult to generalize about the use of NWFP's. They can be classified into several categories based on the purpose of use (for example, as food, fuel, medicine, household utensils and agricultural tools), the part of the plant (leaves, fruits, stems and roots) and the level of use (personal use or commercial) (Pandey et al. 2016). Local trade of NWFP's has advantages to offer and thus deserves more attention from both research and development perspectives. Local markets can provide a guaranteed way of reaching consumers and play a critical role in enhancing livelihoods and improving income opportunities. Consumers of NWFP's that are available in local markets may include locals, urban dwellers or tourists visiting an area. In many cases local markets tend to be informal supply chains. Sometimes the same individuals perform all functions along the supply chain, from harvesting to final sales. In favorable contexts and with appropriate support and intervention, such as increased access to market information or improved harvesting or processing techniques, it is possible to increase the relative returns for participants and/or pave the way for more people to participate (Shackleton et al. 2007; Lovrić et al. 2021).

The Millennium Environmental Assessment (MEA), states that there are at least 150 high-value NWFP goods and services in international trade, covering the products, spiritual, aesthetic and recreational needs of humans. (MEA, 2005), while the World Health Organization, reports that about 80% of the population in developing countries rely on medicines, mostly derived from forest plants, for their primary health care (EFTEC, 2005; Mutke, et al. 2019). The value of NWFP's today differs significantly from past decades. While in the past, NWFP's were associated with the basic needs of rural populations, today they are rather part of a modern lifestyle or luxury goods (Wolfslehner et al. 2019). NWFP's, particularly in the Mediterranean region, are an important source of income (Croitoru, 2007; Martínez de Arano, et al. 2021). NWFP's such as edible mushrooms, pine nuts, acorns, resins, medicinal plants, among others, provide important recreational and commercial activities in the rural-forest regions of the world (FAO, 1995). The involvement of NWFP's as part of innovative management of multi-functional forests is fundamental for developing an alternative to traditional forestry. This multifunctional or ecosystem approach is based on the wide range of products and ecosystem services provided by Mediterranean forests. Recent research indicates the widespread impact of NWFP's on the rural-urban relationship (Mutke, et al. 2019). Most NWFP's provide additional sources of income that are particularly important in forested areas. Thus, they contribute to increasing the efficiency of land use, preventing rural abandonment, and providing opportunities to improve forests and ecological conditions through active management. NWFP's are at the heart of nature-based solutions. They protect and restore biodiversity for the benefit of people and nature. They can contribute significantly to many European policy ambitions, such as those related to sustainable land management, biodiversity and biodiversity conservation, circular bioeconomy, green economy reboot, healthy and resilient food systems, sustainable tourism, green jobs and public health, prosperity, and green recovery, able to address even the impacts of COVID-19 pandemic (Martínez de Arano, et al. 2021).

From the perspective for livelihood, the marketing of NWFP's is defined as an increase in their value in trade, which is expected to increase income and employment opportunities, especially for the poor and other less-favored rural communities (Belcher, et al. 2007), which are highly dependent on the collection of forest products for their household and commercial needs (Pettenella, et al. 2007; Ghosal, 2011). Also, in developed countries, where local people have depended on NWFP's in the past, and in fact they still continue to provide important social and cultural values for local households (Stryamets et al. 2012). Rates of consumption and collection of NWFP's, as well as the number of products collected and their contribution to household income, are increasing from Western to Eastern Europe. Higher income households consume a more diverse range of NWFP's, especially in Western Europe (Lovrić, et al. 2021). Estimates show that in many southern and eastern countries, the value of NWFP's, far exceeds that of timber (Croitoru, 2007; de-Miguel et al. 2014; Abraham et al. 2015). Furthermore, NWFP's, are a key element of sustainable development and sustainable forest management. It is important that NWFP's, have the potential to contribute to the achievement of the UN's 17 Sustainable Development Goals (SDGs), particularly in their social and cultural levels, but also in their environmental and economic dimensions (Martínez de Arano et al. 2021). When sustainably managed, the production, collection and processing of NWFP's, can generate multiple positive interactions: rural development, forest fire prevention, climate change adaptation and mitigation (Brenko, et.al. 2018).

It is important to identify ways to improve the employment and income generation potential of NWFP's, through practices related to harvesting, storage, transport, processing, processing, and marketing (Mutke et al. 2019). Demand for NWFP's, is high and is expected to increase. This demand is driven by the need to reduce dependence on non-renewable resources and to the transition to a sustainable circular bioeconomy. Strong societal trends favoring the biological, physical and unique properties of NWFP's, are increasing their demand. This creates opportunities but can also have negative consequences. Lack of resources emerges as one of the limiting factors. For mainly wild-harvested NWFP's, increased demand can lead to inappropriate harvest levels, uncontrolled trade, loss of biodiversity and resource depletion. It could also create conflicts between local communities and professional NWFP's collectors (Martínez de Arano et al. 2021). Also, NWFP's are vulnerable to market pressures and customer demands (Sheppard et al. 2020 a, Sheppard et al. 2020 b). Developing competitive value chains based on NWFP's, (e.g. essential oils, mushrooms) or their services (e.g. tourism) also requires secure and predictable access to resources (Martínez de Arano et al. 2021). Marketing strategies coordinated by local producers and processors, contractual agreements and various forms of vertical and horizontal integration are powerful tools that can be used to increase both production and marketing of NWFP's (Wolfslehner, et al. 2019). The development of certification standards as well as the development of synergies between NWFP's collectors or producers and manufacturing sectors can yield better results in markets (Agustino et al. 2011). Several NWFP's have high value and strong appeal to the growing number of consumers for organic and/or certified products. However, certification schemes are at an early stage and have a limited presence in large sales and distribution networks (Sheppard et al. 2020). Moreover, in order to flourish, NWFP's certification requires political support, social stability and the existence of strong local institutions (Pierce et al. 2003). Forest management planning and the development of criteria related to NWFP's treatment in forest management plans are essential to properly harness multifunctional synergies in forest management (Tomé et al. 2019). Synergies are another important challenge that needs to be addressed across the value chain between forest owners or growers, harvesters, traders, processors, secondary industries and consumers in order to achieve an integrated value chain (Mutke et al. 2019).

Different marketing strategies can be developed for the promotion of NWFP's, such as: green marketing (FAO 1995), combined marketing, as the use and marketing of NWFP's is closely linked to recreational services (Mavsar et al. 2008), territorial marketing, as they are linked to local traditions, culture and economy (Rovira et al. 2022). Innovative marketing strategies are attributed to related entrepreneurs creating successful value chains (Te Velde, et al. 2006), while web-based marketing development strategies seem to need further research as an innovative model for NWFP's promotion (Secco et al. 2009). Finally, several studies have been conducted internationally on the issue of developing relevant strategies and in different contexts, coming up with interesting results regarding the role of NWFP's in the emerging modern forest bioeconomy and the business and economic opportunities it can offer (Styramets et al., 2012; Weiss et al, 2020; Sheppard et al., 2020 a). Based on our literature review on the issue, the research questions emerging, are the following:

- What are the main NWFP's and their characteristics that attract the interest of Greek consumers in local markets?
- Which stakeholder groups should promote the development of a marketing strategy for NWFP's at the local level and how can this strategy be supported?
- What are the main channels for the promotion and marketing of NWFP's in local markets of Greece?
- What are the factors that can contribute to the creation of a strong brand for Greek NWFP's and how can this contribute to local development through value creation?
- What is the role of marketing of NWFP's in developing synergies in their value chains and in promoting sustainable development overall and multifunctional management of forest ecosystems in particular?

### 3. Research methodology

The survey was conducted from November to December 2022. The approach taken to its structure involves the development of a S.A.V.E. (Solution -Access - Value - Education) marketing mix as a more modern version of the 4P's of marketing (Product - Price - Promotion - Place) (Wani, 2013). Unlike the 4P's model of marketing mix, the S.A.V.E model promotes a more complex approach for businesses in the modern marketplace. It allows for better adaptation to customer needs by giving weight to contemporary market challenges and generally following a more customer-centric approach. This model structure enables the creation of customers who are committed around the brand of a product or business at any given time, through the provision of a narrowed value and participatory content of that value in alignment with customer needs and behavior (Wani, 2013). The questionnaire includes five different sections and 18 questions in total. The first section includes six questions that refer to socio-demographic characteristics of the respondents such as age, educational level, place of residence, occupation, and income to establish their profile. The remaining sections include questions related to respondents' views on the characteristics of NWFP's, access to NWFP's markets, value, and activation and engagement in the related market. The questionnaire was distributed online via social media to a simple random sample of the population. A total of 473 questionnaires were received out of the 500 originally distributed. The

resulting data were processed using SPSS Statistics windows ver 29.0 and the relevant Descriptive statistics (Frequencies) and cross-tabulations (Crosstabs), X<sup>2</sup> test for independence between variables were performed. The reliability of the factors used to determine the S.A.V.E. factors used in the questionnaire, namely NWFP's characteristics - access to NWFP's markets - NWFP's value - NWFP's market activation and involvement in the NWFP's market, was investigated using Reliability Analysis test and Cronbach's a reliability coefficient. The test showed that the scales used to describe the above factors are reliable as the Cronbach's a coefficient is greater than or close to 0.7 (Siomkos and Vasilikopoulou, 2005).

**4. Results**

The demographics of the participants in the present research are shown at the first table following, while in relation to occupation status, 117 people stated they were private employees, 108 civil servants, 100 students, 57 business owners, 39 retired, 30 unemployed, while 22 people stated as "other".

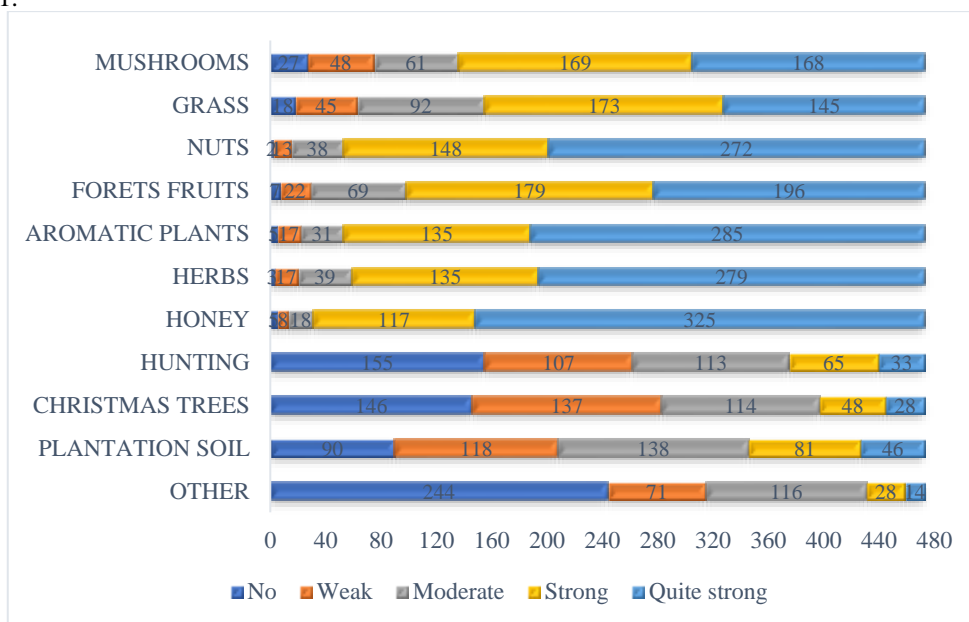
**Table 1.** Demographics of the surveyed sample

DEMOGRAPHICS OF SURVYED SAMPLE		Percentage %
Gender	Male	47,4
	Female	52,6
Age	18-24	19,0
	25-34	16,5
	35-44	15,4
	45-54	28,8
	55-64	16,1
	65 and over	4,2

DEMOGRAPHICS OF SURVYED SAMPLE		Percentage %
Educational level	Compulsory education	3,8
	High school graduate	20,5
	University degree	47,4
	Postgraduate studies	24,3
	Doctoral studies	4,0
Income per month	Less than 600 €	28,9
	601 - 1200 €	37,2
	1201 - 1800 €	23,3
	1801 - 2400 €	6,6
	2400 - 3000 €	1,8
	3000 € and over	2,3

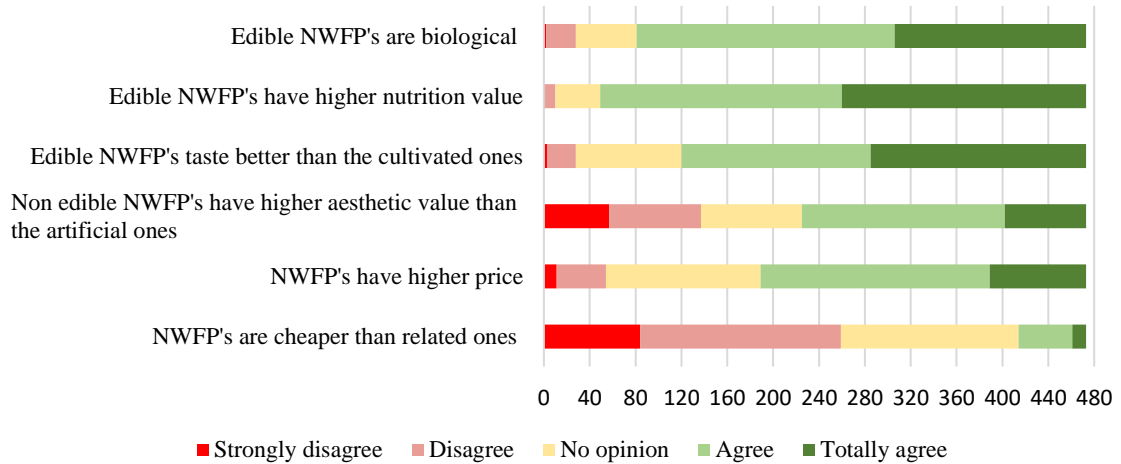
**4.1 Characteristics of NWFP's (Solution)**

To the question on what respondents considered to be as NWFP, the most responses (314) stated 'All forest products except wood'. 280 positive responses were given to being "Forest products harvested directly from the forest other than wood", 171 to being "Animal products (e.g. game, honey, grazing and grazing animals in forest areas, etc.)", 136 responded that they were "Forest products grown within the forest and forest areas other than wood". There were 108 positive responses to 'Forest products grown other than wood', while the lowest number of responses was for 'Forest products that can be produced by conventional agricultural methods (e.g. fertilisation, watering, etc.)', 'Forest products grown outside forest and woodland other than wood' and 'Liquid products (water, beverages, etc.)'. Respondents express interest in buying "strong to quite strong" of mainly edible NWFP's with preference for honey (93.45%), nuts and herbs (88.79%), herbs (87.53%), forest fruits (79.28%) and mushrooms (71.25%), with the rest responses to follow as shown in the next figure 1.



**Figure 1:** Preferences for NWFP's of the surveyed sample

As far as the characteristics of the NWFP's (Figure 2), 47.57% of the respondents agree - while 35.31% strongly agree that edible NWFP's are biological products, 44.61% agree - while 45.03% strongly agree that edible NWFP's have high nutritional value, 34.88% agree - while 39.75% strongly agree that edible NWFP's taste better than the cultivated ones



better than those cultivated.

**Figure 2: Opinions on NWFP's characteristics**

Regarding whether the aesthetic value of non-edible NWFP's is higher than that of their artificial counterparts, 37.42% agree - while 15.01% strongly agree. On whether NWFP's have a higher market price, 60.04% agree or strongly agree, while 54.76% disagree or strongly disagree that MSEs are cheaper than equivalent products. Also, the percentage of those who have no opinion on the economic value of MFIs is significant. Since the characteristics are related to each other, a correlation analysis was performed using Pearson correlation coefficient (Pcc). The results showed that at a significance level of 0.01, the factors that positively influence each other in order to determine the characteristics of the NWFP's are: being organic, having high nutritional value and having better taste. The characteristics "higher price" and "cheaper than similar products" do not seem to be highly correlated with the previous characteristics.

**4.2 Access to NWFP's markets**

Most of the respondents (228 respondents) reported that they are visitors to NWFP's market areas and are interested in them as consumers. A 98.5% of the respondents believe that local markets in mountainous areas have the potential to contribute to the sales of NWFP's. Applying cross-tabulation statistics (Crosstabs), it was found that all those who are professionally active with NWFP's, believe in the contribution of local markets to the increment of sales for NWFP's, while as far as for visitors to areas with these markets are concerned, only one person does not believe in this contribution. Regarding who is responsible for the promotion of NWFP's in the local markets of mountain settlements, the majority of respondents answered with 93.02% that they agree or strongly agree that the responsibility lies with the inhabitants of the settlements who are engaged in NWFP's collection. With a small difference and with 85.17%, the responsibility for the promotion of NWFP's was attributed to the municipality of each settlement. This was followed by manufacturing enterprises with 78.44%, tourism sector enterprises with 77.38%, cultural associations with 76.11% and finally a 59.83% of the respondents attributed the responsibility for the promotion of the NWFP's in local markets to the forestry service. The analysis of the responses, the relatively small variations among them, and the fact that 44.61% of the respondents "have no opinion" on the responsibility of "someone else", suggests the respondents' concerns about who has the responsibility for the promotion of NWFP's in local markets.

The survey continued with a related question, and especially through which channels do survey respondents believe would enable consumer access to NWFP's. The majority (447 respondents) strongly agree and agree on access to NWFP's "through physical outlets of specialised shops". 434 would like "special events (e.g. festivals) for MFA categories", 422 believe that MFAs can be promoted "through agri-tourism and providing an agri-tourism experience", 403 "through the internet (websites and e-shops)", 387 "as a complementary product in a shop", 378 "through cultural associations", 371 believe that access to MFAs can be achieved by "Promotion through niche outlets (hotels, restaurants, cafes, etc. )", 366 "through the use of social media", 349 "by selling as a superfood".

#### 4.3 Value of NWFP's

The analysis of the results continues with the determination of the value of the NWFP's from both, economic and ecosystem perspective. The overwhelming majority of respondents (93.45%), strongly agree and agree that "NWFP's can be an important tourism product" and 90.91% that "NWFP's contribute to the income of populations living next to forests". A percentage of 87.95% strongly agree that "the production and consumption of NWFP's contributes to the preservation of the cultural heritage of a region", while a 84.36% that "the consumption of NWFP's contributes to the improvement of health and well-being", a 75.05% that "NWFP's supply bio-based raw materials to important industrial sectors (e.g. pharmaceutical industry)", a 71.46% that "production and consumption of NWFP's contributes to the conservation of biodiversity" and finally a 54.12% strongly agree that "production and consumption of NWFP's contributes to the fight against climate change". Regarding the contribution of NWFP's production and consumption to addressing Climate Change, it is worth noting that a significant percentage of 35.52% has no opinion on this issue. The  $\chi^2$  analysis showed that, the place of residence of the respondents is a statistically significant determinant, regarding the added value of NWFP's and the development of the related market, and that the residents of the survey areas, consider that the individual values that can be exploited to create a strong brand for NWFP's are:

- Their contribution to addressing climate change (Pearson Chi-Square 25.026,  $p=0.015$ )
- Their contribution to preserving the cultural heritage of the region (Pearson Chi-Square 29.168,  $p=0.004$ )
- The fact that they are an important tourist product (Pearson Chi-Square 31,277,  $p=0,002$ )
- Their contribution to enhancing local income (Pearson Chi-Square 22,991,  $p=0,006$ )
- Their contribution to improving health and self-sufficiency (Pearson Chi-Square 29.168,  $p=0.004$ )
- Their contribution as a source of raw materials for bio-based products in important industrial sectors (Pearson Chi-Square 43.596,  $p=0.001$ ).

#### 4.4 Engagement in NWFP's markets

The last category of results relates to ways of engaging consumers in the purchase of NWFP's. Thus, when asked about the degree of agreement/disagreement on ways of enabling consumers to purchase NWFP's, respondents strongly agree/agree as presented in the next Table 2.

**Table 2.** Ways for engagement in the NWFP's markets of the surveyed sample

Ways for engagement in the NWFP's markets	Percentage %
Provide training in the cultivation and benefits of NWFP's through training programs	90,06
Providing training in the cultivation and benefits of NWFP's in universities	88,79
Development of a standard for certification and labelling of NWFP's as organic products	88,37
Consumer information campaigns on NWFP's by local authorities	84,57
Development of synergies between the tourism sector and other sectors of the economy	82,88
In-company training and education of food industry and other processing sectors on NWFP's	82,03
Consumer information campaigns on NWFP's by enterprises	81,40
Consumer information campaigns on NWFP's by ministries - agencies	81,18
Development of criteria in forest management plans for NWFP's	80,34
Formulation of national policy on NWFP's	79,28
Development of synergies between manufacturing sectors for NWFP's	78,22
Inclusion of NWFP's cultivation in the CAP (Common Agricultural Policy)	73,78
Tax incentives for the collection and use of NWFP's	72,52
Other	16,49

### 5. Discussion

The present research is original for the Greek context, as it is the first time that market research for NWFP's is carried out to draw useful conclusions aiming at formulating the marketing mix for this specific market of forest products in Greece, as a lever to support local economies based on contemporary customer-centric approaches. Thus, it is the first time that the model of the S.A.V.E. approach is used in the marketing mix of NWFP's, instead of the 4p'S approach usually used in similar research. This model structure provides an opportunity to create customers who are committed around a product's particular brand at any given time, through the delivery of targeted value and participatory content of that value, in alignment with customer needs and behavior. This element was used to determine the factors of NWFP's that can create their brand, based on the added value they deliver to local communities based on their needs.

In general, consumers do not believe that NWFP's can be produced using conventional agricultural methods, nor can they be grown outside of forest and woodland. We argue that there is a convergence of consumer views with the definitions given for NWFP's by FAO 1995 and Shackleton et al. 2010. Interest in purchasing mainly edible NWFP's is extremely strong. With regard to our first research question, the survey showed that the

characteristics of organic quality, high nutritional value and best taste are the criteria that make individual NWFP's first in the preferences of both residents of the areas where local NWFP's markets are developed and visitors to these areas, while the selling price of these products does not seem to influence their preferences.

In relation to the second research question "*Which stakeholder groups should promote the development of a marketing strategy for FDI at the local level and how can this strategy be supported*", the analysis of the results revealed that local markets in mountain areas have the potential to contribute to the promotion and sales of NWFP's. Especially the professionals involved in NWFP's strongly support this approach. Although there is a strong concern as to the responsibility for developing marketing strategies, as it is the collectors who are mainly involved with NWFP's, but also those who ultimately see tangible economic benefits from this activity, they also have the main responsibility of promoting local markets in relation to NWFP's. The legitimate and expected assistance from local authorities concerned in this regard is also registered, while simultaneous assistance from tourism or manufacturing businesses and cultural associations would have additional positive effects.

The main channels for the promotion and promotion of NWFP's, in local markets (third research question), although in local markets there are of course outlets of shops specialized in these products, which is considered the most important means of promoting the products concerned, both the organization of activities and experiential experiences and the establishment of local events can help in promoting NWFP's. The development of forms of agri-tourism and the provision of agri-tourism experiences can help in this direction. The Internet could contribute to the contact of consumers who are distant from local markets, by creating websites and e-shops, advertising using social media.

Exploring the factors that can contribute to the creation of a strong brand for Greek NWFP's, and how this can contribute to local development through value creation (fourth research question), it was emerged that providing education on the cultivation and benefits of NWFP's along with the possibility of certification of primary and processed products through appropriate action plans, as well as the idea of developing synergies between the tourism sector and other sectors of the economy, along with in-house training and education, can contribute to local development through value creation.

Regarding the last research question, "*What is the role of marketing of MPAs in developing synergies in their value chains and in promoting sustainable development in general and multifunctional management of forest ecosystems in particular*", we argue that NWFP's can be an important tourism product in the local markets of mountain settlements, while at the same time creating new jobs and increasing the income of the inhabitants of the forest settlements, preserving the cultural and natural heritage of the area. Values such as the contribution of NWFP's to improving health and well-being as they supply bio-based raw materials to important industrial sectors, and the ecosystem services provided by NWFP's are not negligible. The above can work both ways, resulting in incentives for the creation of manufacturing enterprises and by creating the potential for a circular economic activity in the region, while contributing to a low environmental footprint. Their promotion as commercial products of added value will have multiple positive effects, with the main one being the return of young people who have left their homes due to the economic crisis. These could potentially become the new investors for ventures of innovative businesses in mountain areas, with the NWFP's as a reference point.

## References

- Abraham, E. M., Theodoropoulos, K., Eleftheriadou, E., Ragkos, A., Kyriazopoulos, A. P., Parissi, Z. M., & Soutsas, K. (2015). Non-Wood Forest Products from the understory and implications for rural development: The case of a broadleaf deciduous oak forest (*Quercus frainetto* Ten.) in Chalkidiki, Greece. *Journal of Environmental Protection and Ecology*, 16(3), 1024-1032.
- Agustino, S., Mataya, B., Senelwa, K., & Achigan-Dako, E. G. (2011). Non-wood forest products and services for socio-economic development. In *A compendium for technical and professional forestry education. The African Forest Forum, Nairobi, Kenya* (Vol. 219).
- Arnold, J. E. M. (1995). Socio-economic benefits and issues in non-wood forest products use. *Non-Wood Forest Products* (FAO).
- Brenko, A., Buršić, D., Zgrablić, Ž., & Martínez de Arano, I. (2018, June). A Road Map for innovating NWFPs value chains for the Aromatic and Medicinal Plants iNet. In *Conclusions issued from the Scoping seminar–27 & (Vol. 28)*.
- Croitoru, L. (2007). Valuing the non-timber forest products in the Mediterranean region. *Ecological Economics*, 63(4), 768-775.
- de-Miguel, S., Pukkala, T., & Yeşil, A. (2014). Integrating pine honeydew honey production into forest management optimization. *European Journal of Forest Research*, 133(3), 423-432.
- EFTEC, 2005. *The Economic, Social and Ecological Value of Ecosystem Services: A Literature Review*, Available at: <https://www.cbd.int/financial/values/unitedkingdom-valueliterature.pdf>.
- Europe, F., & Unece, F. A. O. (2015). *State of Europe's forests 2015*.

- Food and Agriculture Organization of the United Nations. (1995). Non-wood forest products for rural income and sustainable development. Non-Wood Forest Products No. 7.
- Ghosal, S. (2011). Importance of non-timber forest products in native household economy. *Journal of Geography and Regional Planning*, 4(3), 159-168.
- Greene, S. M., Hammett, A. L., & Kant, S. (2000). Non-timber forest products marketing systems and market players in Southwest Virginia: Crafts, medicinal and herbal, and specialty wood products. *Journal of Sustainable Forestry*, 11(3), 19-39.
- Koppell, C., & Freudenberger, S. K. (1995). Marketing information systems for non-timber forest products
- Lovrić, M., Da Re, R., Vidale, E., Prokofieva, I., Wong, J., Pettenella, D., ... & Mavsar, R. (2021). Collection and consumption of non-wood forest products in Europe. *Forestry: An International Journal of Forest Research*, 94(5), 757-770.
- Martínez de Arano, I., Maltoni, S., Picardo, A., Mutke, S. et al. (2021). Non-wood forest products for people, nature and the green economy. Recommendations for policy priorities in Europe. A white paper based on lessons learned from around the Mediterranean. EFI and FAO, Barcelona
- Mavsar, R., Ramcilovik-Suominen, S., & Palahí, M. (2008). Study on the development and marketing of non-market forest products and services.
- MEA, 2005. Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC.
- Mutke, S., Bonet Lledos, J. A., Calado, N., Calvo, J., Taghouti, I., Redondo, C., & Martínez de Arano, I. (2019). Innovation networks on Mediterranean non wood forest products. *Journal of Innovative Science and Engineering (JISE)*, 2019, vol. 3, núm. 1, p. 1-10.
- Pandey, A. K., Tripathi, Y. C., & Kumar, A. (2016). Non timber forest products (NTFPs) for sustained livelihood: Challenges and strategies. *Research Journal of Forestry*, 10(1), 1-7.
- Pettenella, D., Secco, L., & Maso, D. (2007). NWFP&S marketing: lessons learned and new development paths from case studies in some European countries. *Small-scale Forestry*, 6, 373-390.
- Pierce, A., Shanley, P., & Laird, S. (2003, May). Certification of non-timber forest products: Limitations and implications of a market-based conservation tool. In international conference on rural livelihoods, forests and biodiversity, Bonn, Germany (pp. 19-23).
- Rovira, M., Garay, L., Górriz-Mifsud, E., & Bonet, J. A. (2022). Territorial Marketing Based on Non-Wood Forest Products (NWFPs) to Enhance Sustainable Tourism in Rural Areas: A Literature Review. *Forests*, 13(8), 1231.
- Shackleton, S., Shanley, P., & Ndoye, O. (2007). Invisible but viable: recognising local markets for non-timber forest products. *International Forestry Review*, 9(3), 697-712.
- Sheppard, J. P., Chamberlain, J., Agúndez, D., Bhattacharya, P., Chirwa, P. W., Gontcharov, A., ... & Mutke, S. (2020). Sustainable forest management beyond the timber-oriented status quo: transitioning to co-production of timber and non-wood forest products—a global perspective. *Current Forestry Reports*, 6(1), 26-40.
- Sheppard, J., Santos-Silva, C., Louro, R., Stara, K., Belova, O., & Spiecker, H. (2020). Identification and ecology of NWFP species.
- Siomkos, G. I., & Vasilikopoulou, A. I. (2005). Implementation of Analysis Methods in the Market Research. Chapter, 7, 285-312.
- Stryamets, N., Elbakidze, M., & Angelstam, P. (2012). Role of non-wood forest products for local livelihoods in countries with transition and market economies: case studies in Ukraine and Sweden. *Scandinavian journal of forest research*, 27(1), 74-87.
- Te Velde, D. W., Rushton, J., Schreckenber, K., Marshall, E., Edouard, F., Newton, A., & Arancibia, E. (2006). Entrepreneurship in value chains of non-timber forest products. *Forest Policy and Economics*, 8(7), 725-741.
- Wani, T. (2013). From 4Ps to SAVE: A theoretical analysis of various marketing mix models. *Business Sciences International Research Journal*, 1(1).
- Weiss, G., Emery, M. R., Corradini, G., & Živojinović, I. (2020). New values of non-wood forest products. *Forests*, 11(2), 165.
- Wolfslehner, B., Prokofeva, I. and Mavsar, R. (editors). 2019. Non-wood forest products in Europe: Seeing the forest around the trees.

## **External factors affecting staff productivity, a case study**

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*Keywords: Staff productivity, measurements and operations management*

### **Introduction**

In today's business environment, ever-increasing competition drives businesses to seek ways to increase productivity in order to remain viable and profitable. The continued development of technology and the possibility of its use in the field of knowledge of any organization is certainly a way of increasing productivity. However, it is clearly not the only way, nor is it the way that will give the organization a comparative advantage over competition. The workforce is for the organization the most important asset and through it and the business culture, which it either has or must create, the organization can increase productivity and cope with the strategic goals it has set. Employee demographics, in relation to commitment to the organization are extrinsic factors that are a subject to study and research.

Therefore, in this study we will investigate the relationship between productivity of the production staff of a company in relation to the demographic characteristics of the employees, and some other external factors that influence productivity of the working staff of a company.

### **Literature**

The measurement of performance provides the managerial staff and in general the staff who make decisions in a company all the necessary information needed both for the evaluation of the project or the services produced and for any measures that must be taken to optimize the financial results immediately. In the modern business environment performance is monitored through Key Performance Indicators (KPIs).

The performance indicators should be immediate, provide the possibility to monitor the performance exactly at the moment it is needed without the need for mediation or cooperation with another department (Accounting) of the company, giving the possibility to intervene and proceed with any changes for the optimization of the final result before the situation tends to an irreversible result.

Labor productivity, depends on specific factors. If the structures of a company, technological equipment and in general the facilities are excluded, productivity is directly linked to the demographic characteristics of the production staff as well as the employee's commitment to it. By saying employee commitment or otherwise work commitment, it is the situation in which the employee comes to his workplace with positive feelings, with enthusiasm and willingness. Essentially, the employee does not treat his work as a process and does not come to it just for the pay, but considers himself a part of the company.

Of course, the culture of employee engagement depends on many factors that are mainly related to procedures, communication and ultimately the vision and purpose of the company as communicated by its owners or management staff. According to Eckerson (2010) a KPI is a measure of how well an organization or individual is performing an operational, tactical or strategic activity that is critical to both the present and future success of the organization. KPIs should have some characteristics. These characteristics of KPIs according to Doran's (1981) SMART rule are as follows:

1. Specific, clearly defined
2. Measurable - Can be calculated numerically
3. Attainable - To be able to be achieved
4. Realistic - Aligned with the real goals of the business
5. Time Limited -To be measured in a specified period of time

In commercial but mainly production companies, indicators are usually used that are directly related to the control and measurement of the quantity of goods or services produced in relation to the available time. Therefore, a key performance index in companies that also have a production process is the productivity index.



More generally, productivity is equal to the quotient of the division of the product produced by the inputs used while keeping product quality constant (Grönroos, 2001)

On the other hand, a positive, satisfying, working state of mind, which is characterized by the vigor, dedication and absorption each employee has from his work, is defined as employee engagement by Schaufeli & Bakker (2002).

In addition to the factors that the organization can and must influence in order to increase its productivity, there are several external factors that the organization is unable to influence. These external factors are inextricably linked primarily with the personal characteristics of the employees and secondarily with the economic and social environment (Yanhan Zhu, 2013). The character of the employee is also linked to his productivity in the workplace. Variables such as, educational level, age, experience and seniority in the field are some of the most important factors of employees that play a decisive role in their efficiency and productivity.

**Methodology**

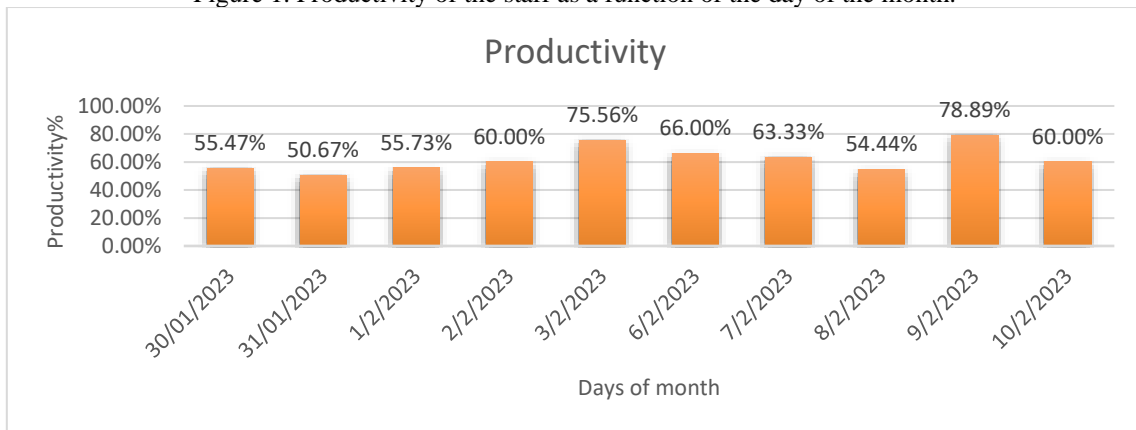
All employees of the organization participated in the survey conducted on behalf of a known Business Group by the Gallup company, between January 19 and March 28, 2022.

Therefore, the sample was the entire population to be investigated, a complete census was carried out. However, we will focus on the group of people working in Thessaloniki, which consists of eight employees. To collect the primary data, a quantitative survey was carried out and specifically, the employees of the organization were asked to answer a questionnaire, consisting of 4 categories of questions. The 1<sup>st</sup> concerns the work needs of the employees and work well-being. The 2<sup>nd</sup> category of questions concerns their empowerment within the organization and their individual contribution to the organization's goals. In the 3<sup>rd</sup> category, the category of teamwork and interpersonal relationships within the organization is examined and finally, in the 4<sup>th</sup> category of questions the development of employees within the organization is examined.

**Results**

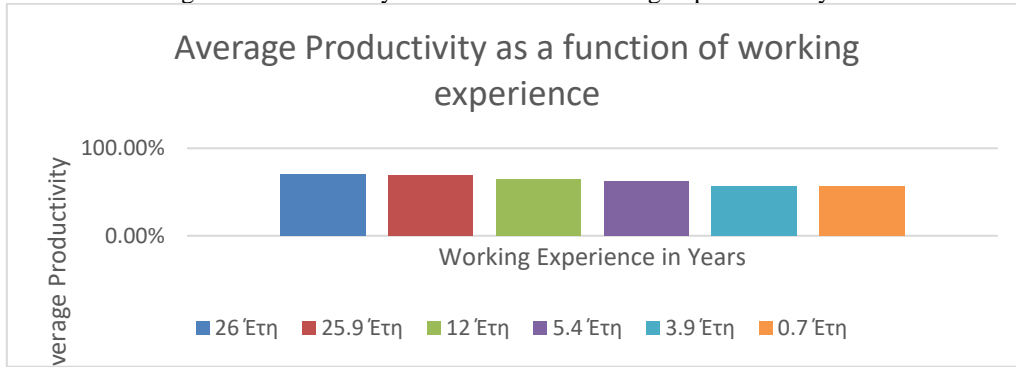
Total productivity increases significantly in the first days of February compared to the last days of January. This can be due to more than one reason. Initially, the third working day of the month is the payday of the company's employees. Therefore, the first cause is linked to the positive psychological mood that payday creates to the workers (see figure 1).

Figure 1. Productivity of the staff as a function of the day of the month.



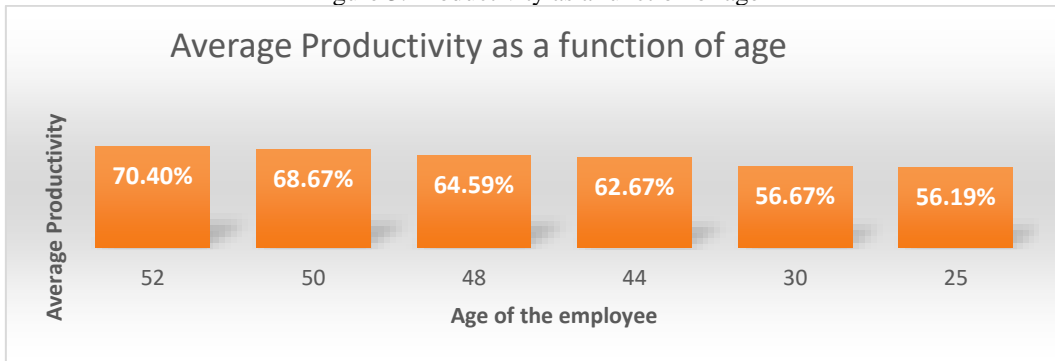
Moreover, it is noticed that the more experienced the employee, the higher the average productivity. Older workers were observed to exhibit greater levels of average productivity (see fig. 2).

Figure 2. Productivity as a function of working experience in years



As age is usually related to experience, it also confirms the above correlation of the dependence between average productivity and years of service (see fig. 3).

Figure 3. Productivity as a function of age

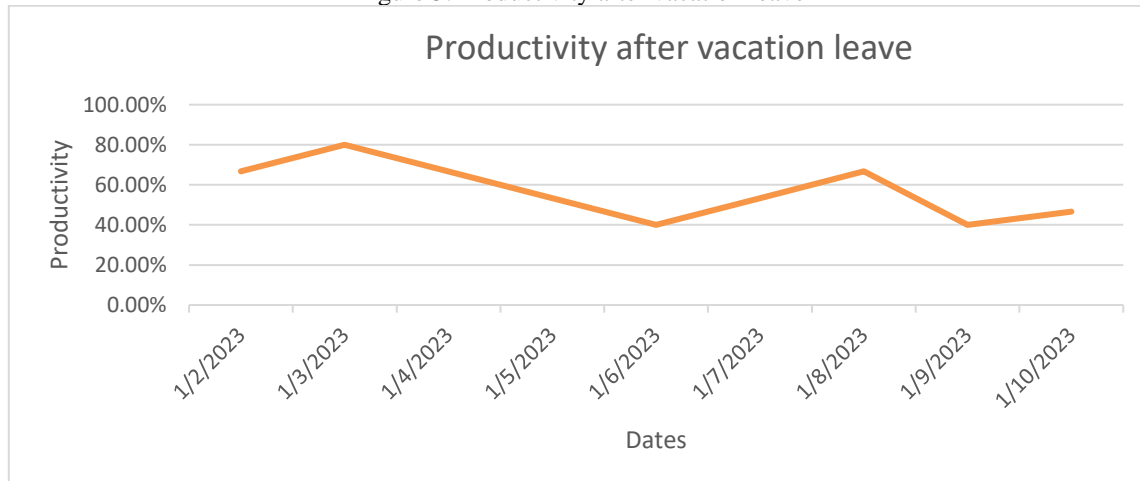


Additionally, there is a peak in productivity a day before taking the vacation leave (see fig. 4). It is observed, that the employee's productivity shows an increase in the first two days after his return from vacation leave (fig. 5). Then, follows a gradual decrease with some fluctuations.

Figure 4. Productivity before vacation leave



Figure 5. Productivity after vacation leave



### Conclusions

Although the examined sample was relatively small, useful conclusions can be drawn from the results of our measurements. Productivity is influenced and shaped by many factors. Taking into account the demographic characteristics of employees we realize that they are indisputable elements that shape productivity results. It is evident that the productivity of the staff is increases significantly in the first days of the month. The psychology of the employees who receive their salary, or just before and after the vacation leave is also something that increases productivity.

Productivity is also increased with the working experience in years and the age of the employee. Maintaining and potentially growing the workforce is a one-way street. Investing in craftsmen with experience and seniority increases the chances of increased productivity and efficiency. Age is not an obstacle to increasing efficiency and productivity but on the contrary it is a guarantee for their increase. The studied and agreed provision of permits to the craftsmen helps the possibility of increasing the productivity of the organization.

### References

- Doran. (1981), *There's a S.M.A.R.T. way to write managements's goals and objectives*. *Management Review*, 70 (11), 35–36. <https://doi.org/info:doi/>
- Eckerson, W. W. (2010). *Performance Dashboards: Measuring, Monitoring, and Managing Your Business* (2nd edition). Wiley.
- Grönroos, C. (2001). The perceived service quality concept – a mistake? *Managing Service Quality: An International Journal*, 11(3), 150–152. <https://doi.org/10.1108/09604520110393386>
- Schaufeli, W. B., Salanova, M., Lez-Roma, V. G., & Bakker, A. B. (2002). *THE MEASUREMENT OF ENGAGEMENT AND BURNOUT: A TWO SAMPLE CONFIRMATORY FACTOR ANALYTIC APPROACH*.
- Zhu, Yanhan. (2012). *A Review of Job Satisfaction*. *Asian Social Science*. 9. 10.5539/ass.v9n1p293.

# **Marketing and Social Media**

# Instagram celebrity fashion reviews' influence on Generation Y students' fashion brand preferences: information-adoption model evaluation

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## Abstract

*Instagram celebrity fashion reviewers are an increasingly popular channel for fashion marketers to connect with current and potential fashion apparel consumers, particularly those classified as members of Generation Y. Despite Generation Y consumers known exposure to Instagram celebrity fashion reviews, there is limited empirical research on the extent to which such reviews influence their fashion apparel brand preferences; that is, the extent to which they adopt those reviews into their fashion apparel brand decision-making process. From an academic marketing perspective, a starting point in addressing this gap in the literature is to validate an appropriate model for measuring Generation Y consumers' adoption of Instagram celebrity fashion reviews. As such, this study sought to evaluate an adapted version of the information adoption theory proposed by Sussman and Siegal (2003) as a measurement model for determining Generation Y consumers' adoption of Instagram celebrity fashion reviews in terms of their fashion brand preferences. Following a single cross-sectional descriptive research design, data were collected from a sample of 334 university students. The measurement model specified for confirmatory factor analysis included the latent factors of the information quality, information trustworthiness, perceived information usefulness and, as a measure of the adoption of Instagram celebrity fashion reviews, the fashion brand preference effect of such reviews. The computed results infer that Generation Y students' adoption of Instagram celebrity fashion reviews in South Africa is a four-factor model, with no multi-collinearity issues that is valid, reliable and exhibits acceptable model fit. This empirically-validated measurement model provides fashion marketing academics and practitioners with an instrument for ascertaining Generation Y consumers' adoption of Instagram celebrity fashion reviews and, by implication, the extent to which such reviews influence their fashion brand preferences.*

**Keywords:** *Information adoption model, Instagram celebrity fashion reviews, Generation Y, model validation, South Africa.*

## 1. INTRODUCTION

Fashion apparel includes any type of clothing item, from formal to leisure wear, from fast fashion to *haute couture* (Smith, 2023). Despite recent challenges, including the negative supply and demand effects of the coronavirus pandemic, and ongoing challenges such as depressed consumer sentiment, hyperinflation and geopolitical tensions (Amed *et al.*, 2022), the fashion sector remains a significant contributor to the global economy, generating approximately 1.5 trillion U.S. dollars in revenue in 2021; a figure estimated to rise to 2 trillion dollars by 2026 (Smith, 2023). As an industry sector, the fashion apparel market is dynamic, intensely competitive and subject to uncertainty and continuous change (BCG, 2019; Wang, 2016). Key to competitive survival in this industry is the ability to predict and swiftly react to emerging trends (Blaszczyk & Wubs, 2018).

Young adult consumers, currently encompassing members of Generation Y (individuals born between 1986 and 2005) (Markert, 2004), signify an important target segment in the fashion apparel sector (Amed *et al.*, 2019). Not only are the Youth historically at the forefront of initiating and diffusing fashion trends (Sproles, 1974), but Generation Y consumers also account for a sizable portion of the global population and have

significant spending power (Amed *et al.*, 2019). The same holds true in South Africa, where it is estimated that members of this generation accounted for 34 percent of the country's population in 2022 (Statistics South Africa, 2022). Moreover, Generation Y consumers are preoccupied with fashion trends (Olajide *et al.*, 2018), exhibit a high need for conspicuous status consumption (Eastman & Liu, 2012), are brand conscious and typically strive to reflect a trendy social image (Fu, 2020).

Connecting with this important generational fashion apparel segment does, however, pose certain challenges in that they tend to be sceptical of traditional forms of marketing communication (Wilberg, 2018; Friedman, 2017). Reports suggest that Generation Y individuals are more likely to connect with a fashion apparel brand online through external sources such as social media influencers and peers than through traditional marketing communication channels (Amed *et al.*, 2019; Phillips, 2018; Wilberg, 2018). Social media influencers are manifesting as a particularly successful way for fashion apparel marketers to connect with their target audiences (Phillips, 2018). Fashion social media influencers are fashion arbiters who, using personal branding, build and maintain relationships with their followers on one or several social media platforms and who shape their followers' fashion attitudes and behaviour in one or several fashion product categories (Dhanesh & Duthler, 2019; De Veirman, *et al.*, 2017). One social media platform that is proving particularly suitable for fashion brands and for connecting with Generation Y consumers is Instagram. Instagram's photograph and short video sharing features, image and video editing tools, audience-targeting tools, and community and brand hashtags make it the ideal platform for showcasing fashion apparel brands (Nguyen, 2021). Moreover, with 64 percent of its users falling within the 18- to 34-year-old age category, Instagram is also a particularly suitable platform for reaching Generation Y consumers (Geysler, 2022). While Instagram social media influencers may be celebrities or non-celebrities, it is the accounts of celebrities that typically attract the most followers (Boyd, 2020) and it is celebrities who are generally the top influencers on this platform (Bhengu, 2020).

Despite the media advocating the use of social media influencers to target Generation Y consumers (Loeb, 2020; Feldman, 2019), there are a limited number of published empirical studies on this generation's perceptions of social influencer marketing (Ki *et al.*, 2020), particularly in the South African market. In order to address this limitation in the marketing literature, this paper outlines the findings of a study that sought to evaluate an adapted version of the information adoption model proposed by Sussman and Siegal (2003) as a measure of Generation Y university students' adoption of Instagram celebrity fashion reviews in terms of their fashion brand preferences.

## 2. LITERATURE REVIEW

Instagram celebrity fashion reviews are a form of word-of-mouth communication that involve the transfer of fashion-related information, opinions and recommendations from Instagram celebrity influencers to their Instagram followers (Wilberg, 2018). The persuasiveness of the information provided in such reviews determines recipients' adoption of that information and, ultimately, the extent to which it influences their fashion brand preferences; that is, their fashion-related purchase decisions (Cho *et al.*, 2022; Tien *et al.*, 2019). The information adoption model, developed by Sussman and Siegal (2003), which focuses on explaining individuals' adoption of advice in digitally-mediated contexts, provides a suitable theory for understanding Instagram followers' adoption of celebrity fashion reviews into their fashion consumption behaviour (Salehi-Esfahani *et al.*, 2016). This model incorporates the elaboration likelihood model (Petty & Cacioppo, 1986) and the technology acceptance model (Davis *et al.*, 1989). The focus of the elaboration likelihood model is on explaining the persuasiveness of a received message. The model subjects that information recipients are influenced by a message via two routes, namely the central route or the peripheral route. The central route concerns the core of the message, while the peripheral route relates to issues that are indirectly related to core of the message (Petty & Cacioppo, 1986). The technology acceptance model focuses on explaining individuals' intentions to use a particular technological system. According to this model, intentions to utilise a technology system depend on individuals' overall feelings or attitude towards that system, which, in turn, is influenced by their subjective perceptions that using the system will enhance their performance in carrying out tasks (Davies *et al.*, 1989).

The information adoption model includes the four dimensions of argument quality, source credibility, information usefulness and information adoption (Sussman & Siegal, 2003). According to the information adoption model, argument quality relates to the central route of persuasion and source credibility to the peripheral route of persuasion (Garg & Pandey, 2023; Haldar, 2022; Sussman & Siegal, 2003). In terms of Instagram celebrity fashion reviews, this entails providing timely information on fashion trends, complete

information and relevant fashion information that resonates with that celebrity's followers. It also involves providing trustworthy and authentic fashion content (Ward, 2017), including relevant disclosures concerning any commercial interests (Lou, 2022; Dhanesh & Duthlar, 2019). The third dimension of the information adoption model, perceived usefulness (Tien *et al.*, 2019; Sussman & Siegal, 2003), refers to the quality of task-related advice (Davis *et al.*, 1989). In the case of Instagram celebrity fashion reviews, this may be viewed as the extent to which these reviews facilitate the Instagram followers' fashion consumption decision-making process and mitigate the risks of fashion brand purchase decision dissonance (Sun *et al.*, 2022; Wilberg, 2018). Information adoption refers to the degree to which a recipient is influenced to act based on the information received (Sussman & Siegal, 2003). Given that the focus of Instagram celebrity fashion reviews is on giving fashion brand advice, review adoption may be interpreted as the creation of fashion apparel brand preferences (Sun *et al.*, 2022).

In accordance with the literature reviewed, this study opines that Generation Y students' adoption of Instagram celebrity fashion reviews into their fashion consumption decision-making process is a four-factor model that includes the latent factors of perceived information quality, information trustworthiness, information usefulness and, as a measure of online Instagram celebrity fashion review adoption, the degree to which such reviews affect followers' fashion brand preferences.

### 3. RESEARCH METHODOLOGY

The study followed the descriptive research design, using a single cross-sectional sampling approach.

#### 3.1 Sampling and data collection

In accordance with the study's aim, the target population was delineated as Generation Y university students registered at South African public higher education institutions (HEIs), who were aged between 18 and 24 years. Cost and distance restraints resulted in the sampling frame being limited to HEI campuses in South Africa's Gauteng province, where judgement sampling was used to select campuses from two of these HEIs. The judgment criteria employed was that the sample should comprise students from each of South Africa's two types of public HEIs; that is, students from a traditional university campus and students from a university of technology campus. Using a mall-intercept type survey approach, fieldworkers distributed 400 questionnaires to a convenience sample of students on each of the two selected campuses (200 per campus).

#### 3.2 Research instrument

The study made use of a self-reporting survey questionnaire to collect the required data. This questionnaire included a cover letter outlining the intent of the study and providing a guarantee of the anonymity of the sample participants, a section relating to demographic data and a section comprising scaled-response items from published studies. These scales included a five-item information trustworthiness scale, adapted from the source credibility scale scales developed by Ohanian (1990), a four-item information usefulness scale, adapted from the perceived usefulness scale developed by Davis *et al.* (1989), a three-item information quality scale developed by Tien *et al.* (2019) and a seven-item Instagram celebrity influence on fashion brand preferences scale adapted from a scale developed by Eze *et al.* (2012). The responses to the 19 scaled items were captured on a six-point Likert-type scale that ranged from strongly disagree (1) to strongly agree (6).

#### 3.3 Data analysis

The survey data were captured and analysed using Versions 28 of SPSS and AMOS. Statistical analysis included Pearson's product-moment correlation for nomological validity analysis, collinearity diagnostics, confirmatory factor analysis using the maximum likelihood method, internal-consistency and composite reliability analysis, together with convergent and discriminant validity analysis, and model fit assessment. The nomological validity of a measurement model requires statistically significant correlation coefficients in the direction that corresponds with the underlying theory between each of the pairs of latent factors

planned for inclusion in a model (Hair *et al.*, 2018). An absence of serious multi-collinearity issues in a proposed measurement model requires tolerance values above 0.10 and an average variance inflation factors (VIF) below 10 (Pallant, 2020).

For confirmatory factor analysis of the measurement model, a four-factor model was specified, whereby the first loading on each of the four latent factors was fixed at 1.0. This resulted in an over-identified model with 209 distinct sample moments and 63 distinct parameters to be estimated, which equates to 146 degrees of freedom (df) based on a chi-square value of 419.713, with a probability level equal to 0.000. Given the chi-square value's known vulnerability to large sample sizes (Byrne, 2010), other model fit indices were applied to assess fit, which included the incremental-fit index (IFI), the Tucker-Lewis index (TLI), the comparative-fit index (CFI), the standardised root mean square residual (SRMR) and the root mean square error of approximation (RMSEA). In terms of the fit indices, IFI, TLI and CFI values above 0.90, and SRMR and RMSEA values below 0.08 suggest acceptable model fit (Malhotra, 2020).

Internal-consistency reliability and composite reliability (CR) require a Cronbach's alpha ( $\alpha$ ) and a CR value of 0.70 and above (Malhotra, 2020), whilst convergent validity requires latent factor loading estimates and average variance extracted (AVE) values of 0.50 or above. As advised by Franke and Sarstedt (2019), discriminant validity was tested by applying the relatively recent measure proposed by Henseler *et al.* (2015), namely the heterotrait-monotrait (HTMT) ratio of correlations parameter. With this measure, HTMT values below 0.85 between each of the pairs of latent factors in a measurement model is recommended to conclude discriminant validity (Voorhees *et al.*, 2016). The level of statistical significance was set at  $p \leq 0.01$  throughout.

#### 4. RESULTS

Data collection yielded 334 complete questionnaires from the 400 distributed (84% response rate). Of the 334 study respondents, 147 (44%) were female and 185 (55.4%) male, with two responses missing (0.6%). Each of the seven age categories specified in the target population and all of South Africa's nine provinces and 11 official languages were represented in the study sample.

The measurement model specified for confirmatory factor testing was that the adoption of Instagram celebrity fashion reviews by Generation Y students is a four-factor model that includes the latent factors of information quality, trustworthiness, usefulness and Instagram celebrity fashion review adoption. Confirmatory factor analysis was preceded by the construction of a matrix of Pearson's Product-Moment correlation coefficients to test for nomological validity, together with collinearity diagnostics to check for any concerning multi-collinearity issues. The computed correlation coefficients, tolerance values and VIF values are reported in Table 1.

**Table 1:** Correlation matrix and collinearity diagnostic results

	F1	F2	F3	Toleranc e	VIF
Quality (F1)				.660	1.516
Trustworthiness (F2)	.498*			.631	1.586
Usefulness (F3)	.527*	.550*		.385	2.599
Adoption (F4)	.408*	.463*	.726*	.467	2.139

\*Significant at  $p \leq 0.01$

The correlation coefficients reported in Table 1, indicate statistically significant ( $p \leq 0.01$ ) positive associations between each of the pairs of latent factors planned for inclusion in the Instagram celebrity fashion review adoption measurement model, thus inferring the model's nomological validity. The computed tolerance values ranged from 0.385 to 0.660 and the average VIF of 1.960 indicate that there are no serious multi-collinearity issues.

A confirmatory factor analysis of the measurement model was then undertaken using AMOS. Table 2 outlines the computed estimates for the measurement model, including the standardised loading estimates, squared multiple correlation estimates ( $R^2$ ), Cronbach alphas, CR and AVE values.



**Table 2:** Estimates for measurement model

Latent factors	Standardised loading estimates	R <sup>2</sup>	<i>a</i>	CR	AVE
Quality (F1)	.769	.591	.76	.76	.52
	.688	.473			
	.693	.480			
Trustworthiness (F2)	.629	.395	.89	.89	.61
	.810	.656			
	.840	.705			
	.787	.619			
	.832	.692			
Usefulness (F3)	.794	.630	.87	.87	.62
	.774	.599			
	.801	.641			
	.783	.614			
Adoption (F4)	.790	.623	.91	.91	.59
	.750	.563			
	.815	.665			
	.707	.499			
	.868	.753			
	.729	.531			
	.727	.529			
Correlations	F1↔F2: .578	F1↔F3: .635	F1↔F4: .457	F2↔F3: .616	
	F2↔F4: .498	F3↔F4: .815			

The estimates for the measurement model set out in Table 2 indicate that all Cronbach alpha and CR values are above 0.70, thus indicating internal-consistency and composite reliability. The standardised loading estimates, as well as each of the four latent factors' AVE values all exceed 0.50, which together with the CR values above 0.70, suggest that these factors exhibit convergent validity. The assessment of the discriminant validity of the measurement model based on the HTMT ratio values is reported in Table 3.

**Table 3:** Heterotrait-Monotrait ratio values (HTMT)

	F1	F2	F3
Quality (F1)			
Trustworthiness (F2)	0.501		
Usefulness (F3)	0.529	0.550	
Adoption (F4)	0.408	0.464	0.725

The HTMT ratio values reported in Table 3 are all below 0.85, with the highest value of 0.73 being between

perceived information usefulness and Instagram celebrity review adoption, which, according to Voorhees *et al.* (2016), provides evidence of discriminant validity.

Having established the reliability and construct validity of the model, the model fit indices computed by AMOS were then assessed. The computed model fit indices all suggested good model fit with an IFI of 0.929, a TLI of 0.916, a SRMR of 0.055 and a RMSEA of 0.075. Based on the above findings, this study asserts that Generation Y students' adoption of Instagram celebrity fashion reviews is a four-factor measurement model that exhibits the psychometric properties of construct validity, reliability and acceptable model fit.

## 5. CONCLUSIONS

This paper discussed the finding of a study that sought to evaluate an adapted version of the information adoption model as a measure of the fashion apparel brand preference effect of Instagram celebrity fashion reviews amongst Generation Y university students in the South African market. The results suggest that the fashion apparel brand preference effect of Instagram celebrity fashion reviews amongst Generation Y Instagram followers is a four-factor model that includes information quality, information trustworthiness, information usefulness and review adoption in terms of fashion apparel brand preference formation based on such reviews. Confirmatory factor analysis affirmed a measurement model that exhibits internal-consistency and composite reliability, nomological, convergent and discriminant validity, and acceptable model fit. Based on these findings, the study concludes that the information adoption model is a befitting model for assessing the fashion apparel brand preference effect of Instagram celebrity fashion reviews amongst Generation Y Instagram followers.

Future research into the relationship between these four factors is needed to provide clarity on whether information quality and information trustworthiness contributes to the perceived usefulness of Instagram celebrity fashion reviews, and whether the perceived usefulness of those reviews predicts Generation Y consumers' fashion apparel brand preferences.

## REFERENCES

- Amid, I., Balchandani, A., Berg, A., Hedrich, S., Jensen, J.E & Rölken, F. (2019). The State of Fashion 2019. *McKinsey & Company*, 12 February 2019. <https://www.mckinsey.com/~media/mckinsey/industries/retail/our%20insights/the%20influence%20of%20work%20consumers%20on%20fashion/the-state-of-fashion-2019.pdf>
- Amid, I., Balchandani, A., Berg, A., Hedrich, S., Jensen, J.E & Rölken, F. (2022). The State of Fashion 2023: Holding onto growth as global clouds gather. *McKinsey & Company*, 29 November. <https://www.mckinsey.com/industries/retail/our-insights/state-of-fashion>
- BCG (2019). True-luxury global consumer insight. *Boston Consulting Group*, 17 April. <http://media-publications.bcg.com/france/True-Luxury%20Global%20Consumer%20Insight%202019%20-%20Plenary%20-%20vMedia.pdf>
- Bhengu, C. (2020). The 2020 Instagram rich list is out - here's who made it and how much they make per sponsored post. *Times Live*, 20 July. <https://www.timeslive.co.za/sunday-times/lifestyle/2020-07-20-the-2020-instagram-rich-list-is-out-heres-who-made-it-and-how-much-they-make-per-sponsored-post/>
- Blaszczyk, R.L. & Wubs, B. (2018). Beyond the crystal ball: the rationale behind color and trend forecasting. In: Blaszczyk, R.L. & Wubs, B., eds. *The fashion forecasters: a hidden history of color and trend prediction*. London: Bloomsbury Publishing. pp. 1-32.
- Boyd, J. (2020). The top 20 most followed Instagram accounts. *Brandwatch*. <https://www.brandwatch.com/blog/top-most-instagram-followers/>
- Byrne, B.M. (2010). *Structural equation modelling with AMOS: basic concepts, applications, and programming*. 2nd ed. New York, NY: Routledge.
- Cho, K., Jung, K., Lee, M., Lee, Y., Park, J. & Dreamson, N. (2022). Qualitative approaches to evaluating social media influencers: A case-based literature review. *International Journal of Electronic Commerce Studies*, 13(2): 119-132.
- Davis, F.D., Bagozzi, R.P., Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of

two theoretical models. *Management Science*, 35(8), 982-1003.

De Veirman, M., Cauberghe, V. & Hudders, L. (2017). Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude. *International Journal of Advertising*, 36(5): 798-828.

Dhanesh, G.S. & Duthler, G. (2019). Relationship management through social media influencers: Effects of followers' awareness of paid endorsement. *Public Relations Review*, 45(3): 101765.

Eastman, J.K. & Liu, J. (2012). The impact of generational cohorts on status consumption: an exploratory look at generational cohort and demographics on status consumption. *Journal of Consumer Marketing*, 29(2):93–102.

Eze, U.C., Chin, C.H.H. & Lee, C.H. (2012). Purchasing designer label apparels: the role of reference groups. *Asian Journal of Business Research*, 2(2): 52-74.

Feldman, B. (2019). How to Reach Millennials—Your 2019 guide to effective Millennial marketing. *Taboola*. <https://blog.taboola.com/marketing-to-millennials/>

Franke, G. & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, 29(3), 430-447.

Friedman, L. (2017). Millennials and the digital experience: getting your digital act together. *Forbes*. 8 February. <https://www.forbes.com/sites/laurenfriedman/2017/02/08/millennials-and-the-digital-experience-getting-your-digital-act-together/#2e72695b730d>

Fu, C. (2020). Key takeaways from 2020 BCG x Tencent Digital Luxury Report. *Jing Daily*, 4 Oct. <https://jingdaily.com/2020-bcg-tencent-digital-luxury-report/>

Garg, P. & Pandey, A. (2023). Decomposing the effect of brand image in influencing information adoption: the case of online travel agents. *Business Perspectives and Research*, 11(1), 11-27.

Geyser, W. (2022). The complete list of Instagram features for marketers. *Influencer Marketing Hub*, 6 June. <https://influencermarketinghub.com/instagram-features/#:~:text=The%20Complete%20List%20of%20Instagram%20Features%20for%20Marketers,8%20IGTV.%20...%209%20Stickers%20and%20quizzes.%20>

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2018). *Multivariate data analysis: a global perspective*. 8th ed. India: Cengage.

Haldar, P. (2022). The influence of social media on users' travel decision using information adoption model. *Journal of Content, Community & Communication*, 15:117-129.

Henseler, J., Ringle, C.M. & Sarstedt, M. J. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.

Ki, C., Cuevas, L.M., Chong, S.M. & Lim, H. (2020). Influencer marketing: social media influencers as human brands attaching to followers and yielding positive marketing results by fulfilling needs. *Journal of Retailing and Consumer Services*, 55:1–11.

Loeb, W. (2020). Social media plays a big role in how Millennials shop, but so do stores. *Forbes*. <https://www.forbes.com/sites/walterloeb/2020/01/21/why-millennials-shop-on-social-media-but-also-like-to-shop-in-stores/#5a6e2244350c>

Lou, C. (2022). Social Media influencers and followers: theorization of a trans-parasocial relation and explication of its implications for influencer advertising. *Journal of Advertising*, 51(1): 4–21.

Malhotra, N.K. (2020). *Marketing research: an applied orientation*. 7th ed. Harlow, UK: Pearson Education.

Markert, J. (2004). Demographics of age: generational and cohort confusion. *Journal of Current Issues and Research in Advertising*, 26(2), 11-25.

Nguyen, W. (2021). A detailed look at the 10 most important Instagram features. *Kicksta*, 12 January. <https://blog.kicksta.co/most-important-instagram-features/>

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. 7th ed. London, UK: McGraw-Hill Education.

Petty, R. E., & Cacioppo, I. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York, NY: Springer Verlag.

Phillips, E. (2018). Maximising Social, PR and Influencers in the Fashion Industry. *Ingenuity Digital*, 28 January. <https://www.ingenuitydigital.com/fashion-social-influencers/>

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness and attractiveness. *Journal of Advertising*, 19(3), 39-52.

Olajide., O.P., Folake, O.C., Olabode, O.T. & Olayinka, A.M. (2018). Social influence and consumer preference

- for fashion clothing among female undergraduate in Nigeria. *Gender and Behaviour*, 16(3):11984–11993.
- Salehi-Esfahani, S., Ravichandran, S., Israeli, A. & Bolden, E. (2016). Investigating information adoption tendencies based on restaurants' user-generated content utilizing a modified information adoption model. *Journal of Hospitality Marketing & Management*, 25, 925–953.
- Smith, P. (2023). Global apparel market - statistics & facts. *Statista*, 17 August.  
<https://www.statista.com/topics/5091/apparel-market-worldwide/#topicOverview>
- Sproles, G.B. (1974). Fashion theory: a conceptual framework. *Advances in Consumer Research*, 1:463-472.
- Statistics South Africa. (2022). Mid-year population Estimates, 2022. Statistical release P0302.  
<https://www.statssa.gov.za/publications/P0302/MidYear2022.pdf>
- Sun, Y., Wang, R., Cao, D & Lee, R. (2022). Who are social media influencers for luxury fashion consumption of the Chinese Gen Z? Categorisation and empirical examination. *Journal of Fashion Marketing and Management: An International Journal*, 26(4): 603-621.
- Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, 14(1): 47-65.
- Tien, D.H., Rivas, A.A.A. & Liao, Y.K. (2019). Examining the influence of customer-to-customer electronic word-of-mouth on purchase intention in social networking sites. *Asia Pacific Management Review*, 24(3): 238-249.
- Voorhees, C.M., Brady, M.K., Calantone, R. & Ramirez, E. (2016). Discriminant validity testing in marketing: an analysis, causes for concern, and proposed remedies. *Journal of the Academy Marketing Science*, 44(1), 119-134.
- Wang, Y. (2016). Dynamic capabilities in fashion apparel industry: emergent conceptual framework. *Baltic Journal of Management*, 11(3):286–309.
- Ward, T. (2017). How to become an influencer: 10 tips for success. *Forbes*, 12 December.  
<https://www.forbes.com/sites/tomward/2017/12/12/how-to-become-an-influencer-10-tips-for-success/?sh=6079b39372a8>
- Wilberg, A. (2018). How social media and its influencers are driving fashion. *Digital Marketing Magazine*, 10 May. <https://www.digitalmarketingmagazine.co.uk/social-media-marketing/how-social-media-and-its-influencers-are-driving-fashion/4871>

# Determinants of Instagram celebrity fashion reviews' influence on Generation Y students' fashion brand preferences: application of the information-adoption theory

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## Abstract

*Social media influencer marketing, most notably on Instagram, is emerging as an important way for fashion marketers to connect with their target markets, particularly the Generation Y consumer segment. While social media influencers may be celebrities or non-celebrities, typically the accounts of celebrities attract the most followers and it is celebrities who are viewed as the top influencers. Despite the increasing prominence of Instagram influencers in fashion apparel marketing and the significance of the Generation Y consumer segment to this sector, there is a dearth of empirical studies on the persuasiveness of Instagram celebrity fashion reviews on Generation Y consumers, especially in South Africa. In order to address this limitation, this study applied an adapted version of the information adoption model to test the influence of perceived information quality, trustworthiness and usefulness of Instagram celebrity fashion reviews on Generation Y university students' fashion brand preferences in South Africa. The data were gathered using a self-administered questionnaire from a convenience sample of 334 university students. The results reflect that in South Africa, Generation Y students perceive Instagram celebrity fashion reviews and the information contained therein as being of a high quality, trustworthy and useful, and that they have adopted such reviews into their consumption-related decision making in that those reviews influence their fashion brand preferences. Furthermore, the regression estimates indicate that information quality and trustworthiness explain 49 percent of the variance in Generation Y students' perceived usefulness of Instagram celebrity fashion reviews and that perceived usefulness, together with its predictors, explains 66 percent of the variance in their adoption of such reviews in terms of their fashion brand preferences. These findings highlight the degree to which Generation Y consumers have integrated Instagram celebrity fashion reviews into their fashion brand consumption-related decision-making and, by implication, the extent to which those reviews exert an influence their fashion brand purchase behaviour. These findings emphasise the importance of fashion marketers collaborating with Instagram celebrity fashion reviewers that provide creative, engaging and trustworthy content that facilitate followers' fashion consumption decision-making process when targeting Generation Y consumers.*

**Keywords:** *Instagram celebrity fashion reviews, information adoption model, path analysis, Generation Y, South Africa.*

## 1 INTRODUCTION

Social media, which refers to the different forms of online communication used by individuals to create networks and communities to share information and other digital content (Appel *et al.*, 2020), has become an integral part of daily life (Fakhreddin & Foroudi, 2022). At the start of 2023, there were an estimated 4.76 billion social media users worldwide, which represents 59.4 percent of the global population (Petrosyan, 2023). In consumer behaviour terms, these social media platforms have become a salient source of consumption-related information in the form of word-of-mouth communication and product reviews based on first-hand experiences across a range of product and service categories (Appel *et al.*, 2020). Increasingly, social media opinion leaders or influencers are having a significant influence

on the brand preferences and consumption behaviour of their social media followers (Fakhreddin & Foroudi, 2022). These social media influencers may be celebrities or non-celebrities, where celebrity influencers attract online followers through their offline fame in their professions such as in sport or entertainment and non-celebrity influencers gain fame and followers through the content that they post on social media platforms (Piehler *et al.*, 2022). Even though both exert a significant influence on their followers' consumption-related attitudes and behaviour, it is typically the accounts of celebrities that attract the most followers (Wallach, 2021) and it is celebrities who are generally viewed as the top influencers (Bhengu, 2020). While the concept of using celebrities with a high social value to promote a brand is not a new marketing strategy, the reach and level of engagement celebrity influencers command on social media has significantly increased the appeal of this approach (Appel *et al.*, 2020). As a result, social media influencer campaigns are on the rise, with increased collaborations between social media influencers and brand marketers, whereby influencers act as brand ambassadors (Belanche *et al.*, 2021).

Although social media influencers, whether celebrity or non-celebrity, use different social media platforms with some even operating across several platforms, Instagram is the most notable platform for such campaigns (Statista, 2023a; Boerman, 2020). Instagram boasted over 2 billion monthly active users at the start of 2023, making it the fourth most popular social media platform after Facebook (2.96 billion), YouTube (2.51 billion) and WhatsApp (2 billion) (Statista, 2023b). Making up 61.3 percent of its global users, Instagram is dominated by people aged 18 to 35 years old (Dixon, 2023), making it an ideal platform for influencers and their brand collaborators to connect with the adult Youth segment, currently members of Generation Y (individuals born between 1986 and 2005) (Markert, 2004). This is especially true given Generation Y consumers' known scepticism of traditional marketing messages (Wilberg, 2018) and preference for social media over traditional media and marketing channels (Piehler *et al.*, 2022; Westcott *et al.*, 2022).

Whilst the Instagram influencer strategy is popular across a range of product and services categories (Chang, 2023; Jansom & Pongsakornrunsilp, 2021; Haenlein *et al.*, 2020), it is particularly prominent in the fashion apparel category (Geysler, 2022), especially in terms of targeting the Generation Y consumer segment (Piehler *et al.*, 2022; Wilberg, 2018). As with many other business-to-consumer industries, Generation Y consumers represent an important target segment for fashion apparel marketers. Not only do Generation Y consumers represent a sizable portion of the global population and have significant spending power (Amed *et al.*, 2019), they are also brand conscious (Fu, 2020) and preoccupied with fashion trends (Olajide *et al.*, 2018).

Despite the increasing prominence of Instagram influencers in fashion apparel marketing and the significance of the Generation Y consumer segment to this sector, there is a dearth of empirical studies on the persuasiveness of Instagram celebrity fashion reviews on Generation Y consumers; that is, the extent to which this segment integrates these reviews into their purchase decisions (Fakhreddin & Foroudi, 2022).

As such, this paper reports on a study that applied an adapted version of the information adoption model (Sussman & Siegal, 2003) to test the influence of the perceived information quality, trustworthiness and usefulness of Instagram celebrity fashion reviews on the fashion brand preferences of Generation Y university students in South Africa. The focus on a university target population was intentional, based on the notion that, generally, a graduate qualification is associated with a higher earning potential and social standing within a society, making university students exemplars amongst their peers.

## 2 LITERATURE REVIEW

Founded on the dual theories of the elaboration likelihood model (Petty & Cacioppo, 1986) and the technology acceptance model (Davis, 1989), Sussman and Siegal (2003) developed the information adoption model as a measure of ascertaining knowledge adoption in a computer-mediated environment. This model has been used to explain recipients' information adoption behaviour in various contexts and across a variety of digital platforms, including mobile messaging applications and customer-to-customer communication (Elwalda *et al.*, 2022), social media and travel destination selection (Halдар, 2022), YouTube and travel destination choice (Arora & Lata, 2020), consumer-to-consumer ecommerce

platforms and electronic word-of-mouth (Bueno & Gallego, 2021), and social media websites and electronic word-of-mouth (Erkan & Evans, 2016). The information adoption model includes the four factors of argument quality, source trustworthiness, information usefulness and information adoption, where the perceived usefulness of the information mediates the influence of argument quality and source trustworthiness on information adoption (Sussman & Siegal, 2003).

Information adoption pertains to the recipients' inclination to act on the information received (Erkan & Evans, 2016), which, in the case of Instagram celebrity fashion reviews, may be viewed as the extent to which their followers internalise such information into their fashion consumption-related decision-making in the form of their fashion brand preferences (Eze *et al.*, 2012). Sussman and Siegal (2003) indicate that information adoption is largely dependent on the receivers' perceived usefulness of that information, which they operationalise as an affective attitudinal dimension of the perceived overall value and benefit of the information received. They add that the quality of the information received, together with its trustworthiness act as precursors of recipients' attitude towards that information.

Information quality refers to the core of the message or the task-related advice and, hence, relates to the central route of persuasion in terms of the elaboration likelihood model (Sussman & Siegal, 2003; Petty & Cacioppo, 1986). In terms of Instagram celebrity fashion reviews, information quality is the extent to which celebrity reviewers transmit new fashion trends and styles, show how these styles can be worn (Fakhreddin & Foroudi, 2022) and develop engaging content around their fashion interests and their lifestyle (Tafesse & Wood, 2021). For fashion marketers, this entails collaborating with a celebrity fashion reviewer who has a high level of engagement with their content and followers with characteristics and a demographic that mimic the fashion brand's target market (Wilberg, 2018). It also entails selecting celebrity reviewers who have a high level of congruency with that fashion brand (Belanche *et al.*, 2021).

Information trustworthiness refers to the credibility of the content in the review and relates to the elaboration likelihood model's peripheral route of persuasion (Sussman & Siegal, 2003; Petty & Cacioppo, 1986). For Instagram celebrity fashion reviewers, it relates to the authenticity of their fashion reviews (Appel *et al.*, 2020). This authenticity relates to the perceived fashion expertise of the celebrity, as well as the fit between the celebrity and the fashion brand (Belanche *et al.*, 2021). Another important aspect of Instagram celebrity fashion review trustworthiness is the disclosure of any commercial interests. Instagram celebrity reviewers are advised to be honest and transparent in disclosing any commercial interests, such as payments, free products and/or sponsorships (Belanche *et al.*, 2021; Appel *et al.*, 2020; Boerman, 2020).

Perceived usefulness (Tien *et al.*, 2019; Sussman & Siegal, 2003) relates to the quality of task-related advice (Davis *et al.*, 1989). In the case of Instagram celebrity fashion reviews, this is the extent to which such reviews facilitate followers' fashion consumption decision-making process and decrease the risks of fashion brand purchase mistakes (Sun *et al.*, 2022; Wilberg, 2018).

Based on a review of the literature, this study theorises that the persuasiveness of Instagram celebrity fashion reviews on Generation Y students' fashion brand preferences is determined by their perceived usefulness of such reviews, which, in turn, is dependent on their perceptions of the information quality and trustworthiness of those reviews.

### **3 RESEARCH METHODOLOGY**

The study adhered to the descriptive research design, and employed a single cross-sectional sampling approach.

#### **3.1 Sampling and data collection**

The population targeted for data collection in this study was defined as Generation Y university students registered at South African public higher education institutions (HEIs), aged between 18 and 24 years. The sampling frame included public HEI campuses situated in South Africa's Gauteng province, whereby judgement sampling was used to ensure that the sample included students from one campus from a traditional university and one from a university of technology. Fieldworkers distributed 400 self-

administered questionnaires equally to a convenience sample of students at each of these two campuses who, when approached, volunteered to participate in the study.

### 3.2 Research instrument

The survey questionnaire utilised included a section requesting respondents' demographic information and a section comprising the scaled-response items, which were adapted from published studies. The perceived trustworthiness of Instagram celebrity reviews was measured using a scale developed by Ohanian (1990) and comprised five items, namely celebrity fashion reviews on Instagram are "dependable", "honest", "reliable", "sincere" and "trustworthy". The perceived information quality dimension was measured using the three items of Instagram celebrity fashion reviews are "relevant", "timely" and "complete" that were adapted from the scale utilised by Tien *et al.* (2019). Perceived usefulness of Instagram celebrity fashion reviews was measured using the four items of celebrity fashion reviews on Instagram are "useful to me", "make fashion purchasing decisions easier", "make me a smarter fashion shopper" and "are very beneficial to me", which were adapted from Davis (1989). An adapted version of a scale developed by Eze *et al.* (2012) was used to measure Instagram celebrity influence on fashion brand preferences. This scale included the seven items of "To make sure I buy the right fashion brand, I often observe what celebrities wear on Instagram", "I often try to buy fashion brands to be like celebrities on Instagram", "I frequently gather information from celebrities on Instagram about fashion brands before I buy", "I like seeing advertisements on Instagram of what fashion brands celebrities wear", "Celebrities on Instagram help me to be more confident in the fashion brands I buy", "I get ideas about fashion from seeing celebrities on Instagram" and "Celebrities on Instagram show me that people like myself wear similar fashion brands". A six-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (6) was used to measure responses to these 19 scaled items.

### 3.3 Data analysis

The data were analysed using SPSS and AMOS, Versions 28. Statistical analysis techniques employed included frequencies and percentages, descriptive statistics, a one-sample t-test and path analysis. The previously validated measurement model displayed reliability with Cronbach alpha and composite reliability (CR) values above 0.70, nomological validity given the statistically significant relationships between each of the pairs of latent factors in the model, convergent validity with both standardised loading estimates and average variance extracted (AVE) values exceeding 0.50 and discriminant validity with the measurement model's heterotrait-monotrait (HTMT) ratio of correlations all being below 0.85. The measurement model also had acceptable model fit (Bevan-Dye, 2023). The structural model specified in the current study is based on this validated model and utilised the same sample of respondents.

## 4 RESULTS

Fieldwork at the two campuses yielded 334 complete questionnaires, representing an 84 percent response rate. The sample description is outlined in Table 1. Sample descriptors included gender, age, province of origin, language and institution, which included students from a campus of a traditional university (HEI A) and a university of technology (HEI B).

**Table 1:** Sample description

	Frequency	Percent (%)		Frequency	Percent (%)
<b>Gender</b>			<b>Language</b>		
Female	147	44.0	Afrikaans	6	1.8
Male	185	55.4	English	14	4.2



Missing	2	0.6	Ndebele	10	3.0
<b>Age</b>			Xhosa	26	7.8
18	36	10.8	Zulu	66	19.8
19	70	21.0	Northern Sotho	45	13.5
20	82	24.6	Southern Sotho	89	26.6
21	46	13.8	Tswana	26	7.8
22	53	15.9	Swati	5	1.5
23	27	8.1	Venda	18	5.4
24	20	6.0	Tsonga	29	8.7
<b>Province of origin</b>			<b>Institution</b>		
Eastern Cape	10	3.0	HEI A	157	47.0
Free State	33	9.9	HEI B	177	53.0
Gauteng	171	51.2			
Kwazulu-Natal	23	6.9			
Limpopo	55	16.5			
Mpumalanga	23	6.9			
North West	14	4.2			
Northern Cape	3	0.9			
Western Cape	2	0.6			

The demographic information provided in Table 1 indicates that the sample respondents fit with the target population definition. The sample comprised male (55.4%) and female (44%) participants from each of the seven age categories specified. There was a relatively even spread of respondents between the two main types of HEIs, with 157 from the traditional university (HEI A) (47%) and 177 from the university of technology (HEI B) (53%). Furthermore, each of South Africa's nine provinces and 11 official language groups were represented in the sample.

In order to determine the extent to which Generation Y students perceive Instagram celebrity fashion reviews as being of a high quality, trustworthy and useful, and whether they adopt such information into their fashion consumption-related decision making, descriptive statistics, together with a one sample t-test where the expected mean was set at 3.5, were computed. The means, standard deviations, t-values and *p*-values for the four latent factors are reported in Table 2.

**Table 2:** Descriptive statistics, t-values and p-values

<b>Latent factors</b>	<b>Means</b>	<b>Standard deviations</b>	<b>t-values</b>	<b>p-values</b>
Quality (F1)	4.50	0.947	19.273	0.000
Trustworthiness (F2)	3.88	1.097	6.304	0.000
Usefulness (F3)	4.21	1.132	11.436	0.000
Adoption (F4)	4.06	1.161	8.750	0.000

Statistically significant at  $p \leq 0.01$

The means of the responses recorded on the six-point Likert-type scale were all statistically significant ( $p \leq 0.01$ ). These results suggest that Generation Y students' fashion brand preferences are influenced by Instagram celebrity fashion reviews and that they perceive such reviews as informative, trustworthy and useful. The highest means were returned for information quality (mean = 4.50), information usefulness (mean = 4.21) and Instagram celebrity fashion review adoption (mean = 4.06). A slightly lower but still statistically significant mean was recorded for trustworthiness (mean = 3.88). This is somewhat concerning given the importance of trustworthiness in the information adoption theory.

Based on the literature reviewed pertaining to the information adoption theory, a structural model was specified to test the theorised paths that Generation Y students' perception of the quality and trustworthiness of information in Instagram celebrity fashion reviews predicts their perceived usefulness of such reviews, and that the perceived usefulness of those reviews predicts their adoption of such reviews into their fashion consumption-related decision making.

Table 3 outlines the un-standardised and standardised regression coefficients, standard error estimates and  $p$ -values estimated by AMOS for the structural model.

**Table 3:** Structural model estimates

Paths	Un-standardised	Standardised	SE	$p$
	$\beta$	$\beta$		
Quality $\rightarrow$ Usefulness	.430	.400	.081	0.00
Trustworthiness $\rightarrow$ Usefulness	.472	.381	.089	0.00
Usefulness $\rightarrow$ Instagram celebrity fashion review adoption	.983	.811	.079	0.00

$\beta$ : beta coefficient; SE: standardised error;  $p$ : two-tailed statistical significance

The estimates in Table 3 indicate that all of the regression paths tested were positive and statistically significant ( $p \leq 0.01$ ). The standardised regression estimates indicate that information quality ( $\beta = 0.40$ ,  $p < 0.01$ ) and information trustworthiness ( $\beta = 0.38$ ,  $p < 0.01$ ) are statistically significant predictors of Generation Y students' perceived usefulness of Instagram celebrity fashion reviews and, with a squared multiple correlation coefficient (SMC) of 0.485, explain 49 percent of the variance in their perceived usefulness of those fashion reviews. Perceived usefulness ( $\beta = 0.81$ ,  $p < 0.01$ ), in turn, is a statistically significant predictor of their adoption of such reviews and, together with its predictors, explains 66 percent of the variance in the influence of Instagram celebrity fashion reviews on their fashion brand preferences. In terms of the model fit indices, a standardised root mean square residual (0.055) and the root mean square error of approximation (0.075) below 0.08, and an incremental-fit index (0.929), a Tucker-Lewis index (0.917) and a comparative fit index (0.928) above 0.90 indicate that the structural model exhibited acceptable model fit (Malhotra, 2020).

## 5 CONCLUSIONS

The results of this study indicate that Instagram celebrity fashion reviews influence their Generation Y consumer followers' fashion brand preferences. They perceive the information in these reviews as being trustworthy, of a high quality and useful. In terms of the information adoption model, the results of the path analysis indicate that information quality and trustworthiness explain 49 percent of the variance in Generation Y students' perceived usefulness of Instagram celebrity fashion reviews, which together with its precursors explains 66 percent of the variance of their adoption of such reviews into their fashion consumption-related behaviour. These findings highlight the degree to which Generation Y consumers have integrated Instagram celebrity fashion reviews into their fashion consumption-related decision-making and, by implication, the extent to which those reviews exert an influence their fashion brand purchase behaviour. These findings emphasise the importance of fashion marketers collaborating with Instagram celebrity fashion reviewers that provide creative, engaging and trustworthy content that facilitate followers' fashion consumption decision-making process when targeting Generation Y consumers.

• **REFERENCES**

- Amid, I., Balchandani, A., Berg, A., Hedrich, S., Jensen, J.E & Rölkens, F. (2019). The State of Fashion 2019. *McKinsey & Company*, 12 February 2019.  
<https://www.mckinsey.com/~media/mckinsey/industries/retail/our%20insights/the%20influence%20of%20woke%20consumers%20on%20fashion/the-state-of-fashion-2019.pdf>
- Appel, G., Grewal, L., Hadi, R. & Stephen, A.T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48:79–95
- Arora, N. & Lata, S. (2020). YouTube channels influence on destination visit intentions. *Journal of Indian Business Research*, 12(1), 23-42.
- Belanche, D., Casaló, L.V., Flavián, M. & Ibáñez-Sánchez, S. (2021). Building influencers' credibility on Instagram: Effects on followers' attitudes and behavioral responses toward the influencer. *Journal of Retailing and Consumer Services*, 61: 102585.
- Bevan-Dye, A.L. (2023). Instagram celebrity fashion reviews' influence on Generation Y students' fashion brand preferences: information-adoption model evaluation. In Proceedings of the 11th International Conference on Contemporary Marketing Issues, (ICCM) 2023 (In press).
- Bhengu, C. (2020). The 2020 Instagram rich list is out - here's who made it and how much they make per sponsored post. *Times Live*, 20 July. <https://www.timeslive.co.za/sunday-times/lifestyle/2020-07-20-the-2020-instagram-rich-list-is-out-heres-who-made-it-and-how-much-they-make-per-sponsored-post/>
- Boerman, S.C. (2020). The effects of the standardized instagram disclosure for micro- and meso-influencers. *Computers in Human Behavior*, 103: 199–207.
- Bueno, S. & Gallego, M.D. (2021). eWOM in C2C platforms: combining IAM and customer satisfaction to examine the impact on purchase intention. *Journal of Theoretical and Applied Electronic Commerce Research*, 16, 1612–1630.
- Chang, J. (2023). 15 Current Instagram trends & forecasts for 2022/2023 according to experts. *Finances Online*, 10 January. <https://financesonline.com/instagram-trends/>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Dixon, S. (2023). Instagram: distribution of global audiences 2023, by age group. *Statista*, 14 February. <https://www.statista.com/statistics/325587/instagram-global-age-group/>
- Elwalda, A., Erkan, İ., Rahman, M. & Zeren, D. (2022), Understanding mobile users' information adoption behaviour: an extension of the information adoption model. *Journal of Enterprise Information Management*, 35(6): 1789-1811.
- Erkan, I. & Evans, C. (2016). The influence of eWOM in social media on consumers' purchase intentions: An extended approach to information adoption. *Computers in Human Behavior*, 61, 47-55.
- Eze, U.C., Chin, C.H.H. & Lee, C.H. (2012). Purchasing designer label apparels: the role of reference groups. *Asian Journal of Business Research*, 2(2): 52-74.
- Fakhreddin, F. & Foroudi, P. (2022). Instagram influencers: the role of opinion leadership in consumers' purchase behavior. *Journal of Promotion Management*, 28(6): 795–825.
- Fu, C. (2020). Key takeaways from 2020 BCG x Tencent Digital Luxury Report. *Jing Daily*, 4 Oct. <https://jingdaily.com/2020-bcg-tencent-digital-luxury-report/>
- Geyser, W. (2022). 15 Fashion influencers to follow. *Influencer Marketing Hub*, 20 June. <https://influencermarketinghub.com/fashion-influencers/>
- Haenlein, M., Anadol, E., Farnsworth, T., Hugo, H., Hunichen, J. & Welte, D. (2020). Navigating the new era of influencer marketing: how to be successful on Instagram, TikTok, & Co. *California Management Review*, 63(1): 5–25.
- Haldar, P. (2022). The influence of social media on users' travel decision using information adoption model. *Journal of Content, Community & Communication*, 15:117-129.
- Jansom, A. & Pongsakornrungsilp, S. (2021). How Instagram influencers affect the value perception of Thai Millennial followers and purchasing intention of luxury fashion for sustainable marketing.

*Sustainability*, 13:  
8572.

- Malhotra, N.K. (2020). *Marketing research: an applied orientation*. 7th ed. Harlow, UK: Pearson Education.
- Markert, J. (2004). Demographics of age: generational and cohort confusion. *Journal of Current Issues and Research in Advertising*, 26(2), 11-25.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness and attractiveness. *Journal of Advertising*, 19(3), 39-52.
- Olajide., O.P., Folake, O.C., Olabode, O.T. & Olayinka, A.M. (2018). Social influence and consumer preference for fashion clothing among female undergraduate in Nigeria. *Gender and Behaviour*, 16(3):11984–11993.
- Petrosyan, A. (2023). Worldwide digital population 2023. *Statista*, 14 February. <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- Petty, R. E., & Cacioppo, I. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York, NY: Springer Verlag.
- Piehler, R., Schhade, M., Sinnig, J. & Burmann, C. (2022). Traditional or 'instafamous' celebrity? Role of origin of fame in social media influencer marketing. *Journal of Strategic Marketing*, 30(4): 408–420.
- Statista. (2023a). Social media platforms used in influencer campaigns worldwide. *Statista Research Department*, 6 January. <https://www.statista.com/statistics/803492/social-media-platforms-social-influencers-brand-collaborations/>
- Statista. (2023b). Most popular social networks worldwide as of January 2023, ranked by number of monthly active users. *Statista*. <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>
- Sun, Y., Wang, R., Cao, D & Lee, R. (2022). Who are social media influencers for luxury fashion consumption of the Chinese Gen Z? Categorisation and empirical examination. *Journal of Fashion Marketing and Management: An International Journal*, 26(4): 603-621.
- Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, 14(1): 47-65.
- Tafesse, W. & Wood, B.P. (2021). Followers' engagement with instagram influencers: The role of influencers' content and engagement strategy. *Journal of Retailing and Consumer Services*, 58: 102303.
- Tien, D.H., Rivas, A.A.A. & Liao, Y.K. (2019). Examining the influence of customer-to-customer electronic word-of-mouth on purchase intention in social networking sites. *Asia Pacific Management Review*, 24(3): 238-249.
- Wallach, O. (2021). The world's top 50 influencers across social media platforms. *Visual Capitalist*, 14 May. <https://www.visualcapitalist.com/worlds-top-50-influencers-across-social-media-platforms/>
- Westcott, K., Arbanas, J., Loucks, J., Downs, K., Arkenberg, C. & Auxier, B. (2022). Digital media trends, 16th edition: Toward the metaverse. *Deloitte*. <https://www2.deloitte.com/us/en/insights/industry/technology/digital-media-trends-consumption-habits-survey/summary.html>
- Wilberg, A. (2018). How social media and its influencers are driving fashion. *Digital Marketing Magazine*, 10 May. <https://www.digitalmarketingmagazine.co.uk/social-media-marketing/how-social-media-and-its-influencers-are-driving-fashion/4871>

# Frontliners image under attack: a machine-learning and twitter data analysis

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## **Abstract:**

### **Purpose**

Learning from COVID-19 is imperative as the world slowly recovers from the pandemic. Our study uses the UK as a case study to examine how negative or positive tweets are impacting of frontline workers image regarding COVID-19 outcomes.

### **Methodology**

The effects of online campaigns were examined via text and sentiment analyses, as well as random forest regressions and cointegration analyses.

### **Results**

The COVID-19 pandemic appears to have driven a rise in negative Tweets, suggesting that individuals became frustrated with the frontline staff during the pandemic. Negative conversations on Twitter did lead to a decrease in vaccinations nine days after they occurred, due to a (non-persistent) lagged effect. This suggests that negative online conversations can negatively impact real life COVID-19 results, which is potentially concerning.

### **Contribution**

This study examines the relationship between Twitter posts about frontline health care workers and COVID-19 variables using a unique dataset of tweets about frontline health care workers. An econometric approach is complemented by text mining, sentiment analysis, and machine learning methods in order to demonstrate how these approaches can be combined to enhance research outcomes. This article contributes to the discussion regarding the COVID-19 pandemic and the lessons learned, as we prepare for the next pandemic in the future.

**Keywords:** *Frontliners; Machine Learning; Twitter; Sentiment Analysis*

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## **Introduction**

Hospitality sectors have been significantly affected by the COVID-19 pandemic on a physical and mental level as employees in the sector absorbed several waves with their self-sacrificing (Liu & Chong, 2023; Northington, Gillison, Beatty, & Vivek, 2021). Although the pandemic is consider an old story already those employees continue to carry out their duties, including handling COVID-19, despite the fact that they faced substantial complications and health hazards as a result. During the early stages of the virus, frontline employees were welcomed as protagonists in online campaigns and hailed as heroes (Polyzos, Fotiadis, & Huan, 2023). In spite of this, frustration and disappointment increased as the pandemic spread, making many to turn against those employees and express bad sentimentalities in response (Sallam, 2021). In addition, conspiracy theorists stoked this fire by attacking the effectiveness of preventative measures and vaccines and by choosing frontliners as the enemies of the cause.

In this study, our main objective is to examine how online discussions showcasing the contributions of frontline employees have interpreted into action as a result of online discussions. The data set consists of 693,361 tweets, allowing us to examine concurrent as well as lagged effects using random regression forests and cointegration analysis, respectively. Furthermore, we examine whether COVID-19 frustrations may have been transferred to frontline workers due to reverse causality.

## **Literature Review**

As a consequence of the COVID-19 pandemic, international markets have been shocked, changing the way employees, consumers, and organizations interact (Del Chiappa, Bregoli, & Fotiadis, 2021; Rabiul, Promsivapallop, Al Karim, Islam, & Patwary, 2022; Severo, de Guimarães, Wanderley, Gueiros, & Jabbour, 2023). The dangers associated with medical crises and the new regulations that govern everyday activities are causing a lot of anxiety among employees, employers, and organizations. In order to discuss these issues, frontline employees, service providers and service recipients use social media platforms and traditional media platforms (Cho et al., 2023; Michael & Fotiadis, 2022; Zhang & Cozma, 2022).

With the rapid development of the Internet and troublemaking technologies, people now get new evidence from a variety of sources (Ismagilova, Slade, Rana, & Dwivedi, 2020; Papanas & Spyridou, 2020). It has changed the way communication is handled, how information is transmitted, and how culture is shaped by the Internet. With the advent of smartphones and social media, the availability, speed, and flow of information have changed completely (Chatzigeorgiou, 2017; Fotiadis, 2018). During the post-pandemic period, many people began using technology for work and communication, thereby increasing the importance of social media (Kontogianni & Alepis, 2020). Twitter, a social media platform in the digital age, has become a major tool for disseminating and distributing information. Following the outbreak of COVID-19, tweets mentioning this disease have increased alarmingly (Del Chiappa et al., 2021). These tweets include tweets from both individuals and news organizations, which cover a broad range of news topics. Using Twitter as a tool to circulate news on the Internet was considered beneficial for news organizations when disseminating COVID-19 related material. Furthermore, Twitter allows its users to communicate through retweeting, liking, and commenting, which makes it more likely that information can be spread effectively than traditional news media (such as newspapers and television). In addition, social media can also trigger public interest in specific topics, contributing to the resolution of public concerns and enhancing public wellbeing, as well as aiding in the implementation of government action plans against the COVID-19 outbreak (Spyridou, 2017).

Content advancement and information dissemination can be facilitated by algorithms related to social media, which can understand users' needs and preferences (Leelawat et al., 2022; Shin, Rasul, & Fotiadis, 2021), but can also confirm self-bias (Spyridou, 2019). By shifting away from the traditional news paradigm, social perceptions and narratives have been reframed. As a result of COVID-19, Goel Goel and Gupta (2020) report an increase of almost 95% in users engaging with the account of the Journal of Clinical Rheumatology during the first wave. Thus, Twitter impressions can also be a contributing factor to the spread of information through the dissemination of tweets.

## Methodology

As part of the construction of the empirical results presented in this paper, we use a unique combination of methodologies. In this study, we will examine the relationship between Twitter sentiment data and the number of new cases of COVID-19 in the UK, the number of new deaths in the UK, and the number of new vaccinations. In order to obtain sentiment information about frontline workers, we mine Twitter for posts relating to them and extract information based on four lexica of sentiment. As a next step, we used this data through a “Random Forest Regression (RRF) process”, which provides us with an indication of the analytical power of the variables used. To establish causality between Twitter sentiment and COVID-19 outcomes, we conduct Vector Error Correction Models to examine co-integration among the data series. Cointegration and machine learning are used to combine a unique and expanded data set to ensure robustness. Furthermore, it produces several interesting results, which will be discussed in more detail later. Combining these methodological tools adds to the novelty of our research as it allows us to analyze data in a new way.

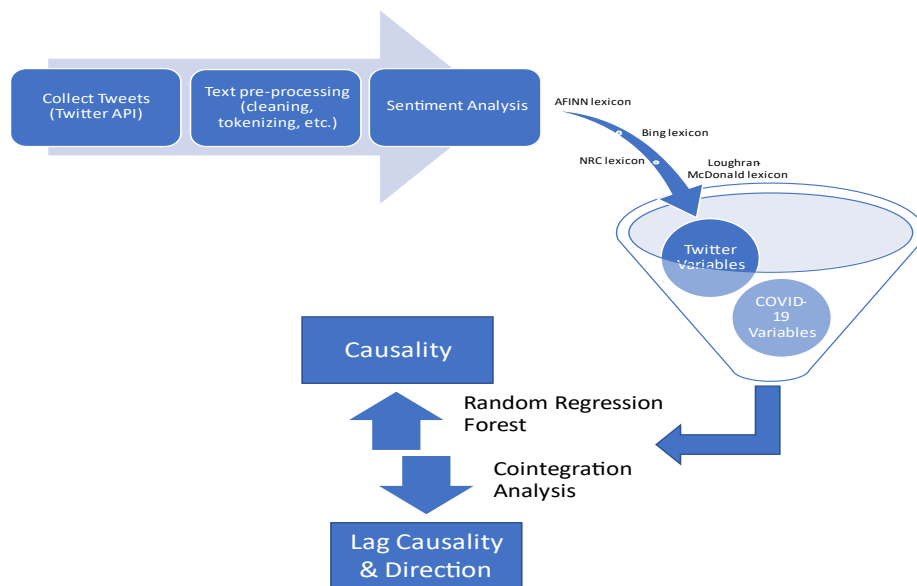


Figure 7. Pipeline of research activities

## Results

Using the Twitter API, we extracted a list of tweets for our first step and performed sentiment analysis. In the process, hyperlinks and common words used in the English language, commonly referred to as “stop words”, were cleaned from the text content of each tweet. For sentiment indexes, we compared the resulting word matrix with the four sentiment lexica. The results most-often converge, as we will see below, using four different dictionaries. The figure below illustrates how specific words contribute to two sentiments based on three lexica (figure 2). We note that the words of have not undergone text analysis and thus some common words (such as “I’m”, etc.) are present.

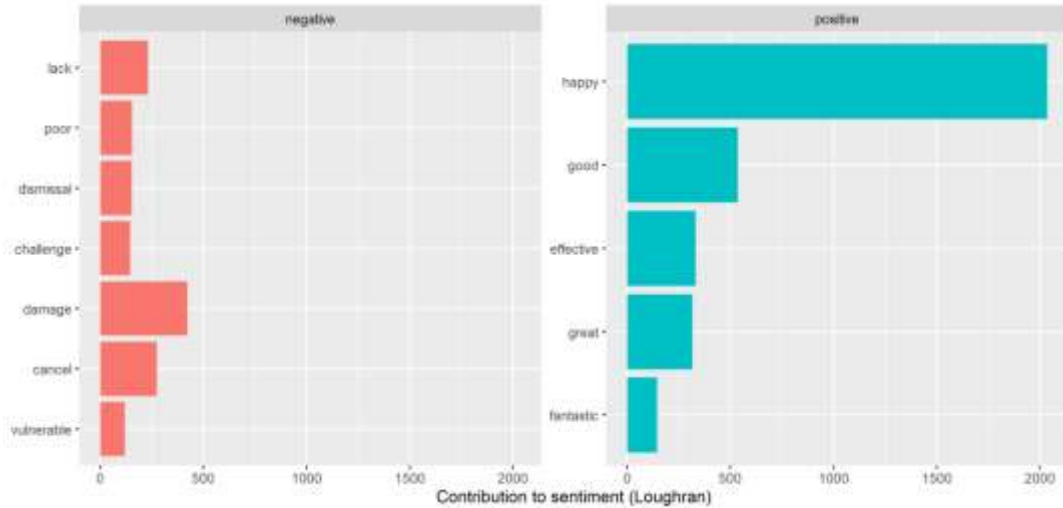


Figure 2. Contribution of Words to Sentiments

The next step was to run a random regression forest. Among the 45 forest models that were constructed, 15 were constructed for each of the dependent variables, and they were examined contemporaneously as well as lagged effects of up to 14 days (2 weeks) after the event. As a result of this approach, we can determine if online conversations on Twitter have affected cases, deaths, and vaccinations up to 14 days after the original conversation. In this case, a day with particularly positive sentiments is expected to encourage people to take action, either by protecting themselves further (resulting in fewer cases or deaths) or by vaccinating (resulting in more vaccinations). It presumes that the relevant action may not have been taken immediately, but two weeks later, allowing for possible lag effects of two weeks. Additionally, the random forests took into account other metrics in addition to the number of cases and deaths, the number of vaccinated individuals, the virus' calculated reproduction rate, and the Oxford COVID-19 stringency measure.

There was a sense of disappointment and encouragement to our findings at the same time. As a first step, we can see that the government measures are having a positive effect on the amount of fresh cases as well as the number of deaths, as the stringency index has a significant influence on the two variables. Additionally, it can be seen that vaccinations affect the amount of novel cases (all vaccination variables are important), confirming the correlation between vaccinations and a decrease in COVID-19 cases and deaths. Our final analysis shows the grim effect that in mortality among new cases and the total pandemic cases. This correlation again confirms that there is a strong correlation between deaths and cases.

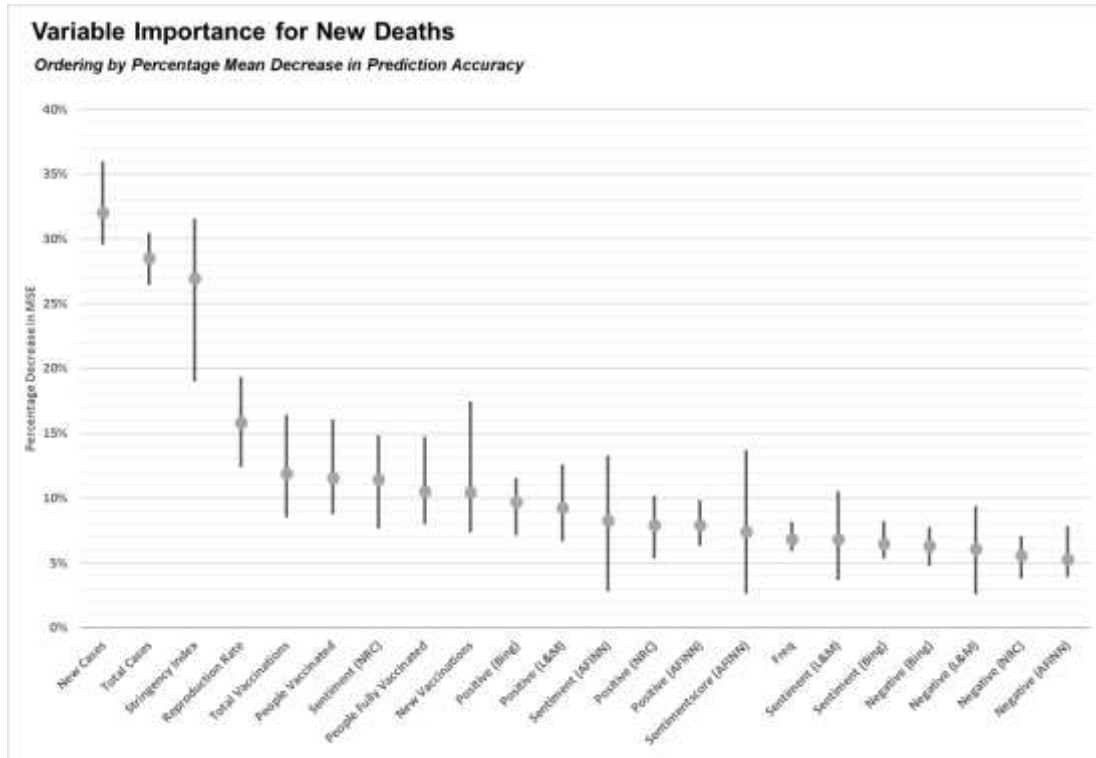


Figure 3. Determinants of the Number of New Deaths based on MDPA

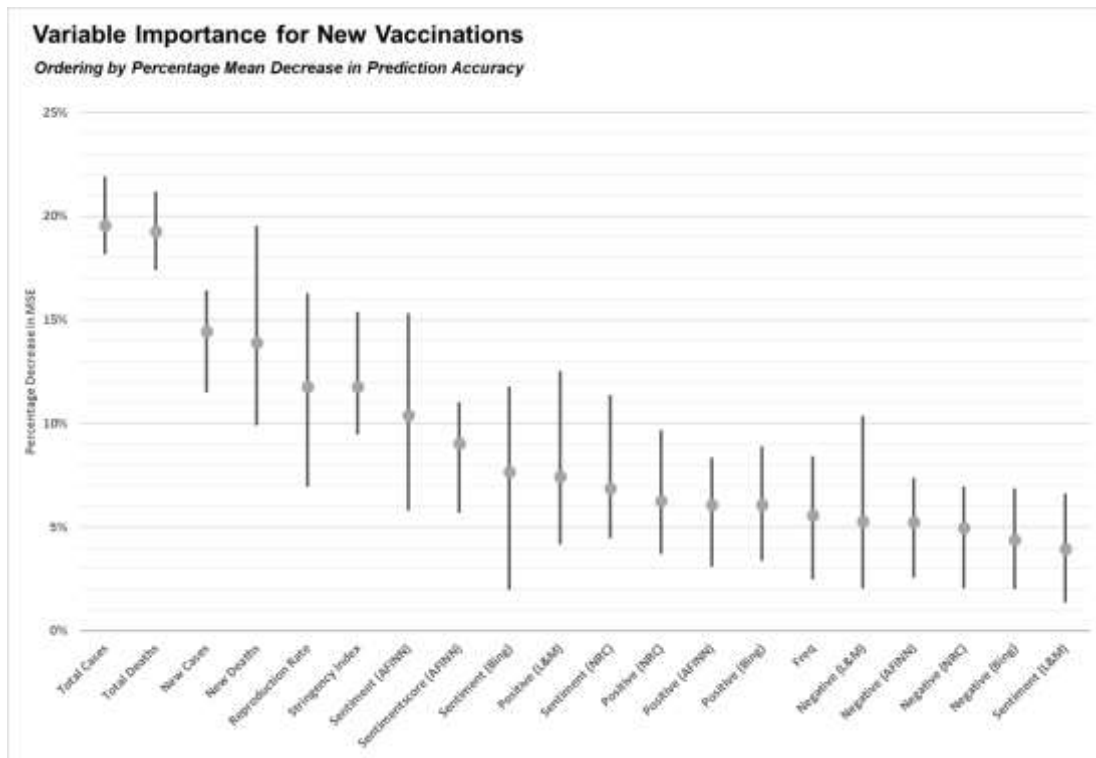


Figure 4. Determinants of the Number of New Vaccinations based on MDPA

In terms of new vaccinations, we see that they are primarily affected by deaths and cases, while the stringency index is also important. It is disappointing to find that neither the number of posts about frontline issues nor the sentiment of the Twitter discussions seems to affect vaccinations. Based on this finding, we can infer that physical activity and online activity are not inherently linked. During this period, we were able to find that individuals tended to participate in online trends to celebrate frontline workers, but this did not translate into individuals having a motivation to protect themselves (which would result in fewer cases) or to get vaccinated during this time period. Additionally, this study shows that online campaigns have no effect on individuals who resist vaccines (whether due to fear or conspiracy theories). Meanwhile, because negative tweets (with



all employed dictionaries) had a relatively low impact on vaccination numbers, fake and negative news most likely did not play a significant role in reducing vaccination rates.

To confirm this finding, cointegration analysis must be used to examine whether bivariate converging relationships exist in the data. In addition, analyses of cointegration will show whether online discussions lead to COVID-19 outcomes or not. COVID-19 vaccination rates and other COVID-19 variables did not seem significantly affected by negative Tweets about frontliners and COVID-19. However, it is possible that negative outcomes in pandemic numbers resulted in frontliners becoming online scapegoats for people's frustrations and fears (thus a reverse causal relationship between COVID-19 results and Twitter sentiment). The RRF analysis does not reveal any generalised (contemporaneous or lagged) effects, but it is possible that there are still some individual effects in certain lags of the variables. Due to our presentation of averages for MDPA over all lags, we were not able to capture these effects in our RRF analysis, since we smooth some out to minimize single effects.

In order to establish a causal link between COVID-19's three variables (new cases, new deaths, and new vaccinations), we paired them with Twitter sentiment variables and the total number of Twitter posts made by users on the frontline. To determine whether there is a converging relationship between them and to determine their causal relationship, a series of VECMs were calculated.

### **Discussion – Conclusion**

Considering the implication of our findings for the lessons learned as a result of this pandemic, they have a great deal of importance. The results of COVID-19 and the online interactions don't have a strong, persistent relationship, indicating that such campaigns cannot be relied upon to increase motivation among individuals in a sustained manner. In our work, the effectiveness and suitability of preventing diseases were demonstrated, and the government should focus more on designing and implementing prevention programs in order to prevent them from occurring. Aside from that, promoting vaccinations through online campaigns and celebrations is going to be a more time consuming process than motivating individuals to take part. There is no correlation between negative-sentiment tweets in the UK and new vaccinations in the country, but we find a negative relationship between them, despite it being a relatively weak correlation. Further analysis, possibly in a cross-sectional study, would be necessary to confirm the validity of this finding, as it could have important implications for regulating online forums.

In severe health crises like the COVID-19 epidemic, hashtag-based campaigns do not promote action (Carvache-Franco, Carvache-Franco, & Carvache-Franco, 2021; Ojo, Guntuku, Zheng, Beidas, & Ranney, 2021). It is intended to create original, actionable content and to launch new, inclusive movements using healthcare-led hashtags, but the actual effects will not extend to healthcare professionals or non-healthcare staff. A growing body of research indicates social media can reach a wide range of people, including those related to medicine and public health, but there does not seem to be enough action taken to make this a reality (Fotiadis & Stylos, 2017; Shiljas, Kumar, & Bashir, 2022; Zaman, Yaqub, & Saleem, 2022). Among the limited number of studies that have examined the effects of social media campaigns on health outcomes, none of them have been encouraging (Polyzos et al., 2023).

In addition to this, we have found that it is concerning that frontline workers are being attacked online either through frustration over COVID-19 or because conspiracy theorists are attacking preventative measures and vaccines (Halbrook et al., 2021; Woodside, 2020). Online attacks have the potential to become physical attacks, which has been documented in numerous cases (Voorhees, Fombelle, & Bone, 2020). In times of public health emergency, the government must act proactively to ensure that frontline workers are protected from these types of attacks (Berry et al., 2020). As well as protecting the front-line professionals from violence, this is also vital because, in addition to the obvious fact that such incidents can create a feeling of disheartenment among the front-line professionals during critical periods, which will affect their ability to deliver the best possible service to their victims.

Our research can be extended by using the same combination of methods in a cross-sectional study examining multiple countries simultaneously. It is possible to gain a deeper understanding of the COVID-19 pandemic by extending the framework to incorporate network analysis. By doing so, local governments would be able to prepare personal plans against the next pandemic, considering the potential consequences from their respective countries.

## References:

- Carvache-Franco, O., Carvache-Franco, M., & Carvache-Franco, W. (2021). Coastal and marine topics and destinations during the COVID-19 pandemic in Twitter's tourism hashtags. *Tourism and Hospitality Research*, 22(1), 32-41. doi:10.1177/1467358421993882
- Chatzigeorgiou, C. (2017). Modelling the impact of social media influencers on behavioural intentions of millennials: The case of tourism in rural areas in Greece. *Journal of Tourism, Heritage & Services Marketing*, 3(2), 25-29.
- Cho, H., Li, P., Ngien, A., Tan, M. G., Chen, A., & Nekmat, E. (2023). The bright and dark sides of social media use during COVID-19 lockdown: Contrasting social media effects through social liability vs. social support. *Computers in Human Behavior*, 146, 107795. doi:<https://doi.org/10.1016/j.chb.2023.107795>
- Del Chiappa, G., Bregoli, I., & Fotiadis, A. (2021). The impact of COVID-19 on the Italian accommodation sector and related response actions: A supply-perspective using a mixed method approach. *Journal of Tourism, Heritage & Services Marketing*, 7(1), 13-22.
- Fotiadis, A. (2018). Modelling wedding marketing strategies: An fsQCA Analysis. *Journal of Tourism, Heritage & Services Marketing*, 4(1), 23-26.
- Fotiadis, A., & Stylos, N. (2017). The effects of online social networking on retail consumer dynamics in the attractions industry: The case of 'E-da' theme park, Taiwan. *Technological Forecasting and Social Change*. doi:<http://dx.doi.org/10.1016/j.techfore.2016.06.033>
- Goel, A., & Gupta, L. (2020). Social Media in the Times of COVID-19. *Journal of clinical rheumatology : practical reports on rheumatic & musculoskeletal diseases*, 26(6), 220-223. doi:10.1097/RHU.0000000000001508
- Halbrook, M., Gadoth, A., Martin-Blais, R., Gray, A. N., Kashani, S., Kazan, C., . . . Rimoin, A. W. (2021). Longitudinal assessment of COVID-19 vaccine acceptance and uptake among frontline medical workers in Los Angeles, California. *Clinical Infectious Diseases*. doi:10.1093/cid/ciab614
- Ismagilova, E., Slade, E., Rana, N. P., & Dwivedi, Y. K. (2020). The effect of characteristics of source credibility on consumer behaviour: A meta-analysis. *Journal of Retailing and Consumer Services*, 53. doi:<https://doi.org/10.1016/j.jretconser.2019.01.005>
- Kontogianni, A., & Alepis, E. (2020). Smart tourism: State of the art and literature review for the last six years. *Array*, 6, 100020. doi:<https://doi.org/10.1016/j.array.2020.100020>
- Leelawat, N., Jariyapongpaiboon, S., Promjun, A., Boonyarak, S., Saengtattim, K., Laosunthara, A., . . . Tang, J. (2022). Twitter data sentiment analysis of tourism in Thailand during the COVID-19 pandemic using machine learning. *Heliyon*, 8(10), e10894. doi:<https://doi.org/10.1016/j.heliyon.2022.e10894>
- Liu, C., & Chong, H. T. (2023). Social media engagement and impacts on post-COVID-19 travel intention for adventure tourism in New Zealand. *Journal of Outdoor Recreation and Tourism*, 100612. doi:<https://doi.org/10.1016/j.jort.2023.100612>
- Michael, N., & Fotiadis, A. (2022). Employee turnover – The hotel industry perspective *Journal of Tourism, Heritage & Services Marketing*, 8(1).
- Northington, W. M., Gillison, S. T., Beatty, S. E., & Vivek, S. (2021). I don't want to be a rule enforcer during the COVID-19 pandemic: Frontline employees' plight. *Journal of Retailing and Consumer Services*, 63. doi:10.1016/j.jretconser.2021.102723
- Ojo, A., Guntuku, S. C., Zheng, M., Beidas, R. S., & Ranney, M. L. (2021). How Health Care Workers Wield Influence Through Twitter Hashtags: Retrospective Cross-sectional Study of the Gun Violence and COVID-19 Public Health Crises. *JMIR Public Health Surveill*, 7(1), e24562. doi:10.2196/24562
- Papana, A., & Spyridou, A. (2020). Bankruptcy Prediction: The Case of the Greek Market. *Forecasting*, 2(4). doi:10.3390/forecast2040027
- Polyzos, E., Fotiadis, A., & Huan, T.-C. (2023). From Heroes to Scoundrels: Exploring the effects of online campaigns celebrating frontline workers on COVID-19 outcomes. *Technology in Society*, 72, 102198. doi:<https://doi.org/10.1016/j.techsoc.2023.102198>
- Rabiul, M. K., Promsivapallop, P., Al Karim, R., Islam, M. A., & Patwary, A. K. (2022). Fostering quality customer service during Covid-19: The role of managers' oral language, employee work engagement, and employee resilience. *Journal of Hospitality and Tourism Management*, 53, 50-60. doi:<https://doi.org/10.1016/j.jhtm.2022.09.002>
- Sallam, M. (2021). COVID-19 Vaccine Hesitancy Worldwide: A Concise Systematic Review of Vaccine Acceptance Rates. *Vaccines*, 9(2). doi:10.3390/vaccines9020160
- Severo, E. A., de Guimarães, J. C. F., Wanderley, L. S. O., Gueiros, M. M. B., & Jabbour, C. J. C. (2023). Influence of the COVID-19 pandemic on the use of social media on awareness' socio-environmental and sustainable consumption: Consolidating lessons from the pandemic. *Environmental Development*, 100865. doi:<https://doi.org/10.1016/j.envdev.2023.100865>

- Shiljas, K., Kumar, D., & Bashir, H. A. (2022). Nexus between Twitter-based sentiment and tourism sector performance amid COVID-19 pandemic. *Tourism Economics*, 13548166221123102. doi:10.1177/13548166221123102
- Shin, D., Rasul, A., & Fotiadis, A. (2021). Why am I seeing this? Deconstructing algorithm literacy through the lens of users. *Internet Research, ahead-of-print*(ahead-of-print). doi:10.1108/INTR-02-2021-0087
- Spyridou, A. (2017). Perceived Service Quality and Customer Revisiting Intention: The Case of “all you can eat” Asian Restaurants in Southern Taiwan. *Journal of Tourism, Heritage & Services Marketing*, 3(2), 30-38.
- Spyridou, A. (2019). To Cheat or Not to Cheat. *Journal of the International Academy for Case Studies*, 25(2), 1-5.
- Voorhees, C. M., Fombelle, P. W., & Bone, S. A. (2020). Don't Forget About the Frontline Employee During the COVID-19 Pandemic: Preliminary Insights and a Research Agenda on Market Shocks. *Journal of Service Research*, 23(4), 396-400. doi:10.1177/1094670520944606
- Woodside, A. G. (2020). Interventions as experiments: Connecting the dots in forecasting and overcoming pandemics, global warming, corruption, civil rights violations, misogyny, income inequality, and guns. *Journal of Business Research*, 117, 212-218. doi:<https://doi.org/10.1016/j.jbusres.2020.05.027>
- Zaman, S., Yaqub, U., & Saleem, T. (2022). Analysis of Bitcoin's price spike in context of Elon Musk's Twitter activity. *Global Knowledge, Memory and Communication, ahead-of-print*(ahead-of-print). doi:10.1108/GKMC-09-2021-0154
- Zhang, X. A., & Cozma, R. (2022). Risk sharing on Twitter: Social amplification and attenuation of risk in the early stages of the COVID-19 pandemic. *Computers in Human Behavior*, 126, 106983. doi:<https://doi.org/10.1016/j.chb.2021.106983>

## **Almost (un)real: consumer perception of virtual influencers in social media advertising**

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### **Abstract:**

Brands are increasingly using virtual influencers (VI), computer-generated or artificial intelligence-based characters that create content for social media, in their marketing communications (Stein et al., 2022). Studies show that the singularity and innovativeness of VI attract attention (Moustakas et al., 2020), but VI are trusted less than “real” influencers (Sands et al., 2022). This phenomenon is partly explained by the unreality and lack of authenticity (Stein et al., 2022) associated with VI. Despite the existence of several neuromarketing studies on the perception of “real” influencers (Mañas-Viniegra et al., 2020; Vaiciukynaite, 2019), until now there have been no studies investigating the perception of VI in marketing communications. Our study aims to reveal the specificity of consumers' perception of social media advertising with the participation of VI. The study is based on neuromarketing methods including eye-tracking and galvanic skin response (GSR) with subsequent questioning of the respondents. The survey respondents (N=28) were women aged 18 to 34 years, which corresponds to the largest age group of Instagram users (Dixon, 2023). The design of the study involved showing each respondent an artificially simulated Instagram feed with static advertising posts featuring VI. The results showed that respondents more often experience negative emotions to stimuli with VI than with real ones. In addition, the use of VI does not affect the brand's memorability, and purchase intention. An analysis of the results of the study also shows that VI can evoke different respondents' emotions depending on the quality of visualization and the degree of realism of the characters. Finally, our study provides initial evidence on the specifics of using VI in advertising for various types of products: VI are perceived better in advertising of high-tech products where virtual characters might be associated with innovations and technology developments.

**Keywords:** *virtual influencers, influence marketing, social media advertising, neuromarketing study*

### **References:**

- Dixon, S. Distribution of Instagram users worldwide as of January 2023, by age group. Statista. URL: <https://www.statista.com/statistics/325587/instagram-global-age-group/> (last accessed: 11.06.2023, 12:00)
- Mañas-Viniegra, L., Núñez-Gómez, P., & Tur-Viñes, V. (2020). Neuromarketing as a strategic tool for predicting how Instagramers have an influence on the personal identity of adolescents and young people in Spain. *Heliyon*, 6(3), e03578.
- Moustakas, E., Lamba, N., Mahmoud, D., & Ranganathan, C. (2020, June). Blurring lines between fiction and reality: Perspectives of experts on marketing effectiveness of virtual influencers. In *2020 International Conference on Cyber Security and Protection of Digital Services (Cyber Security)* (pp. 1-6). IEEE.
- Sands, S., Campbell, C. L., Plangger, K., & Ferraro, C. (2022). Unreal influence: Leveraging AI in influencer marketing. *European Journal of Marketing*. Vol. 56 No. 6, pp. 1721-1747.
- Stein, J. P., Linda Breves, P., & Anders, N. (2022). Parasocial interactions with real and virtual influencers: The role of perceived similarity and human-likeness. *New Media & Society*.
- Vaiciukynaite, E. (2019, June). Men or Women? Neuro-Marketing study of social media influencers. In *Proceedings of the 6th European Conference on Social Media, ECSM 2019, June* (pp. 280-287).

# Using Social Media Marketing Activities to Build Brand Loyalty in the Higher Education

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**Keywords:** *Social media marketing activities, Engagement, Higher education institutions*

## Introduction

Social media has become a major means of communication, particularly among young people who engage with it at a very high frequency (Clark et al., 2016). Given the high level of familiarity and usage, social media is essential for conveying higher education institutions (HEIs) information and interacting with students (Clark et al., 2016; Bhattacharya and Faisal, 2020). Due to the increased use of social media by young people, it has become vital to delve deeper into the concept of engagement (Garza Salgado and Royo Vela, 2019), as user engagement is linked to consumer behavior and brand loyalty (Hollebeek, 2011). The higher education sector exemplifies a growing competitive environment, which has been affected by declining government financial support and the pandemic (Bhattacharya and Faisal, 2020; Santos et al., 2020; Schlesinger et al., 2021; Williams and Omar, 2014). HEIs increasingly recognize the need for brand management and marketing (Williams and Omar, 2014), making it crucial to use different strategies and channels to reach a broader range of students and stakeholders to foster or maintain brand loyalty (Santos et al., 2020).

The rise of green behaviors has led to significant changes in the way consumers behave and remain loyal to a brand (Rizomyliotis et al., 2021). As the educators of the majority of society's leaders, HEIs have a significant responsibility to increase awareness, technologies, and tools necessary for a sustainable future (Finlay and Massey, 2012). Green branding is an essential component of green brand positioning and an effective strategy for gaining significant eco-advantages (Lin et al., 2017), prompting more companies to adopt green marketing strategies to satisfy consumers' environmental demands (Moravcikova et al., 2017).

However, research on the role of green branding and social media marketing practices in sustaining brand loyalty within higher education remains limited. Given the emerging trends toward green consumption values (GCV) and the relevance of social media marketing practices in user engagement, further investigation of their role in sustaining brand loyalty is needed.

## Theoretical Background and Hypotheses

### *Brand Loyalty*

Brand loyalty positively impacts business performance and is crucial in a competitive market (Aaker, 1991; Garza Salgado & Royo Vela, 2019). In higher education, brand loyalty is increasingly recognized as an essential performance indicator (Snijders et al., 2019, 2020) and has become central to HEIs strategies (Hennig-Thurau et al., 2001; Santos et al., 2020; Yousaf et al., 2020). Prior research has examined various drivers of brand loyalty in HEIs, such as trust, commitment, perceived value, and student satisfaction (Alves & Raposo, 2007; Brown & Mazarrol, 2008; Carvalho & de Oliveira Mota, 2010; Kaushal & Ali, 2019; Perin et al., 2012).

However, brand loyalty drivers in the digital environment differ from those in the offline environment (Ebrahim, 2020). Studies in other industries have demonstrated that active social media marketing positively impacts brand loyalty (Erdoğan & Cicek, 2012; Godey et al., 2016; Ibrahim et al., 2021; Kim & Ko, 2010, 2012; Seo & Park,

2018; Wang et al., 2019). While research in higher education has found that positive experiences on HEIs' social media can increase student loyalty (Garza Salgado & Royo Vela, 2019), there is still very little research on the higher education sector overall.

#### *Social Media Marketing Activities*

Social media platforms enable users to create, share, and discuss content, facilitating engagement and cooperation (Filo et al., 2015; Kaplan & Haelein, 2010; Kietzmann et al., 2011). They provide companies, institutions, and government organizations with opportunities to promote their brands and services at lower costs while receiving direct feedback from stakeholders (Ebrahim, 2020). Social media marketing activities (SMMA) have attracted much attention from researchers, who have identified various dimensions of SMMA, such as Entertainment, Interaction, Trendiness, Customization, and Word-of-mouth (WoM) (Kim & Ko, 2010, 2012). Several studies have applied these dimensions to various industries, demonstrating that SMMA have direct or indirect effects on different brand dimensions (Godey et al., 2016; Wang et al., 2019; Hafez, 2021; Cheung et al., 2020; Ebrahim, 2020; Ibrahim et al., 2021). In the context of higher education institutions (HEIs), SMMA offer advantages such as low cost, immediacy, and a large number of users (Kelleher & Sweetser, 2012). They can help increase brand loyalty and aid in new student acquisition, student retention, and stakeholder relationship management (Ebrahim, 2020).

#### *Customer Engagement*

Engagement is a critical aspect of the consumer experience, as it establishes lasting relationships between customers and brands, becoming a strategic goal for organizations (Mollen & Wilson, 2010; Vivek et al., 2012; Dessart, 2017; Dwivedi, 2015). Social media, as a two-way communication platform, allows users to actively participate and interact, which 78% of marketers use to increase customer engagement (Ashley & Tuten, 2015; Choedon & Lee, 2020). Consequently, companies need to improve their social media marketing activities (SMMA) to foster these interactions and opportunities.

In the context of higher education institutions (HEIs), student engagement is equally crucial (Conduit et al., 2016; Vuori, 2014). Although various definitions of student engagement exist, Waqas (2022) defines it as "a psychological and motivational state composed of cognitive, emotional, and behavioral dimensions based on interactive experiences of students," emphasizing the interaction between students and college brands. This interaction is essential for maintaining mutual relationships and enhancing brand loyalty.

The dimensions of student engagement include cognitive processing, affection, and activation (Hollebeek et al., 2014). Cognitive engagement relates to students' mental activity and concentration on their academic experiences, while affection refers to their positive sentiment towards the HEI brand (Waqas, 2022; Northey et al., 2015). Activation, on the other hand, represents the time and energy students spend interacting with HEI brands. To foster student engagement, HEIs should post compelling content on social media that generates a positive impression and attitude towards their brands. This strategy encourages students to continue visiting and interacting with the HEI's social media pages, ultimately building long-term relationships and enhancing brand loyalty.

#### *Green Consumption Values*

Green brand building is a strategic approach that can provide significant ecological advantages over competitors, with green value being a crucial component of green brand positioning (Lin et al., 2017). Values are beliefs that guide people's actions and transcend specific situations (Rokeach, 1973; Hofstede, 1984; Schwartz & Bilsky, 1987). As consumers become more environmentally conscious, changes in personal values impact their decision-making (Pinto et al., 2011). Green consumption value (GCV) helps explain these effects.

GCV has been defined in various ways. Haws et al. (2014) describes it as a predisposition to prioritize environmental protection through purchasing and consumption behaviors, while Varshneya et al. (2017) consider it a reflection of environmental protection through diverse acts driven by individual values. Rizomyliotis et al. (2021) define green consumption beliefs as beliefs about product creation processes that positively impact society. Consumers with higher GCV tend to prefer eco-friendly products (Haws et al., 2014; Rizomyliotis et al., 2021), and as they become more concerned about ecological issues, they recognize their purchasing decisions can influence the environment, leading to changes in personal values and lifestyles. This shift in values underscores the importance of analyzing brand loyalty (Rizomyliotis et al., 2021).

The relationship between ethical behavior and brand loyalty in the context of green branding has been studied. Some researchers argue that green perceived value, green features, and emotional benefits positively influence green satisfaction, green trust, and green purchase intentions (Chen & Chang, 2012, 2013; Koller et al., 2011).

Others suggest that developing corporate brand loyalty depends on effectively communicating green messages and benefits (Lin et al., 2017, 2019; Mustonen et al., 2016). When consumers believe in a brand's green value, they are more likely to be loyal to it. However, there is limited research on the impact of green consumption value on higher education institutions (HEIs) brand loyalty. It is anticipated that HEIs' social media activities and student engagement will significantly relate to brand loyalty, with green consumption values playing a moderating role in this relationship. This study considered GCV as a moderator of the relationships between drivers (SMMAs and SE) and BL, which is relatively new in the literature.

Based on the above discussion, we hypothesise that:

**H1:** *Social media marketing activities are positively related to brand loyalty in HEIs.*

**H2:** *Social media marketing activities are positively related to student engagement in HEIs.*

**H3:** *Student engagement is positively related to brand loyalty in HEIs.*

**H4:** *Green consumption values moderate the effect of social media marketing activities on brand loyalty.*

**H5:** *Green consumption values moderate the effect of student engagement on brand loyalty.*

## Research Method and Results

To empirically test the research hypotheses, a field study was conducted. A conclusive research design was chosen (Parasuraman et al., 2006) and the validity of the model was evaluated with the use of a sample of UK HEI students. A structured questionnaire was used as the research instrument of the study (Dolnicar et al., 2014). In order to measure SMMAs' five dimensions: Entertainment, Interaction, Trendiness, Customization and WoM, a scale from Kim and Ko (2012) was employed. SE included was measured using a modified engagement scale proposed by Hollebeek et al. (2014). Based on Dagiliūtė et al. (2018) and Rizomyliotis et al. (2021), we employed the Green Consumption Values Scale. Finally, in order to measure BL we used the scale from Hennig-Thurau et al. (2001). All the above were 7-point Likert scales. A total of 313 valid answers were available for analysis according to the requirements for causal-comparative analysis (Onwuegbuzie et al., 2015).

In order to check for construct validity, we performed Kaiser-Meyer-Olkin (KMO=0.944) sampling adequacy test and Bartlett's sphericity test ( $p < 0.001$ ) (Avlund et al., 1993). Cronbach's  $\alpha$  was then used to assess the reliability of the measurement scales (Kirk et al., 1986). All relevant values were higher than the minimum value of 0.70. Confirmatory factor analysis (CFA) was conducted in the structural equation model to test the convergent factor validity of the conceptual model. The results of the estimated model showed a satisfactory fit to the data. Hence, the proposed study model was confirmed.

Hypotheses were then tested via structural equation modelling (SEM). The results support H1, H2 and H3 as brand loyalty (BL) is directly or indirectly affected by social media marketing activities (SMMAs) through student participation (SE) (Brakus et al., 2009). As expected, SE is more capable of establishing or maintaining BL than SMMAs, given that the direct impact of SE on loyalty was found to be greater than that of SMMAs. At the same time, SMMAs have a significant positive impact on SE. This can be partly explained by the fact that SMMAs that stimulate student engagement can effectively facilitate interactions between students and HEIs, thus building stronger relationships to enhance loyalty.

## Discussion

Our findings reveal the importance of social media marketing activities (SMMAs) in higher education institutions (HEIs). The results support the hypotheses that SMMAs positively impact student engagement (SE) and brand loyalty (BL), aligning with previous literature across various industries and regions. It is crucial for HEIs to focus on active and targeted SMMAs to foster stronger engagement and loyalty among students. Our study also confirms the positive influence of student engagement on brand loyalty. This suggests that HEIs should invest in cognitive, emotional, and behavioral aspects of their offerings to make their brands experientially appealing. Developing sub-accounts for customized marketing and emphasizing interaction, word-of-mouth, and trendiness in their SMMAs can directly improve student engagement. The moderating role of green consumption value (GCV) was examined in this research. Interestingly, GCV negatively moderates the relationship between SE and BL, while having no moderating effect on the relationship between SMMAs and BL. This finding implies that environmentally conscious students may be less loyal to a brand despite being engaged if the HEIs do not emphasize their green practices and communication. In summary, this discussion highlights the significance of SMMAs in HEIs for student engagement and brand loyalty. It underscores the need for HEIs to adapt their marketing strategies to include active, customized, and environmentally conscious approaches to strengthen the relationship with students and foster long-term loyalty.

## References

- Aaker, D.A., (1991). *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York: The Free Press.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571-588.
- Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & marketing*, 32(1), 15-27.
- Bhattacharya, S., & Faisal, M. (2020). University Branding During Covid-19: A Study On The Role Of Social Media In Promoting Covid-19 Awareness And Building Brand Image. *Journal of Content, Community & Communication*, 12(6), 281-290.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Brown, R. M., & Mazzarol, T. W. (2009). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher education*, 58, 81-95.
- Carvalho, S. W., & de Oliveira Mota, M. (2010). The role of trust in creating value and student loyalty in relational exchanges between higher education institutions and their students. *Journal of Marketing for Higher Education*, 20(1), 145-165.
- Chen, Y. S., & Chang, C. H. (2013). Towards green trust: The influences of green perceived quality, green perceived risk, and green satisfaction. *Management decision*, 51(1), 63-82.
- Cheung, M. L., Pires, G., & Rosenberger, P. J. (2020). The influence of perceived social media marketing elements on consumer-brand engagement and brand knowledge. *Asia Pacific Journal of Marketing and Logistics*, 32(3), 695-720.
- Choedon, T., & Lee, Y. C. (2020). The Effect of Social Media Marketing Activities on Purchase Intention with Brand Equity and Social Brand Engagement: Empirical Evidence from Korean Cosmetic Firms. *Knowledge Management Research*, 21(3), 141-160.
- Clarke, T. B., Murphy, J., & Adler, J. (2016). Celebrity chef adoption and implementation of social media, particularly pinterest: A diffusion of innovations approach. *International Journal of Hospitality Management*, 57, 84-92.
- Conduit, J., Karpen, I. O., & Farrelly, F. (2016). Student engagement: A multiple layer phenomenon. In C. Plewa and J. Conduit (eds.), *Making a Difference Through Marketing: A Quest for Diverse Perspectives*, 229-245.
- Dagiliūtė, R., Liobikienė, G., & Minelgaitė, A. (2018). Sustainability at universities: Students' perceptions from Green and Non-Green universities. *Journal of Cleaner Production*, 181, 473-482
- Dessart, L. (2017). Social media engagement: a model of antecedents and relational outcomes. *Journal of Marketing Management*, 33(5-6), 375-399.
- Dolnicar, S., Grün, B., Leisch, F., & Schmidt, K. (2014). Required sample sizes for data-driven market segmentation analyses in tourism. *Journal of Travel Research*, 53(3), 296-306.
- Dwivedi, A. (2015). A higher-order model of consumer brand engagement and its impact on loyalty intentions. *Journal of Retailing and Consumer Services*, 24, 100-109.
- Ebrahim, R. S. (2020). The role of trust in understanding the impact of social media marketing on brand equity and brand loyalty. *Journal of Relationship Marketing*, 19(4), 287-308.
- Erdoğan, İ. E., & Cicek, M. (2012). The impact of social media marketing on brand loyalty. *Procedia-Social and Behavioral Sciences*, 58, 1353-1360.
- Filo, K., Lock, D., & Karg, A. (2015). Sport and social media research: A review. *Sport Management Review*, 18(2), 166-181.
- Finlay, J., & Massey, J. (2012). Eco-campus: Applying the ecocity model to develop green university and college campuses. *International Journal of Sustainability in Higher Education*, 13(2), 150-165.
- Garza Salgado, E., & Royo Vela, M. (2019). Brand Fan Pages experience and strength as antecedents to engagement and intensity of use to achieve HEIS'brand loyalty. *Journal of Marketing for Higher Education*, 29(1), 102-120.
- Godey, B., Manthiou, A., Pederzoli, D., Rokka, J., Aiello, G., Donvito, R., & Singh, R. (2016). Social media marketing efforts of luxury brands: Influence on brand equity and consumer behavior. *Journal of Business Research*, 69(12), 5833-5841.
- Hafez, M. (2021). The impact of social media marketing activities on brand equity in the banking sector in Bangladesh: the mediating role of brand love and brand trust. *International Journal of Bank Marketing*, 39(7), 1353-1376.
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336-354.



- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and managing student loyalty: An approach based on the concept of relationship quality. *Journal of service research*, 3(4), 331-344.
- Hofstede, G. (1984). *Culture's Consequences: International Differences in Work-Related Values*, SAGE.
- Hollebeek, L. D. (2011). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, 27(7-8), 785-807.
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149-165.
- Ibrahim, B., Aljarah, A., & Sawaftah, D. (2021). Linking social media marketing activities to revisit intention through brand trust and brand loyalty on the coffee shop facebook pages: Exploring sequential mediation mechanism. *Sustainability*, 13(4), 2277.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59-68.
- Kaushal, V., & Ali, N. (2020). University reputation, brand attachment and brand personality as antecedents of student loyalty: A study in higher education context. *Corporate Reputation Review*, 23, 254-266.
- Kelleher, T., & Sweetser, K. (2012). Social media adoption among university communicators. *Journal of Public Relations Research*, 24(2), 105-122.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241-251.
- Kim, A. J., & Ko, E. (2010). Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention. *Journal of Global Fashion Marketing*, 1(3), 164-171
- Kim, A. J., & Ko, E. (2012). Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of Business Research*, 65(10), 1480-1486.
- Koller, M., Floh, A., & Zauner, A. (2011). Further insights into perceived value and consumer loyalty: A "green" perspective. *Psychology & Marketing*, 28(12), 1154-1176.
- Lin, J., Lobo, A., & Leckie, C. (2017). Green brand benefits and their influence on brand loyalty. *Marketing Intelligence & Planning*, 35(3), 425-440.
- Lin, J., Lobo, A., & Leckie, C. (2019). The influence of green brand innovativeness and value perception on brand loyalty: the moderating role of green knowledge. *Journal of Strategic Marketing*, 27(1), 81-95.
- Mollen, A., & Wilson, H. (2010). Engagement, telepresence and interactivity in online consumer experience: Reconciling scholastic and managerial perspectives. *Journal of Business Research*, 63(9-10), 919-925.
- Moravcikova, D., Krizanova, A., Kliestikova, J., & Rypakova, M. (2017). Green Marketing as the Source of the Competitive Advantage of the Business. *Sustainability*, 9(12), 2218.
- Mustonen, N., Karjaluoto, H., & Jayawardhena, C. (2016). Customer environmental values and their contribution to loyalty in industrial markets. *Business Strategy and the Environment*, 25(7), 512-528.
- Northey, G., Bucic, T., Chylinski, M., & Govind, R. (2015). Increasing student engagement using asynchronous learning. *Journal of Marketing Education*, 37(3), 171-180.
- Onwuegbuzie, A. J., Leech, N. L., & Collins, K. M. T. (2015). Qualitative analysis techniques for the review of the literature. Qual Rep 17.
- Perin, M. G., Sampaio, C. H., Simões, C., & de Pólora, R. P. (2012). Modeling antecedents of student loyalty in higher education. *Journal of Marketing for Higher Education*, 22(1), 101-116.
- Pinto, D. C., Nique, W. M., Añaña, E. D. S., & Herter, M. M. (2011). Green consumer values: how do personal values influence environmentally responsible water consumption?. *International Journal of Consumer Studies*, 35(2), 122-131.
- Rizomyliotis, I., Poulis, A., Konstantoulaki, K., & Giovanis, A. (2021). Sustaining brand loyalty: The moderating role of green consumption values. *Business Strategy and the Environment*, 30(7), 3025-3039.
- Rokeach, J. (1973). *The Nature of Human Values*, The Free Press, NY.
- Santos, G., Marques, C. S., Justino, E., & Mendes, L. (2020). Understanding social responsibility's influence on service quality and student satisfaction in higher education. *Journal of Cleaner Production*, 256, 120597.
- Schlesinger, W., Cervera-Taulet, A., & Wymer, W. (2021). The influence of university brand image, satisfaction, and university identification on alumni WOM intentions. *Journal of Marketing for Higher Education*, 33(1), 1-19.
- Schwartz, S.H. & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53(3), 550-562.
- Seo, E. J., & Park, J. W. (2018). A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. *Journal of Air Transport Management*, 66, 36-41.
- Snijders, I., Wijnia, L., Rikers, R. M., & Loyens, S. M. (2019). Alumni loyalty drivers in higher education. *Social Psychology of Education*, 22(3), 607-627.
- Snijders, I., Wijnia, L., Rikers, R. M., & Loyens, S. M. (2020). Building bridges in higher education: Student-faculty relationship quality, student engagement, and student loyalty. *International Journal of Educational Research*, 100, 101538.

- So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016). The role of customer engagement in building consumer loyalty to tourism brands. *Journal of Travel Research*, 55(1), 64-78.
- Varshneya, G., Das, G., & Khare, A. (2017). Experiential value: a review and future research directions. *Marketing Intelligence & Planning*, 35(3), 339-357.
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 122-146.
- Vuori, J. (2014). Student engagement: buzzword of fuzzword?. *Journal of Higher Education Policy and Management*, 36(5), 509-519.
- Wang, X. W., Cao, Y. M., & Park, C. (2019). The relationships among community experience, community commitment, brand attitude, and purchase intention in social media. *International Journal of Information Management*, 49, 475-488.
- Waqas, M. (2022). The role of brand experience and student engagement in the creation of brand equity in a higher education context. *Journal of Nonprofit & Public Sector Marketing*, 34(4), 451-474.
- Williams Jr, R. L., & Omar, M. (2014). How branding process activities impact brand equity within higher education institutions. *Journal of Marketing for Higher Education*, 24(1), 1-10.
- Yousaf, A., Mishra, A., & Bashir, M. (2020). Brand trust, institutional commitment, and their impact on student loyalty: evidence for higher education in India. *Studies in Higher Education*, 45(4), 878-891.

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# Marketing Communications

## **D&C for EU Funded Projects: Towards an Integrated Omnichannel Dissemination and Communication Framework**

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### **Abstract**

In an ever-changing environment, technological progress is at the frontline. Through European-funded projects, research is conducted in various fields, aiming to tackle Europe's biggest challenges in various sectors. In the course of materializing these new advancements, exploitable outcomes are designed and developed that, in turn, need to be optimally introduced to the market. In order for that to happen, the first thing needed is to make the developments widely known so that they start the journey of diffusion toward adoption, for which Dissemination and Communication is key. However, Dissemination and Communication actions are quite often underperforming. This research proposes a new approach to Dissemination and Communication actions by introducing an Integrated Omnichannel Dissemination and Communication (IODC) Framework relying upon Integrated Communications, capitalizing on an Omnichannel approach to optimally address all potentially interested stakeholders (through the Quintuple helix) that can help European Funded projects' partners effectively structure their Dissemination and Communication strategy and actions.

**Keywords:** *Dissemination, Communication, Integrated, Omnichannel, Funded Projects*

### **Introduction**

European Union is leading the way for sustainable growth with the new Circular Economy Action Plan (CEAP) (European Commission, 2020). In this framework, the EU has been actively promoting and implementing initiatives for transitioning to a circular economy, with specific aims such as reducing waste, increasing resource efficiency and creating economic, environmental and social benefits. Some key initiatives (as materialized through funded projects) for sustainable production processes and sustainable products can be found in EU funding projects such as PLOOTO (European Commission, 2023). These efforts and outputs will enable the transition towards circularity for the industry/workers/ people/ regions and cities. Ultimately, it empowers production and consumption to move towards a new circular future. However, for results to be communicated and disseminated properly, thus multiplying their outreach and lessening their adoption time, Dissemination and Communications (D&C) actions are necessary to be conducted appropriately and in a structured manner. This research aims to support this direction by introducing an Integrated Omnichannel Dissemination and Communication Framework [IODC]. Its building blocks will be validated in the context of the PLOOTO EU-funded project on circularity.

PLOOTO is a European Union (EU) funded project under the HORIZON EUROPE main program, aiming to deliver a Circular and Resilient Information System (CRIS) to support manufacturers in their green, digital and circular transition. Following these directions, as has been set in the research and innovation activities of the program, aligned with relevant EU-funded programs, Dissemination and Communication (D&C) has a

prominent and essential role in the well-ordered outreach activities of the project. With this being the case, the present research aims to set an initial D&C project strategy abiding to an Integrated Omnichannel D&C Framework based on the existing bibliography of Integrated Marketing Communications and Omnichannel Communications and instantiated with prior studies on environmental marketing (accounting for the overall context of the project).

## **Dissemination and communication**

### *The importance of D&C*

Dissemination and communication are essential components of EU-funded programs, as they are tasked with the critical role to ensure that the results of these programs are effectively shared with all interested stakeholders (e.g. Academia and Industry) and utilized (medium towards exploitation of produced Key Exploitable Outcomes (KERs)). The EU program “Science with and for society” (Commission et al., 2020), part of the EU Research and Innovation program Horizon2020, precisely serves this purpose. Through the formulation of core values, “Science with and for society” emphasizes the importance of the role of dissemination and communication in science education, promoting open access to research outputs and setting as a priority the engagement of citizens across the European Commission, is aiming to “effectively build cooperation between science and society”. Campos & Codina (2021) underline the necessity of planning the communication strategy from the early stages, to effectively answer questions such as what the project is, what is the purpose of the project, the impact etc. as well as the day-to-day operations towards materializing its diffusion goals. Additionally, as part of the FP7 European project SOPHIE, Marín-González et al. (2017) stressed the importance of dissemination and communication in research projects by calling attention to the effectiveness of D&C.

The importance of the activities of dissemination and communication can be comprehended in terms of their purpose and the key benefits they provide. Specifically, D&C enhances the impact and reach of the program. Communicating the results and outcomes of a funded program to a broader audience increases the impact of the program and widens the audience who can benefit from the knowledge and resources generated. Tripathy et al. (2017) listed 10 approaches that can lead to an improved visibility and dissemination for policy makers and practitioners. Part of this list emphasizes on the effective use of social media, sharing research outputs in different formats other than manuscripts, such as SlideShare and FigShare, disseminating through personal blogs, carefully selecting the title and keywords and embracing open science practices, among others. In addition to the previous tips, Ross-Hellauer et al. (2020) – focusing mainly on digital communication vehicles – set out their own rules for successful and innovative dissemination of research. Plenty of their rules are consistent with those proposed by Tripathy et al., (2017). From the ten steps the authors proposed, we found similarities in the media format selection, the open science impact, dissemination through personal blogs and others. Although previous efforts have presented general guidelines and tips on how to effectively conduct D&C activities and strategies (Kaur & Nikander, 2017; Ross-Hellauer et al., 2020; Tripathy et al., 2017), an overall methodology and framework is yet to be produced, and research has highlighted its necessity in line of presenting the need for D&C actions that have unified messages and approach different stakeholders (Coyne et al., 2022; Elwy et al., 2022; Goodman & Sanders Thompson, 2017). The first step in this direction is to examine the way the D&C messages are created in a coherent and uniform manner across potential channels, paving the way for the need of Integrated D&C.

### *Environmental dissemination and communication*

The importance of successfully managing communications in an environmental project across stakeholders is vital for the development and implementation of the project (Khrutba et al., 2021). Since the beginning of 2000, the European Commission has made efforts to improve communications between environmental scientists and policy-makers (Danielopol et al., 2006) as one of the main stakeholders in environmental D&C. In this direction, Hansen (2011) highlighted the necessity for integrated communication research on environmental issues on the so-called “three foci of environmental communication research”: the construction of media messages, the content of the messages and the impact of such messages. To address this framework, environmental researchers should disseminate research findings from traditional and online media to engage more actively with different stakeholders (Wilkinson & Weitkamp, 2013). Gravina et al. (2017) study on social networks and environmental research communication, suggest that users’ interest can be stimulated from regular updates on the website and that web-mediated scientific dissemination can be enhanced with a more direct involvement of the researchers.

### *Integrated Dissemination and Communication*

Since the beginning of its conception, Integrated Marketing Communications (IMC) has become a powerful tool in the hands of marketing practitioners. Despite the seminal academic research that has been produced in the last

decades (J. Kliatchko, 2009), a widely accepted and standard definition in terms of issues (J. Kliatchko, 2005) and scope (Finne & Grönroos, 2017) has not yet been defined. Nevertheless, for the purpose of this research, we approach Integrated Marketing Communications as “an audience-driven business process of strategically managing stakeholders, content, channels, and results of brand communication programs” (J. G. Kliatchko, 2008, p.140). Although previous research (Campos & Codina, 2021) has highlighted the need to plan D&C activities, a detailed approach on how this plan can be formulated is yet to be designed and evaluated, leaving ample room for it, aligned with the overall purpose of the project itself. In order to ensure that all project partners, all development efforts and all Key Exploitable Results (KERs) are eventually coordinated and adhere to each project’s vision, a uniform dissemination and communication should be planned. To aid us in that direction we draw from the literature certain principles of Integrated Marketing Communications to assist us in formulating a first step towards Integration of D&C planning. Specifically, Harrison & Jackson (2013), in their research on business practices by food and beverage companies, synthesize from the academic literature the main characteristics- principles of Integrated Marketing Communications presented in Table 1.

Themes	Source	Characteristics - Principles
Integrated Marketing Communication	Harrison & Jackson, (2013)	<ul style="list-style-type: none"> <li>◆ Affect behaviour through communication</li> <li>◆ Consistency of communication and its elements</li> <li>◆ Consumer as crucial focus</li> <li>◆ Establish and grow a brand-consumer relationship</li> <li>◆ Engages target consumers in co-creation</li> <li>◆ Leverages subtlety</li> <li>◆ Engages with target customers using multiple channels</li> </ul>

Table 1. IMC principles

Following the Harrison & Jackson (2013) approach (Table 1), we propose introducing the base principles of Integrated Marketing Communications to the Dissemination and Communication of EU Projects. This leads to an Integrated Dissemination and Communication Plan where the consumer (i.e., different stakeholders) stands in the center and she/he is utilized in the co-creation of messages where all produced communication and elements are consistent among them. Specifically, in EU-funded projects all messages should be made initially to be consistent with the overall project vision and more importantly with the targeted recipients into consideration. However, the recipients are of vastly different types (e.g., Academia vs Industry vs Government) leading to the need for further adaptation of the messages. In that direction of segmentation and horizontal coverage of all possible types of D&C activities’ categories of recipients, we can utilize the “Quintuple Helix” model derived from the “Triple Helix” model (Carayannis et al., 2012) towards building the integrated messages.

The "Triple Helix" model has been used for several decades to describe the relationship between academia, government, and industry in the context of innovation (Meyer et al., 2014). Recently, a new model has been proposed that builds upon the Triple Helix model and includes two additional stakeholders: civil society and the natural environment (Fig.1). This expanded model, known as the "Quintuple Helix" model, has gained significant attention among scholars, policy-makers, and business leaders (Carayannis et al., 2012). The Quintuple Helix model acknowledges the importance of not only the three traditional stakeholders of academia, government, and industry but also the role of civil society and natural environment in fostering sustainable innovation. The model recognizes that innovation and economic development are not isolated from the larger social and environmental systems in which they operate (Carayannis et al., 2018).

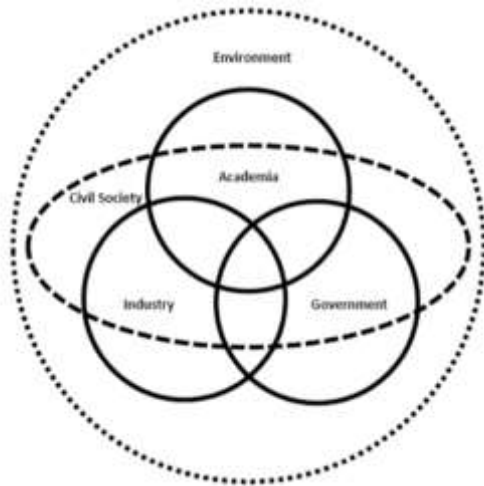


Figure 1. Five Helices of the Quintuple Helix (Carayannis et al., 2012)

help identify new markets and opportunities for innovation (Etzkowitz, 2003). Civil society, as the fourth stakeholder in the Quintuple Helix model, encompasses a range of non-governmental organizations, community groups, and social enterprises that can help to create a more inclusive and sustainable innovation ecosystem (Yoon et al., 2017). These organizations can bring new perspectives and ideas and help identify and address social and environmental issues often overlooked in traditional innovation models. The natural environment is the final stakeholder in the Quintuple Helix model. This stakeholder recognizes the natural world's critical role in providing the resources and ecological services that underpin economic and social activity (Barcellos-Paula et al., 2021). All the aforementioned types of potential D&C recipients need to be accounted for in the course of the D&C efforts. As they have different needs and can utilize project results differently, a need emerges to have D&C activities for all five types and in parallel have the messages customized for each one whilst maintaining an alignment to the project vision. Having an integrated message abiding for all potential stakeholders, we need to examine the potential to reach them across all possible outlets. In that direction, practices from the field of Omnichannel communications can lend support.

#### *Omnichannel Dissemination and Communication*

Current D&C practices in European Funded projects include utilising online and offline approaches in the course to actively engage each project's target audiences. Most commonly used channels include: (a) Online: Website, Social Media (LinkedIn, Facebook, Twitter, YouTube etc.), e-Mail Newsletter, White Papers, Open Repositories, Online Training Material, Journal and Conferences submission/participation, Webinars etc. and (b) Offline: Press Releases, TV, Radio, Conferences, Workshops, Multi-(Bi-) lateral discussions/presentations etc.

The use of channels and technologies for D&C currently is determined by each project's target audience and is driven by the resources and capabilities of the projects' participants. However, as the goal of D&C is maximizing the outreach potential and not all projects utilize all available mediums in their efforts (Lorés, 2020; Mea et al., 2016), the industry currently is operating at best on a multi-channel modal of D&C activities. Nevertheless, other fields (e.g., retailing) have developed far more advanced methods of interacting with their target recipients driven by the rapid changes in the technological landscape in marketing communications. In particular, Omnichannel Marketing is a relatively new field (Verhoef et al., 2015) that Cui et al. (2021) defines "as the synergistic management of all customer touchpoints and channels both internal and external to the firm to ensure that the customer experience across channels as well as firm-side marketing activity, including marketing-mix and marketing communication (owned, paid, and earned), is optimized for both firms and their customers" (pp. 104). In Omnichannel Marketing, several principles and characteristics can benefit the current modal of operation of D&C activities in EU projects as Table 2 presents.

Academia stands as a critical stakeholder in the Quintuple Helix model (Grundel & Dahlström, 2016). Universities are vital in generating new knowledge and ideas that can lead to innovations (Huang & Chen, 2017). Additionally, academic institutions can help educate the next generation of innovators and entrepreneurs, creating a pipeline of talent that can contribute to economic growth (Morawska-Jancelewicz, 2022; Volkmann et al., 2009). Government role stands highly in importance as a stakeholder in the Quintuple Helix model as it can provide funding and policy support for innovation initiatives. Part of those initiatives is to create an enabling environment for innovation by providing infrastructure and support for research and development (Mahfuz Ashraf et al., 2019). The industry is the third traditional stakeholder in the Quintuple Helix model. Businesses are critical in translating research and ideas into products and services that can be brought to market. Additionally, they can provide funding for research and development and

Themes	Source	Characteristics - Principles
Omnichannel Business	Lehrer & Trenz, (2022)	<ul style="list-style-type: none"> <li>◆ Seamless transition between channels within the same transaction</li> <li>◆ Consistent customer experience across channels</li> <li>◆ Coordinated and management of channels</li> <li>◆ Knowledge sharing across channels</li> <li>◆ Directed towards minimizing channel competition and maximizing channel synergies</li> <li>◆ Integrated across channels</li> </ul>

Table 2. Principles of omnichannel communication

Following this perspective, we propose introducing the base principles of Omnichannel marketing to the Dissemination and Communication of EU Projects, leading to an Omnichannel Dissemination and Communication Plan where all possible channels are examined and utilized in unison to maximize the potential of outreach of EU funded projects.

**Towards a Framework of Integrated Omnichannel Dissemination and Communication (IODC)**

Having identified the vast benefits of integrated marketing for all stakeholders (accounted by the quintuple helix) and omnichannel marketing, we propose an Integrated Omnichannel Dissemination and Communication (IODC) Framework as illustrated in Figure 2. The IODC Framework is developed to account for the need to mitigate the difficulties in synergies creation across channels and integrate customers’ messages, touchpoints and interactions as identified by Manser Payne et al. (2017) for European Funded projects.

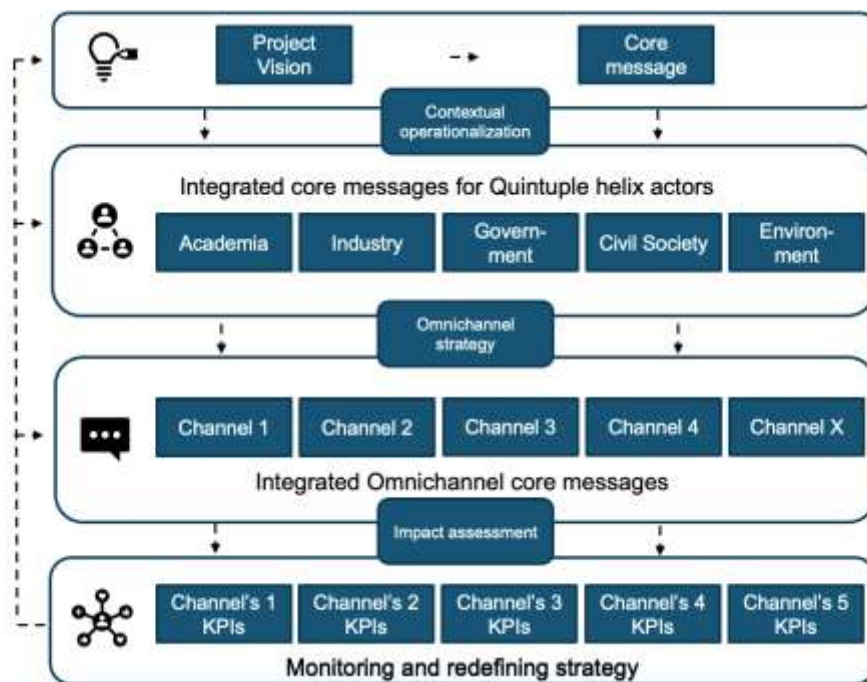


Figure 2. The Integrated Omnichannel Dissemination and Communication (IODC) Framework

Table 3 provides a comprehensive view for developing and evaluating a project's integrated omnichannel dissemination and communication strategy, with specific KPIs for each level. The matrix is structured into six levels, each focusing on a different aspect of the framework. The first level is the Core Message, which is the foundation of the communication strategy. It aims to develop a clear and concise message consistent across all channels and adapted to each stakeholder in the Quintuple Helix model while maintaining alignment with the research project vision. The second level is Contextual Relevance, which ensures that the messages are relevant and meaningful in the broader social, environmental, and economic context in which the research project occurs. The third level is Stakeholder Adaptation, which tailors the message to the interests and be appropriate for each stakeholder in the Quintuple Helix model. The fourth level is Communication Channels, identifying each stakeholder's most effective communication channels in order to reach the intended audience and engaging with them effectively. The fifth level is the Omnichannel Approach, which uses an integrated approach to distribute messages across multiple platforms and touchpoints, ensuring the message is consistent across all platforms and



reaches the intended audience in various contexts. The final level is Impact Assessment, which monitors and evaluates the impact of the communication strategy, using metrics such as website traffic, social media engagement, media coverage, citation counts, funding success, policy changes, and commercial agreements to track the effectiveness of the communication strategy and adjust as necessary.

Level	Objective	Suggested KPIs
Core Message	Develop a clear and concise message.	Clarity of message, Consistency of message across channels, Adaption of message for each stakeholder, Alignment with the research project vision
Contextual Relevance	Ensure messages are relevant and meaningful in the context of the research project	Alignment with broader social, environmental, and economic context, Effectiveness in conveying the significance and impact of the research project
Stakeholder Adaptation	Tailor the message to each stakeholder in the Quintuple Helix model	Appropriateness of message for each stakeholder, Alignment with stakeholder interests and priorities, Effectiveness of stakeholder-specific communication channels
Communication Channels	Identify the most effective communication channels for each stakeholder	Usage and effectiveness of each communication channel, Integration and consistency of communication channels, Audience reach and engagement
Omnichannel Approach	Utilize an omnichannel approach to distribute messages	Cross-platform consistency, Level of audience engagement across channels, Alignment with the project's context
Impact Assessment	Monitor and evaluate the impact of the communication strategy	Metrics such as website traffic, social media engagement, media coverage, citation counts, funding success, policy changes, commercial agreements

Table 3. The Integrated Omnichannel Dissemination and Communication (IODC) Matrix

## Conclusion and Future Work

In conclusion, developing and implementing an integrated omnichannel dissemination and communication strategy for research projects is crucial for ensuring that research findings are effectively disseminated to relevant stakeholders and maximize their impact on the broader society (Gudele, 2019). The proposed framework presented in this paper offers a comprehensive approach to developing and evaluating such a communication strategy, considering the stakeholders in the Quintuple Helix model and the respective communication channels. The framework offers a clear structure to ensure that the core message of the research project is communicated consistently and adapted appropriately for each stakeholder while being distributed effectively across various communication channels. The proposed KPIs for each level of the framework enable the evaluation of the effectiveness of the communication strategy and the optimization of its impact. Implementing the framework has the potential to contribute to the successful communication and dissemination of research findings, which can lead to positive outcomes such as commercial, academic, and social exploitation. Next steps include the operationalization of the IODC Framework to the Plooto project and its evaluation relevant to the KPIs proposed and monitored during (and after) the projects' lifespan.

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## References

- Barcellos-Paula, L., De la Vega, I., & Gil-Lafuente, A. M. (2021). The quintuple helix of innovation model and the sdgs: Latin-American countries' case and its forgotten effects. *Mathematics*, 9(4), 1–24. <https://doi.org/10.3390/math9040416>
- Campos, A., & Codina, L. (2021). Communication, dissemination and exploitation strategy analysis in horizon 2020 keys to multiply the impact of european projects. *Prisma Social*, 32(january), 293–320.
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. (2012). The Quintuple Helix innovation model: global warming as a challenge and driver for innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 2. <https://doi.org/10.1186/2192-5372-1-2>
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate To Each Other? : A Proposed Framework for a Trans-disciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development (IJSESD)*, 1(1), 41–69. <https://doi.org/10.4018/jesed.2010010105>
- Carayannis, E. G., Grigoroudis, E., Campbell, D. F. J., Meissner, D., & Stamati, D. (2018). The ecosystem as helix: an exploratory theory-building study of regional co-opetitive entrepreneurial ecosystems as Quadruple/Quintuple Helix Innovation Models. *R and D Management*, 48(1), 148–162. <https://doi.org/10.1111/radm.12300>
- Commission, E., Innovation, D.-G. for R. and, Iagher, R., Monachello, R., Warin, C., Delaney, N., & Tornasi, Z. (2020). *Science with and for society in Horizon 2020 : achievements and recommendations for Horizon Europe* (N. Delaney & Z. Tornasi (eds.)). Publications Office. <https://doi.org/doi/10.2777/32018>
- Coyne, P., Kustra, E., & Woodruff, S. J. (2022). Let's Talk About It: A Narrative Review of Digital Approaches for Disseminating and Communicating Health Research and Innovation. *Journal of Public Health Management and Practice : JPHMP*, 28(5), 541–549. <https://doi.org/10.1097/PHH.0000000000001518>
- Cui, T. H., Ghose, A., Halaburda, H., Iyengar, R., Pauwels, K., Sriram, S., Tucker, C., & Venkataraman, S. (2021). Informational Challenges in Omnichannel Marketing: Remedies and Future Research. *Journal of Marketing*, 85(1), 103–120. <https://doi.org/10.1177/0022242920968810>
- Danielopol, D. L., Gibert, J., & Griebler, C. (2006). Efforts of the European Commission to improve communication between environmental scientists and policy-makers. *Environmental Science and Pollution Research*, 13(2), 138–139. <https://doi.org/10.1065/espr2006.02.002>
- Elwy, A. R., Maguire, E. M., Kim, B., & West, G. S. (2022). Involving Stakeholders as Communication Partners in Research Dissemination Efforts. *Journal of General Internal Medicine*, 37, 123–127. <https://doi.org/10.1007/s11606-021-07127-3>
- Etzkowitz, H. (2003). Studies of science Etudes sur la science Innovation in innovation : the Triple Helix of university - industry - government relations. *Social Science Information*, 42(3), 293–337.
- European Commission. (2020). *A new Circular Economy Action Plan*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>
- European Commission. (2023). *Product Passport through Twinning of Circular Value Chains*. <https://cordis.europa.eu/project/id/101092008>
- Finne, Å., & Grönroos, C. (2017). Communication-in-use: customer-integrated marketing communication. *European Journal of Marketing*, 51(3), 445–463. <https://doi.org/10.1108/EJM-08-2015-0553>
- Goodman, M. S., & Sanders Thompson, V. L. (2017). The science of stakeholder engagement in research: classification, implementation, and evaluation. *Translational Behavioral Medicine*, 7(3), 486–491. <https://doi.org/10.1007/s13142-017-0495-z>
- Gravina, T., Muselli, M., Ligrone, R., & Angela Rutigliano, F. (2017). SUSTAINABILITY: A science communication website on environmental research. *Natural Hazards and Earth System Sciences*, 17(8), 1437–1446. <https://doi.org/10.5194/nhess-17-1437-2017>
- Grundel, I., & Dahlström, M. (2016). A Quadruple and Quintuple Helix Approach to Regional Innovation Systems in the Transformation to a Forestry-Based Bioeconomy. *Journal of the Knowledge Economy*, 7(4), 963–983. <https://doi.org/10.1007/s13132-016-0411-7>
- Gudele, I. (2019). The quintuple HELIX innovation model: Cooperation for E-services development and education of society. A case study in Latvia. In *Lecture Notes in Networks and Systems* (Vol. 68). Springer International Publishing. [https://doi.org/10.1007/978-3-030-12450-2\\_78](https://doi.org/10.1007/978-3-030-12450-2_78)
- Hansen, A. (2011). Communication, media and environment: Towards reconnecting research on the production, content and social implications of environmental communication. *International Communication Gazette*, 73(1), 7–25. <https://doi.org/10.1177/1748048510386739>
- Harrison, P., & Jackson, M. (2013). Integrated marketing communications and power imbalance: The strategic nature of marketing to children and adolescents by food and beverage companies. In *Advances in Communication Research to Reduce Childhood Obesity*. Springer New York. <https://doi.org/10.1007/978-1-4614-5511-0>

- Huang, M. H., & Chen, D. Z. (2017). How can academic innovation performance in university–industry collaboration be improved? *Technological Forecasting and Social Change*, *123*, 210–215. <https://doi.org/10.1016/j.techfore.2016.03.024>
- Kaur, B., & Nikander, J. (2017). Dissemination and Exploitation of European Projects. *2017 27th EAEEIE Annual Conference, EAEEIE 2017*. <https://doi.org/10.1109/EAEEIE.2017.8768687>
- Khrutba, A., Morozov, V., Khrutba, Y., Tkachenko, V., & Lysak, R. (2021). Implementation of communication and interaction management in distributed environmental projects. *Technology Audit and Production Reserves*, *6*(2(62)), 53–57. <https://doi.org/10.15587/2706-5448.2021.245853>
- Kliatchko, J. (2005). Towards a new definition of integrated marketing communications (IMC). *International Journal of Advertising*, *24*(1), 7–34. <https://doi.org/10.1080/02650487.2005.11072902>
- Kliatchko, J. (2009). IMC 20 Years After: A Second Look at IMC Definitions. *International Journal of Integrated Marketing Communications*, *1*(2), 7–12.
- Kliatchko, J. G. (2008). Revisiting the IMC construct: A revised definition and four pillars. *International Journal of Advertising*, *27*(1), 133–160. <https://doi.org/10.1080/02650487.2008.11073043>
- Lehrer, C., & Trenz, M. (2022). Omnichannel Business. *Electronic Markets*, *32*(2), 687–699. <https://doi.org/10.1007/s12525-021-00511-1>
- Lorés, R. (2020). Science on the web: The exploration of European research websites of energy-related projects as digital genres for the promotion of values. *Discourse, Context and Media*, *35*. <https://doi.org/10.1016/j.dcm.2020.100389>
- Mahfuz Ashraf, M., Razzaque, M. A., Liaw, S. T., Ray, P. K., & Hasan, M. R. (2019). Social business as an entrepreneurship model in emerging economy: Systematic review and case study. *Management Decision*, *57*(5), 1145–1161. <https://doi.org/10.1108/MD-04-2017-0343>
- Manser Payne, E., Peltier, J. W., & Barger, V. A. (2017). Omni-channel marketing, integrated marketing communications and consumer engagement: A research agenda. *Journal of Research in Interactive Marketing*, *11*(2), 185–197.
- Marín-González, E., Malmusi, D., Camprubí, L., & Borrell, C. (2017). The Role of Dissemination as a Fundamental Part of a Research Project: Lessons Learned From SOPHIE. *International Journal of Health Services*, *47*(2), 258–276. <https://doi.org/10.1177/0020731416676227>
- Mea, M., Newton, A., Uyarra, M. C., Alonso, C., & Borja, A. (2016). From science to policy and society: Enhancing the effectiveness of communication. *Frontiers in Marine Science*, *3*(SEP), 1–17. <https://doi.org/10.3389/fmars.2016.00168>
- Meyer, M., Grant, K., Morlacchi, P., & Weckowska, D. (2014). Triple Helix indicators as an emergent area of enquiry: A bibliometric perspective. *Scientometrics*, *99*(1), 151–174. <https://doi.org/10.1007/s11192-013-1103-8>
- Morawska-Jancelewicz, J. (2022). The Role of Universities in Social Innovation Within Quadruple/Quintuple Helix Model: Practical Implications from Polish Experience. *Journal of the Knowledge Economy*, *13*(3), 2230–2271. <https://doi.org/10.1007/s13132-021-00804-y>
- Ross-Hellauer, T., Tennant, J. P., Banelytè, V., Gorogh, E., Luzi, D., Kraker, P., Pisacane, L., Ruggieri, R., Sifacaki, E., & Vignoli, M. (2020). Ten simple rules for innovative dissemination of research. *PLoS Computational Biology*, *16*(4), 1–12. <https://doi.org/10.1371/journal.pcbi.1007704>
- Tripathy, J. P., Bhatnagar, A., Shewade, H. D., Kumar, A. M. V., Zachariah, R., & Harries, A. D. (2017). Ten tips to improve the visibility and dissemination of research for policy makers and practitioners. *Public Health Action*, *7*(1). <https://doi.org/10.5588/pha.16.0090>
- Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From Multi-Channel Retailing to Omni-Channel Retailing. Introduction to the Special Issue on Multi-Channel Retailing. *Journal of Retailing*, *91*(2), 174–181. <https://doi.org/10.1016/j.jretai.2015.02.005>
- Volkman, C., Wilson, K., Mariotti, S., Rabuzzi, D., & Vyakarnam, S. (2009). Unlocking entrepreneurial capabilities to meet the global challenges of the 21<sup>st</sup> Century. *World Economic Forum: A Report of the Global Education Initiative*, April, 184.
- Wilkinson, C., & Weitkamp, E. (2013). A case study in serendipity: Environmental researchers use of traditional and social media for dissemination. *PLoS ONE*, *8*(12), 1–9. <https://doi.org/10.1371/journal.pone.0084339>
- Yoon, J., Yang, J. S. W., & Park, H. W. (2017). Quintuple helix structure of Sino-Korean research collaboration in science. *Scientometrics*, *113*(1), 61–81. <https://doi.org/10.1007/s11192-017-2476-x>

# Marketing SMEs

## The Dynamics of Family Firms' Internationalization and Embeddedness Processes: A Longitudinal Case Study

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### Abstract:

The integration of a network perspective within the current IB discourse allows to study companies as embedded “*within networks of interconnected relationships that provide opportunities for and constraints on behaviour*” (Brass et al. 2004:795), rather than as isolated actors. Literature not only shows that network ties represent a key resource in facilitating internationalization (Masiello & Izzo, 2019) but also that insidership in the relevant network(s) increases the likelihood of succeeding in the foreign arena (Johanson & Vahlne, 2009). In this respect, network embeddedness - the degree actors are involved in “*concrete, ongoing systems of social relations*” (Granovetter, 1985:487) - plays a pivotal role in a company's potential international expansion. The present literature suggests that network embeddedness positively affects the international growth of the company, by providing valuable resources, increasing the engagement of organizational members, and representing a bridge to enter new foreign markets (Fletcher, 2008). Its relational nature makes the study of embeddedness particularly intriguing in the interaction among individuals, groups, and organizations, especially in the context of family firms. Especially during their internationalization process, family firms significantly differ both in the establishment and strength of network ties compared to their non-family counterparts (Kontinen & Ojala, 2011; Graves & Thomas, 2004), and the nature of their network embeddedness strongly influences their expansion in foreign markets (Pittino et al. 2021, Arregle et al. 2015).

Family firms are organizations where families influence corporate strategy and are willing to transfer the business across generations, thus giving special importance not only to economic goals but also to the pursuit of socioemotional wealth, i.e. non-economic issues related to family members' effective endowment (Gómez-Mejía et al. 2007). Since families are enduring social institutions across generations, they can rely on lasting shared meanings including values, norms, and beliefs to develop and shape family ties (Sieger & Minola, 2017). Family ties represent an important conduit of resources and a crucial driver of cooperation, mutuality, and information sharing (Aldrich & Cliff, 2003). Considering their orientation towards socioemotional wealth goals, multigenerational impact, and personal relationships, family firms thus represent a unique organizational setting to examine the phenomenon of network embeddedness (Howorth & Robinson, 2020). Indeed, especially when they expand at a global level, family firms need to carry out their strategic activities in collaboration with other firms. The success of these collaborations with suppliers and other strategic partners is built also on long-term oriented and trust-based relational governance rather than mere formal governance mechanisms (Arregle et al. 2015). Therefore, it is important to study how family and organizational ties are built and integrated, as well as extend the exploration of family embeddedness beyond the boundaries of a single organization to unveil its potential in cross-organizational collaborations.

We intend to conduct a longitudinal qualitative case study of the internationalization of an Austrian family firm, the world leader in the development and production of packaging solutions. We aim to study how the company has created, nurtured, and leveraged inter-personal and inter-firm network relationships over time, and how this has influenced the firm outstanding global growth. This analysis will make it possible to analyze: a) how family firms can lever their family values and non-economic goals to build social ties and manage embeddedness in their strategic networks during internationalization; b) which kind and in what ways their network relationships may influence internationalization process; c) and how network embeddedness changes over time during international expansion. As a preliminary step, we conducted 14 open-ended interviews (~45 minutes) with family and non-family members of the company, especially those involved in strategic choices regarding internationalization and employees who have experienced generational succession. Our initial findings show that the chosen company is an exemplar case of how family values can help create strong social ties and the conditions for becoming global leaders. Given its strong global presence, the establishment of production and

manufacturing facilities around 4 continents has allowed the company to create and leverage network relationships with its business partners and to become locally embedded in the served markets. Over the years, the firm engaged and consolidated long-lasting strategic partnerships, thanks to its family values and cutting-edge technologies. Ultimately, such embedded ties enabled the company to “offer peace of mind both to employees and to customers and partners”, while strengthening its role in existing networks and developing new ones. Over the years, the family firm has established strong network-based relationships with all its business partners, but also within the company (e.g., long-term relationships with employees). Such a strategy helped the company to expand in the target markets and enhance its identity around the world.

We aim to contribute to the intersection of the international business and family business literature, by widening social embeddedness theory toward family firms’ internationalization. In this regard, we seek to offer relevant theoretical implications for family business research, a field in which the concept of embeddedness still lacks “theoretical definiteness” (Krippner & Alvarez, 2007; Steier, Chua & Chrisman, 2009). Ultimately, the present study will contribute to the existing literature, by analysing the dynamics of embeddedness formation and management of key network relations within the company (e.g., intra- and extra-family relationships) and with its business partners. In particular, we aim to identify and highlight the key social and business network relationships of the firm and the critical role they played in its international expansion, with a special focus on their inherent mechanisms. To date, knowledge on network embeddedness has mostly been generated by variance theorizing, overlooking how such phenomenon emerges, evolves, or terminates over time, as well as its antecedents (Langley, 1999; Langley, Smallman, Tsoukas, & Van de Ven, 2013). Therefore, the adoption of a dynamic approach, grounded on a process ontology allows for providing a time-informed contribution to social embeddedness theory (Granovetter, 1985; Uzzi, 1996, 1997) on the phenomenon of network embeddedness.

**Keywords:** *Internationalization, Networks, Embeddedness, Family business, Case study*

## References:

- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of business venturing*, 18(5), 573-596.
- Arregle, J.-L., Batjargal, B., Hitt, M.A., Webb, J.W., Miller, T. and Tsui, A.S. (2015), Family ties in entrepreneurs’ social networks and new venture growth, *Entrepreneurship: Theory and Practice*, 39(2), 313-344.
- Brass, D. J., Galaskiewicz, J., Greve, H. R., & Tsai, W. (2004). Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal*, 47(6), 795-817.
- Fletcher, R., & Barrett, N. (2001). Embeddedness and the Evolution of Global Networks: An Australian Case Study. *Industrial Marketing Management*, 30(7), 561–573.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative science quarterly*, 52(1), 106-137.
- Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- Howorth, C., & Robinson, N. (2020). *Family business*. Routledge.
- Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-1431.
- Krippner, G. R., & Alvarez, A. S. (2007). Embeddedness and the intellectual projects of economic sociology. *Annual Review of Sociology*, 33, 219-240
- Kontinen, T., & Ojala, A. (2011). Network ties in the international opportunity recognition of family SMEs. *International Business Review*, 20(4), 440-453.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691–710.
- Langley, A., Smallman, C., Tsoukas, H., & Van de Ven, A. H. (2013). Process Studies of Change in Organization and Management: Unveiling Temporality, Activity, and Flow. *Academy of Management Journal*, 56(1), 1–13.
- Masiello, B., & Izzo, F. (2019). Interpersonal social networks and internationalization of traditional SMEs. *Journal of Small Business Management*, 57, 658-691.
- Sieger, P., & Minola, T. (2017). The family's financial support as a “poisoned gift”: A family embeddedness perspective on entrepreneurial intentions. *Journal of Small Business Management*, 55, 179-204.

- Pittino, D., Visintin, F., Minichilli, A., & Compagno, C. (2021). Family involvement in governance and firm performance in industrial districts. The moderating role of the industry's technological paradigm. *Entrepreneurship & Regional Development*, 1-18.
- Steier, L. P., Chua, J. H., & Chrisman, J. J. (2009). Embeddedness perspectives of economic action within family firms. *Entrepreneurship Theory and Practice*, 33(6), 1157-1167.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: the network effect. *American Sociological Review*, 61(4), 674-698.
- Uzzi, B. (1997). Social structure and competition in interfirm networks. *Administrative Science Quarterly*, 42(1), 37-69.

## **The Determinants of Digitalization in SMEs in Turkey: An Empirical Study**

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Digitalization becomes a key factor, especially after the pandemic all over the World for all sectors. In this context, this study aims to analyze the determinants of digitalization for small and medium-sized enterprises in Turkey. A survey is applied to 540 firms to determine the evaluation of digitalization after the pandemic. Firms are serving in the manufacturing and service sectors in 12 NUTS areas of Turkey. The field of the business, gender, city, the number of employees, effect of the pandemic are the main explanatory variables for the digitalization mod. Logistic regression is employed to see the factors of digitalization. According to the preliminary results, the Covid-19 pandemic tends to affect positively the digitalization story of the firms.

**Keywords:** *Digitalization, Turkey, SMEs.*



# Family SMEs internationalization through exports: A systematic literature review

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**Abstract:** Although research on family small and medium enterprises (family SMEs) internationalization has increased over the past 30 years, the understanding of family SMEs exports is fragmented with contradictory findings with regard to the exportation activities. This fragmentation makes it difficult to assess the state of the art and identify where researchers should focus their future efforts. Stemming from these considerations and with the aim to understand where the academic debate is now and where it should go next, this study maps the extant family SMEs' exportation literature and identify some promising directions for future research on family SMEs' exports. To do so, this study systematically collects and analyses 55 articles and brings into light four research thematic categories, namely "the role of innovation in family SMEs' exports", the role of family involvement in SMEs' exports", "the role of SEW in family SMEs' exports" and "the role of successors in family SMEs' exports". Additionally, future research directions are proposed within these four categories.

**Keywords:** exports, non-equity modes, family SME, innovation, SEW, family involvement, successors

## 1. INTRODUCTION

Family SMEs, owned and operated by family members, constitute the majority of companies worldwide (Hennart et al., 2019). They are known for their strong family ties, distinct cultures and values and a unique bundle of resources known as "familiness" (Habbershon and Williams, 1999; Hennart et al., 2019). These features together with Socio-Emotional Wealth (SEW) preservation tendencies (e.g. the preservation of family legacy, the maintenance of the good reputation of the family owning the family SME) can inform family SMEs' domestic and international operations (Arregle et al., 2021; Lobo et al., 2022).

In an international context, family-owned SMEs embark on an equity investment (e.g. foreign direct investments) or other non-equity forms of internationalization such as exports or non-equity contractual agreements (e.g. licensing or franchising). The family firm (FF) internationalization literature highlights that the majority of family SMEs choose exports as their entry mode (Maggi et al., 2022) in order to minimize the potential SEW preservation risk associated with equity modes (Pongelli et al., 2016; Scholes et al., 2016). Nevertheless, research on the family SMEs exporting activities provides conflicting findings with regard the exportation trend of family SMEs (e.g. Cirillo et al., 2022; Basly, 2015). Moreover, although FF exportation research has shown that family SMEs are different than other non-family SMEs in their exporting activities (Larimo, 2013), it is also shown that family SMEs can also achieve similar exporting activities as their nonfamily counterparts (Hennart et al., 2019). These conflicting findings makes it difficult to assess the state of the art and identify where researchers should focus their future efforts. Stemming from these considerations and with the aim to understand where the academic debate is now and where it should go next, this study maps the extant FF exportation literature, by systematically collecting and analyzing 55 articles, and identifies some promising directions for future research on family SMEs' exports.

To the best of our knowledge, this is the first state-of-the-art review that seeks to interpret and compare findings from the FF exportation literature and illuminate emerging thematic categories and future research directions. Our study also provides the reader with ideas on the challenges or opportunities that family SMEs face in their exporting activities.

## 2. METHODOLOGY

In order to fulfill the purpose of the study, we conducted a systematic literature review (Snyder, 2019) to assess the state of the art on the topic of family SMEs' exports. To ensure a thorough and rigorous literature review process, we followed the recommendations of previous researchers, such as Short (2009), Paul and Criado

(2017), and Tsotsou (2022) and identified empirical studies published in international business peer-reviewed journals, following the predetermined inclusion and exclusion criteria below.

We first identified the relevant body of research by conducting a keyword search in the Scopus database trying to identify search terms such as "export\*", "family firm", "family enterprise", "family-owned firms", and "family managed" in the title, abstract, and keywords of the studies. This process yielded a total of 170 articles. We then employed inclusion and exclusion criteria to ensure the quality and reliability of the research following Snyder's (2019) suggestion. In particular, we searched in the Scopus database in the subject area of "Business, Management, and Accounting" to identify empirical articles published in journals listed in the 2021 ABS list. This helped us to identify articles published in high-quality journals. After applying these criteria, 66 studies were identified. Out of the 66 studies, 11 articles, such as Schøtt et al. (2021) and Misra (2012) did not meet the aforementioned criteria and hence they were excluded, resulting in a final sample of 55 articles.

After selecting a final dataset of 55 articles, a qualitative content analysis was conducted (Snyder, 2019; Krippendorff, 2018). To ensure a comprehensive analysis, each article's content was analyzed independently, and a unique coding scheme was developed by drawing upon previous reviews and the distinctive characteristics of the data (e.g., Kontinen & Ojala, 2010). The coding spreadsheet featured columns for each code and rows for the analysis of each individual article. The paper's type, purpose, key theories, methodology, findings, and practical implications identified in each article were analyzed and grouped as we deemed appropriate. To illustrate, we looked for the associations and connections between key categories highlighted in the examined articles by examining the links between the different codes associated with each article. By grouping the articles in this way, connections between the findings and prevalent themes emerged. For example, 26 studies from our data pool of articles addressed the same topic of "family involvement in exports". We note that some of the articles from our data pool fell into two categories, namely, the role of innovation in family SMEs exports and the role of successors in family SMEs' exports. The synthesis of the studies resulted also in the emergence of new ideas that we proposed as future research directions.

### 3.FINDINGS

To map the extant FF exportation literature this study analyzed 55 empirical research papers published in 40 different academic journals. It should be noted that the majority of the articles were published between 2019 and 2022, with a peak of interest in 2021 and 2022.

The dominant theories applied in these studies are: the SEW perspective (Das, 2022; Saleem et al., 2020; Scholes et al., 2016; Liang et al., 2014; Monreal-Pérez & Sánchez-Marín, 2017; Cirillo et al., 2022), the agency theory (Luu, 2022; Das, 2022; Yang et al., 2020; Monreal-Pérez & Sánchez-Marín, 2017; Cano-Rubio et al., 2021; Sánchez Pulido et al., 2021; Carney et al., 2017; Ramón-Llorens et al., 2017; Westhead & Howorth, 2006; Smith, 2008; Calabrò & Mussolino, 2013; Khan et al., 2015), the stewardship theory (Alayo et al., 2022; Luu, 2022; Das, 2022; Basly & Saunier, 2020; Cano-Rubio et al., 2021; Westhead & Howorth, 2006; Alayo et al., 2022; Campos-García et al., 2021; Vazquez et al., 2020), and the resource-based view (Duarte Alonso & Austin, 2016; Luu, 2022; Das, 2022; Giang & Dung, 2021; Ramón-Llorens et al., 2017; Cerrato & Piva, 2012; Calabrò & Mussolino, 2013; Campos-García et al., 2021; Crick et al., 2006; Bassetti et al., 2015).

From our analysis four thematic categories emerged, namely "the role of innovation in family SMEs' exports", the role of family involvement in SMEs' exports", "the role of SEW in family SMEs' exports" and "the role of successors in family SMEs' exports". We report our findings within these thematic categories below.

#### *The role of innovation in family SMEs exports*

All examined studies within this category (n=17 studies within this thematic category) illustrate that innovative activities of family SMEs' are important since they can stimulate the internationalization process (Alayo et al., 2022; Espeche et al., 2022; Freixanet & Federo, 2020) and enhance the success of exportation activities (Petrů et al., 2019). Family SMEs' innovation strategies and abilities make them more likely to transform new knowledge gained through exporting into product innovation and to be more efficient in this pursuit compared to non-family SMEs (Sánchez-Marín et al., 2020; Freixanet et al., 2020).

Nevertheless, not all family SMEs adopt innovative strategies. The adoption of innovation depends on the family that owns the family SME (Alayo et al., 2022) - family ownership can impede a firm's pursuit of innovation (e.g. green innovation) – and is mostly due to family features such as risk aversion and SEW preservation (Haddoud et al., 2021).

The role of the successors in the exportation activities of family SMEs is also highlighted within this research category with contradictory findings. For example, while our findings highlight that the impact of learning-by-exporting on product innovation decreases as the family SME moves into its second or third generation (Civelek et al., 2021), the study by Espeche et al. (2022) support no significant differences in the innovativeness of SMEs with and without successors.

*The role of family involvement in exports*

The effect of family involvement on a firm's exportation is a subject of debate in the examined literature (n=26 studies within this thematic category). It should be noted that while some studies suggest that family member involvement in management has a negative impact on the export trend, other research shows that having non-family members on the board positively influences the exportation activities of family SMEs. To further enhance export intensity, it is advised that family SMEs employ non-family managers for a certain period and that the number of family members involved should be optimized to maximize innovation and internationalization (Cirillo et al., 2022; Campos-García et al., 2021).

*The role of SEW in family SMEs' exports*

All examined studies within this category (n=10) showed a significant interest in their findings related to SEW and family SMEs' exporting activities. Most articles suggest that family SMEs are negatively associated with export propensity due to their focus on achieving SEW in both short-term and long-term (Yang et al., 2020). It is also supported that SEW aspirations are more strongly correlated with export propensity than the intensity of exports. Factors such as disharmony between family members, lack of trust, family control, and influence can limit family SMEs' export activity (Scholes et al., 2016). However, Basly and Saunier (2020) suggest that export intensity in family SMEs is influenced by two out of five SEW goals (family control and influence and identification of family members with the firm), while four SEW goals are positively and significantly impacted by the family SME essence. Their study also provides evidence of a positive relationship between the power and experience components of the familiness construct, and between experience and the family firm SME of the firm (p. 271).

*The role of successors in family SMEs' exports*

Our results indicated (n= 11 studies within this thematic category) that there are contrasting findings with regard to the role of successors in family SMEs' exports. To illustrate, on the one hand past research supports that the degree of conservatism and tradition of family members negatively affects the level of family SMEs' foreign sales ((Ramón-Llorens et al., 2017; Fernández & Nieto, 2005; Okoroafo, 1999; Petru et al., 2019) and those family SMEs that do not engage in foreign markets in the first and second generations are less likely to do so in subsequent generations (Okoroafo, 1999). On the other hand, more recent studies support that second/next-generation family SMEs are in favor of exports (Calabrò & Mussolino, 2013) and highlight that involving family millennials in promoting and supporting exportation can enhance export intensity (Cirillo et al., 2022; Campos-García et al., 2021). By assigning family SMEs to the next generations who can bring in new resources and knowledge (Ramón-Llorens et al., 2017; Fernández & Nieto, 2005; Okoroafo, 1999; Petru et al., 2019), the exportation activities can be increased.

Table 1: Emerging thematic categories

<b>Thematic Categories</b>	<b>References of explored papers within each thematic category</b>
The role of innovation in family SMEs' exports	Alayo et al., 2022; Espeche et al., 2022; Freixanet & Federo, 2020; Haddoud et al., 2021; Civelek et al., 2021; Sánchez-Marín et al., 2020; Freixanet et al., 2020; Duarte Alonso & Austin, 2016; Koul et al., 2020; Audretsch et al., 2018; Carney et al., 2017; Buxey, 2005; Segaro & Haag, 2022; D'Angelo & Buck, 2019; Khan et al., 2015; Crick et al., 2006; Larimo, 2013
The role of family involvement in SMEs' exports	Cirillo et al., 2022; Campos-García et al., 2021; Manogna & Mishra, 2021; Sánchez-Marín et al., 2020; Liang et al., 2014; Eberhard & Craig, 2013; Cerrato & Piva, 2012; Moini et al., 2010; Westhead & Howorth, 2006; Smith, 2008; Singh & Wyrobek, 2013; Calabrò & Mussolino, 2013; Alayo et al., 2022; Civelek et al., 2021; Basly & Saunier, 2020; Vazquez et al., 2020; Freixanet et al., 2020; Bauweraerts et al., 2019; Luu, 2022; Cano-Rubio et al., 2021; Sánchez Pulido et al., 202; Coşkun et al., 2022; Kotey, 2005; Crick et al., 2006; Herath et al., 2006; Bassetti et al., 2015
The role of SEW in family SMEs' exports	Basly & Saunier, 2020; Scholes et al., 2016; Luu, 2022; Das, 2022; Giang & Dung, 2021; Saleem et al., 2020; Yang et al., 2020; Razzak et al., 2019; Liang et al., 2014; Monreal-Pérez & Sánchez-Marín, 2017
The role of successors in family SMEs' exports	Calabrò & Mussolino, 2013; Ramón-Llorens et al., 2017; Fernández & Nieto, 2005; Okoroafo, 1999; Petru et al., 2019; Luu, 2022; Cano-Rubio et al., 2021; Cirillo et al., 2022; Sánchez-Marín et al., 2020; Westhead & Howorth, 2006; Alayo et al., 2022

#### 4.CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

In this study, our objective was to collect, analyze, and synthesize existing research on the topic of family SMEs' exports. By doing so, we aimed to enhance the understanding of family SMEs' exports and to propose a way forward for future research and practice. Our findings highlight that in family SMEs, innovation is important for promoting exportation and that the family involvement in the family SMEs' exportation activities and innovation during these activities plays a crucial role (Hausmann et al., 2007). Our results also illustrate the contradictory findings in the extant family SMEs' exportation research with regard to the role of the successors in the exportation trends and the focus family SMEs place of SEW preservation tendencies (Liang & Wang, 2014; Basly & Saunier, 2020; Campos-García et al., 2021; Cirillo et al., 2022).

With regard to future research directions, the results from our study enabled us also to focus on what merits further investigation, in terms of “the role of innovation in family SMEs' exports”, the role of family involvement in SMEs' exports”, “the role of SEW in family SMEs' exports” and “the role of successors in family SMEs' exports” (Table 1).

Table 2: Future research directions under each thematic category

Thematic Categories	Future Research Directions
The role of innovation in family SMEs' exports	Investigate what is the impact of successors in innovation processes during exportation activities of family SMEs
The role of family involvement in SMEs' exports	Explore how family SMEs owned by different family CEO types (e.g. with different training and experience in international markets) use their resources (financial or non-financial) to boost their exports
The role of SEW in family SMEs' exports	Clarify which SEW dimensions can increase (or not) export intensity of family SMEs
The role of successors in family SMEs' exports	Explore how successors of different generations could family SMEs to enroll (or not) in exportation activities

First, with regard to the role of innovation research still lacks an understanding of the impact of successors in innovation processes during the exportation of family SMEs. Such a research could resolve conflicting findings in the literature (Civelek et al., 2021) and enhance understanding of the family SMEs' exportation processes.

With regard to the role of family involvement in exports, we note that assessing the degree and manner of family involvement is more relevant than categorizing firms as family or non-family (Astrachan et al., 2002) in FF exportation research. Family SMEs consist of a family managing their firm, with various types of families influencing management, resources, and strategies (Arregle et al., 2019).

Moreover, our findings highlighted that the exportation activities of family SMEs depend on the CEO's training and experience (Sánchez Pulido et al., 2021). Taking these into account plus the fact that the implications for family SMEs' international performance are scarce (Debellis et al., 2021), future research could explore how family SMEs owned by different family CEO types (e.g. with different training and experience in international markets) use their resources (financial or non-financial) to boost their exports. Sometimes willingness and ability are at odds with each other, meaning that family SMEs may have the willingness to boost their exports and further expand internationally by adopting equity modes but not have the financial ability to do so. Such a research could be of theoretical and practical interest to both researchers and family SMEs. The resource-based view could help in addressing such a future research direction since it suggests that an organization's performance is determined by its ability to combine its unique set of resources in order to take advantage of market opportunities (Taher, 2012, p.154).

With regard to the role of SEW, it is recognized that SEW goals (family harmony, family control maintenance) impact strategic decisions (Berrone et al., 2012). Future research could better clarify which SEW dimensions can increase (or not) the export intensity of family SMEs. For example, successors from different generations do not give the same emphasis on the preservation of SEW (Mariotti et al., 2018). Hence, it would be interesting to explore how successors can increase (or not) the exporting activities of family SMEs.

Finally, given the fact that there are contradictory findings in the literature with regard to the role of successors (belonging to different generations) in the exportation processes of family SMEs, future research could explore how successors of different generations could enroll (or not) in the exportation activities of family SMEs.

**KEY REFERENCES**

- Alayo, M., Iturralde, T., & Maseda, A. (2022). Innovation and internationalization in family SMEs: analyzing the role of family involvement. *European Journal of Innovation Management*, 25(2), 454-478.
- Alonso, A. D., & Austin, I. P. (2016). "I see the future": Associations between innovation and resources in the case of an exporting Western Australian regional family firm. *Review of International Business and Strategy*, 26(3), 314-333.
- Arregle, J. L., Chirico, F., Kano, L., Kundu, S. K., Majocchi, A., & Schulze, W. S. (2021). Family firm internationalization: Past research and an agenda for the future. *Journal of International Business Studies*, 52(6), 1159-1198.
- Arregle, J. L., Hitt, M. A., & Mari, I. (2019). A missing link in family firms' internationalization research: Family structures. *Journal of International Business Studies*, 50(5), 809-825.
- Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: A proposal for solving the family firm definition problem. *Family Business Review*, 15(1), 45-58.
- Audretsch, D. B., Lehmann, E. E., & Schenkenhofer, J. (2018). Internationalization strategies of hidden champions: lessons from Germany. *Multinational Business Review*, 26(1), 2-24.
- Basly, S. (2015). Family involvement in the firm and exports in the family SME: is the Manager's international orientation influential? *Journal of Intercultural Management*, 7(3), 69-99.
- Basly, S., & Saunier, P. L. (2020). Familiness, socio-emotional goals and the internationalization of French family SMEs. *Journal of International Entrepreneurship*, 18(3), 270-311.
- Bassetti, T., Dal Maso, L., & Lattanzi, N. (2015). Family firms in Eastern European countries: How informal payments affect exports. *Journal of Family Business Strategy*, 6(4), 219-233.
- Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 25(3), 258-279.
- Calabrò, A., & Mussolino, D. (2013). How do boards of directors contribute to family SME export intensity? The role of formal and informal governance mechanisms. *Journal of Management & Governance*, 17(2), 363-403.
- Campos-García, I., Muñoz-Bullón, F., Sanchez-Bueno, M. J., & Zúñiga-Vicente, J. Á. (2021). Do Employees boost opportunities to compete abroad? A longitudinal study of family and non-family firms. *European Management Journal*, 40(5), 741-757.
- Carney, M., Duran, P., Van Essen, M., & Shapiro, D. (2017). Family firms, internationalization, and national competitiveness: Does family firm prevalence matter? *Journal of Family Business Strategy*, 8(3), 123-136.
- Cerrato, D., & Piva, M. (2012). The internationalization of small and medium-sized enterprises: the effect of family management, human capital and foreign ownership. *Journal of Management & Governance*, 16(4), 617-644.
- Cirillo, A., Maggi, B., Sciascia, S., Lazzarotti, V., & Visconti, F. (2022). Exploring family millennials' involvement in family firm internationalization: Who should be their leader? *Journal of Family Business Strategy*, 13(3), 100455.
- Cirillo, A., Muñoz-Bullón, F., Sánchez-Bueno, M. J., & Sciascia, S. (2022). Employee downsizing and sales internationalization strategy in family firms. *Journal of Family Business Strategy*, 13(2), 100354.
- Civelek, M., Ključnikov, A., Fialova, V., Folvarčnà, A., & Stoch, M. (2021). Major obstacles in innovative activities of family-owned SMEs: Evidence from Czechia. *Economics & Sociology*, 14(2), 137-149.
- Coşkun, R., Kryeziu, L., & Krasniqi, B. A. (2022). Institutions and competition: does internationalisation provide advantages for the family firms in a transition economy? *Journal of Entrepreneurship and Public Policy*, 11(2-3), 253-272.
- Crick, D., Bradshaw, R., & Chaudhry, S. (2006). "Successful" internationalising UK family and non-family-owned firms: a comparative study. *Journal of Small Business and Enterprise Development*, 13(4), 498-512.
- D'Angelo, A., & Buck, T. (2019). The earliness of exporting and creeping sclerosis? The moderating effects of firm age, size and centralization. *International Business Review*, 28(3), 428-437.
- Das, A. (2022). Promoting organizational diversity and preserving socioemotional wealth: can family firms balance the two? *Journal of Family Business Management*, 12(4), 653-678.
- Downs, G.W., & Mohr, L.B. (1979). Toward a theory of innovation. *Administration and Society*, 10(4), 379-408.
- Espeche, J. F. T., Sacristán-Navarro, M., Zúñiga-Vicente, J. Á., & Crespo, N. F. (2022). Innovation and internationalisation during times of economic growth, crisis, and recovery prior to Covid-19: A configurational approach comparing Spanish manufacturing family and non-family firms. *Journal of Family Business Strategy*, 100513.

- Fernández, Z., & Nieto, M. J. (2005). Internationalization strategy of small and medium-sized family firms: Some influential factors. *Family Business Review*, 18(1), 77-89.
- Freixanet, J., & Federo, R. (2022). The complex interplay of firm innovation, internationalization and learning capability in driving firm performance: a configurational analysis. *Journal of Strategy and Management*, 15(4), 766-790. Haddoud et al., (2021).
- Freixanet, J., Monreal, J., & Sánchez-Marín, G. (2020). Family firms' selective learning-by-exporting: product vs process innovation and the role of technological capabilities. *Multinational Business Review*, 29(2), 210-236.
- Giang, H. T. T., & Dung, L. T. (2021). Transformational leadership and non-family employee intrapreneurial behaviour in family-owned firms: the mediating role of adaptive culture and psychological empowerment. *Leadership & Organization Development Journal*, 42(8), 1185-1205.
- Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*.
- Hausmann, R., Hwang, J., & Rodrik, D. (2007). What you export matters. *Journal of Economic Growth*, 12(1), 1-25.
- Hennart, J. F., Majocchi, A., & Hagen, B. (2021). What's so special about born globals, their entrepreneurs or their business model?. *Journal of International Business Studies*, 52(9), 1665-1694.
- Herath, S. K., Herath, A., & Azeez, A. A. (2006). Family firms and corporate culture: a case study from a Less Developed Country (LDC). *International Journal of Management and Enterprise Development*, 3(3), 227-243.
- Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship Theory and Practice*, 28(3), 209-228.
- Khan, A., Muttakin, M. B., & Siddiqui, J. (2015). Audit fees, auditor choice and stakeholder influence: Evidence from a family-firm dominated economy. *The British Accounting Review*, 47(3), 304-320. Kotey, (2005).
- Kontinen, T., & Ojala, A. (2010). The internationalization of family firms: A review of extant research. *Journal of Family Business Strategy*, 1(2), 97-107.
- Koul, S., Kumar, U., Kumar, V., & Singla, S. (2020). Internationalization: Case of an emerging home decor family firm. *South Asian Journal of Business and Management Cases*, 9(3), 433-444.
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology*. Sage publications.
- Larimo, J. (2013). Small and medium-size enterprise export performance: Empirical evidence from Finnish family and non-family firms. *International Studies of Management & Organization*, 43(2), 79-100.
- Liang, X., Wang, L., & Cui, Z. (2014). Chinese private firms and internationalization: Effects of family involvement in management and family ownership. *Family Business Review*, 27(2), 126-141.
- Lobo, C. A., Fernandes, C., Ferreira, J., Veiga, P. M., & Gerschewski, S. (2022). The Determinants of International Performance for Family Firms: Understanding the Effects of Resources, Capabilities, and Market Orientation. *Entrepreneurship Research Journal*.
- Luu, T. D. (2022). Non-family employee strategic renewal in family firms: the transformational leadership role of family board members and psychological ownership. *Journal of Family Business Management*.
- Mariotti, S., Marzano, R., & Piscitello, L. (2021). The role of family firms' generational heterogeneity in the entry mode choice in foreign markets. *Journal of Business Research*, 132, 800-812.
- Maggi, B., Pongelli, C., & Sciascia, S. (2022). Family firms and international equity-based entry modes: a systematic literature review. *Multinational Business Review*, (ahead-of-print).
- Manogna, R. L., & Mishra, A. K. (2020). Exploring the role of family ownership in internationalization: empirical investigation of Indian firms. *Review of International Business and Strategy*, 31(1), 1-15.
- Misra, S. (2012). Ramesh Sawant: Story of an Entrepreneur's Journey without the Map. *The Journal of Entrepreneurship*, 21(1), 133-156.
- Monreal-Pérez, J., & Sánchez-Marín, G. (2017). Does transitioning from family to non-family controlled firm influence internationalization? *Journal of Small Business and Enterprise Development*, 24(4), 775-792.
- Okoroafo, S. C. (1999). Internationalization of family firms: Evidence from Northwest Ohio, USA. *Family Business Review*, 12(2), 147-158.
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 1017-17.
- Petrů, N., Tomášková, A., & Krošlák, M. (2019). Diversification of export territories of family firms as a tool of their further development. *Problems and Perspectives in Management*, 17(3), 306.
- Pongelli, C., Caroli, M. G., & Cucculelli, M. (2016). Family business going abroad: The effect of family ownership on foreign market entry mode decisions. *Small Business Economics*, 47, 787-801.
- Ramón-Llorens, M. C., García-Meca, E., & Duréndez, A. (2017). Influence of CEO characteristics in family firms internationalization. *International Business Review*, 26(4), 786-799.
- Saleem, I., Siddique, I., & Ahmed, A. (2019). An extension of the socioemotional wealth perspective: Insights from an Asian sample. *Journal of Family Business Management*, 10(4), 293-312.

- Sánchez Pulido, L., Moreno Gené, J., & Gallizo Larraz, J. L. (2021). Internationalization of family firms: the effect of CEO attributes. *Journal of Management and Governance*, 26(4), 1123-1154.
- Sánchez-Marín, G., Pemartín, M., & Monreal-Pérez, J. (2020). The influence of family involvement and generational stage on learning-by-exporting among family firms. *Review of Managerial Science*, 14(1), 311-334.
- Scholes, L., Mustafa, M., & Chen, S. (2016). Internationalization of small family firms: The influence of family from a socioemotional wealth perspective. *Thunderbird International Business Review*, 58(2), 131-146.
- Schøtt, T., Gartner, W. B., & Vescovi, T. (2021). Introduction to and overview of the special issue on family business. *European Journal of International Management*, 16(2), 183-189.
- Shi, H. X., Graves, C., & Barbera, F. (2019). Intergenerational succession and internationalisation strategy of family SMEs: Evidence from China. *Long Range Planning*, 52(4), 101838.
- Short, J. (2009). The art of writing a review article. *Journal of Management*, 35(6), 1312-1317.
- Smith, M. (2008). Differences between family and non-family SMEs: A comparative study of Australia and Belgium. *Journal of Management & Organization*, 14(1), 40-58.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333-339.
- Taher, M. (2012). Resource-based view theory. *Information Systems Theory* (pp. 151-163). Springer, New York, NY.
- Tsiotsou, R. H., Koles, B., Paul, J., & Loureiro, S. M. C. (2022). Theory generation from literature reviews: A methodological guidance. *International Journal of Consumer Studies*, 46(5), 1505-1516.
- Vazquez, P., Carrera, A., & Cornejo, M. (2020). Corporate governance in the largest family firms in Latin America. *Cross Cultural & Strategic Management*, 27(2), 137-163.
- Westhead, P., & Howorth, C. (2006). Ownership and management issues associated with family firm performance and company objectives. *Family Firm Review*, 19(4), 301-316.
- Yang, X., Li, J., Stanley, L. J., Kellermanns, F. W., & Li, X. (2020). How family firm characteristics affect internationalization of Chinese family SMEs. *Asia Pacific Journal of Management*, 37(2), 417-448.
- Zogning, F. (2017). Agency theory: A critical review. *European journal of Business and Management*, 9(2), 1-8.

# **A systematic literature review of SMEs' internalization and intercultural competences**

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## **Abstract**

Small and medium-sized businesses (SMEs) encounter comparable global challenges to larger corporations. However, SMEs face even greater obstacles when compared to their larger counterparts. Specifically, their management, marketing, and entrepreneurial abilities, together with their capacity to acquire technological equipment, financial resources, and know-how, serve as barriers to their internationalization efforts. Consequently, SMEs encounter difficulties accessing global markets due to their limited ability to acquire and apply relevant information. Moreover, the lack of intercultural competency among employees further compounds the challenges SMEs face, particularly in navigating the intricacies of cultural issues.

This study aims to identify the key issues associated with business internalization and intercultural skills in the existing literature. To achieve this, we systematically examine the prisma analysis literature, critically evaluating 43 peer-reviewed articles published between 2013 and 2023. By synthesizing and analyzing the most recent material on this subject, this research contributes to the body of literature on the topic, fostering and advancing the discourse surrounding business internalization and intercultural skills of SMEs.

## **1. Introduction**

In recent years, there has been a significant surge in scholarly interest surrounding the internalization of small and medium-sized businesses (SMEs) (Chen, 2016). This heightened attention lies in the recognized benefits of internalization for a nation's economic development and global reputation (Rahman, 2022). Consequently, governments of developing countries have taken proactive measures to support and facilitate the internalization efforts of SMEs (Etemad, 1999). SMEs face a myriad of challenges, including limited managerial, marketing, entrepreneurial, and technical resources, as well as financial constraints. As these businesses expand their operations internationally, they must grapple with the complexities arising from cultural issues and establish effective connections with individuals from diverse cultures to operate in global marketplaces (Dabic, 2020; Hossain, 2020). Thus, to enhance the efficacy of cross-cultural interactions, it becomes imperative for employees to acquire intercultural competencies (Fernandez-Alles, 2022; Schelfhout, 2022).

Intercultural competencies typically refer to an individual's capacity to interact and communicate with members of different communities, cultures, or social groups (Hossain, 2020). It encompasses various methods, perspectives, and unique behavioral skills that facilitate integration in cross-cultural contexts (Deardorff, 2006). The ability of employees to recognize and appropriately respond to the differences in expectations and customs between their own culture and foreign cultures is particularly relevant in cross-cultural scenarios (Singhet, 2022). Furthermore, significant components of intercultural competencies that employees should master include information, attitudes, cultural awareness, and skills (Byram, 2000).

Specifically, "knowledge" refers to employees' familiarity with the traditions, beliefs, and social norms of both their own culture and other cultures, enabling them to make comparisons (Byram, 2000). "Attitude" encompasses openness, communicativeness, and positive interactions with individuals from diverse cultures. "Skills" include the ability to relate and interpret events from different cultural, ethnic, or racial communities while explaining and relating those events to those in one's own culture. It further entails interacting effectively with people from other communities and comprehending nonverbal cues. According to Bryan (2000), Hossain



(2000), and Khan (2023), "critical cultural awareness" refers to the ability to respond to others without condemning or demeaning them. Intercultural competencies thus exhibit multifaceted characteristics.

Therefore, companies with operations in multiple nations should integrate these aforementioned components into their management practices, as they contribute to effectively navigating cultural diversity (Tsai, 2022; Puri, 2022). This goal can be accomplished by fostering the growth of intercultural competency among employees. As individuals develop their intercultural skills on an individual level, they become better equipped to handle cultural diversity, thereby enhancing organizational performance (Schelfhout, 2022).

The primary objective of the present study is to conduct a comprehensive literature review of both theoretical and empirical research on business internalization and intercultural skills to investigate and advance our understanding of this subject matter. To address the research questions, we employ a framework-based examination of theory, context, and features (Paul and Rialp-Criado, 2020). Specifically, the research questions are as follows: (1) Which theories have been employed to explain the relationship between intercultural competency and business internalization? (2) In what environments (industries, nations) have studies on this topic been conducted? (3) How have analytical approaches and data collection techniques been utilized to examine business internalization and intercultural competencies? This study aimed to provide insights and answers to the aforementioned research concerns through a systematic prisma analysis literature review of 43 peer-reviewed articles published between 2013 and 2023.

## 2. Methodology

We opted for the domain-based systematic literature review approach to identify, select, critically assess, and synthesize the relevant literature regarding the theories and their impact on firm internalization behavior and intercultural competencies (Paul and Rialp-Criado, 2020). This approach aligns with the established guidelines for performing systematic literature reviews in the business and management fields (Snyder, 2019; Williams et al., 2021; Tranfield et al., 2003; Palmatier et al., 2018; Hermundsdottir and Apselund, 2020; Conz and Magnani, 2020).

### 2.1 Systematic literature search

Clear and focused research questions serve as the cornerstone of a comprehensive literature review (Vrontis and Christofi, 2021; Snyder, 2019). In line with this, we formulated specific research questions to guide our systematic literature review process and ensure its adequacy. The electronic databases, namely Ebsco, Emerald Insight, ProQuest, ScienceDirect, and Wiley, were selected as the primary sources for our search. The literature review was performed in May 2023.

Our initial search utilized the key phrases "business internalization" and "intercultural competences." However, this broad search yielded a substantial number of irrelevant results. To refine our search, we employed additional keywords, such as "theory" in conjunction with "business internalization" (e.g., "business internalization" and "theory," "business internalization" and "contingency theory," "business internalization" and "RBV theory," "business internalization" and "network theory," and "business internalization" and "dynamic capability theory"), as well as "intercultural competence" and "theory" (e.g., "intercultural competence" and "theory," "intercultural competences" and "contingency theory," "intercultural competences" and "network theory," and "intercultural competences" and "dynamic capability theory"). Additionally, we incorporated relevant buzzwords to capture activities related to cross-cultural competency and international business, such as "internalization business" and "internalization firm behavior." Following the application of these inclusion criteria, our preliminary search yielded 80 relevant articles.

### 2.2 Selection of relevant articles

A set of exclusion criteria was employed to assess and refine the initial pool of relevant studies. Only scholarly articles that had undergone peer review, consistent with previous reviews in the field of business management (Parida et al., 2019), were included. Non-English manuscripts were excluded to ensure the researchers could fully comprehend the content. As such, there were two rounds of screening.

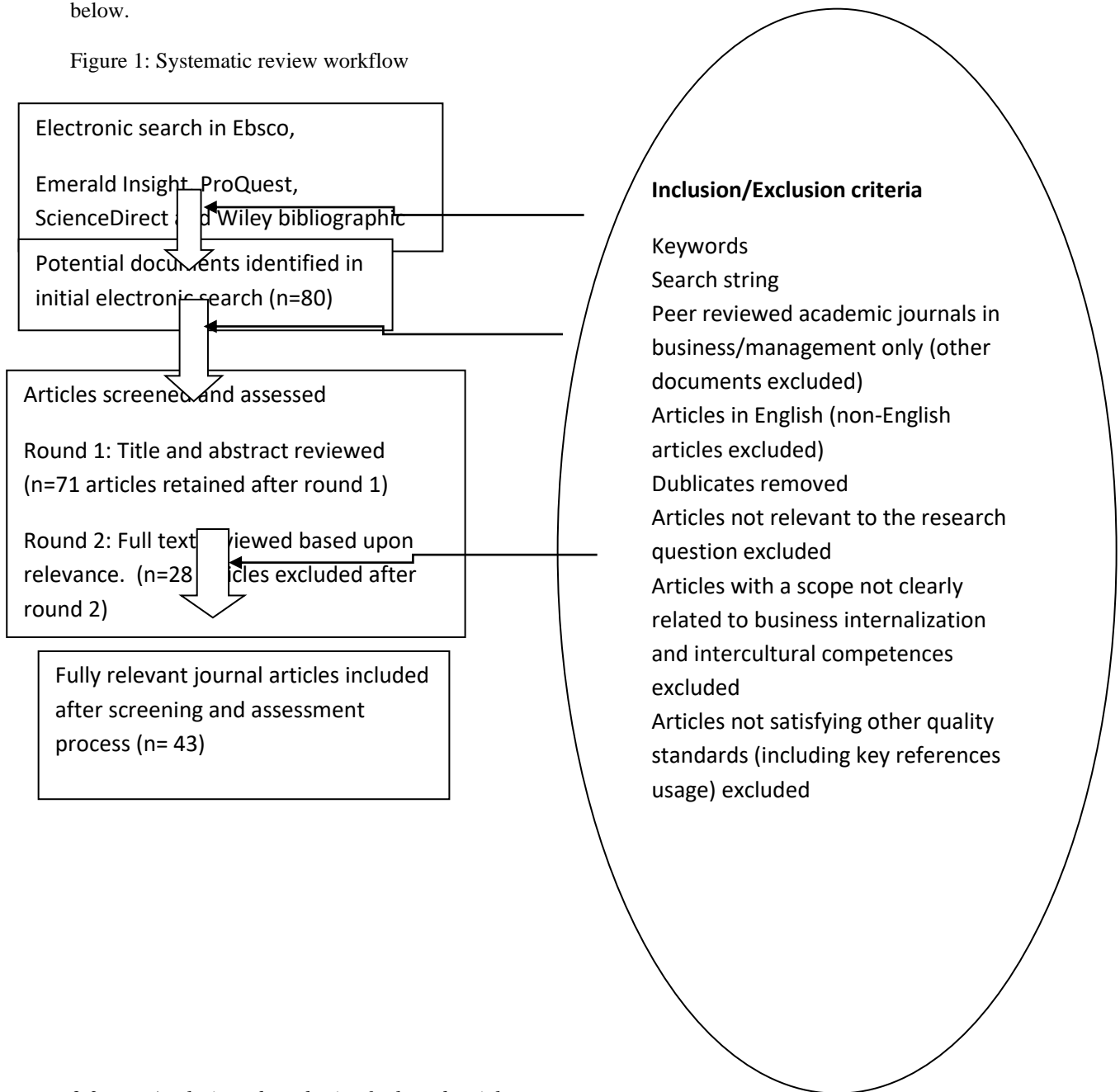
In the initial round, the abstracts of the papers were scanned to eliminate items that did not align with the objectives of this review. Following this screening, 71 articles remained for further consideration.

In the second phase, the full texts of each article were meticulously examined to determine their relevance to the study's objectives. Any manuscripts that raised doubts regarding their suitability for review were excluded. Ultimately, 43 articles satisfied all the selection criteria after the final round of screening. These articles were published between 2013 and 2023.

The increasing number of publications on the topic, particularly those focusing on business internalization, signifies the growing interest in intercultural skills and company internalization. The heterogeneity observed in the publications indicates that this issue is being investigated across various business and management domains. Individual journals contributed one to three articles on this topic. Notably, journals such as the International Journal of Management Review (2 articles), International Marketing Review (2 articles), Journal of Business

and Industrial Marketing (2 articles), and Journal of International Business Studies (2 articles) have published relevant articles on international entrepreneurship. The systematic literature review process employed to identify and select the 43 articles is illustrated in Figure 1 below.

Figure 1: Systematic review workflow



### 2.3 Analysis and synthesis of selected articles

In line with previous review studies (Vrontis and Christofi, 2021; Parida et al., 2019; Hermundsdottir and Aspelund, 2020; Tranfield et al., 2003), the analysis conducted in this study followed a two-fold approach: descriptive analysis and thematic analysis. The descriptive analysis aimed to capture essential information about each article, including its purpose, theories employed, methodology, industry sector, and country of origin. This comprehensive examination allowed for a comparative evaluation of the overall quality of the reviewed material.

Subsequently, thematic analysis was employed to identify significant findings and emerging themes across the evaluated publications. By categorizing the content of the reviewed articles, this analysis method facilitated the identification and synthesis of key results. Tables 1 and 2 present the characteristics and attributes of the studies investigated concerning business internalization and intercultural competencies.

**Table 1:** Characteristics of the business internalization studies included in the literature review

Author/Year	Aim/Research Question(s)	Theories Basis	Methodology	Industry Sector Context	Home Origin
Afsharghasemi et al., 2013	Examines the key drivers influencing the internalization process of SMEs, such as market orientation, and government regulation on internalization of manufacturing SMEs.	RBV theory	Quantitative, 257 cases	Manufacturing	Malaysia
Sinkovics et al., 2013	Examines the drivers and performance outcomes of 2 patterns of internet use supporting export marketing: the internet as an alternative to physical presence and the internet as a sales channel.	RBV and transaction cost theory	Quantitative, 115 cases	High-technology industry	The U.K.
Rendom et al., 2014	Examines strategies of marketing that promote the internalization of the hotel industry.	Network theory	Quantitative data from a survey conducted in 2010 by the National Tourism Secretariat to identify the profile of tourists.	Tourism and hotel	Michoacan, Mexico
Daszkiewicz et al. 2014	Examine the reasons family businesses go international and identify entry modes they use during their internalization process.	RBV theory	Quantitative, 216 cases	Service, manufacturing	Poland
Teece, 2014	Examines how strategy and dynamic capabilities determine firm-level sustained competitive advantage in a global environment.	Dynamic capability	Conceptual	n/a	n/a

Galati et al., 2014	Examines firm internal factors that influence the export intensity and ability to fit into the international market.	RBV and contingency theory	Quantitative, 20 cases	Italian wine and sparkling trade	Italy
Mudalige, 2015	Examines the relationship between internalization and performance based on a dynamic capability perspective is developed.	Dynamic capability	conceptual	n/a	n/a
Jain et al., 2015	Examines the internalization firm variation in opening international global development centers in a high commitment entry mode.	RBV, strategic behavior theory, organizational learning theory	Quantitative, 32 cases	Software	India
Chen et al., 2016	Explores the relationship between internalization and environmental strategy.	RBV theory	Quantitative, 63 cases	Service, manufacturing	U.S., U.K., Austria, Australia, Canada, China, Denmark, Egypt, France, Germany, Greece, Italy, India, Japan, Korea, Netherlands, Portugal, Spain, Sweden, Taiwan
Lindstrand et al., 2017	Examines new business opportunities after firms' initial entry into overseas markets.	Network theory	Quantitative, 239 cases	Retail	Finland, Norway, Denmark, Germany, United States
Girod et al., 2017	Presents a comparison of performance outcomes of two reorganizations, differing in their pervasiveness:	Dynamic capability	Quantitative, 50 cases	Multiple industries	U.S.A.

	organizational restructuring and reconfiguration.				
Laaksonen and Pettoniemi, 2018	Assess the extent to which different ways of measuring dynamic capabilities in quantitative studies correspond to the theoretical essence of the concept.	Dynamic capability	Conceptual	n/a	n/a
Dabic et al., 2019	Theoretically investigate SME activities that increase its ability to internationalize.	RBV theory, network theory, transaction cost theory and entrepreneurial theory	Conceptual	n/a	n/a
Safari et al., 2019	Examines the capacity to accelerate SMEs' export.	RBV, contingency theory	Quantitative, 364 cases	Service, manufacturing, construction	Vietnam
Ramon-Jeromino et al., 2019	Examines the role of informal management control in mobilizing export resources to develop export capabilities, influencing the export performance of SMEs in an inter-organizational relationship context.	RBV theory	Quantitative, 432 cases	Multiple industries	Spain
Panibratov et al., 2019	Examines the dynamic capabilities which companies from post-socialist emerging markets use during internalization.	Dynamic capability theory and internalization theory	Qualitative, 16 cases and 7 interviews with post-socialist emerging market	Energy, Metallurgy, Oil gas, Food and retail, Pharma, Chemical	Russia, Poland, Czech Republic, Hungary, Romania, Slovenia, Croatia, Ukraine, Serbia
Sukaatmatja et al., 2020	Examines the factors that increase product innovation to achieve a competitive advantage in an attempt to improve internalization	RBV theory	Quantitative, 100 cases	Woodcraft	Bali, Indonesia

	and marketing performance.				
Correira et al., 2020	Examines the mediating role of competitive advantages in the relationship between dynamic capabilities and business performance.	Dynamic capability	Quantitative, 1.190 cases	Service, manufacturing, construction	Portugal
Zahoor et al., 2020	Examines the current state of research into SMEs' collaborative internalization.	RBV, network, internalization entrepreneurship theory, Uppsala model of internalization, and miscellaneous theories.	Conceptual	n/a	n/a
Lee et al., 2020	Examines the extant knowledge on SME success and failure-based learning from internalization with particular emphasis on how two bases of learning interact.	Network theory	Conceptual	n/a	n/a
Mwesigye et al., 2020	Examines each level in international networking matters in the internalization of small to medium-sized enterprises.	Network theory	Quantitative, 206 cases	Agriculture and agro-processing, manufacturing arts and crafts	Europe, Asia, Rest Africa Community (EAC), Common Market for Easterns Southern Africa (COMESCA)
Felzenszstein et al., 2021	Examines how home country institutions and international entrepreneurial capabilities can speed up small firms' internalization process in under-developed institutional environments.	RBV theory, institutional theory	Quantitative, 73 employees	Primary, manufacturing, and retail industry	Chile, Colombia, Peru.
Magni et al., 2021	Examines the role of the networks in SMEs' readiness for internalization.	RBV and internalization theory	Quantitative, 300 3employees	Argo-food industry	Italy
Rahman et al.,	Examines the key	RBV theory	Quantitative,	Primary,	Bangladeshi

2022	drivers of their internalization for SMEs		212 employees	manufacturing, and service industries	
Breuillot et al., 2022	Examines the strategic resources associated with each phase of the early internalizing firms' internalization process.	RBV theory	Conceptual	n/a	n/a
Fredrich et al., 2022	Examines the dynamic capabilities perspectives that enhance SME internalization to achieve growth.	Dynamic capability	Quantitative, 262 cases	High-tech industries	36 countries in Europe
Vatamanescu et al., 2022	Examines the mediating role of knowledge sharing between international informal business networks and organizational performance.	Network theory	Quantitative, 111 employees	IT solutions and devices, steel products commerce, electronic appliances	Central and East Europe
Rahman et al., 2022	Examines the factors that influence SMEs' internalization in developing countries.	RBV theory	Quantitative, 212 employees	Service, primary, manufacturing	Bangladesh

**Table 2:** Characteristics of the intercultural competencies studies included in the literature review

<b>Author/Year</b>	<b>Aim/ Research Question(s)</b>	<b>Theoretical Basis/ Perspectives</b>	<b>Methodology</b>	<b>Industry Sector/ Context</b>	<b>Home Origin</b>
Samad, 2013	Examines the relationship between human capital and business performance.	RBV theory	Quantitative, 390 employees	Logistic	Malaysia
Prange et al., 2017	Examines the impact of internal drivers (personal and organizational) on the international performance of SMEs	RBV theory	Quantitative, 120 cases	Information technology, software and consultancy-related projects, textiles, clothing, software, machinery and equipment, beverages, furniture, retailing and	Portugal

				services firms	
Lee et al., 2018	Examines gaps in the existing literature by theoretically analyzing and empirically defining the specific roles of cross-cultural adjustment and social capital formation in dynamic capabilities development in multi-unit organizations.	Dynamic capability theory	Qualitative, 455 employees	Information technology, electrical engineering, wholesale and retail, chemicals, metals, energy and light industry.	Taiwan
Popp and Hadwich, 2018	Provides comprehensive results in types of service situations.	Contingency theory	Quantitative, 315 employees	Service	Germany
Safari et al., 2019	Examines the capacity to accelerate SMEs' export performance	RBV and contingency theory	Quantitative, 364 cases	Manufacturing service construction	Vietnam
Jiang et al., 2019	Examines the concept of organizational resilience, dynamic capabilities and its parent theories from the strategy literature.	Dynamic capability and evolutionary theory	Conceptual	n/a	n/a
Kobayashi et al., 2019	Examines the transition in Japanese and American business people's intercultural communication competence depending on the flow of the time.	Contingency theory	Qualitative	Service	Japan, America
Hossain et al., 2020	Examines the relationship between absorptive capacity team, culture, competitive intelligence awareness and	RBV theory	Quantitative, 475 employees	Hospitality	Malaysia



	entrepreneurial behavior with strategic flexibility and sustainable competitive advantage.				
Singhet et al., 2021	Identifying the human capital skills and HR-related challenges top management face from the industry perspective in emerging economies.	RBV about potential theory	Qualitative, 11 employees	n/a	India
Apascaritei et al., 2022	Explores how dynamic capabilities can be developed through HRM resources and practices and advance several caveats about potential obstacles.	Dynamic capability, RBV and behavioral theory	conceptual	n/a	n/a
Fernandez-Alles et al., 2022	Examines the human capital, the social capital and the psychological capital of the academic entrepreneur could be the key resources for the internalization of the companies.	RBV and network theory	Quantitative, 628 employees	Educational, health, social, information and communication, manufacturing sector	Spain
Ramadaniet et al., 2022	Investigates the sustainable competencies of social entrepreneurs.	RBV theory	Qualitative, 23 employees	Social entrepreneurs	Uttar, Pradesh, India
Puri et al., 2022	Examines the factors that improve managerial communication in multicultural workplaces in the hospitality industry.	Contingency theory	Qualitative, 167 employees	Hospitality	Kathmandu Valley, Nepal
Tsai, 2022	Provides a	Contingency	conceptual	n/a	n/a

	theoretical framework about the conditions that expatriate business leaders are likely to adjust their leadership behaviors and how leadership behavior adjustment is related to leader effectiveness.	theory			
Khan et al., 2023	Examines the effect of hotel star rating on employees' empowerment, and this relationship is verified with HRM practices as a moderator.	Contingency theory, Institutional theory	Quantitative, 302 employees	Hospitality	Pakistan

**3. Overview of the reviewed studies**

The process of firm internalization and the development of intercultural competencies can be examined through various approaches. Researchers have proposed several conceptual models based on fundamental ideas to explore the factors influencing internalization decisions and entry modes into foreign markets (Buckley and Casson, 1976; Anderson and Gatignon, 1986). While no single idea has achieved universal consensus (Daszkiewicz, 2012), the Resource-Based View Theory (RBV), Dynamic Capability Theory, Network Theory, and Contingency Theory are prominent theories commonly explored in the context of business internalization and intercultural skills, and they are the focus of this study. This section presents an overview of the analysis findings conducted for each theory and the methods employed to investigate internalization and intercultural skills.

*Resource-Based View Theory (RBV):* Based on our review, the majority of studies (Safari, 2019; Magni, 2021; Felzensztein, 2021; Rahman, 2022; Sukaatmadja, 2020; Ramon-Jeronimo, 2019; Afshargsemi, 2013; Daszkiewicz, 2014; Jain, 2015; Chen, 2016) have focused on the factors influencing a firm's internalization. These factors encompass both internal and external elements. Internal components include a firm's human capital, which necessitates personnel with international experience, market and consumer knowledge, basic education, skills, and a strong commitment to the company's objectives (Rahman, 2022; Felzensztein, 2021; Safari, 2019; Magni, 2021). Additionally, a few studies consider internal aspects such as product innovation and the business strategy required for international market entry (Safari, 2019; Sukaatmadja, 2020). External influences encompass factors such as the state of the domestic market and the target country for business operations. It is important to note that these studies aim to advance knowledge that can enhance and expedite the internalization process for businesses.

Intercultural competency among employees is an ongoing aspect of a firm's internalization process. Studies approach this topic from various angles, including educational background, abilities, skills, knowledge of other cultures, international experience, and perceptions of globalizing a business, all of which managers and employees should possess to effectively communicate with managers from different cultural backgrounds (Safari, 2019; Hossain, 2020; Fernandez-Alles, 2022; Ramadaniet, 2022).

*Dynamic Capability Theory:* According to our review, this theory focuses on enhancing corporate performance. To succeed in the international market, firms adopt suitable strategies aligned with their objectives (Fredrich, 2022; Correira, 2020; Laaksonen and Pettoniemi, 2018; Panibratov, 2019). However, terms such as "management capabilities," "proper managerial decisions," "interaction adjustment," and "work adjustment" pertain to intercultural competencies, as managers need to accurately assess situations and take appropriate actions to expand their firm's market share (Laaksonen and Pettoniemi, 2018; Apascarianti, 2022; Lee, 2018).

*Network Theory*: This theory emphasizes the role of networking in facilitating the international expansion of businesses, particularly small and medium-sized enterprises, through partnerships with other firms. Gaining a competitive advantage entails more than just internal resources; it also involves interactions and collaborations with other businesses. Networking allows companies to access the crucial assets their partners possess (Vatamanescu, 2022; Lee, 2020; Mwesigye, 2020; Dablic, 2019; Rendom, 2014; Limdstrand, 2017). While this theory primarily focuses on business interactions to establish a robust network system, it is important to note that managers and employees must possess intercultural communication skills or have knowledge of their partner's culture to effectively work and negotiate with their partners (Zahoor, 2020).

*Contingency Theory*: Based on the review, the decision-maker, typically the top manager responsible for the expansion and entry method decisions, is the unit of analysis. The decision-making process should consider a limited number of variables, with the environment and problem divided into constant and stable subsystems, respectively (Cumberland, 2006). The characteristics of the decision-maker and the decision task influence the strategic decision-making process. Therefore, decision-makers should be aware of available strategies and able to make swift judgments, select the appropriate course of action, and execute it successfully. Given that managers are responsible for making decisions regarding company growth, this theory primarily focuses on the intercultural competencies that managers need to possess. Managers must integrate the information and skills required to function effectively and appropriately when interacting with individuals from diverse cultural backgrounds, necessitating international experience, intercultural competencies, cultural knowledge, and cultural intelligence. These qualities are essential for managers to operate effectively in cross-cultural contexts (Schelfhout, 2022; Jung, 2019; Puri, 2022; Tsai, 2022; Popp and Hadwich, 2018; Engelsberger, 2021; Khan and Hussain, 2023).

In addition to the above, the majority of the evaluated studies concur on the types of resources that companies require to achieve internalization (Magni, 2021; Safari, 2019; Felzensztein, 2021; Breuillot, 2022; Hossain, 2020). The first category of resources is international experience. Employees or managers with international experience can learn, recognize, absorb, and apply relevant knowledge through networks to seek and exploit global opportunities. Compared to individuals without such experience, managers with international experience can secure more resources and make better decisions (Safari, 2019; Fredrich, 2022). The second category of resources is intercultural competencies. In addition to international experience, managers must possess intercultural capabilities, cultural knowledge, and cultural intelligence to effectively and appropriately interact with individuals from different cultures (Schelfhout, 2022; Jung, 2019; Puri, 2022). The third category of resources is network capabilities. By networking, companies can enhance their competitive advantage in international markets through the integration and coordination of internal and external organizational operations within their value chain. Networking enables companies to access the valuable assets their partners hold (Vatamanescu, 2022; Lee, 2020; Mwesigye, 2020; Dablic, 2019). The fourth category of resources is organizational agility. According to Teece (2014), organizational agility refers to a company's ability to effectively reallocate and redirect its resources toward value-creating and value-protecting activities as dictated by internal and external conditions. It enables companies to strategically coordinate their value propositions, value generation, and value capture in global marketplaces. The fifth category of resources is product strategy, particularly innovative product strategies, which play a role in how organizations innovate their business management models for internalization. A distinctive product can provide deeper insights into the target market, becoming a fundamental element for enabling business management innovation (Sukaatmadja, 2020; Teece, 2014; Chen, 2016; Hennart, 2021).

#### **4. Conclusion**

Employees need to develop intercultural competencies to enhance organizational performance and effectively deal with cultural diversity. This review aimed to analyze the current state and academic contributions in the field of business internalization.

To achieve its objectives, this study addressed three research questions. The analysis revealed that many theories have been employed to explain business internalization and intercultural competencies, as explored in the first research question. While many studies adopted a comprehensive approach by integrating multiple theories, the most commonly utilized theories were RBV, dynamic capability, network, and contingency theory.

The second research question focused on the contexts in which the studies were conducted, including countries, industries, and firm types. The review demonstrated a diverse range of industry sectors covered in the studies. However, 12 studies either did not specify the target industry or examined businesses from various industries. Furthermore, the firms under investigation represented a geographically diverse set of nations.

The final research question explored the methodologies employed to analyze business internalization and intercultural competencies. The review indicated that seven studies used quantitative techniques to analyze intercultural skills and business internalization, while 11 studies employed a conceptual approach. In terms of qualitative methodologies, six studies examined cross-cultural skills, and one focused on company

internalization. The quantitative investigations predominantly utilized regression procedures to test models. The sample sizes in quantitative studies varied, ranging from 32 to 432 respondents for the analysis of company internalization and 11 to 842 participants for the examination of intercultural skills.

This study shed light on the prevalent theories used to explain business internalization and intercultural competencies across different sectors and nations. It also highlighted various resources, such as knowledge and learning capacities, international experience, network skills, and organizational agility, which may benefit businesses seeking to expand internationally. However, the study acknowledged the limitations of small sample sizes and suggested that future research should consider larger samples to further explore the relationships between theories and the concepts of business internalization and intercultural competencies.

## References

- Ahimbisibwe, G. M., Ntayi, J. M., Ngoma, M., Bakunda, G., & Kabagambe, L. B. (2020). The internationalization of small to medium-sized enterprises: do all levels in international networking matter? *Journal of small business and enterprise development*, 27(5), 817-837.
- Anderson, E., & Gatignon, H. (1986). Modes of entry: A transaction cost analysis and propositions. *Journal of International Business Studies*, 17 (3), 1-26
- Afsharghasemi, A., Zain, M., Sambasivan, M., & Imm, S. N. S. (2013). Market orientation, government regulation, competitive advantage and internationalization of SMEs: A study in Malaysia. *Journal of Business Administration Research*, 2(2), 13-22.
- Apascaritei, P., & Elvira, M. M. (2022). Dynamizing human resources: An integrative review of SHRM and dynamic capabilities research. *Human Resource Management Review*, 32(4).
- Breuillot, A., Bocquet, R., & Favre-Bonté, V. (2022). Navigating the internationalization process: Strategic resources for early internationalizing firms. *Journal of International Entrepreneurship*, 20(2), 282-315.
- Buckley, P. J., & Casson, M. C. (1976). *The future of multinational enterprise*. New York: Holmer and Meier Publishers
- Byram, M., & Planet, M. T. (2000). *Social identity and the European dimension: intercultural competence through foreign language learning*. Council of Europe.
- Calof, J. L., & Beamish, P. W. (1995). Adapting to foreign markets: Explaining internationalization. *International business review*, 4(2), 115-131.
- Chen, P. H., Ong, C. F., & Hsu, S. C. (2016). The linkages between internationalization and environmental strategies of multinational construction firms. *Journal of cleaner production*, 116, 207-216.
- Conz, E., & Magnani, G. (2020). A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research. *European Management Journal*, 38(3), 400-412.
- Correia, R. J., Dias, J. G., & Teixeira, M. S. (2020). Dynamic capabilities and competitive advantages as mediator variables between market orientation and business performance. *Journal of Strategy and Management*, 14(2), 187-206.
- Cumberland, F. (2006). Theory development within international market entry mode - An assessment. *The Marketing Review*, 6 (4), 349-373.
- Dabić, M., Maley, J., Dana, L. P., Novak, I., Pellegrini, M. M., & Caputo, A. (2020). Pathways of SME internationalization: A bibliometric and systematic review. *Small Business Economics*, 55, 705-725.
- Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, 10(3), 241-266.
- Daszkiewicz N., Wach K. (2012), *Internationalization of SMEs. Context, Models, Implementation*, Gdańsk University of Technology Publishers, Gdańsk 2012.
- Daszkiewicz, N., & Wach, K. (2014). Motives for going international and entry modes of family firms in Poland. *Journal of Intercultural Management*, 6(2), 5-18.
- Etemad, H., & Wright, R. W. (1999). Internationalization of SMEs: management responses to a changing environment. *Journal of International Marketing*, 7(4), 4-10.
- Fernández-Alles, M., Hernández-Roque, D., Villanueva-Flores, M., & Díaz-Fernández, M. (2022). The impact of human, social, and psychological capital on academic spin-off internationalization. *Journal of International Entrepreneurship*, 20(3), 433-473.
- Felzensztein, C., Saridakis, G., Idris, B., & Elizondo, G. P. (2022). Do economic freedom, business experience, and firm size affect internationalization speed? Evidence from small firms in Chile, Colombia, and Peru. *Journal of International Entrepreneurship*, 20(1), 115-156.
- Fredrich, V., Gudergan, S., & Bouncken, R. B. (2022). Dynamic capabilities, internationalization and growth of small- and medium-sized enterprises: The roles of research and development intensity and collaborative intensity. *Management International Review*, 62(4), 611-642.
- Galati, A. & Crescimanno, M.,(2014). Competitiveness of Italian wines in the international market. *Bulgarian Journal of Agricultural Science*, 20(1), 12-22.

- Girod, S. J., & Whittington, R. (2017). Reconfiguration, restructuring and firm performance: Dynamic capabilities and environmental dynamism. *Strategic management journal*, 38(5), 1121-1133.
- Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, 280, 124715.
- Hossain, M. S., Hussain, K., Kannan, S., & Kunju Raman Nair, S. K. (2022). Determinants of sustainable competitive advantage from resource-based view: implications for the hotel industry. *Journal of Hospitality and Tourism Insights*, 5(1), 79-98.
- Jain, N. K., Pangarkar, N., Yuan, L., & Kumar, V. (2015). Internationalization of Indian software firms through establishment of global development centers: A contingency perspective. *The Multinational Business Review*, 23(2), 90-110.
- Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *International Journal of Tourism Research*, 21(6).
- Khan, M. H., & Hussain, A. (2023). Effect of Human Resources Practices on Employees' Empowerment in Hotels. *Journal of Managerial Sciences*, 17(1), 27-46.
- Kobayashi, J. (2019). Transition in Intercultural Communication Competence: Business Communication between Japanese and Americans. *International Journal of Business and Social Science*, 10(4), 167-172.
- Laaksonen, O., & Peltoniemi, M. (2018). The essence of dynamic capabilities and their measurement. *International Journal of Management Reviews*, 20(2), 184-205.
- Lee, J. Y., Jiménez, A., & Devinney, T. M. (2020). Learning in SME internationalization: A new perspective on learning from success versus failure. *Management International Review*, 60, 485-513.
- Lee, P. Y., Li, C. S. J., & Wu, M. L. (2018). The roles of cross-cultural adjustment and social capital formation in the dynamic capabilities development of multi-unit organizations. *Asia Pacific Management Review*, 23(1), 20-29.
- Lindstrand, A., & Hånell, S. M. (2017). International and market-specific social capital effects on international opportunity exploitation in the internationalization process. *Journal of World Business*, 52(5), 653-663.
- Magni, D., Chierici, R., Fait, M., & Lefebvre, K. (2022). A network model approach to enhance knowledge sharing for internationalization readiness of SMEs. *International Marketing Review*, 39(3), 626-652.
- Mudalige, D. (2015). A dynamic capabilities perspective of internationalization and performance of SMEs in South Asia: A conceptual framework. *International Journal of Information Technology and Business Management*, 35(1), 44-62.
- Panibratov, A., & Michailova, S. (2019). The role of state ownership and home government political support in Russian multinationals' internationalization. *International Journal of Emerging Markets*.
- Palmatier, R. W., Houston, M. B., & Hulland, J. (2018). Review articles: Purpose, process, and structure. *Journal of the Academy of Marketing Science*, 46, 1-5.
- Parida, V., Sjödin, D., & Reim, W. (2019). Reviewing the literature on digitalization, business model innovation, and sustainable industry: Past achievements and future promises. *Sustainability*, 11(2), 391.
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4).
- Popp, M., & Hadwisch, K. (2018). Examining the effects of employees' behaviour by transferring a leadership contingency theory to the service context. *SMR-Journal of Service Management Research*, 2(3), 44-62.
- Prange, C., & Pinho, J. C. (2017). How personal and organizational drivers impact SME international performance: The mediating role of organizational innovation. *International business review*, 26(6), 1114-1123.
- Puri, S., Devkota, N., Mahato, S., & Paudel, U. R. (2022). A Study on Determinants of Managerial Communication in Hospitality Industry in Kathmandu Valley: A Structural Equation Modelling Analysis. *Journal of Tourism & Adventure*, 5(1), 23-43.
- Rahman, M., Hack-Polay, D., Shafique, S., & Igwe, P. (2022). Institutional and organizational capabilities as drivers of internationalization: Evidence from emerging economy SMEs. *The International Journal of Entrepreneurship and Innovation*.
- Ramadani, V., Agarwal, S., Caputo, A., Agrawal, V., & Dixit, J. K. (2022). Sustainable competencies of social entrepreneurship for sustainable development: Exploratory analysis from a developing economy. *Business Strategy and the Environment*, 31(7), 3437-3453.
- Ramon-Jeronimo, J. M., Florez-Lopez, R., & Araujo-Pinzon, P. (2019). Resource-based view and SMEs performance exporting through foreign intermediaries: The mediating effect of management controls. *Sustainability*, 11(12), 3241.
- Rendón, O. H. P., Martínez, R. M., & Flores, M. S. R. (2014). Marketing strategies for hotel industry internationalization in Morelia. *Procedia-Social and Behavioral Sciences*, 148, 271-279.
- Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: a resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing*, 35(4), 635-654.

- Samad, S. (2013). Assessing the contribution of human capital on business performance. *International Journal of Trade, Economics and Finance*, 4(6), 393.
- Schelfhout, S., Vandecasteele, R., De Maesschalck, S., D'hondt, F., Willems, S., & Derous, E. (2022). Intercultural competence predicts intercultural effectiveness: Test of an integrative framework. *International Journal of Environmental Research and Public Health*, 19(8), 4490.
- Singh, R. K., Agrawal, S., & Modgil, S. (2022). Developing human capital 4.0 in emerging economies: an industry 4.0 perspective. *International Journal of Manpower*, 43(2), 286-309.
- Sukaatmadja, I., Yasa, N., Rahyuda, H., Setini, M., & Dharmanegara, I. (2021). Competitive advantage to enhance internationalization and marketing performance woodcraft industry: A perspective of resource-based view theory. *Journal of Project Management*, 6(1), 45-56.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, 333-339.
- Sinkovics, N., Sinkovics, R. R., & "Bryan" Jean, R. J. (2013). The internet as an alternative path to internationalization? *International Marketing Review*, 30(2), 130-155.
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45, 8-37.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222.
- Tsai, C. J. (2022). Cross-cultural leadership behavior adjustment and leader effectiveness: a framework and implications. *International Studies of Management & Organization*, 52(3-4), 205-225.
- Vătămănescu, E. M., Mitan, A., Cotîrleţ, P. C., & Andrei, A. G. (2022). Exploring the mediating role of knowledge sharing between informal business networks and organizational performance: An insight into SMEs internationalization in CEE. *Sustainability*, 14(7), 3915.
- Vrontis, D., & Christofi, M. (2021). R&D internationalization and innovation: A systematic review, integrative framework and future research directions. *Journal of Business Research*, 128, 812-823.
- Williams Jr, R. I., Clark, L. A., Clark, W. R., & Raffo, D. M. (2021). Re-examining systematic literature review in management research: Additional benefits and execution protocols. *European Management Journal*, 39(4), 521-533.
- Zahoor, N., Al-Tabbaa, O., Khan, Z., & Wood, G. (2020). Collaboration and internationalization of SMEs: Insights and recommendations from a systematic review. *International Journal of Management Reviews*, 22(4), 427-456.

# Marketing Strategy

## Marketing in the metaverse – opportunities and barriers for the creation of marketing value

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### Abstract

The metaverse has emerged as a highly popular topic in marketing circles, especially since Facebook's late 2021 announcement that it was rebranding itself as Meta (Isaac, 2021) and focusing on building a metaverse platform. The metaverse holds great promise as the next iteration of the internet. However, instead of websites, future metaverses are intended to be more immersive, virtual worlds or augmentations of the real world, where users can interact with each other and with AI agents, consume virtual and hybrid products, and engage in a wide range of activities. The metaverse is also often expected to enable entirely new applications and business models (Dwivedi et al., 2022; Park & Kim, 2022). However, the vision of the metaverse is still highly speculative, and there is a lack of clarity regarding what the metaverse will be and how it will function, both in academia and among practitioners (Barrera & Shah, 2023; McKinsey, 2022). Despite these uncertainties, many consumer brands are already exploring the potential of the metaverse for their marketing activities (Barrera & Shah, 2023; Ravenscraft, 2022).

To understand how consumer brands are currently using the metaverse for marketing and what their future plans are, we conducted in-depth interviews with high-ranking marketing managers from top consumer brands across five industries: fashion, automotive, food and drinks, telecom, and cosmetics & personal care. We selected these industries as they represent sectors with a significant B2C focus and where the metaverse is expected to have the greatest impact (Dwivedi et al., 2022; Barrera & Shah, 2023). We used a purposive sampling strategy (Miles et al., 2020) to identify companies that were already using the metaverse for marketing in some form. We conducted fifteen 45-minute interviews between November and December 2022 and transcribed the interviews for analysis.

Our study aims to identify the patterns of metaverse usage among consumer brands and the barriers and opportunities they face in using the metaverse for marketing. The preliminary findings show that while some brands are tentatively exploring the metaverse's marketing potential, others are generating value from their metaverse activities by establishing new channels of communication with their customers and even expanding into lifestyle brands. However, the metaverse's potential is still limited by several barriers, such as a lack of consumer access, governance, and protection for brands. Our study will contribute to a better understanding of the metaverse's role in contemporary marketing and identify the challenges that need to be addressed to fully realize its potential. We plan to conduct further studies to deepen our understanding of the metaverse's role in marketing, and we acknowledge that our work is ongoing and subject to change as we continue our analysis.

**Keywords:** *Metaverse, Marketing Strategy, Consumer Brands, Customer Engagement, Virtual Worlds*

### References:

- Barrera, K. G., & Shah, D. (2023). Marketing in the metaverse: Conceptual understanding, framework, and research agenda. *Journal of Business Research*, 155(3). 113420. 10.1016/j.jbusres.2022.113420
- Dwivedi, Y. K., Hughes, L., Wang, Y., Alalwan, A. A., Ahn, S. J. (G.), Balakrishnan, J., Barta, S., Belk, R., Buhalis, D., Dutot, V., Felix, R., Filieri, R., Flavián, C., Gustafsson, A., Hinsch, C., Hollensen, S., Jain, V., Kim, J., Krishen, A. S., ... Wirtz, J. (2023). Metaverse marketing: How the metaverse will shape the future of consumer research and practice. *Psychology and Marketing*.
- Isaac, M. (2021, October 28). Facebook renames itself Meta. *The New York Times*. <https://www.nytimes.com/2021/10/28/technology/facebook-meta-name-change.html>



- McKinsey & Company. (2022). *Value creation in the metaverse. The real business of the virtual world.* <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/value-creation-in-the-metaverse>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4<sup>th</sup> ed.). Sage Publications.
- Park, S.-M., & Kim, Y.-G. (2022). A Metaverse: Taxonomy, Components, Applications, and Open Challenges. *IEEE Access.* <https://doi.org/10.1109/ACCESS.2021.3140175>
- Ravenscraft, E. (2022). *What Is the Metaverse, Exactly? Everything You Never Wanted to Know About the Future of Talking About the Future.* Wired. <https://www.wired.com/story/what-is-the-metaverse/>

## AI as a strategic leader? On the role of intelligent machines in strategic marketing decisions

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### **Abstract:**

With increasing computing capacity, data availability and capabilities of algorithms, companies are intensifying their efforts to use artificial intelligence (AI) to generate business value (Enholm et al., 2022). In marketing, there is great potential for using AI to better understand, predict and influence customer behavior and shape marketing strategies (Campbell et al., 2020; Davenport, 2020; Huang & Rust, 2021, 2022). Empirical research so far has mostly focused on how AI can be used for relatively narrow tasks on the operational level—for example, integrated in tools as chatbots and product recommendation systems. But as capabilities of smart machines grow, the boundaries of AI in organizational decision-making are said to be shifting from the operational to the strategic level (Eriksson et al., 2020; Stone et al., 2020). There seems to be a consensus in academic research that AI and humans may best work together in cooperative relationships to leverage complementary strengths and weaknesses (Huang & Rust, 2022; Jarrahi, 2018). However, the question of how human-machine collaboration between marketing managers and intelligent machines in strategic decision-making processes can be designed in concrete terms remains largely unanswered. Our research aims to fill this research gap by evaluating the role AI already plays in strategic decision-making today and investigating managers' future preferences and willingness to use intelligent algorithms to support, augment or automate their strategic decision-making processes.

We used a mixed-methods explanatory sequential design combining a quantitative survey study and qualitative in-depth interviews to first gain a general understanding of the research topic through quantitative data collection and analysis and then, in a second step, to refine and deepen the findings through qualitative data collection and analysis (Ivankova et al., 2006).

In study 1 we used a standardized survey study to examine managers' acceptance and future preferences regarding the role of AI in strategic marketing decision-making. We therefore introduce a five-category model based on organizational decision-making frameworks (e.g., Colson, 2019; Haesevoets et al., 2021; Jarrahi, 2018; Shrestha et al., 2019) to evaluate the role of AI in collaboration with human managers based on its tasks and its level of autonomy. Our sample consists of 500 high-level marketing and corporate strategy executives in B2C markets from the 2,000 largest publicly traded companies in the world, as listed on the Global Forbes 2000 list. Our results show that, on average, managers are open to incorporating AI into their strategic decision-making and want to give it even more weight in decision-making processes in the future. However, the majority of respondents prefer to retain some degree of control. AI is thus likely to evolve from a predominantly supporting role to a truly collaborative one.

In study 2 we used a qualitative approach by undertaking 18 in-depth interviews of high-ranking marketing managers from companies from the Global Forbes 2000 list that already employ AI to some degree in their strategic marketing processes. This second study aims to identify real-world use cases of AI in strategic marketing and provide practice-relevant insights through a qualitative content analysis of the obstacles and benefits experienced by these "AI pioneers." The analysis of real use cases from pioneering companies allows us to identify the areas in marketing management where AI is already used for strategic purposes and where growing potential is seen for the years to come.

The results suggest that power structures in decision-making processes are likely to change, which in turn will have implications for job profiles, required skills and competencies of managers, training programs and university curricula. This research project marks only the beginning in this still very sparsely studied field and opens new fields of research and discussion—both in academia and in practice.

**Keywords:** artificial intelligence, marketing strategy, managerial decision-making, human-machine collaboration

**References:**

- Campbell, C., Sands, S., Ferraro, C., Tsao, H.-Y., & Mavrommatis, A. (2020). From data to action: How marketers can leverage AI. *Business Horizons*, 63(2), 227–243. <https://doi.org/10.1016/j.bushor.2019.12.002>
- Colson, E. (2019, July 08). What AI-driven decision making looks like. *Harvard Business Review*. Retrieved February 22, 2023 from <https://hbr.org/2019/07/what-ai-driven-decision-making-looks-like>
- Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48, 24–42. <https://doi.org/10.1007/s11747-019-00696-0>
- Enholm, I. M., Papagiannidis, E., Mikalef, P., & Krogstie, J. (2021). Artificial intelligence and business value: a literature review. *Information Systems Frontiers*, 24(5), 1709–1734. <https://doi.org/10.1007/s10796-021-10186-w>
- Eriksson, T., Bigi, A., & Bonera, M. (2020). Think with me, or think for me? On the future role of artificial intelligence in marketing strategy formulation. *The TQM Journal*, 32(4), 795–814. <https://doi.org/10.1108/TQM-12-2019-0303>
- Haesevoets, T., De Cremer, D., Dierckx, K., & Van Hiel, A. (2021). Human-machine collaboration in managerial decision making. *Computers in Human Behavior*, 119, 106730. <https://doi.org/10.1016/j.chb.2021.106730>
- Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 30–50. <https://doi.org/10.1007/s11747-020-00749-9>
- Huang, M. H., & Rust, R. T. (2022). A framework for collaborative artificial intelligence in marketing. *Journal of Retailing*, 98(2), 209–223.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, 61(4), 577–586. <https://doi.org/10.1016/j.bushor.2018.03.007>
- Shrestha, Y. R., Ben-Menahem, S. M., & Von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. *California Management Review*, 61(4), 66–83. <https://doi.org/10.1177/0008125619862257>
- Stone, M., Aravopoulou, E., Ekinci, Y., Evans, G., Hobbs, M., Labib, A., Laughlin, P., Machtynger, J., & Machtynger, L. (2020). Artificial intelligence (AI) in strategic marketing decision-making: a research agenda. *The Bottom Line*, 33(2), 183–200. <https://doi.org/10.1108/BL-03-2020-0022>

# Marketing Strategies for Specialty Fats in Bakery Products in Turkish Market

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The fleshy fruit part, mostly the seeds, of many annual and perennial plants grown wild and culturally around the world contain oil at different rates. Palm (date) is one of the leading perennial plants (Onat et al., 2017). The palm oil industry in the world has achieved the fastest increase in oil and fat supply in the last four decades (Basiron et al., 2004). 33.2% of the world's vegetable crude oil production is met from palm. The world crude vegetable oil production (million tons) values between 2013 and 2023 and their distribution by product types are given in Table 1. When the chart is examined, it is seen that palm has the highest value with 77.22 million tons of production in 2023 as in the other years (Onat et al., 2017).

It is seen that the vegetable oil sector in Turkey has an important place in the food service industry especially for bakery products. The vegetable oil industry in Turkey has a total of 402 establishments producing crude oil, refined vegetable oil and margarine, and these establishments produce 1714 product types with permission certificates. With the increase in the demand for vegetable oils, there is a strong competition environment in the domestic market. Businesses want to gain competitive advantage by raising their products or brands to a higher market position than the products of competing brands. In order to achieve this, businesses follow different paths. Sometimes they try to achieve this by considering only the features of the product and sometimes the marketing components. In both cases, they mainly consider consumers' perspectives on the product. In order for the organizations in the market to cope with the competition, the best way is to know their consumers well and to develop strategies suitable for their wishes and demands, to contribute to increasing the production quality, structuring the sector and making the necessary regulations, and expanding and deepening the market in these ways (Bayraktar et al., 2017).

Fats and oils are crucial bakery ingredients for bakery foods. These shortenings give tenderness, a moister mouthfeel, and also has an impact on structure for a bakery product. Moreover, they often contribute taste of their own. In short, fats and oils often influence the manipulation of doughs and leavening of the final product (Schubert et. all, 2022). Without fats, these bakery goods would not look or taste the same. Various fats and oils used in the baking industry come from either an animal or vegetable source and have different functional properties to improve appearance, flavor, palatability and texture. For different products, they serve different benefits such as they provide for development of flakiness in products like croissant.

Marketing the specialty fats thus require a set of different techniques. Since, fat is a critical ingredient in bakery products like cookies, muffins, cakes and pastries, bakers and bakery chefs should understand choosing the appropriate fat or oil by understanding the functional use of each. For that reason, specialty fats producers should have a good marketing organization to explain their products specifications to their target customers who are actually bakery chefs.

In this paper, it is aimed to capture points that will attract the attention of both academics and private sector employees and raise awareness in specialty fats and oil sector with regard to marketing strategies. Using deferent literature materials, the paper gives the general overview on the marketing strategies of Turkish companies in fat business while they are selling specialty fats and oil It highlights the experience on bakery fats producer in food sector in Turkey. Finally, it points the concluding remarks and advices that will lead to improve the marketing concepts of business organization, which are oriented at the market, needs of different consumer groups as bakery chefs. The most effective results for the companies are provided by the implementation of marketing management concepts that are oriented at meeting consumer demand with holistic marketing interaction and communication.

The success of the marketing strategy of the marketing department depends on the degree of consideration of the interests of the target customers and the companies. It is concluded that oil and fat companies in the bakery industry can gain sustainable competitive advantages if they efficiently use marketing tools by recognizing their existing and potential consumers in Turkish bakery industry.

## REFERENCES

Basiron, Y., Balu, N. ve Chandramohan, D., 2004, Palm Oil: The driving force of world oils and fats economy, *Oil Palm Industry Economic Journal*, 4(1); 1-10.

- Bayraktar, S., Akyol, A. ve Esen, S.K., 2017, Türkiye’de bitkisel yağ sektörünün çok boyutlu ölçekleme analizi ile değerlendirilmesi, *Balkan ve Yakın Doğu Sosyal Bilimler Dergisi*, 03(04); 97-105.
- Madline Schubert, Nelli Erlenbusch, Sebastian Wittland, Sharline Nikolay, Birgit Hetzer, Bertrand Matthäus, Rapeseed Oil Based Oleogels for the Improvement of the Fatty Acid Profile Using Cookies as an Example, *European Journal of Lipid Science and Technology*, 10.1002/ejlt.202200033, 124, 11, (2022).
- Onat, B., Arıoğlu, H., Güllüoğlu, L., Kurt, C., ve Bakal, H., 2017, Dünya ve Türkiye’de yağlı tohum ve ham yağ üretimine bir bakış, *KSÜ Doğa Bilimleri Dergisi*, 20(Özel Sayı); 149-153.

## Design a Model to Study Ecosystem Development to Strengthen the Lehigh Valley as a Hub for Entrepreneurs in Creative Industries

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### **Abstract:**

The importance of entrepreneurship as fuel for the local community and economic development is well-established; however, the representation and support for all sectors may pose a still unsolved problem. For example, Creative Industries (CIs) generate spillover effects for other industries associated with quality of life, the “image” of cities, regions, and tourism (Cunningham & Potts, 2015; Stejskal & Hajek, 2019). CIs contribute to regional, city, community, and economic development and growth (Balfour et al., 2018). CIs are instrumental in social fulfilment and contributing to economic growth. Communities represent a vital frontier for entrepreneurship research (Lyons et al., 2012) and are pivotal for understanding societal impact creation (Branzei et al., 2018). While it is essential to support entrepreneurs in CIs– there is a dearth of studies about CI entrepreneurship. White (2017, p. 9) also underscored that “there is no easy way to identify those individuals who organize both non-profit and state-subsidized arts organizations across the U.S.A. Nor is there a way to easily identify common challenges amongst distinct groups of arts entrepreneurs, how much financial capital one might want to acquire before undertaking specific arts-based ventures, or where distinct arts organizations (e.g., producing, presenting, education, policy, service, and other) tend to, respectively, start-up, endure and/or dissolve.” Universities are highlighted as critical actors in supportive ecosystems (Sanchez-Barrioluengo & Benneworth, 2019). Studies (Autio et al., 2014; Roundy et al., 2017) suggest that supportive ecosystems are composed of various actors with complementary resources, and their participation in the ecosystem is valuable for everyone involved. Against this backdrop, this paper aims to present the research design to examine ecosystem changes in the Lehigh Valley, Pennsylvania, U.S.A., to strengthen the area as a hub for entrepreneurs in Creative Industries. Creative Inquiry at Lehigh University supports the research project.

**Keywords:** *Entrepreneurs, Creative Industries, Ecosystem Development, Lehigh Valley, USA*

**References:** APA Style [Times New Roman, 10 pt, bold type, left side alignment, without numbering]

Autio, E., Dahlander, L., & Frederiksen, L. (2013). “Information Exposure, Opportunity Evaluation, and Entrepreneurial Action: An Investigation of an Online User Community,” *Academy of Management Journal*, 56(5), 1348-1371. <https://doi.org/10.5465/amj.2010.0328>

Balfour, B., Fortunato, M.W.P., & Alter, T.R. (2018). “The Creative Fire: An Interactional Framework for Rural Arts- Based Development”, *Journal of Rural Studies*, 63, 229–539.

Cunningham, S., & Potts, J. (2015). Creative industries and the wider economy. *The Oxford handbook of creative industries*, 387-404

Lyons, T. S., Alter, T. R.; Audretsch, D., & Augustine, D. (2012). "Entrepreneurship and Community: The Next Frontier of Entrepreneurship Inquiry," *Entrepreneurship Research Journal*, 2(1), <https://doi.org/10.2202/2157-5665.1064>

Roundy P. T., (2017). "Small town" entrepreneurial ecosystems: Implications for developed and emerging economies", *Journal of Entrepreneurship in Emerging Economies*, 9(3), 238-262. <https://doi.org/10.1108/JEEE-09-2016-0040>

Sanchez Barrioluengo, M., & Benneworth, P. S. (2019). Is the entrepreneurial university also regionally engaged? Analysing the influence of university's structural configuration on third mission performance. *Technological forecasting and social change*, 141, 206-218. <https://doi.org/10.1016/j.techfore.2018.10.017>

Stejskal, J. & Hajek, P., (2016). "Determinants of Collaboration and Innovation in Creative Industries A Case of the Czech Republic". *Proceedings of Knowledge Management International Twenty 29 – 30 August, Chiang Mai, Thailand.*

White, J. (2017). Analyzing Entrepreneurship in the U.S. Arts Sector: Identifying Arts Entrepreneurs' Demographics and Shared Characteristics, *Artivate*, 6(1), 8-32. <https://doi.org/10.1353/artv.2017.0007>

# Services Marketing



## **Perceived overqualification and nurses' service performance: the mediating role of employee silence towards patient safety**

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### **Abstract**

Using the conservation of resources (COR) theory as our theoretical basis, we investigate how perceived overqualification influences nurses' silence towards patient safety and, in turn, their service performance. Data were collected from 201 nurses employed in a Greek public hospital. Results showed that perceived overqualification is positively related to nurses' silence towards patient safety and the latter is negatively related to their service performance. Our study also found support for the indirect effect of perceived overqualification on service performance through nurses' silence towards patient safety. Based on our findings, we discuss implications for theory and practice.

**Keywords:** *Nurses' silence towards patient safety, Mediation, Perceived overqualification, Service performance*

## **Investigating attitudes and behavioral intentions of the Panteion University students, about the private gyms in the area of Attiki.**

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### **Abstract**

The consequences of quality and customer experience for a business unit have been emphasized by many scholars. For professionals, understanding the concepts of quality and consumer experience and the importance of the elements they include, means that it will benefit private gyms to offer quality services by improving existing ones in order to satisfy the needs and wants of the client who consumes the sports product. The purpose of this essay is to provide rational information for the formulation of an appropriate strategy regarding the opinions, intentions and knowledge of Greek students regarding their consumer experience in private gyms. In the survey included 209 students of Panteion University and filled out a questionnaire that assessed: a) service quality, b) customer experience, c) the ubiquity of social media in gym services, d) satisfaction and e) the loyalty intentions of athletes. The results showed that service quality, customer experience with its four dimensions, ubiquity of social media and satisfaction, can affect positively the loyalty intentions of the athletes in the Greek private gyms of Attiki.

*Keywords: Service Quality, Customer Experience, Social Media Ubiquity, Satisfaction, Loyalty Intentions, Private Gyms.*

### **Introduction**

In recent years, private gyms in Greece have been increasingly trying to provide quality services to athletes, in order to maintain or increase the number of their customers, thus maintaining their viability. Understanding the needs of customers for exercise programs and in general their consumer behavior was necessary in order to have a rational reception for drawing up a business strategy (Tilikidou 2011). In order to achieve the above objectives, research should be carried out, which will ensure correct, sufficient and up-to-date information, suitable and necessary for each specific reception.

Accumulated research from the sport management field has shown that service quality and customer satisfaction are key drivers of customer loyalty (Theodorakis et al., 2014; Avourdiadou & Theodorakis 2014). Notably, consumer experience has attracted much attention among marketing experts. Marketers have realized that understanding how they experience a product or service is an important point in developing their marketing strategy. The customer's consumer experience influences behavioral intentions, through positive recommendations and repurchases for the product or service. (Hallmann, et al, 2021; Brakus et al, 2009).

Previous studies have considered satisfaction (Clemes, et al, 2011; Tzetzis, et al, 2014) as a factor explaining the relationship between service quality, experience and customer behavioral intentions. Also, the continuous engagement of consumers with social media has created a ubiquitous presence of social media, especially for information needs for the purchase and use of products and services (Du, et al, 2019).

### **Research Purpose**

The purpose of the study is to provide rational information for drawing up an appropriate strategy regarding the opinions, intentions and knowledge of Greek students regarding their consumer experience in private gyms.

The general research objective of the paper is to investigate the level of knowledge, opinions and intentions of Greek students about the services offered by private gyms. Particularly, the specific research objectives investigate the views/attitudes of students on the service quality, consumer experience, usefulness of social networks as an information tool for the services offered by gyms, the degree of student satisfaction and the future loyalty intentions of students in private gyms. It is examined also, possible relationships between the main behavioral dependent variable of the survey and the demographics of the sample.

## Literature Review

### *Service Quality*

According to Barger & Grandey, (2006), a service is based on three basic elements: the conditions, the process and the result of the process. The conditions required for the appropriate resources that ensure the provision of the service, the process concerns the production of the service and the results of the degree of fulfillment of expectations (Robinson, 2003; Ryu & Jang, 2008).

In the process of production and delivery of services the organization, the employees (providers) and the customers participate ("service triptych"), (Zeithaml, & Bitner, 2000). The organization creates promises and expectations to targets in order to confirm their expectations (Zavlanos, 2006; Walker, 2000). Responsible for the confirmation / denial of expectations are the providers (usually the employees), who during the process of providing the service interact with the customers (Bagozzi, 1986). Parasuraman, Zeithaml and Berry, proposed (1988) 5 dimensions (factors) of the SERVQUAL model which is an acronym for the words SERVICE QUALITY: Reliability: the business is held to be subject to the customer and provides the service according to the accuracy and consistency that the customer seeks. Assurance: the interaction between employees and create a feeling of security and trust of the customer towards the company. The employees are always polite and have the necessary knowledge to respond to the customer's connections. Material assets (tangibles): the whole of the logistical infrastructure, its businesses, the equipment used and overall the appearance of the employees. Personalization – empathy (empathy): the degree to which the business understands the customer's reports and problems. It provides the service with the aim of the maximum possible utility of the consumer. He treats each client individually with attention and works with hours that are convenient for the client's activities. Responsiveness: whether the employees are willing and positive to immediately serve the requests of the customers. Responses are made without delay with the service time and in the possible existence of an error or problem, there is an immediate response.

Theodorakis and Alexandris, (2008), based on SERVQUAL, investigated the relationship of service quality with repeat purchase intentions of football spectators in Greek professional football. The dimensions of service quality that can influence repeat purchase intention and word-of-mouth communication of viewers were investigated. They adapted SERVQUAL to the SPORTSERV five-factor measurement instrument (Theodorakis & Kambitsis, 1998), with the aim of scoring spectators' expectations of service quality in the field of professional sports. With the help of Likert attitude scale (seven points) they created the questionnaire of 5 dimensions with 20 correspondingly examined items – questions: Facilities (4 items), Staff (4 items), Access (4 items), Safety (4 items) and Reliability (4 items). For the word-of-mouth communication dimension and for the repurchase intentions dimension there were 3 items examined each.

According to Theodorakis, et al (2014) research with service quality scales in sport and fitness contexts tends to include the dimensions of both relational and physical quality (service) as well as outcomes. The service environment is important for sports and fitness services, where customers interact with the physical environment often for relatively long periods of time (e.g. as spectators at sporting events and as participants in fitness activities in sports and gyms). Relational quality is very important for sports and fitness services, because the customer relies heavily on the expertise of the staff, such as trainers for fitness classes or instructors for swimming lessons.

The SERVPERF (SERVICE PERFORMANCE) model, created by Cronin and Taylor, (1994), as an instrument for evaluating perceived service quality, is used to measure the customer's perception rather than expectation by examining the elements included in the service offered.

The QUESC model by Kim and Kim (1995) evaluated service quality in South Korean sports and health centers using the corresponding questionnaire, which examined the following eleven dimensions related to service quality: environment, employee behavior, reliability, information, planning, personal esteem, benefits, honor, relief, motivation and ease of access. Afthinos et al., (2005), based on the QUESC model, examined the motivations of people who exercise, and related to the type of gyms they prefer (public or private) and the demographic characteristics (gender and age) of the sample. The research sample consisted of 346 respondents who participated as members in public and private gyms in the Attica region. Individual issues related to the different motivations of the two sexes regarding their participation in different types of gym programs were examined. With the help of statistical tools, and more specifically, the test of variance for formulating accurate statistical predictions (ANOVA), Afthinos et al, (2005), concluded that gender is an important factor in formulating different participation motivations in the different programs of the gyms, as well as the expectations regarding the quality of the services offered by the gyms.

Mavropoulou, Kouthouris and Alexandris (2013), referred to the motivations for participation, the quality of the services offered, the obligation and the intention to repeat participation in clients of private gyms. The results revealed differences related to age and motivation sub-groups. The specific findings showed that each age group has different needs and different motivations for participating in sports, especially in private gyms, which offer a wide range of programs adapted to all age groups.

Howat and Assaker, (2016), examined the relationship of service quality to sportsmen's behavioral intentions, through perceived value and satisfaction, in public outdoor swimming pools in Australia. 4 factors were examined for process quality: "Presentation of facilities", (3 items), "Main services", (5 items), "Staff", (4 items), and "parking", (2 items). For the quality of results, 4 factors were examined: "Competitive successes", (3 items), "Sociability", (3 items), "Health and fitness", (3 items) and "Relaxation and release of stress", (3 items). Additionally, for the next 3 factors: "Perceived value", (2 items), "Satisfaction", (2 items) and "Loyalty", (3 items) were examined. They were led to the conclusion that overall satisfaction is positively correlated with loyalty and that perceived value has a positive correlation with overall satisfaction. The process quality factor has a very strong effect on perceived value and a positive effect on overall satisfaction. Outcome quality has a positive effect on overall satisfaction and has no effect on perceived value.

#### *Customer Experience*

According to Meyer, & Schwager, (2007) customer experience includes the full range of a company's offering, such as the quality of customer service, and other factors such as advertising, packaging, product and service features, ease of use and reliability. Klaus, et al, (2012) through a literature review and fourteen in-depth interviews with customer experience experts presented a typology of current customer experience management practice based on five dimensions: "customer experience definition", "scope and objectives customer experience governance", 'customer experience management', 'customer experience policy development and challenges'.

Girish & Lee, (2019) in a survey of 313 ultra-marathon runners to analyze the relationship between brand experience and sports event image revealed that emotional experience is the most important dimension, followed by sensory and behavioral experiences. However, spiritual experience showed an insignificant relationship. Sports event imagery showed a positive effect on word-of-mouth and revisit intention.

Sorrentino et al, (2020) collected data from 542 tourists during the America's Cup World Series held in Southern Italy. The results revealed that event experience and event satisfaction had positive effects on tourists' intentions to recommend and return to the same destination. Brakus et al, (2009) distinguished various dimensions of experience and constructed a brand experience scale that includes four dimensions: sensory, affective, cognitive and behavioral. The authors demonstrated that the scale is reliable, valid, and distinct from other brand measures, including brand evaluations, brand involvement, brand attachment, customer enjoyment, and brand personality. Furthermore, brand experience affects consumer satisfaction and loyalty directly and indirectly through brand personality associations.

#### *Ubiquity of Social Media*

Social media users often face the difficulty of controlling their social media use while they have important tasks to do (Du et al., 2019). Recent theory on self-control and media use suggests four potential factors (immediate gratifications, habitual control, ubiquity, and alerts) that may cause social media self-control failure. Du, et al, (2019) in a survey of 590 daily users examined their needs in relation to their relationship with social networks. The results showed that when people checked social media regularly, they either strongly experienced its ubiquity, or perceived through the notifications they received information they could use in their daily lives. Factors related to social media may cause social media users to have difficulty in self-control.

Lopez-Nicolas et al, (2008) based on a sample of 542 Dutch consumers, concluded that ease of use and perceived usefulness of communication devices can be linked to diffusion-related variables such as social influence and perceived benefits (flexibility and condition).

#### *Satisfaction*

Brakus et al, (2009) measured consumer satisfaction using five items: "I am satisfied with the brand and its performance" and "If I could do it over again, I would buy a brand other than this brand" (negative meaning), "My choice to get this brand was wise" and "I feel bad about my decision to get this brand" (negative meaning) and "I'm not happy with what I did with this brand" (negative sense). They concluded that experience affects satisfaction and loyalty both directly and indirectly.

According to Avourdiadou & Theodorakis (2014), overall satisfaction refers to the existence of both cognitive and affective influences and is described as cumulative in terms of customers' experience with a particular service. The overall evaluation that customers make of the gym, of the services it offers during the total number of visits to it, is an important element of the concept of overall satisfaction. Overall satisfaction should be distinguished from satisfaction with a single transaction. They concluded that satisfaction is a major driver of future customer behavior. However, its impact is significantly greater on experienced customers. That is, a customer's overall satisfaction is the sum of a series of consumer experiences, believed to have both cognitive and affective influences. Researchers have used both a single satisfaction item (Ferrand et al., 2010; Murray & Howat, 2002) and multi-item scales to capture overall satisfaction (Alexandris et al., 2004; Bodet, 2008) in a setting sport and fitness.

Tsitskari & Tsakiraki (2013), examined satisfaction, non-satisfaction, psychological commitment and the degree to which these factors differ between the gender elements (men - women) participating in gym programs. They distributed 300 questionnaires to clients of the five gyms (a total of eight) in the Komotini area. 198 of the questionnaires were completed by both genders. A return rate of 66% was recorded. They concluded that between the two sexes there are differences in terms of the level of satisfaction or non-satisfaction for their participation in the wide range of programs provided by gyms.

Hallmann et al, (2021) in a survey of 5,986 spectators at ice-hockey world championships, table-tennis world championships, and motorsports events (German touring car championship), concluded that entertainment, aesthetics, escape, and education served as defining dimensions in experience in sporting events and their association with intention to re-participate. Jepson et al (2012), in Great Britain, examined the motivation of South Asian participants in exercise programs offered by gyms. The most important motivation according to the findings of the research was the satisfaction received by the respondents, during their participation in the exercise program of the gym.

The purpose of the research of Xu et al, (2021), the examination of the dimension of the provision of quality services and wellness services by gyms and sports centers in China, while investigating their effect on customer satisfaction. In the first phase of the research, qualitative data were collected from telephone comments related to the service quality of 30 wellness centers in the Shanghai area (n=6252). The need to provide high-quality services is highlighted, focusing on services that contribute to the recovery of clients in combination with the development of effective relaxation methods, the safety of clients thanks to high-quality machines and excellent facilities that should be constantly renewed, providing a guarantee for the final result.

### *Loyalty Intentions*

A number of factors such as the quality of the equipment and space, the interaction with the gym staff and the benefits of participation had an indirect effect on customers' behavioral intentions through satisfaction (Theodorakis, N. 2014). Customer satisfaction positively affects future purchase intention, while service quality has an indirect or direct positive impact on future purchase intentions through customer satisfaction (Papadopoulos & Kargidis, 2022).

According to Alexandris, et al, (2017), in a survey of participants in the "Alexander the Great" International Marathon, the results showed that only the service environment and outcome service quality dimensions significantly contributed to the prediction of sports event commitment, while, and in contrast to other sports services, the interaction of service quality did not prove to be an important determinant for the development of loyalty to these events. Additionally, Marathon participation was shown to play a moderating role in the relationship between event quality and event loyalty. Service quality is more important for the development of commitment to sport events more in low than high involvement runners. Yoshida and James, (2010), concluded that viewers' satisfaction with a service can create long-term profits for service firms by influencing positive communication intention and repeat purchase intention, as well as enhancing viewer loyalty to the organization. Historically loyalty has been studied from a behavioral perspective focusing mainly on repeat purchasing (Bodet, 2008). However, researchers have highlighted the inadequacy of this one-dimensional view that fidelity is fully covered by this concept (Oliver, 1997). Thus, loyalty has been considered to have two components (Avourdiadou & Theodorakis (2014), behavioral loyalty, which examines the thoughts and feelings expressed by consumers towards specific service providers (e.g. positive recommendations of the company and services of), while attitudinal loyalty includes indicators related to action behavior (e.g., frequency and duration of participation). Customer loyalty is defined as the customer's favorable attitude toward the gym in terms of its communicative recommendation for the services offered and demonstrates positive repurchase behaviors (e.g. subscription renewal).

Brakus et al, (2009) to measure consumer loyalty identified five key reward elements "In the future, I will be loyal to this brand", "I will buy this brand again", "This brand will be my first choice in the future", "I will not buy other brands if this brand is available in the store" and "I will recommend this brand to others".

### **Methodology**

The sample should be essentially a miniature of the population from which it is drawn. But it is difficult to always be a faithful reflection of its population. The information obtained from the sample can, under the condition of observing the statistical rules, considered to concern the entire population (Zafeiropoulos & Mylonas, 2017). This research used the convenience sampling method, examining limitations of saving costs, time and effort in contacting the statistical population (McCusker & Gunaydin, 2015). Convenience sampling is taken at the convenience of the researcher, without all units of the population having the same opportunities to participate in the sample (Neuman, 2013).

The poll was carried out in electronic format using as a tool the questionnaire which was constructed with the purpose of collecting data regarding the investigation of the level of knowledge, opinions and intentions of Panteion University students regarding their experience in the private gyms of Lekanopedio Attikis. It is a

structured questionnaire that emerged from the literature review. The geographical area where the questionnaire was distributed is the regions of Attiki. The time the survey was conducted is December 2022. The population of the research is defined as the students of Panteion University. Sampling unit is defined as the adult student of Panteion University. The size of the research sample was finally formed at  $n=209$  people.

This process was carried out using social media as a means of promoting the questionnaire. The questionnaire was promoted to the student groups on social media by sending a relevant text along with it. Then, since there was no response needed, the questionnaire was forwarded to each student individually. Also in some cases, the questionnaire was forwarded to the professors of each department via email. The questionnaire was converted into an electronic format with the help of Google Drive, through the Google Form feature. The choice of creating a questionnaire in electronic form to carry out the research was made because this method is more effective for conducting the research, as it requires less time and is more economical (Walonick, 1993). Another advantage of the electronic questionnaire is the ease of statistical analysis, since there is the possibility of directly entering them into some statistical software such as SPSS.

For the construction of the questionnaire, an investigation and search for secondary data was carried out, through the literature review, and in addition to the examined data related to the subject under investigation, the questionnaire consists of a part with questions related to demographic data. More specifically, the questionnaire consists of the following two sections:

a) The first part of the main questionnaire examined "overall service quality" with 4 items, for example "the level of programs / services at this gym is very high" and "this gym provides superior service in many ways to its customers » (Theodorakis, et al., 2014; Avourdiadou & Theodorakis 2014). The consumer experience was then assessed with 12 items examined by Brakus et al, (2009).

More specifically, the consumer experience was evaluated based on 4 factors: 1) "Sensory Experience" (3 questions) for example "the gym makes a strong impression on my visual sense or other senses" and "I find the gym interesting in a sensory way", 2) "Emotional Experience" (3 questions) for example "gym evokes feelings and emotions" and "gym is an emotional experience", 3) "Behavioral Experience" (3 questions) for example "i engage in physical actions and behaviors when using the services" and "the gym is action oriented" and 4) "Spiritual Experience" (3 questions) for example "I choose this gym without a second thought" and "The gym stimulates my curiosity and problem solving".

"Satisfaction" with the respondents' overall experience includes 3 examined items (Theodorakis, et al 2014; Avourdiadou & Theodorakis 2014) such as "I am satisfied with the services offered" and "I am satisfied with my decision to become a member of this gym". The "ubiquity" factor is assessed with 3 items examined (Wixom & Todd, 2005; Lopez-Nicolas et al, 2008), for example "social media networks make it easy to access fitness information" and "I can engage in gym on social media networks at any time". Finally, "loyalty intentions" are evaluated by 5 examined elements, that is, communication development intentions, for example "I always recommend this particular gym when others ask for my opinion" and intentions to repeat the purchase of the service, for example "I plan to use the gym again in the future".

b) The second part of the basic questionnaire examined with 4 questions information on the respondents' participation in the services, such as "weekly frequency of visits", "length of stay", "visiting time zone" and "sports program", as well as the demographics - personal information of participants with 3 questions, such as "gender", "school attended" and "family income".

Responses to measures of overall service quality, experience, satisfaction, ubiquity and loyalty intentions were given on a five-point Likert scale, where 1 corresponded to "strongly disagree" and 5 corresponded to "strongly agree" ( Rial et al, 2014).

For the statistical processing and analysis of the data, the statistical package SPSS was used, as well as Microsoft Excel for the transfer of the data. For the assessment of the data collected and concerning the descriptive statistics, they were presented in the form of tables and the frequencies and relative frequencies of the demographic characteristics of the sample were used, while at the same time, for the presentation of the results of the answers determined through a numerical Likert scale, they were used measures of central tendency, such as the mean, and measures of variability, such as the standard deviation (Zafeiropoulos, 2012).

Also, the Pearson correlation coefficient was used to test correlations between numerical variables. A number between 1 and -1 that represents the linear correlation between different pairs of quantitative variables. A number with a positive sign implies a positive relationship and a number with a negative sign a negative relationship. The examination of the statistically significant relationship (effect) of each of the demographics gender, school and family income on the dependent variable loyalty intentions was carried out.

Cronbach's Alpha coefficient was used to check the reliability of the factors and the internal consistency of the variables that make them up. According to this coefficient, the degree of pairwise covariance of the variables that make up a factor is captured as well as its total variation with an acceptable minimum of 0.6 and a potentially competent rating from 0 to 1. In this paper, the Cronbach A coefficient is deemed satisfactory because it includes the following values: Total Service Quality 0.801, Sensory Experience 0.863, Emotional

Experience 0.814, Behavioral Experience 0.875, Spiritual Experience 0.854, Social Media Ubiquity 0.874, Satisfaction 0.914, and Loyalty Intentions 0.937.

### Result

Starting the presentation of the results with the demographic characteristics of the sample, it is initially observed that 56.46% of them are women, while 42.11% are men.

**Table 1 School**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
School of Economics & Management Sciences	68	32.54%
School of Political Science	26	12.44%
School of Social Sciences	75	35.89%
School of International Studies, Communication & Culture	40	19.14%
<b>total</b>	<b>209</b>	<b>100.00%</b>

Regarding the question in which school of Panteion University do the researched study (table 1), 35.89% study at the School of Social Sciences, 32.54% study at the School of Economics & Management Sciences, 19.14% study at the School of International Studies, Communication & Culture and 12.44% of students in the School of Political Sciences.

**Table 2 Family Income**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
up to €5,000	39	18.66%
between €5,001 - €15,000	73	34.93%
between €15,001 - €25,000	45	21.53%
between €25,001 - €35,000	33	15.79%
between €35,001.- €45,000	10	4.78%
More than €45,000	9	4.31%
<b>total</b>	<b>209</b>	<b>100.00%</b>

In relation to the annual family income of the individuals in the sample (table 2), this is less than €5,000 for 18.66%, ranges from €5,000 to €15,000 for 34.93%, from €15,000 to €25,000 for 21.53%, from €25,000 to €35,000 for 15.79%, from €35,000 to €45,000 for 4.78% and it is higher than €45,000 for 4.31% of the study participants.

**Table 3 Frequency of visit weekly**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
Less than 1 time	31	14.83%
1-2 times	62	29.67%
3-4 times	98	46.89%
5-6 times	18	8.61%
<b>total</b>	<b>209</b>	<b>100.00%</b>

46.89% of the sample states that they visit the gym 3 to 4 times a week (table 3), while 29.67% visit it once or twice a week. 14.83% visit the gym less than once a week, and 8.61% visit it more than 5 times.

**Table 4 Time spent in the gym**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
Less than 1 hour	37	17.70%
1-2 hours	149	71.29%
2-3 hours	18	8.61%
More than 3 hours	5	2.39%
<b>total</b>	<b>209</b>	<b>100.00%</b>

Regarding the length of time spent in the gym (table 4), more than 7 out of 10 respondents (71.29%) state that they exercise for one to two hours, 17.70% exercise for less than 1 hour, while the remaining 8.61% and 2.39% exercise 2 to 3 hours and more than 3 hours respectively.

**Table 5 Time zone of visiting the gym**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
8.00 – 12.00	20	9.57%
12:00 - 17:00	33	15.79%
17:00 - 22:00	138	66.03%
22:00 - close	18	8.61%
<b>total</b>	<b>209</b>	<b>100.00%</b>

In addition, 66.03% of the survey participants visit the gym (table 5) between the hours of 17:00 and 22:00, while 15.79% visit the gym after noon (12:00-17:00). The morning hours between 8:00 and 12:00 are preferred by 9.57%, while after 22:00 only 8.61% visit the gym.

**Table 6 Exercise program**

<b>ANSWERS</b>	<b>n</b>	<b>%</b>
Use of instruments	104	49.76%
Paid group exercise programs	21	10.05%
Group sports programs within the membership	50	23.92%
Personal sports programs	34	16.27%
<b>total</b>	<b>209</b>	<b>100.00%</b>

Finally, approximately one in two of the respondents (49.76%) use the fitness equipment to exercise (table 6), while 23.92% prefer the group programs included in the subscription. 16.27% of the sample chooses to exercise with an individual program (personal) and 10.05% prefer group exercise programs outside of membership.

Continuing with the presentation of the results concerning the attitudes and perceptions of the researched regarding the sports services they receive from the gyms and listing the results concerning the perceived overall quality of services (table 7), medium level answers are obtained ( $M=3.44$ ,  $S.D.=1.00$ ), although all scores of the four items are slightly above the neutral response, with the opinion that the gym provides excellent service tending in the positive direction ( $M.O.=3.60$ ,  $S.D.=1.02$ ).

**Table 7 "Overall Service Quality"**

<b>ANSWERS</b>	<b>M</b>	<b>SD</b>
Overall, the gym provides excellent service	3.60	1.02
The level of programs / services in this gym is very high	3.49	0.94
The gym offers excellent programs/services	3.26	1.03
This gym provides superior service in many ways to its customers	3.43	0.97
<b>Overall Service Quality</b>	<b>3.44</b>	<b>1.00</b>

Continuing the descriptive listing of the average scores of the factors under consideration and presenting the factors that make up the concept of experience (table 8), it initially emerges that the total experience level of the athletes in the context of sports services is of a moderate level with a tendency towards the most positive. ( $M=3.54$ ,  $S.D.=1.00$ ).

The respondents' attitudes regarding the emotional experience indicate a low level of satisfaction ( $M=3.43$ ,  $S.D.=1.07$ ), while on the contrary, the corresponding average scores regarding the degree of spiritual ( $M=3.67$ ,  $S.D.=0.93$ ), behavioral ( $M=3.54$ ,  $S.D.=1.00$ ) and sensory experience ( $M=3.52$ ,  $S.D.=0.96$ ).

Higher is the degree to which the research participants consider that the gym stimulates curiosity and problem solving ( $M=3.73$ ,  $S.D.=0.92$ ), while the emotional experience where the gym evokes feelings and emotions is evaluated as lower ( $M=3.36$ ,  $S.D.=1.14$ ), as is the sensory experience with the admission that the gym follows the senses ( $M=3.36$ ,  $S.D.=1.02$ ), but not below of the medium.

**Table 8 "Experience"**

<b>ANSWERS</b>	<b>M</b>	<b>SD</b>
The gym makes a strong impression on my visual sense or other senses	3.62	0.93
I find the gym interesting in a sensory way	3.56	0.93
The gym follows my senses	3.36	1.02
<b>Sensory Experience</b>	<b>3.52</b>	<b>0.96</b>
The gym evokes feelings and emotions	3.36	1.14
I have strong feelings about the gym	3.54	1.03
The gym is an emotional experience	3.40	1.04
<b>Emotional Experience</b>	<b>3.43</b>	<b>1.07</b>
I engage in physical actions and behaviors when using the Services	3.44	1.01
The gym results in physical experiences	3.52	1.03
The gym is action oriented	3.67	0.96
<b>Behavioral Experience</b>	<b>3.54</b>	<b>1.00</b>
I choose this gym without a second thought	3.69	0.95
Being in the gym doesn't make me think about anything else	3.59	0.92
The gym stimulates my curiosity and problem solving	3.73	0.92
<b>Spiritual Experience</b>	<b>3.67</b>	<b>0.93</b>
<b>Overall Experience</b>	<b>3.54</b>	<b>1.00</b>

Regarding the loyalty intentions (table 9) of the respondents, rather positive intentions emerge, with the average scores exceeding the value of 3.5 ( $M=3.62$ ,  $S.D.=1.07$ ), while a higher score receives the element concerning the intention to reuse the gym in the future ( $M=3.70$ ,  $S.D.=1.03$ ). Relatively positive communication intentions



are followed by athletes' willingness to share positive things about the gym with another (M=3.64, S.D.=1.05) and to recommend the gym when asked for their opinion (M=3.64, S.D.=1.07).

**Table 9 "Loyalty Intentions"**

ANSWERS	M	SD
I share positive things about the gym with others	3.64	1.05
I always recommend this particular gym when others ask for my opinion	3.64	1.07
I encourage friends and family to use his services	3.58	1.07
I consider this gym as my first choice	3.52	1.11
I plan to use the gym again in the future	3.70	1.03
<b>Loyalty Intentions</b>	<b>3.62</b>	<b>1.07</b>

The lowest average score of all the factors is evaluated by ubiquity (table 10), although it is above the neutral point (M=3.34, S.D.=1.09). Respondents rate relatively low the advanced technologies of a gym and especially the busyness (M=3.31, S.D.=1.12) and easy access (M=3.35, S.D. =1.08) in the information of the gym through social media .

**Table 10 "Ubiquitous Presence"**

ANSWERS	M	SD
Social media makes it easy to access gym information	3.35	1.08
I can do fitness on social media anywhere	3.31	1.12
I can engage with fitness on social media at any time	3.37	1.08
<b>Ubiquity</b>	<b>3.34</b>	<b>1.09</b>

Finally, the satisfaction dimension (table 11) is rated above average by the athletes (M=3.62, S.D.=0.97), who are satisfied to a degree M=3.67 (S.D.=0.95) from the services offered and satisfied to a degree M=3.63 (S.D.=0.95) from the programs offered by the gym.

**Table 11 "Satisfaction"**

ANSWERS	M	SD
I am satisfied with the services provided	3.67	0.95
I am very happy with the programs / services of the gym	3.63	0.95
I am satisfied with my decision to join this gym	3.56	1.00
<b>Satisfaction</b>	<b>3.62</b>	<b>0.97</b>

Through the application of Pearson correlations (table 13), loyalty intentions and the variables of ubiquity (r =0.441, p <0.001), satisfaction (r=0.701, p<0.001), overall service quality (r=0.579 , p<0.001), sensory (r=0.572, p<0.001), emotional (r =0.645 , p <0.001), behavioral (r =0.676, p <0.001) and spiritual experience (r =0.691, p <0.001 ) shows that the pairwise linear relationships are generally positive and statistically significant.

**Table 12 Correlation of loyalty intentions and all independent variables**

	UBI Ubiquitous	SAT Satisfaction	OSQ Overall Service Quality	SE Sensory Experience	AE Emotional Experience	BE Behavioral Experience	IE Spiritual Experience
LI Intentions	r 0.441	0.701	0.579	0.572	0.645	0.676	0.691
of Loyalty	p 0.000	0.000	0.000	0.000	0.000	0.000	0.000

In contrast, no statistically significant differences emerge (table 13) in the mean scores of the dimension of loyalty intentions based on gender (p =0.594), school (p =0.683) and family income (p =0.140).

**Table 13 Analysis of Variance ( ANOVA ) of the variable Loyalty Intentions based on the variables Gender, School & Family Income**

		LI Loyalty Intentions				
		M	SD	T	df	p
Gender	Man	3.57	0.93	- 0.533	204	0.594
	Woman	3.64	0.97			
		M	SD	F	df	p
School	School of Economics & Management Sciences	3.70	10.07	0.499	208	0.683
	School of Political Science	3.72	0.79			
	School of Social Sciences	3.52	0.95			
	School of International Studies, Communication & Culture	3.60	0.86			
		M	SD	F	df	p

	<5,000	3.32	1.01			
	5,001-15,000	3.72	0.98			
Family income	15,001-25,000	3.72	0.95	1,683	208	0.140
	25,001-35,000	3.58	0.78			
	35,001.- 45,000	4.00	0.87			

### Discussion and conclusions

The general research objective of this paper was to investigate the level of knowledge, opinions and intentions of Greek students about the services offered by private gyms. The results showed that service quality, customer experience with its four dimensions, ubiquitous presence of social media and satisfaction, can influence loyalty intentions of the athletes in the Greek private gyms of Lekanopedio of Attiki.

The student's rate all the dimensions examined in this paper as neutral to positive. Overall Service Quality (M=3.44, S.D.=1.00) , Overall Experience (M=3.54, S.D.=1.00) , Loyalty Intentions (M. O.=3.62, S.D.=1.07) , Ubiquity (M=3.34, S.D.=1.09) , Satisfaction (M=3.62, S.D.=0.97). It is typical that these average scores should, to some extent, concern gym managers, in order to have a better perceived service quality, customer experience, satisfaction, social media involvement and, by extension, increased loyalty intentions.

Also through the application of Pearson correlations, the dependent variable "loyalty intentions" and the independent variables "ubiquity", "satisfaction", "total service quality", "sensory experience", "emotional experience", "behavioral experience" and "spiritual experience" it follows that pairwise linear relationships are generally positive and statistically significant. This result adds to and reinforces the already existing empirical findings regarding the positive effect of quality, customer experience, adoption of new technologies and satisfaction on the two main categories of intentions: word of mouth and repurchase intention.

On the contrary, as can be seen, gender (p =0.594), school (p =0.683) and family income (p =0.140) do not differentiate loyalty intentions (dependent variable) because no statistically significant differences emerge in the mean scores of the intention dimension loyalty based on demographics.

The gym administration should keep in mind that smart technologies are increasingly in demand among the buying public and even more so among young people. For this, it should be oriented towards digital marketing practices, especially in matters of advertising, publicity, daily electronic contact with the customer and comprehensive use of proprietary electronic media. Actions should be taken in order to increase visits on the official website of the gym, but also on other social media. There needs to be a re-approach of the content of sports programs in order to increase the perceived service quality and the overall experience of the athletes. Continuous improvement in aspects such as employee training, customer convenience and updated equipment can help gyms deliver services that will exceed their customers' expectations and improve their satisfaction. The gym should launch more programs in the morning and midday time zones due to the heavy traffic that the 17:00-22:00 zone has. With promotions and offers it should strengthen the remaining time zones.

In conclusion, sports executives should place special emphasis on improving perceived service quality, creating feelings of satisfaction, but also maximizing positive consumer experience, improving overall sports services and maintaining a competitive advantage within the sports market, through increasing customer loyalty.

The present study presents some limitations. Initially, the sample size was not particularly large. A larger sample would equal greater statistical power. Also, it should be noted that our sample consisted of young consumers and specifically students of the Panteion University of the region of Attica. This means that generalizations of the findings of this research to individuals with different demographic characteristics than those in the sample should be made with caution. In addition the selection of the sample with convenience sampling confirms the problem of generalizability. Further investigation of the relationships between the variables concerning "weekly frequency of visit", "length of stay", "visit time zone" and "exercise schedule" and demographics requires the use of other statistical techniques (e.g. x<sup>2</sup> , correlation, regression, etc. ), which could be attempted in processing the results with cross-questions.

Future research could focus on studying samples with different demographic characteristics, a larger sample and people from more geographical areas, as well as it is suggested to examine other new factors that were not studied in the present research, such as the effect of perceived value on satisfaction and intentions in order to achieve a better understanding of the phenomenon.

### References

- Afthinos, Y., Theodorakis, N.D. & Nassis, P. (2005). Customers' expectations of service in Greek fitness centers. Gender, age, type of sport center, and motivation differences. *Managing Service Quality*, Vol. 15, No.3, pp.245-258. <https://doi.org/10.1108/09604520510597809>
- Alexandris, K., Theodorakis, N., Kaplanidou, K., & Papadimitriou, D. (2017). Event quality and loyalty among runners with different running involvement levels: The case of "The Alexander the Great" International Marathon. *International Journal of Event and Festival Management*. <https://doi.org/10.1108/IJEFM-08-2016-0057>

- Alexandris, K., Zahariadis, P., Tsorbatzoudis, C. & Grouios, G. (2004). An empirical investigation of the relationships among service quality, customer satisfaction and psychological commitment in a health club context, *European Sport Management Quarterly*, 4 (1), 36–52. <https://doi.org/10.1080/16184740408737466>
- Avourdiadou, S. & Theodorakis, N.D. (2014) The development of loyalty among novice and experienced customers of sport and fitness centers, *Sport Management Review*, 17:4, 419-431, DOI:10.1016/j.smr.2014.02.001
- Bagozzi, R.P. (1986) *Principles of Marketing Management*, Science Research Associates, Chicago, IL.
- Barger, P.B. & Grandey, A.A. (2006). Service with a smile and encounter satisfaction: emotional contagion and appraisal mechanisms, *Academy of Management Journal*, Vol. 49 No. 6, pp. 1229-1238. <https://doi.org/10.5465/amj.2006.23478695>
- Bodet, G. (2008). Customer satisfaction and loyalty in service: Two concepts, four constructs, several relationships. *Journal of retailing and consumer services*, 15(3), 156-162. <https://doi.org/10.1016/j.jretconser.2007.11.004>
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty?. *Journal of marketing*, 73(3), 52-68. <https://doi.org/10.1509/jmkg.73.3.052>
- Clemes, M.D., Brush, G.J. & Collins, M.J. (2011). Analyzing the professional sport experience: a hierarchical approach, *Sport Management Review*, Vol. 14 No. 4, pp. 370-388. <https://doi.org/10.1016/j.smr.2010.12.004>
- Cronin, J.J., Taylor, S.A., (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality, *Journal of Marketing*, Vol. 58, 125-131. <https://doi.org/10.1177/002224299405800110>
- Du, J., Kerkhof, P., & van Koningsbruggen, G. M. (2019). Predictors of social media self-control failure: Immediate gratifications, habitual checking, ubiquity, and notifications. *Cyberpsychology, Behavior, and Social Networking*, 22(7), 477-485. <https://doi.org/10.1089/cyber.2018.0730>
- Ferrand, A., Robinson, L., & Valette-Florence, P. (2010). The intention-to-repurchase paradox: A case of the health and fitness industry. *Journal of Sport Management*, 24(1), 83-105. <https://doi.org/10.1123/jsm.24.1.83>
- Girish, V. G., & Lee, C. K. (2019). The relationships of brand experience, sports event image and loyalty: Case of Jeju International Ultramarathon Race. *International Journal of Sports Marketing and Sponsorship*. <https://doi.org/10.1108/IJSMS-08-2017-0095>
- Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18, 36-34. <https://doi.org/10.1108/EUM0000000004784>
- Hallmann, K., Zehrer, A., & Rietz, J. (2021). Sport events as experiencescapes: the spectator's perspective. *International Journal of Sports Marketing and Sponsorship*. <https://doi.org/10.1108/IJSMS-04-2020-0056>
- Hellier, P.K., Geursen, G.M., Carr, R.A. & Rickard, J.A. (2003). Customers repurchase intention: a general structural equation model. *European Journal of Marketing*, 37 (11/12), 1762-1800. <https://doi.org/10.1108/03090560310495456>
- Jepson, R., Harris, F.M., Bowes, A., Robertson, R., Avan, G., Sheikh, A. (2012). Physical Activity in South Asians: An In-Depth Qualitative Study to Explore Motivations and Facilitators. *PLoS ONE*, 7(10): e45333. <https://doi.org/10.1371/journal.pone.0045333>
- Kim, D., & Kim, S. (1995). QUESC: An Instrument for Assessing the Service Quality of Sport Centers in Korea. *Journal of Sport Management*, 9, 208-220. <https://doi.org/10.1123/jsm.9.2.208>
- Klaus, P., Edvardsson, B., & Maklan, S. (2012). Developing a typology of customer experience management practice—from preservers to vanguards. In *12th International Research Conference in Service Management, La Londe les Maures, France*.
- Linardis, A., Papagiannopoulos, K., & Kalisperati, E. (2011). *Online research. Advantages, disadvantages and tools of conducting online surveys*. National Center for Social Research, 1-27 (in Greek).
- López-Nicolás, C, Molina-Castillo, F.J. & Bouwman, H. (2008). An assessment of advanced mobile services acceptance: Contributions from TAM and diffusion theory models, *Information & Management*, Volume 45, Issue 6, pp 359-364, <https://doi.org/10.1016/j.im.2008.05.001>
- Mavropoulou, M., Kouthouris, X., Alexandris, K. (2013). Investigating the motivation, service quality, commitment & repeat intention of private gym customers. *Hellenic Journal of Sports & Recreation Management*, volume 10 (1), 44 – 57 (in Greek).
- McCusker, K., & Gunaydin, S. (2015). Research using qualitative, quantitative or mixed methods and choice based on the research. *Perfusion*, 30(7), 537-542. <https://doi.org/10.1177/0267659114559116>
- McDougall, G. & Levesque, T. (2000). Customer satisfaction with service: putting perceived value into the equation. *Journal of Services Marketing*, 14(5), 392-410. <https://doi.org/10.1108/08876040010340937>
- Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard business review*, 85(2), 116.

- Murray, D. & Howat, G. (2002). The relationships among service quality, value, satisfaction and future intentions of customers at an Australian Sports and Leisure Centre. *Sport Management Review*, 5, 25-43. [https://doi.org/10.1016/S1441-3523\(02\)70060-0](https://doi.org/10.1016/S1441-3523(02)70060-0)
- Neuman, W. L. (2013). *Understanding Research: Pearson New International Edition PDF eBook*. Pearson Higher Ed..
- Oliver, R. (1997). *Satisfaction: a behavioral perspective on the consumer*. New York: McGraw Hill
- Papadopoulos, N.G. & Kargidis, T. (2022). The Effect of Service Quality on Spectators' Behavioral Intentions in Professional Football: The Role of Value and Satisfaction. *International Journal of Innovation and Technology Management*, 2241006. <https://doi.org/10.1142/S0219877022410061>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Rial, B. M., Cancela-Carral, J. M. & Cambau, V. (2014). Design and psychometric properties of the questionnaire for assessing quality management in sports federations. *Educacion Fisica y Deportes*, 117(3), 69-76.
- Robinson, L. (2003). Committed to quality: the use of quality schemes in UK public leisure services. *Managing Service Quality*, 13(3), 247-255. <https://doi.org/10.1108/09604520310476508>
- Ryu, K. & Jang, S. (2008). DINESCAPE: a scale for customers' perception of dining environments, *Journal of Foodservice Business Research*, Vol. 11 No. 1, pp. 2-22. <https://doi.org/10.1080/15378020801926551>
- Sorrentino, A., Fu, X., Romano, R., Quintano, M., & Risitano, M. (2020). Measuring event experience and its behavioral consequences in the context of a sports mega-event. *Journal of Hospitality and Tourism Insights*. <https://doi.org/10.1108/JHTI-03-2020-0026>
- Sower, V. (2011). *Essentials of Quality with Cases and Experiential Exercises*, Huston: Wiley.
- Telikidou, E. (2011). *Marketing Research*, Thessaloniki, Sofia (in Greek).
- Theodorakis, N. & Alexandris, K. (2008). Can service quality predict spectators' behavioral intentions in professional soccer? *Managing Leisure*, 13, 162-178. <https://doi.org/10.1080/13606710802200852>
- Theodorakis, N. (2014). The Role of "Perceptions of Other Customers" in the Formation of Satisfaction and Behavioral Intentions in Gyms. *Management*, 11 (2), 24-35 (in Greek).
- Theodorakis, N., & Kambitsis, C. (1998). The effect of service quality on sport consumers' behavioral intentions, *Proceedings of the 6th Congress of the European Association of Sport Management*. Madeira, Spain.
- Theodorakis, N.D., Howat, G., Ko Y.J. & Avourdiadou, S. (2014) A comparison of service evaluation models in the context of sport and fitness centres in Greece, *Managing Leisure*, 19:1, 18-35, DOI: 10.1080/13606719.2013.849505
- Tsitskari, E., Tsakiraki, A. (2013). Does satisfaction affect a member's psychological to a fitness center? *Journal of Physical Education and Sport*, 13(4), Art 82, pp. 522-527. DOI:10.7752/jpes.2013.04082;
- Tzetzis, G., Alexandris, K. & Kapsampeli, S. (2014). Predicting visitors' satisfaction and behavioral intentions from service quality in the context of a small-scale outdoor sport event, *International Journal of Event and Festival Management*, Vol. 5 No. 1, pp. 4-21. <https://doi.org/10.1108/IJEFM-04-2013-0006>
- Walker, J., (2000). An exploratory study of a multi-expectation framework for services, *Journal of Services Marketing*, Vol. 14 – No 5, 411-431. <https://doi.org/10.1108/08876040010340946>
- Walonick, D. S. (1993). Everything you wanted to know about questionnaires but were afraid to ask. <http://www.statpac.com/research-papers/questionnaires.htm> Ανακτήθηκε 12 Ιανουαρίου 2023
- Westbrook, R-A. (1987). Product / consumption-based affective responses and post purchase processes. *Journal of Marketing Research*, 24(3), 258-270. <https://doi.org/10.1177/002224378702400302>
- Wixom, B.H. & Todd, P.A. (2005) A Theoretical Integration of User Satisfaction and Technology Acceptance. *Information Systems Research* 16(1):85-102. <https://doi.org/10.1287/isre.1050.0042>
- Xu, K.K., Chen, K.K., Kim, E., Garcia-Fernandez, J., Nauright, J., Zhang, J.J. (2021). Dimensions of service quality in health-Fitness clubs in China. *Int J. Environ. Res. Public Health*, 18(20), 10567. <https://doi.org/10.3390/ijerph182010567>
- Yoshida, M. & James, J.D. (2010). Customer satisfaction with game and service experiences: antecedents and consequences, *Journal of Sport Management*, Vol. 24 No. 3, pp. 338-361. <https://doi.org/10.1123/jsm.24.3.338>
- Zafeiropoulos, K. & Mylonas, N., (2017). *Statistics with SPSS. Contains Probability Theory*, Thessaloniki, Tziolas (in Greek).
- Zavlanos, M. (2006). *Quality in the Services and Products Provided*, Athens: Stamouli Publications (in Greek).
- Zeithaml, V.A. (1988). Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52, 2-22. <https://doi.org/10.1177/002224298805200302>
- Zeithaml, V.A., Bitner, M.J., (2000), *Services Marketing, Integrating customer focus across the firm*, 2<sup>nd</sup> edition, Irwin McGraw-Hill.

## **Tourism service providers' attitudes towards automation and robotization of services in tourism**

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### **Abstract**

The 21st century has seen the introduction of automation in every aspect of life, including the tourism industry. Despite being a high-contact industry that relies on human interaction, automation, and robotization have made their way into tourism. This study aimed to investigate the attitudes of tourism service providers towards these technological advancements in the industry. The study begins with a theoretical exploration of service automation and robotization in tourism, including examples of good practices, advantages, and disadvantages, and elaboration on the importance of technological support during the pandemic. The empirical part of the research was based on semi-structured interviews with six tourism stakeholders in Maribor. The findings revealed that automation is a crucial aspect of modern tourism, but service providers also recognize the importance of human staff in providing value to tourism services. While there is still much potential for further technological upgrades in the industry, service providers remain committed to preserving the authenticity of the tourist experience

**Keywords:** *service automation, service robotization, tourism, services in tourism, automation potential*

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### **1. Introduction**

About 100 years ago, at the time of their creation, robots were considered something close to science fiction, and in the following decades, they were used mainly for industrial purposes (Kazandzhieva and Filipova, 2019, p. 79). Thanks to the development of artificial intelligence, today, in the era of the fourth industrial revolution, "machines" are capable of more than before - they know how to connect and communicate with each other and make decisions without human intervention. Thus, automation and robotization are starting to appear practically everywhere (Tussyadiah, 2020, p. 4), due to their countless advantages, even in the most "human" activities, such as the service industry. In this context, automation is understood as autonomous and self-service systems, which in a certain sense reduce the need for human labour or enable human workers to devote themselves to less routine tasks (in tourism, for example, the check-in machine at the airport). And part of automation is also robotization - the implementation of robotic systems based on artificial intelligence (in tourism, for example, a humanoid robot that does not only respond to the client's "commands", but also reacts to them - recognizes his feelings and has the knowledge to react to them) (Chaloupková and Jarolimkova, 2018, p. 755). In industries such as marketing, automation brings many opportunities - as large amounts of data are stored and processed by machines, it is easier for organisations to focus on other activities - both in terms of technology taking care of routine tasks that would otherwise require time devote employees, as well as by the fact that technological modernization optimizes many marketing processes - e.g. nurturing a relationship with customers, predicting their future purchasing behaviour, etc. (Todorić, 2016, p. 88).

In this paper, we're discussing the automation and robotization of services in tourism in more detail. In recent years, for example, robot guides and robot waiters have started to appear, and even fully automatically managed establishments such as hotels and amusement parks are opening (Tussyadiah, 2020, pp. 2-4). According to forecasts, this is only the beginning of the service revolution that awaits us. With technologies that are ever smarter, but at the same time ever smaller, lighter, and cheaper, it seems practically all sectors of the service industry will be changed noticeably (Wirtz, Kunz, and Paluch, 2021). As automation and robotization are becoming imminent in all activities, tourism is also developing in the direction where they will be present in all its service processes. This means both before, during and after the service. Since tourism is an activity in which the value of the inevitable and irreplaceable human factor has always been emphasized, the effectiveness and feasibility of such comprehensive changes are in question (Kazandzhieva and Filipova, 2019, p. 79). Almost ironically, tourism at the same time represents one of the activities in which automation, due to the nature of the work (most employees perform predictable and repetitive procedures and/or operate appliances: e.g. preparing and serving food, cleaning the premises...) has the greatest potential for further development (Ivanov, 2020, pp. 2-6). The biggest doubts regarding the adoption of automation arise from the perspective of losing human contact. It is true that customer satisfaction and positive attitudes towards tourist destinations are decisively influenced by meaningful interactions between visitors and hosts at the destination - both with the tourism service providers themselves, as well as with locals, etc. Though at the same time, automation brings many advantages - better support for visitors, constant level of service quality, etc. (Tussyadiah, 2020, pp. 17, 18).

Many authors (Alfalih, 2022; Ivanov, Webster, Stoilova and Slobodskoy, 2022; Manthiou & Klaus, 2022; Parvez, Ozturen and Cobanoglu, 2021) perceive the greater potential for further automation in tourism in the period after (and during) the pandemic of the COVID- 19. With the onset of the pandemic, our central priorities have changed – people place more importance on safety, physical distance, more precise cleaning, etc. During the pandemic, the automation and robotization of services have already represented strong support for services that otherwise require close (in this case, sometimes high-risk) contact between service providers and clients. With the new reality, automation and robotization could develop further to better safety and health protection in tourism.

However, how is the possibility of the development of automation and robotization in the tourism industry accepted by those who provide services in it? At a time when more and more places are appearing in tourism where human resources are replaced (or supplemented) by robots, many researchers are already writing about the advantages, disadvantages, and opportunities of introducing automation and robotization in the industry. Of course, automation and robotization do not necessarily bring only the launch of robots, but the automation of processes for more efficient and competitive operation with the aim of achieving high-quality services (Deng, Lawson and Moutinho, 2000, pp. 60-62). In this paper, we're focusing on the views of tourism service providers in more detail. How do they view automation? Which parts of tourist services do they think makes sense to support, supplement, or replace with automation and/or robotization?

The attitudes we discussed are basically multidimensional hypothetical constructs used to measure an individual's relationship to a certain phenomenon. They are usually defined as long-term assumptions for a consistent response to different situations, events, and phenomena. We know three components of attitudes: actions, feelings, and beliefs (Pickens, 2005).

The main purpose of this paper is to identify and analyze the attitudes of providers of automated tourist services towards robotization and robotization of services in tourism.

## 2. Literature review

First, we overviewed automation, which includes all autonomous and self-service systems, which in a certain sense reduce the need for human labor or enable the workers to devote themselves to less routine tasks (Chaloupková and Jarolimkova, 2018, p. 755). And service automation means of using or supporting machines to perform a certain sequence of operations during the performance of a service (Lukanova and Ilieva, 2019, p. 3) without human intervention or management. This includes the use of robots, self-driving vehicles, artificial intelligence, chatbots, automated trading algorithms, self-service kiosks, three-dimensional printing, facial and speech recognition technologies, the Internet of Things, etc. (Ivanov, Webster, Stoilova, and Slobodskoy, 2022, p. 7). Technology has brought and enabled progress to almost all industries in the world - technological solutions make work processes easier and more cost-effective (Berezina, Ciftci and Cobanoglu, 2019, p. 206).

Of course, the automation of services does not necessarily mean that the entire service is automated, , automation represents support for an existing service and an opportunity to optimize it (Lukanova and Ilieva, 2019, p. 3). Due to the nature of the service process, this was almost unimaginable until recently, but in recent years progress has begun to enable the automation of this sphere also (Coombs, Hislop, Taneva and Barnard, 2020, p. 2). Automation is important as part of newer and technologically supported ways of providing services

(den Hertog, Van der Aa and De Jong, 2010, p. 495). The rapid development of artificial intelligence and digital technologies are decisively changing the contacts between clients and organizations - and thus the roles of everyone involved in the process of using services (Larivière et al., 2017, p. 3). Today, technology helps service providers to meet (or exceed) the expectations of their customers and "overtake" competitors. The technological dimensions are so large that suitable technological support can create a "wow" effect on every part of the customer's experience or service process (Edwards, 2016).

The provision of services is made possible by complex service systems (these include both people and technologies), which interact with other service systems for the purpose of joint value creation (Maglio, Vargo, Caswell and Spohrer, 2009, p. 1). Many services are performed as a product of the joint work of several providers, and customers are also taking an increasingly active role in the service process (McCull-Kennedy, Vargo, Dagger, Sweeney and Kasteren, 2012, p. 2).

Tourism is an economic industry in which the human factor plays a decisive role, and the most important element of the entire industry is the person - the customer or the guest (Berezina, Ciftci, and Cobanoglu, 2019, p. 206). In addition to the customers, the service providers are also of incomparable importance, as they directly influence the implementation of the tourist service and the customer's experience during the service (Chaloupková & Jarolimkova, 2018, p. 755). At a time when the range of tourism offers can often exceed the demand, the standards for even the most basic services are rising. Thus, tourist organizations focus more on the implementation and the way of performing this service than on the service itself. And with this comes the need to innovate services, also supported by technology (Lukanova & Ilieva, 2019, p. 2). Technology has experienced rapid development in recent years, enabling tourism providers to intensively improve the quantity and quality of the services offer. Today, modern technologies are used by all the fundamental stakeholders of the tourism industry, usually for marketing and communication purposes (Ercan, 2019, p. 529). Practically all providers of tourist services use computerized reservation systems and depending on the specifics, also the rest of the technological support.

Technological support for tourism service providers is a support system for making business decisions (from the point of view of logistics, pricing, etc.) (Ercan, 2019, p. 531) and usually used in the tourism service industry with the aim of improving the work of employees and creating an environment in which can make your work easier and with the aim of improving guest satisfaction. Likewise, technology as a means of adding value acts as a cause of differentiating service providers, increasing guest satisfaction and building loyalty among them (Margarido, 2015, p. 5 after Collins and Cobanoglu, 2008). Chui, Manyika and Miremadi (2016, pp. 7-9) characterize the potential of service automation in tourism as a medium. The possibilities for development are greater in services that involve predictable physical work, and even in basic tasks such as cleaning a hotel room, situations may arise for which the technology is not yet sufficiently developed.

However, further technological implementation in tourism is foreseen. The additional potential of automation arose in the COVID-19 pandemic that turned the world upside down - and tourism with it. Even after the situation began to normalize and tourism started to wake up again, many adjustments were necessary, as the health conditions required an adapted provision of services that would ensure safety as much as possible and limit the possibility of the spread of the virus (Hall, Scott and Gössling, 2020, p. 585). This is where automation came in handy, allowed automating many parts of the tourism service, and enabled physical distancing.

One of the parts of automation is also robotization, the implementation of robotic systems based on artificial intelligence. These include complex functions capable of analysis, prediction, optimization, and visualization in order to make better operational decisions (Chaloupková & Jarolimkova, 2018, p. 755). Although the use of robots was initially limited to manufacturing activities, the accelerated development of artificial intelligence and robotics has opened the door to robots in many other activities, including marketing and even tourism, where service robots are mostly used. Compared to industrial robots, service robots are usually mobile, capable of social interactions, and more independent (Murphy, Hofacker and Gretzel, 2017b, p. 3).

The robotization of (parts of) tourist services is one of the ways of achieving a competitive advantage for providers of tourist services (Kuo, Chen and Tseng, 2017, p. 1; Ivanov, 2019, p. 1). Tourism was the first to introduce robots to the general public after specialized industries such as healthcare, the military, and manufacturing (Berezina, Ciftci, and Cobanoglu, 2019, p. 195). The use of robots or artificial intelligence in tourism has enabled the development of robotic language understanding, emotion recognition, and facial recognition. Robots today can also perform certain tourist services that require direct contact with guests (Chi, Gursoy and Chi, 2022, pp. 1-3). Robotization in tourism represents an opportunity to enable the development of new tourist services (Chaloupková & Jarolimkova, 2018, p. 759), and similarly to automation, robotization also represents an opportunity to fill places with the support of artificial intelligence where there is no specific knowledge or direct human contact required (Kuo, Chen and Tseng, 2017, p. 2).

After the literature review, several conclusions can be formulated:

- automation and robotization are already a noticeable part of the tourism industry and have a somewhat potential for further development,
- despite the specifics of the high-contact tourism industry, thanks to the development of modern technology, different forms of automation and robotization of service processes are starting to be offered in tourism as well,
- considering modern trends and increasingly intensive technological development, we were interested in whether the providers of tourist services see this as a threat to such a vital activity as tourism rather than an opportunity.

### 3. Research prepositions

Considering the trend of modernization of services (Chaloupková & Jarolimkova, 2018; Tuomi, Tussyadiah, Ling, Miller and Lee, 2020), we assumed that tourism service providers are generally in favour of automation and robotization. According to many authors (Chaloupková and Jarolimkova, 2018; Ivanov, Webster and Berezina, 2017; Ivkov, Blešić, Dudić, Pajtková Bartáková, and Dudić, 2020; Tuomi et al., 2020), automation and/or robotization should occur primarily in workplaces where such the technology is efficient and meets the client's needs. Basically, this would not represent a threat to existing jobs, but a support for existing employees and an opportunity for additional innovation, more efficient operation and reorientation of employees to other, more creative jobs. At the points that require a deeper and more personal understanding of the client, we would maintain the human workforce (supported by technology) in order to provide the optimal tourist service.

In addition to the business outcome, according to the findings of Ivkov et al. (2020), the performance of services according to the standards of the organization is the most important factor when thinking about the implementation of automation and robotization of services for tourism stakeholders. Based on this, we assume that tourism providers would automate or robotized only tourist services, where this would mean an even improved implementation of tourist services. Of course, the feasibility must be evaluated from the point of view of economic efficiency, customer experience, the competitiveness of the organization, etc. (Ivanov, Webster and Berezina, 2017; Paluch, Wirtz and Kunz, 2020).

Findings of various authors (Tuomi et al., 2020; Chaloupková and Jarolimkova, 2018; Chi, Gursoy and Chi, 2022), shows that it makes the most sense to introduce automation and/or robotization as part of tourist services at points where this would serve as support for the existing work of employees. There is also mention of bringing services closer to places that are more difficult to access, or to individuals who have difficulty accessing certain places (e.g. a virtual visit to a place for a physically challenged person). Thus, we assumed that the interviewed tourism service providers support automation or robotization of parts of tourist services with an intelligence, guidance or information function and support systems (for easier data processing, etc.).

We assumed that at points where the level of interaction between the client and the tourist service provider is high, automation or robotization would be carried out to a lesser extent. At points where a deeper and more personal understanding of the client is required, genuine human contact would be maintained. In many situations, customers do not yet accept robots as an equivalent alternative to humans. Technologically stronger support is better accepted for services that offer exclusively utility value - e.g. providing information at an information point compared to massage, a high-contact service where the client wants to relax and have fun (Ivkov et al., 2020; Chi, Gursoy, and Chi, 2022). Thus, we assumed that providers of tourist services are not in favor of the automation or robotization of high-contact services - services with a high degree of human contact.

The positive aspects of automation or robotization are primarily perceived by clients as more efficient data processing and storage, easier translation of content into a foreign (their) language, and a constant level of service delivery. At the same time, they are sceptical that services in tourism could become too impersonal with excessive automation or robotization. According to the authors' findings, which state that a combination of human and robotic service delivery can ensure a more efficient and consistently high-quality tourist service, we assumed that this would have a positive effect on customer satisfaction (Chaloupková and Jarolimkova, 2018; Ivkov et al., 2020).

Further on, we assumed that the impact on their satisfaction in the case of automation and robotization would be positive, as the purpose of automated and/or robotized support is to strengthen work effectiveness and support employee innovation. It can also bring shorter working hours and encourage additional education. In addition to monotonous and long-term work, automation and robotization can also fill work at a less convenient time, when there are significantly fewer customers - e.g. automated reception of hotel guests during night shifts (Chaloupková and Jarolimkova, 2018, p. 757).

Our intention was to get information on the attitudes of the interviewees towards the expected business results in the case of automation of services or expected changes in profitability/performance by service providers. Ivkov



and others (2020, p. 10) note that business success is one of the central factors on the basis of which decisions are made in tourism companies.

#### **4. Data collection**

Based on a pre-prepared guide of interview, we interviewed six relevant local tourist service providers from various fields of tourism (destination's tourist information centre, organizer of the biggest local outdoor festival, restaurant, hotel, tourist board and a museum). Geographically, we limited ourselves to providers of tourist services within the tourist destination of Maribor, the second-largest city in Slovenia (100.000+ citizens). We conducted the interviews live and, with the prior consent of the interviewees, also recorded them in order to facilitate further analysis.

After interviewing six relevant local tourist service providers from various fields of tourism (destination's tourist information center, organizer of the biggest local outdoor festival, restaurant, hotel, tourist board, and a museum), the recorded interview content was analysed using coding technique. By summarizing and extracting the most important findings from the answers of the interviewees, we formulate conclusions consistent with the research goals.

Through interviews, we discussed attitudes towards service automation: experience, expected business outcome, service assurance, empathy, communication and interaction, social influence, reliability, performance, and tangibles (summarized according to the scale of Ivkov et al., 2020).

#### **5. Results**

Concerning the first question if the interviewees propose to automate or robotized points with intelligence, guidance, and information functions and support systems for tourist services, the interviewees were unanimous that the optimal integration of automation represents support for existing services - especially in the area of easier and more effective informing and guiding of clients - as well as a tool for optimizing the work process - in the form of support systems for tourist services.

Regarding the second question addressing the belief of interviewees that high-contact tourism services are not suitable for automation or robotization, the interviewees responded that "human contact is still more genuine", "that the human factor will remain until the end" and that "it would be a shame to replace such (high-contact) parts of services with technology".

The respondents believe that the automation or robotization of tourist services would have a positive effect on customer satisfaction", the answers opinions were diverse. The idea was partially accepted or accepted with reservations, as the vast majority of interviewed tourism service providers agreed that automated support represents a way to work faster, more efficiently and more innovatively. This ultimately has a positive effect on customer satisfaction. The vast majority of interviewees simultaneously agreed that more advanced automation (e.g. robotization in the form of launching actual robots) would not have a positive effect on customer satisfaction or could have a positive impact only if it were really unobtrusive and meaningfully included in the service process.

Concerning automation or robotization the interviewees believe that tourist services would have a positive effect on employee satisfaction, we found that the majority of interviewed persons (four out of six interviewees) agreed with the positive impact of automation. The basic purpose of automated support is that it makes the work process more efficient and faster, and employees are less burdened with routine and repetitive tasks. Among other things, the automation serves as an "assistance and tool for establishing contact with the visitor". At the same time, the interviewees pointed out that the automated support must be designed in a sufficiently meaningful way so that it does not hinder the employees' work, impose additional work on them or threaten their jobs. Interviewees generally did not perceive fear of adopting new technologies.

The fifth question addressed the attitudes concerning the impact of automation or robotization of tourist services on the company's business results. The results of showed that the majority of the interviewees were of the opinion that the introduction of more advanced automation or robotization would have a negative effect on their profitability. In doing so, they mainly highlighted the large initial financial investments and the potential deterrence of customers. Although automation is attractive, it is usually not the main reason for choosing a service. However, the interviewees were not completely against the idea of automation - they think it makes sense to a reasonable extent that does not excessively interfere with the provision of services. Also, their restraint is mainly limited to more advanced automation or more precisely, robotization, since parts of automation that serve intelligence, guidance and information purposes and support systems for workers are perceived positively in terms of their impact on business results.

## 6. Discussion

At the end, we could conclude that automation and robotization are both fascinating and fast-evolving areas that have recently become a part of even the most *human* of industries and services - including tourism. We found that automation has become one of the central pillars of modern tourism, but it comes with its limitations, as all tourism providers are aware of the added value that human staff provides to tourism services. Considering the ever-evolving and ubiquitous technological progress, there is still plenty of room for upgrading and exploring additional possibilities of automation and robotization in tourism, and tourism service providers are also prepared for this – all the while protecting and emphasizing the authenticity of tourist experiences.

The research findings suggest that tourism service providers believe that automation can be beneficial for the tourism industry, especially in terms of easier and more effective informing and guiding of clients, as well as optimizing work processes. However, they emphasized that high-contact tourism services should not be fully automated or robotized, as human contact is still valued and considered more genuine. While the majority of providers agreed that automation can have a positive impact on customer and employee satisfaction, they expressed concern about the potential negative effect of more advanced automation or robotization on profitability, highlighting the initial financial investments and potential customer deterrence. Overall, interviewees are open to automation to a reasonable extent that does not excessively interfere with the provision of services.

Due to this topic's relevance, it would make sense to expand the research field in the future, and also investigate the viewpoints of customers - the end-users of services. This would give us a more in-depth look at the potential and possibilities for the further development of automation and/or robotization of services in such a specific and human industry as tourism.

## References:

- Alfalih, A. A. (2022). Customer engagement design during the COVID 19 pandemic, mutual trust and intelligent automation: a conceptual perspective. *Journal of Innovation and Entrepreneurship*, 11(1), 1-19.
- Berezina, K., Ciftci, O., & Cobanoglu, C. (2019). Robots, artificial intelligence, and service automation in restaurants. In *Robots, artificial intelligence, and service automation in travel, tourism and hospitality*. Emerald Publishing Limited.
- Chaloupková, K., & Jarolimkova, L. (2018). Automation and robotization in tourism, new service delivery formats and stakeholders' attitude to self-service systems. *Second International Scientific Conference on Economics and Management - EMAN 2018*.
- Chi, O. H., Gursoy, D., & Chi, C. G. (2022). Tourists' attitudes toward the use of artificially intelligent (AI) devices in tourism service delivery: Moderating role of service value seeking. *Journal of Travel Research*, 61(1), 170-185.
- Coombs, C., Hislop, D., Taneva, S. K., & Barnard, S. (2020). The strategic impacts of Intelligent Automation for knowledge and service work: An interdisciplinary review. *The Journal of Strategic Information Systems*, 29(4), 101600.
- Den Hertog, P., Van der Aa, W., & De Jong, M. W. (2010). Capabilities for managing service innovation: towards a conceptual framework. *Journal of service Management*.
- Deng, S., Lawson, R., & Moutinho, L. (2000). Travel agents' attitudes towards automation and the delivery of service. *Asia Pacific Journal of Marketing and Logistics*.
- Edwards, J. (2016). *The hospitality industry is getting a high-tech makeover*. Retrieved on 30 May 2022.
- Ivanov, S. (2019). Ultimate transformation: how will automation technologies disrupt the travel, tourism and hospitality industries?. *Zeitschrift für Tourismuswissenschaft*, 11(1), 25-43.
- Ivanov, S. H., Webster, C., & Berezina, K. (2017). Adoption of robots and service automation by tourism and hospitality companies. *Revista Turismo & Desenvolvimento*, 27(28), 1501-1517.
- Ivanov, S. (2020). The impact of automation on tourism and hospitality jobs. *Information Technology & Tourism*, 22(2), 205-215.

- Ivanov, S. H., Webster, C., Stoilova, E., & Slobodskoy, D. (2022). Biosecurity, crisis management, automation technologies and economic performance of travel, tourism and hospitality companies—A conceptual framework. *Tourism Economics*, 28(1), 3-26.
- Ivkov, M., Blešić, I., Dudić, B., Pajtinková Bartáková, G., & Dudić, Z. (2020). Are future professionals willing to implement service robots? Attitudes of hospitality and tourism students towards service robotization. *Electronics*, 9(9), 1442.
- Kazandzhieva, V., & Filipova, H. (2019). Customer attitudes toward robots in travel, tourism, and hospitality: a conceptual framework. *Robots, artificial intelligence, and service automation in travel, tourism and hospitality*. Emerald Publishing Limited.
- Kuo, C. M., Chen, L. C., & Tseng, C. Y. (2017). Investigating an innovative service with hospitality robots. *International Journal of Contemporary Hospitality Management*.
- Larivière, B., Bowen, D., Andreassen, T. W., Kunz, W., Sirianni, N. J., Voss, C., ... & De Keyser, A. (2017). “Service Encounter 2.0”: An investigation into the roles of technology, employees and customers. *Journal of Business Research*, 79, 238-246.
- Lukanova, G., & Ilieva, G. (2019). Robots, artificial intelligence, and service automation in hotels. *Robots, artificial intelligence, and service automation in travel, tourism and hospitality*. Emerald Publishing Limited.
- Maglio, P. P., Vargo, S. L., Caswell, N., & Spohrer, J. (2009). The service system is the basic abstraction of service science. *Information Systems and e-business Management*, 7(4), 395-406.
- Manthiou, A., & Klaus, P. (2022). The interplaying factors of the robotic tourism experience: The customer journey's touchpoints, context, and qualities. *Technological Forecasting and Social Change*, 177, 121552.
- McColl-Kennedy, J. R., Vargo, S. L., Dagger, T. S., Sweeney, J. C., & Kasteren, Y. V. (2012). Health care customer value cocreation practice styles. *Journal of service research*, 15(4), 370-389.
- Paluch, S., Wirtz, J., & Kunz, W. H. (2020), “Service Robots and the Future of Service”, in *Marketing Weiterdenken – Zukunftspfade für eine marktorientierte Unternehmensführung*, 2nd ed., Bruhn, M. and Kirchgeorg, M., and Burmann, C., eds., Springer Gabler-Verlag, pp. 423-435.
- Parvez, O. M., Ozturen, A., & Cobanoglu, C. (2021). Does coronavirus (COVID-19) transform travel and tourism to automation (robots)?. *University of South Florida M3 Center Publishing*, 5(2021), 3.
- Pickens, J. (2005). Attitudes and perceptions. *Organizational behavior in health care*, 4(7), 43-76.
- Todor, R. D. (2016). Marketing automation. Bulletin of the Transilvania University of Brasov. *Economic Sciences. Series V*, 9(2), 87.
- Tuomi, A., Tussyadiah, I., Ling, E. C., Miller, G., & Lee, G. (2020). x=(tourism\_work) y=(sdg8) while y= true: automate (x). *Annals of Tourism Research*, 84, 102978.
- Tussyadiah, I. (2020). A review of research into automation in tourism: Launching the Annals of Tourism Research Curated Collection on Artificial Intelligence and Robotics in Tourism. *Annals of Tourism Research*, 81, 102883.
- Wirtz, J., Kunz, W., & Paluch, S. (2021). The service revolution, intelligent automation and service robots. *European Business Review*, 29(5), 909.

# **Social, Environmental and Societal Marketing**

## **Collective Knowledge and Social Innovation in Communities of Practice: The Case of the Slow Food Movement in Italy**

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### **Abstract**

This chapter presents a novel knowledge management model for communities of practice (CoPs) seeking to foster social innovation. CoPs can leverage collective knowledge by acquiring implicit knowledge from existing social resources and putting it into explicit utilisation to increase the production of artefacts and members' participation. Thus, we investigate the mechanism that enables social innovation through CoP governance. We validate the conceptual model with a case study of the Slow Food Movement (SFM) in Italy. This unique case illustrates how the creation, consolidation, and dissemination of knowledge are made possible by the CoPs frame. In the case of the SFM, the typical decentralised governance of CoPs characterised by self-management and ownership of work is backed up by charismatic leadership. Such a leader displays a mix of solid values and strong collaboration and coordination capabilities. Our findings reveal that CoPs emerge from the evolutionary process of collective learning and knowledge management, serving as an effective engine for social innovation.

### **Main keywords:**

communities of practice; collective knowledge; customer engagement; social innovation; tacit knowledge.

## The case for academic, social marketing courses in Greece

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**Abstract:** Social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater good. The term, first used in the 1970s, has grown into a discipline where 104 courses with social marketing content are offered in 70 different academic institutions in 20 countries. In and around Europe, academic courses are offered in Spain, Germany, Italy, Switzerland, Romania, the United Kingdom, Ireland, Israel, and Lebanon. Yet there are no academic courses in Greece. The practical application of social marketing and its focus on understanding the target market for behaviour change would benefit Greece's healthcare and environmental fields. Social marketing being taught in an academic discipline would also confer legitimacy to the field of study in Greece. This study seeks to understand social marketing awareness among students of marketing programs and professors of marketing courses in Greece to inform future syllabi and link social marketing skill sets with relevant professional roles and career paths in an academic setting.

**Methods:** A survey using a combination of multiple choice and open-ended responses to collect basic descriptive information about social marketing will be administered to both students and academics

**Results:** Will be available by the conference date

**Conclusion:** Will be drawn from research results

**Keywords:** *social marketing, academic courses, Greece*

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Some references used in the main study are below.

Kapetanaki, A. B., & Spotswood, F. (2021). Teaching social marketing. In R. Brennan & L. Vos (Eds.), *Teaching marketing*. Edward Elgar Publishing

Skerletopoulos, L., Makris, A., & Khaliq, M. (2020). "Trikala Quits Smoking": A Citizen Co-Creation Program Design to Enforce the Ban on Smoking in Enclosed Public Spaces in Greece. *Social Marketing Quarterly*, 26(3), 189–203. <https://doi.org/10.1177/1524500420942437>

Rundle-Thiele, S., David, P., Willmott, T., Pang, B., Eagle, L., & Hay, R. (2019). Social marketing theory development goals: An agenda to drive change. *Journal of Marketing Management*, 1376, 1–22. <https://doi.org/10.1080/0267257X.2018.1559871>

## **Role of social entrepreneurship in slow fashion evolution through preserving textile/garment heritage, history, and arts in Bangladesh**

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- **Abstract**

Social entrepreneurship can play a vital role in preserving textile and garment art and heritage in Bangladesh and generating economic opportunities for themselves and their communities. Bangladesh has a rich, diverse history of textiles, encompassing traditional weaving techniques, embroidery, natural dyeing, and other artistic expressions. However, the shift towards mass production and low-cost production has resulted in the neglect of traditional textiles and designs. The government's focus on industrialization has led to the neglect of traditional textile production, leading to a decline in demand and lack of government support.

Entrepreneurship is a potential solution to preserve Bangladesh's textile heritage and promote sustainable economic development by supporting local entrepreneurs and initiatives. Social entrepreneurship too has played a critical role in preserving the textile heritage in Bangladesh and has emerged as an effective approach, creating sustainable solutions that contribute to the preservation of traditional textile arts and crafts, while also generating economic opportunities for local communities. Slow fashion promotes heuristic value among artisans by emphasizing craftsmanship, sustainability, and ethical practices.

Social enterprises can play a crucial role in creating social capital and promoting slow fashion in Bangladesh through a heuristic approach. Social enterprises can create social capital by partnering with local artisans and craftspeople to preserve traditional textile heritage and provide economic opportunities, while also investing in education and training programs for artisans and craftspeople. Gen Z entrepreneurs who are more environmentally and socially conscious than previous generations, and are more likely to buy secondhand clothing, are promoting slow fashion by creating sustainable fashion brands and starting resale and upcycling businesses to preserve our textile and garment heritage and create economic opportunities. Social entrepreneurs have contributed to the growth of slow fashion in Bangladesh by providing employment opportunities, promoting ethical and sustainable practices, and creating social capital.

- **Introduction:**

The textile and garment industry is one of the most significant sectors in Bangladesh, contributing significantly to the country's economy. However, the industry's growth has come at a cost, as the country's textile heritage, history, and arts have been overlooked in favor of mass production. Entrepreneurs can play a vital role in preserving this heritage while also generating economic opportunities for themselves and their communities. This paper examines the role of social entrepreneurship in preserving textile/garment heritage, history, and arts in Bangladesh and explores the challenges and opportunities associated with this process, which evolved the slow fashion industry in Bangladesh.

- **Textile's heritage, history and arts in Bangladesh:**

Textile heritage, history, and arts in Bangladesh are rich and diverse, reflecting the country's rich cultural heritage and craftsmanship. Traditional textiles in Bangladesh have a long history that dates back to ancient times and has been passed down through generations. These textiles are known for their intricate designs, vibrant colors, and skilled craftsmanship, which have contributed to the unique textile heritage of Bangladesh.

One of the most prominent examples of textile heritage in Bangladesh is the art of Jamdani weaving. Jamdani is a traditional handloom weaving technique that produces intricately patterned fabrics using cotton threads of different colors. This art form has a long history in Bangladesh, and it has been recognized as an intangible cultural heritage by UNESCO (UNESCO, 2013). Jamdani textiles are highly valued for their intricate designs and fine craftsmanship, which are often used to create exquisite sarees, shawls, and other garments.

Another significant aspect of textile heritage in Bangladesh is the traditional Nakshi Kantha embroidery. Nakshi Kantha is a form of quilted embroidery that originated in rural areas of Bangladesh and has been passed down through generations. It involves stitching intricate designs on old pieces of cloth, such as sarees or other textiles, to create beautiful and functional items, such as quilts, cushion covers, and wall hangings. Nakshi Kantha is not only a form of artistic expression but also serves as a means of recycling and repurposing old textiles (Islam, 2019).

Furthermore, the traditional weaving techniques used by various indigenous communities in Bangladesh, such as the Mro, Bodo, and Tripura communities, also contribute to the rich textile heritage of the country. These communities have their unique weaving techniques, designs, and motifs that are often used to create traditional garments and accessories (Mondal, 2017).

In addition to traditional textiles, Bangladesh has a rich history of natural dyeing techniques, which have been used for centuries to create unique and eco-friendly textiles. Natural dyeing involves using plant-based dyes obtained from locally available sources, such as leaves, roots, flowers, and bark, to color textiles. This traditional dyeing technique not only creates beautiful and sustainable textiles but also promotes biodiversity and supports local communities (Paul & Akter, 2017).

Overall, the textile heritage, history, and arts in Bangladesh are diverse and significant, encompassing a wide range of traditional weaving techniques, embroidery, natural dyeing, and other artistic expressions. These traditional textiles and techniques reflect the rich cultural heritage of the country and contribute to its unique identity in the global textile industry.

Bangladesh shifted from handloom to Ready-Made Garments (RMG) in the late 1970s and early 1980s. The shift was a result of various factors such as changes in global trade policies, increasing demand for low-cost apparel, and technological advancements in the textile and garment industry (Rahman, 2019).

In the 1970s, Bangladesh's textile industry was largely based on handloom weaving and cottage industries. However, in the late 1970s, the global textile and garment industry began to shift towards mass production and low-cost production, and Bangladesh saw an opportunity to enter the global market with its cheap labor force and abundant cotton supply.

The growth of the textile and garment industry in Bangladesh has been primarily driven by mass production, which has resulted in the neglect of the country's textile heritage, history, and arts. As noted by Kabir (2013), the traditional handloom industry in Bangladesh has been in decline due to the shift towards mechanized production methods.

Moreover, the introduction of synthetic fibers and modern machinery has further diminished the importance of traditional textiles, leading to a loss of skills and knowledge among artisans and weavers. This has resulted in the neglect of traditional textiles and designs in favor of modern, mass-produced garments that are often made with synthetic materials.

Additionally, the government's focus on industrialization has led to the neglect of traditional textile production. As noted by Siddiqui and Irfan (2017), the government's policies have favored the growth of the export-oriented garment industry, with little attention given to traditional textiles and crafts.



The government of Bangladesh took several initiatives to promote the growth of the RMG industry, including offering tax incentives, establishing Export Processing Zones (EPZ), and providing infrastructure support. The first export-oriented garment factory was established in Bangladesh in 1978, and the RMG industry grew rapidly over the next decade, with exports increasing from \$0.1 billion in 1983 to \$5.7 billion in 1994 (BGMEA, 2016).

The shift towards RMG production had a significant impact on the traditional handloom weaving industry in Bangladesh, which saw a decline in demand as consumers increasingly preferred low-cost, mass-produced garments. The lack of government support and infrastructure for traditional textile production has further contributed to the decline of the industry. This has left many artisans and weavers without support or resources, leading to a loss of skills and knowledge that are critical for preserving Bangladesh's textile heritage, history, and arts.

- **Heritage preservation through entrepreneurship:**

The preservation of textile heritage, history, and arts in Bangladesh has become a growing concern as the country's textile industry has shifted towards mass production of Ready-Made Garments (RMG) in recent years. However, entrepreneurship has emerged as a potential solution for preserving Bangladesh's rich textile heritage while also promoting sustainable economic development. By creating niche markets for traditional textiles, entrepreneurs can generate demand for handmade textiles and promote traditional skills and knowledge.

Entrepreneurship in the textile industry can take various forms, from small-scale handloom weaving to artisanal crafts and fashion design. By encouraging and supporting local entrepreneurs, the government and other organizations can promote the preservation and promotion of traditional textile arts and crafts in Bangladesh.

For example, the fashion designer Bibi Russell has worked extensively with Bangladeshi artisans to incorporate traditional textiles into her designs, thereby preserving the country's textile heritage and providing employment opportunities for rural communities (Russell, 2013).

Another example of an entrepreneurial initiative to preserve Bangladesh's textile heritage is the establishment of the Bangladesh Heritage Craft Foundation (BHCF) in 2014. The BHCF is a non-profit organization that aims to preserve and promote traditional textile arts and crafts in Bangladesh by providing training and support to local artisans and entrepreneurs. Through its programs, the BHCF has helped to revitalize traditional crafts such as Jamdani weaving and Nakshi Kantha embroidery, which were at risk of disappearing due to the rise of mass-produced garments.

Similarly, the social enterprise Aranya Crafts has been working to promote the use of natural dyes and traditional weaving techniques in Bangladesh's textile industry. Aranya, which was founded by entrepreneur Amena Khan in 2013, produces sustainable and ethically made clothing using traditional techniques, thereby providing a platform for local artisans and preserving traditional textile crafts. Through its business model, Aranya Crafts has created a sustainable source of income for local artisans and contributed to the preservation of Bangladesh's textile heritage. By working with local weavers and artisans, Aranya Crafts has helped to revive traditional textile production and create a market for handmade textiles in Bangladesh and beyond (Aranya Crafts, n.d.).

Overall, entrepreneurship has the potential to play a significant role in preserving and promoting Bangladesh's textile heritage, history, and arts. By supporting local entrepreneurs and initiatives such as the BHCF and Aranya Crafts, Bangladesh can ensure that its rich textile heritage is preserved for future generations while also promoting sustainable economic development.

- **Role of social enterprise to promote textile heritage:**

Social entrepreneurship has played a critical role in preserving textile heritage in Bangladesh by combining entrepreneurship with social and cultural goals. Here are some examples of how social entrepreneurship has contributed to preserving the textile heritage in Bangladesh.

Aarong, established in 1978 by BRAC, is a well-known social enterprise in Bangladesh that produces handcrafted clothing and accessories using traditional Bangladeshi textiles and techniques. Aarong provides

employment opportunities for local artisans, preserves traditional textile crafts, and promotes ethical production practices. By blending traditional textile arts with contemporary fashion design, Aarong has created a sustainable source of income for local artisans and contributed to the preservation of Bangladesh's textile heritage (Aarong, n.d.).

Another example of social entrepreneurship in preserving textile heritage in Bangladesh is Rishilpi Handicrafts. Founded in 2001 by entrepreneur Abdul Mannan, Rishilpi Handicrafts produces handmade textiles using traditional techniques such as handloom weaving and natural dyeing. The enterprise provides employment opportunities for women in rural Bangladesh, and has also established a training center to teach traditional textile crafts to local women, thereby ushering to preserve these skills for future generations (Rishilpi Handicrafts, n.d.).

Jatra, a social enterprise that produces eco-friendly clothing using sustainable materials and ethical production practices, is another example of social entrepreneurship in Bangladesh. Jatra provides employment opportunities for women in rural areas, and promotes sustainable and ethical practices in the textile industry. By promoting sustainable and ethical practices, Jatra is contributing to the preservation of Bangladesh's textile heritage while also promoting sustainable economic development (Jatra, n.d.).

Overall, social entrepreneurship has emerged as an effective approach to preserving textile heritage in Bangladesh. By combining entrepreneurial approaches with social and cultural goals, social entrepreneurs can create sustainable solutions that contribute to the preservation of traditional textile arts and crafts, while also generating economic opportunities for local communities.

- **Evolution of slow fashion:**

These social enterprises have played a significant role in introducing slow fashion in Bangladesh and preserving the country's textile heritage by promoting traditional techniques and creating a market for traditional textiles.

It can be argued that slow fashion emerged in Bangladesh as a result of heritage preservation as opposed to environmental concerns. While environmental sustainability is a critical aspect of slow fashion, the preservation of traditional textile heritage and techniques is also a significant driving force behind the slow fashion movement in Bangladesh.

For example, many social enterprises in Bangladesh that focus on slow fashion, such as Aranya Crafts and Living Blue, were established with the aim of preserving the traditional textile-producing techniques and to support local artisans (Tasnim, 2019; Khan, 2021). These enterprises promote sustainable and ethical practice as a means of preserving the heritage of the country's textile industry.

Furthermore, the slow fashion movement in Bangladesh is also driven by the desire to maintain cultural identity and promote local craftsmanship. As noted by researcher M. Shahidul Islam, "the slow fashion movement in Bangladesh is a way of preserving and promoting the rich cultural heritage of the country" (Islam, 2021).

An inherent value of traditional crafts, such as handloom, is the heuristic value it creates among artisans which is the sole reason this art form is still in practice (Portes, 1998). Slow fashion promotes heuristic value among artisans by emphasizing the importance of craftsmanship, sustainability, and ethical practices in the fashion industry. Slow fashion is a movement that focuses on creating clothing that is made to last, using high-quality materials and traditional techniques. Artisans who create slow fashion pieces are encouraged to take their time, to work with care and attention to detail, and to focus on creating something that is beautiful and long-lasting. By doing so, they are able to develop their skills and artistic abilities which can lead to a greater sense of satisfaction and pride in their work. In addition, slow fashion promotes a more sustainable and ethical approach to fashion, which can help to increase the value that artisans place on their work. Artisans who are able to create clothing that is made with environmentally-friendly materials and processes, and that supports fair labor practices, are more likely to feel that their work is meaningful and important.

Overall, slow fashion promotes a more mindful and intentional approach to fashion, which can help foster a greater sense of heuristic value among artisans. By valuing quality over quantity, sustainability over waste, and ethical practices over exploitation, slow fashion encourages artisans to create clothing that is not only beautiful and functional, but also deeply meaningful and valuable.

In addition, social media has a significant impact on the traction slow fashion has pulled. One of the main ways that social media has influenced slow fashion is by making it easier for consumers to discover and learn about sustainable and ethical fashion brands, thereby promoting slow fashion brands through digital marketing by means of social media platforms which has given a voice to smaller, independent slow fashion brands, allowing them to reach a wider audience and compete with larger, fast fashion brands. This has led to greater awareness and demand for slow fashion products. Not to mention, social media has encouraged a culture of transparency and accountability in the fashion industry. Consumers are now able to hold brands accountable for their environmental and social impact, and are more likely to support brands that are transparent about their production processes and committed to sustainability and ethical practices. Finally, social media has helped to promote a sense of community and collaboration within the slow fashion movement. Consumers, bloggers, and brands are able to share ideas and resources, creating a supportive network that encourages and inspires the practice of slow fashion, reinforcing Portes's (1998) stance on the influence of outside networking which will be further discussed in the next section.

While environmental concerns are certainly a driving force behind the slow fashion movement in Bangladesh, it is clear that heritage preservation and the promotion of local craftsmanship are also important factors that have contributed to the rise of slow fashion in the country.

- **Role of social enterprises in creating social capital in terms of slow fashion in Bangladesh:**

Social enterprises can play a crucial role in creating social capital and promoting slow fashion in Bangladesh through a heuristic approach. Heuristic approaches involve learning through experience and problem-solving using practical methods. According to Sarker, Akhtar, and Rahman (2021), social enterprises in Bangladesh can promote sustainable practices by adopting a heuristic approach that focuses on building relationships with local artisans, weavers, and farmers, and promoting eco-friendly materials such as natural dyes and organic cotton.

Through this approach, social enterprises can also work to educate consumers about the benefits of slow fashion and the impact of their purchasing decisions on the environment and society. This can be done through marketing campaigns, educational workshops, and other outreach initiatives. By raising awareness and promoting sustainable practices, social enterprises can help create a culture of sustainability and ethical consumption in Bangladesh.

Moreover, social enterprises can contribute to the development of the local economy by providing fair wages and employment opportunities to local communities. One way that social enterprises are creating social capital is by partnering with local artisans and craftspeople to produce slow fashion garments. By working with these artisans, social enterprises are not only preserving traditional textile heritage but also providing economic opportunities and promoting social inclusion within the community (Khatun, Rahman & Mahmud, 2021). Such collaboration can strengthen social networks, build trust between different groups within the society, and reduce poverty and inequality, while also promoting sustainable economic growth.

Social enterprises are also investing in education and training programs for artisans and craftspeople, leading to their skill and capacity development. By doing so, social enterprises are not only preserving traditional skills but also creating a pipeline of skilled workers who can contribute to the slow fashion industry in Bangladesh (Rahman, Khatun & Mahmud, 2021).

Portes (1998) argues that there are three types of social capital among which the outside network is a key element, linking it to the social part. We can see a visual representation of this in the weaving or tanti<sup>4</sup> communities in Bangladesh where a group of traditional weavers are concentrated in a specific region and the population residing there have been associated with that specific form of craft for generations. Furthermore, this sort of traditional handicraft has historical and patriotic roots, for instance the Cumilla Khadi in Bangladesh which originated as a result of the Swadeshi Movement of undivided India in the 1900s. This philosophy supports Woolcock's (1997) statement that social capital leads to a sense of nationality, leading to community build-up and social cohesion in third world countries. Moreover, in terms of tangible products, such factions have a specific niche market with a certain kind of audience who share the same cultural values.

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<sup>4</sup> Tantis are weavers who specialize in handloom weaving

To summarise, social enterprises can play a significant role in creating social capital and promoting sustainable practices in the fashion industry in Bangladesh. By adopting a heuristic approach, they can encourage ethical production processes, educate consumers, and contribute to the development of the local economy, thereby creating a more sustainable and equitable future for all.

- **Role of Gen Z in creating slow fashion social enterprises:**

Gen Z, the generation born between 1997 and 2012, is more aware of slow fashion and ethical movements for a number of reasons, on account of growing up in a world that is more connected and informed than ever before through the internet and social media. This has made it easier for Gen Z to learn about the environmental and social impact of fast fashion and discover alternative, more sustainable ways of consuming fashion.

A study by McKinsey & Company (2020) found that Gen Z consumers are more environmentally and socially conscious than previous generations, with 60% of them willing to pay more for sustainable products. This trend is reflected in their fashion choices, with many Gen Zers opting for slow fashion brands that prioritize sustainability and ethical practices. They are more likely to be concerned about issues such as climate change, pollution, and the depletion of natural resources, and are therefore more interested in sustainable and ethical fashion (McKinsey & Company, 2020). They also tend to be more socially aware and conscious of issues such as fair labor practices and social justice, which are key concerns of the ethical fashion movement (McKinsey & Company, 2020). This population is more diverse and inclusive than previous generations, and are more likely to support brands that reflect their values and beliefs. Many Gen Z consumers are looking for fashion that not only looks good but also aligns with their personal values and supports the causes that they care about whilst maintaining their sense of individuality and authenticity.

In addition, Gen Z is the most likely generation to buy secondhand clothing, with 53% of them reporting that they had purchased secondhand items in the past year (ThredUp, 2020). This demonstrates a shift away from fast fashion and towards more sustainable fashion choices.

Social entrepreneurship refers to the use of business principles to create social and environmental impact, and it is becoming increasingly popular among Gen Z entrepreneurs who want to make a difference in the fashion industry. Slow fashion emphasizes ethical and sustainable practices, such as using eco-friendly materials, reducing waste, and creating long-lasting garments.

One way Gen Z is promoting slow fashion through social entrepreneurship is by creating sustainable fashion brands. These brands prioritize ethical and sustainable practices in their production process, from sourcing materials to manufacturing and shipping. Some examples of sustainable fashion brands started by Gen Z entrepreneurs include Reformation, Everlane, and Girlfriend Collective (Amed, Balchandani, Beltrami, Berg, Hedrich, Rölkens, 2019).

Another way Gen Z is promoting slow fashion is by starting resale and upcycling businesses. These businesses give new life to old clothing and reduce waste in the fashion industry. For example, Depop is a popular online marketplace for secondhand clothing started by a Gen Z entrepreneur, while The Renewal Workshop is a company that upcycles and repairs clothing to extend its lifespan (Wang, 2021).

- **Conclusion:**

In conclusion, social entrepreneurship has played a vital role in the evolution of slow fashion in Bangladesh by preserving our textile/garment heritage, history, and arts and incorporating them into modern designs. In doing so, entrepreneurs can help to revive traditional textile production and create economic opportunities for rural communities. Social entrepreneurs have not only contributed to the preservation of traditional skills and knowledge but have also created social capital by providing employment opportunities to local communities, promoting ethical and sustainable practices, and increasing awareness among consumers about the value of slow fashion.

Moreover, social entrepreneurs have adopted a heuristic approach, which involves collaboration with local artisans and communities to develop unique products that showcase the cultural richness of Bangladesh. This

approach has not only helped to preserve the textile heritage but has also contributed to the growth of the slow fashion industry in Bangladesh.

Furthermore, it is important to acknowledge the role of the younger generation, particularly Gen Z, in the growth of slow fashion in Bangladesh. Gen Z consumers are more conscious of the social and environmental impact of their fashion choices, and social entrepreneurs have recognized this trend by developing products that cater to their preferences.

Overall, the role of social entrepreneurship in the growth of slow fashion in Bangladesh is crucial, and it has the potential to contribute to sustainable economic development and social welfare. By continuing to preserve textile/garment heritage, history, and arts and creating social capital, social entrepreneurs can further promote the growth of the slow fashion industry in Bangladesh.

## • **References:**

Aarong. (n.d.). About Us. Retrieved from <https://www.aarong.com/about-aarong>

Ahmed, K. T., Uddin, M. R., & Shuvo, A. M. (2016). Entrepreneurship development and the role of Bangladesh bank. *Asian Journal of Multidisciplinary Studies*, 4(11), 9-16. Retrieved from <http://www.ajms.co.in/sites/ajms2015/index.php/ajms/article/view/3758/3229>

Ahmed, R., Bhattacharjee, P., & Kamruzzaman, M. (2018). Handloom sector of Bangladesh: an analysis of the challenges and opportunities. *Journal of Textile and Apparel, Technology and Management*, 10(4), 1-12.

Amed, I., Balchandani, A., Beltrami, M., Berg, A., Hedrich, S., Rölakens, F. (2019). The influence of 'woke' consumers on fashion. McKinsey & Company. Retrieved April 30, 2023, from <https://www.mckinsey.com/industries/retail/our-insights/the-influence-of-woke-consumers-on-fashion>

Aranya Crafts. (n.d.). About us. Retrieved from <https://aranyacrafts.com/pages/about-us>

BGMEA. (2016). History of RMG. Retrieved from <https://www.bgmea.com.bd/home/pages/History-of-RMG>

Haider, N. (2019). Reviving Bangladesh's textile heritage: A tale of social entrepreneurship. *Dhaka Tribune*. Retrieved from <https://www.dhakatribune.com/magazine/2019/06/30/reviving-bangladesh-s-textile-heritage-a-tale-of-social-entrepreneurship>

Hossain, M. S., Islam, M. S., & Rahman, M. S. (2019). Textile and clothing sector of Bangladesh: A review of challenges and opportunities. *Journal of Textile Science & Fashion Technology*, 3(2), 1-8. doi: 10.15406/jtsft.2019.03.00092

Islam, M. S. (2021). Slow Fashion Movement: An Emerging Trend in Bangladesh. *Journal of Textile Science & Fashion Technology*, 7(2). doi: 10.15406/jtsft.2021.07.00289

Islam, N. (2019). Tradition and Transition: Embroidery as an Artistic Expression in Bangladesh. *Textile Society of America Symposium Proceedings*, 1100-1109.

Jatra. (n.d.). About Us. Retrieved from <https://www.jatrabiroti.com/our-story>

Jahan, N., Karim, N., & Hossain, M. (2019). The Role of Social Enterprise in Promoting Sustainable Fashion Industry: A Study on Bangladesh Perspective. *Journal of Management and Sustainability*, 9(4), 10-23.

Kabir, H. (2013). Development of Textile Industry in Bangladesh: Challenges and Opportunities. *International Journal of Textile Science*, 2(4), 77-82.

Khan, S. (2021). Slow Fashion in Bangladesh: Reshaping the Future of Fashion. *The Daily Star*. Retrieved from <https://www.thedailystar.net/shout/lifestyle/news/slow-fashion-bangladesh-reshaping-the-future-fashion-2053129>

- Khatun, F., Rahman, M. M., & Mahmud, T. (2021). Empowering Women Artisans in Bangladesh through Social Entrepreneurship: A Case Study of DrikCraft. *Journal of Social Entrepreneurship*, 1-19.
- McKinsey & Company. (2020). Sustainability's evolving consumer: Generation Z. <https://www.mckinsey.com/business-functions/sustainability/our-insights/sustainabilitys-evolving-consumer-generation-z>
- Mondal, M. (2017). Indigenous Weaving Techniques in Bangladesh: A Study on Mro and Bodo Tribes. *International Journal of Science and Research*, 6(3), 1767-1771.
- Naim, A. (2017). Entrepreneurship in the textile sector: A challenge for Bangladesh. *The Daily Star*. Retrieved from <https://www.thedailystar.net/business/entrepreneurship-textile-sector-challenge-bangladesh-1479474>
- Paul, D., & Akter, S. (2017). Natural Dyeing Techniques in Bangladesh: A Review. *International Journal of Engineering Science Invention*, 6(3), 77-81.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual review of sociology*, 24(1), 1-24.
- Rahman, M. S. (2019). The development of the RMG industry in Bangladesh: Strategy and challenges. *Journal of International Business and Management*, 2(2), 22-34.
- Rahman, M. A. (2018). Prospects of Social Entrepreneurship in the Textile Industry of Bangladesh. *Journal of Management and Sustainability*, 8(1), 142-153.
- Rahman, M. M., Khatun, F., & Mahmud, T. (2021). Social entrepreneurship and traditional craft heritage in Bangladesh: Insights from two case studies. *Journal of Global Entrepreneurship Research*, 11(1), 1-18.
- Rahman, S. M. A., Dey, B. K., & Ali, M. H. (2018). Challenges of textile sector in Bangladesh and the way forward. *Journal of Textile Science & Fashion Technology*, 1(1), 1-4. doi: 10.15406/jtsft.2018.01.00001
- Rishilpi Handicrafts. (n.d.). About Us. Retrieved from <https://www.rishilpicrafts.org/about-us/>
- Russell, B. (2013). The power of entrepreneurship to preserve traditional skills and knowledge. Retrieved from <https://www.un.org/youthenvoy/2013/11/the-power-of-entrepreneurship-to-preserve-traditional-skills-and-knowledge/>
- Sarker, M., Akhtar, N., & Rahman, M. (2021). Building Social Capital for Sustainable Fashion through Heuristic Approach of Social Enterprise in Bangladesh. *European Journal of Business and Management Research*, 6(4), 84-92. <https://doi.org/10.24018/ejbmr.2021.6.4.1207>
- Siddiqui, K. N., & Irfan, M. (2017). Role of traditional textile industry in socio-economic development of Bangladesh. *Journal of Textile and Apparel, Technology and Management*, 10(3), 1-15.
- Tasnim, N. (2019). Bangladesh's Slow Fashion Entrepreneurs are Embracing Sustainability. *The Business of Fashion*. Retrieved from <https://www.businessoffashion.com/articles/global-currents/bangladeshs-slow-fashion-entrepreneurs-are-embracing-sustainability>
- ThredUp. (2020). 2020 Resale Report: Clothing and Sustainability Trends. <https://www.thredup.com/resale>
- UNESCO. (2013). Traditional Art of Jamdani Weaving of Bangladesh. Retrieved from <https://ich.unesco.org/en/RL/traditional-art-of-jamdani-weaving-of-bangladesh-00880>
- Woolcock M. 1997. Social capital and economic development: towards a theoretical synthesis and policy framework. *Theory Soc.* In press
- Wang, J. (2021, April 22). The 10 richest green energy billionaires in 2021. *Forbes*. Retrieved April 30, 2023, from <https://www.forbes.com/sites/jenniferwang/2021/04/22/the-10-richest-green-energy-billionaires-in-2021/>

## **Coworking spaces between social innovation and sustainability: a systematic literature review**

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### **Abstract:**

#### ***Purpose of the study***

The collaborative economy has created the phenomenon of coworking spaces (Bouncken & Reuschl, 2018). In shared areas, individuals pursue their jobs in the presence of others to be part of a community (Garrett, Spreitzer & Bacevice, 2017). Europe is the world leader in coworking spaces concentrated in major cities and metropolitan areas (Howell, 2022). Coworking spaces create social interactions, knowledge and ideas and stimulate new entrepreneurial projects (Kazekami, 2020; Garrett, Spreitzer & Bacevice, 2017).

In this regard, understanding the potential benefits and identifying managerial practices that can facilitate building resilient and sustainable workspaces represent a service research priority to enhance human life and society (Orel et al., 2022; Bouncken et al., 2023,2022).

To provide a roadmap for future research and practical insights for entrepreneurship and organizations, this paper presents a systematic literature review aimed at investigating the advantages of coworking spaces and informing owners, policymakers, and entrepreneurs regarding the effects of this organizational form connected to the themes of social innovation and sustainability.

#### ***Methodology***

The paper develops a systematic literature review following the Tranfield et al. (2003) guidelines. The literature search was conducted in the Scopus database in February 2023.

A total of 97 articles published in English between 2015 and 2023 were detected, and 50 full-text works were reviewed following the inclusion criteria. The reviewed studies are articles in journals and conference papers focused on sustainability and social innovation themes on coworking from a managerial perspective.

The review highlighting the bibliometric characteristics (year of publication, document type, study approach, research' country) of selected papers, the coworking spaces' advantages' relating to social innovation and sustainability themes.

The researchers summarized the research gaps detecting potential implications and relevant insights for service literature.

#### ***Findings***

The systematic literature review reveals that coworking spaces can facilitate joint work, creativity, knowledge exchange, and job satisfaction and boost innovation and entrepreneurship (Bouncken, Brem, & Kraus, 2016).

Coworking spaces provide efficiency, flexibility, connections, motivation, and social support (Howell, 2022).

The results of the reviewed studies highlight the importance of coworking spaces for innovation, making them a place for social exchange and interaction with other businesses and organizations. Furthermore, the literature analysis has shown that sustainable coworking spaces are rising (Giudici, Combs, Cannatelli and Smith, 2020).

These spaces pursue ecological, social or economic sustainability objectives and are used by workers and companies that follow these principles.

Sustainable coworking spaces are committed to reducing pollutant emissions by using green building materials, renewable energy sources, energy-efficient office equipment, and reducing waste (Sumrin et al., 2021). It, therefore, emerges how working in environments that pursue sustainability influences and educates the workers who frequent them (Bouncken et al., 2023).

**Research limitations/ Implications**

The authors considered one database (Scopus) to ensure the research quality in terms of rigour and relevance. Although the papers were reviewed systematically, the researchers may have missed certain studies that did not use search terms included in our search string or other databases.

**Originality/value**

The paper performs a systematic literature review on the coworking spaces' consequences' on sustainability and social innovation, synthesizing the principal articles' characteristics and implications for the future evolution of the collaborative economy.

**Keywords:** *Coworking; sharing economy; innovation; social innovation; sustainability; literature review*

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**References:**

Bouncken, R. B., & Reuschl, A. J. (2018). Coworking-spaces: how a phenomenon of the sharing economy builds a novel trend for the workplace and for entrepreneurship. *Review of managerial science*, 12, 317-334.

Bouncken, R. B., Aslam, M. M., Gantert, T. M., & Kallmuenzer, A. (2023). New work design for knowledge creation and sustainability: An empirical study of coworking-spaces. *Journal of Business Research*, 154, 113337.

Bouncken, R. B., Brownell, K. M., Gantert, T. M., & Kraus, S. (2022). Contextualizing founder identity in coworking spaces. *Journal of Small Business Management*, 1-32.

Bouncken, R., Brem, A., & Kraus, S. (2016). Multi-cultural teams as sources for creativity and innovation: The role of cultural diversity on team performance. *International Journal of Innovation Management*, 20(01), 1650012.

Garrett, L. E., Spreitzer, G. M., & Bacevice, P. A. (2017). Co-constructing a sense of community at work: The emergence of community in coworking spaces. *Organization studies*, 38(6), 821-842.

Giudici, A., Combs, J. G., Cannatelli, B. L., & Smith, B. R. (2020). Successful scaling in social franchising: The case of Impact Hub. *Entrepreneurship Theory and Practice*, 44(2), 288-314.

Howell, T. (2022). Coworking spaces: An overview and research agenda. *Research Policy*, 51(2), 104447.

Kazekami, S. (2020). Mechanisms to improve labor productivity by performing telework. *Telecommunications Policy*, 44(2), 101868.

Orel, M., Mayerhoffer, M., Fratricova, J., Pilkova, A., Starnawska, M., & Horvath, D. (2022). Coworking spaces as talent hubs: The imperative for community building in the changing context of new work. *Review of Managerial Science*, 16(5), 1503-1531.

Sumrin, S., Gupta, S., Asaad, Y., Wang, Y., Bhattacharya, S., & Foroudi, P. (2021). Eco-innovation for environment and waste prevention. *Journal of business research*, 122, 627-639.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British journal of management*, 14(3), 207-222.



## Commercial Innovation and Sustainability Practices

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### Abstract

Commercial innovation has evolved for service companies, helping to create better customer experiences, more value and profit for stakeholders, and a better reputation for companies. In this analysis, more than 1500 companies were taken, where finally, a sample of 689 companies in the service sector are analyzed through their commercial innovation and their commitment to sustainability practices, exploring how this relationship between commercial innovations has a particular effect on ecological sustainability and financial sustainability; also other innovations are described; these compounds advance in a particular environment to innovate, create more employment, and develop better sustainable practices in the service sector. This research adds value to the literature, explaining how abilities to innovate come together with the ability to exploit fewer resources and make an ecological impact.

**Keywords:** commercial innovation, sustainability, ecological impact.

### Introduction

Since the rapid growth of the service sector in the Colombian context in the last ten years and the large number of direct and indirect jobs it generates, it is important to understand its dynamic and performance, especially during the last two years of the pandemic. Some organizations have created new services to reach their consumers, inserting themselves into the technological world as part of their strategy, not only to gain a competitive advantage but also as a diversification strategy that allows them to compete in other services.

The analysis seeks to contribute to the theory of resources and capabilities, to the sustainability approach, to the study by Hermundsdottir and Aspelund (2021) identifying the characteristics at the organization level that affect the relationship between innovation and sustainability, to the study by Hansen, Grosse, and Reichwald (2009), establishing whether in this relationship there is a directional risk of innovation on sustainability. This relationship has been little studied in the service sector, but it is essential for corporate development and the scope of competitive advantage where organizations must analyze their sustainability practices and measure their performance through, for example, the sustainability cube and their forms of innovation as facilitators of this sustainability, but also an in-depth review of other variables that can be mediators and moderators in the relationship, given that some elements external to the company can affect their behavior and their interests to include sustainable practices and ways of innovation in business.

The services sector has become one of the country's main economic engines; services during the pandemic have grown exponentially; for its part, the consumer is much more digital and hastened to use new services during long seasons of lockdown across the country. The use of different services from food, payments, transportation, technology, and clothing, among many others, had an important use since physical purchases were replaced by virtual purchases, creating and improving services associated with tangible products, which results from interest, given that traditionally services were created as the main source of value creation for the organization. However, with the advent of technology, many products have associated services to improve client relationships. However, the idea is familiar; it is interesting to identify how the services associated with these tangible products that emerged during the pandemic have developed better innovation processes, obtaining greater corporate performance.

On the other hand, organizations in the service sector are associated, according to the literature (Tajudeen et al., 2021; Blichfeldt & Faullant, 2021; Blocher & Alt, 2021) with forms of innovation concerning the organizational method, the commercial method, the service in itself, but carrying out these innovations requires intensive

technological use, which is not always related to a more ecological approach; therefore, there is a false paradigm regarding the idea of a less polluting service sector, with better uses of water and energy resources. On the contrary, the service sector can be as intensive as the manufacturing sector in using scarce resources. In contrast, service sector organizations have had to develop forms of innovation that directly affect various sustainability practices to approach a sustainability approach.

The services sector is very diverse; it has small organizations dedicated to specialized sectors such as entertainment, including cinema, television, restaurants, catering, and large-scale services such as health, education, and telecommunications that have national and foreign investment. This configuration of the services sector and its economic importance justify being analyzed. However, it is also important to highlight that it is a sector that does not have in-depth analysis in the Colombian context regarding the relationship between sustainability and innovation, like the manufacturing sector, in such a way that it can be understood which innovation practices are the most appropriate or those that allow for better performance in the intangibles sector and which practices, in addition to being innovative, allow a positive impact on the environment. It is also necessary to highlight that the most sustainable companies are not always the most innovative, so establishing whether the companies that are innovative in the sector, by investing in technology to develop these innovations, also manage to find a balance by maintaining the ecological perspective within of its value chain.

On the other hand, it is interesting that in the services sector, companies associate their innovation and ecological sustainability with developing services that associate some tangible good; it can be a product or a good that improves the brand's goodwill for the client. This suggestive practice supposes, for the organizations of the service sector, a corporate strategy with a double effect, firstly, it helps the company to establish an environmental innovation, and secondly, it allows goodwill to be superior in the consumer mind.

Some companies have already developed the relationship between innovation and sustainability; we can observe, for example (themonopolitan, 2020): Sampla, an Irish shoe brand that uses apple skin to make them, BezMiesny, dedicated to the production of vegetable-based meats, Bamboo bags, bamboo bags that degrade in 90 days, Rens, slippers made from coffee waste and recycled plastic bottles. Other well-established ideas include Grupo Ecoplasso, which makes bricks from recycled plastic, known as Bloqueplás, and Lifepack makes disposable plates based on corn and pineapple, known as Papelyco, that can be sown. These businesses allow establishing two fundamental elements: innovation and sustainability; they can work hand in hand for social development; and second, sustainability mobilizes organizations to innovate based on the needs of recovering the environment.

## Conceptual Framework

### Sustainability

Service companies in recent years have decided to have sustainability practices; however, the relationship in this sector concerning its innovation practices and its relationship with sustainability is not entirely clear; some studies (Riccaboni et al., 2021) show that sustainability occurs whenever innovation is found in all company processes while other authors explain how organizations that carry out sustainability practices later discover a path to innovation (Klein et al., 2021). In both cases, sustainability becomes a fundamental element in the value chain, especially since, from the supply chain to the distribution chain, it seeks to establish the appropriate way to build a service that affects the environment very little, but that means a great improvement in the quality of life. Some previous analyzes have shown that sustainability in the service sector (Hsu et al., 2018) depends to a large extent on a social approach, the use of alternative energy, environmentally friendly technologies, also known as green technologies (Mu et al., 2021) whose foundation is the development of the service, but not the planetary wear and tear as the ultimate goal.

On the other hand, sometimes, within the service sector, some activities associated with the sale of these services are also susceptible to improvement. The ecological environment is not only outside the organization but also within the company, from the moment in which the Employees share a physical environment (Aboramadan & Karatepe, 2021) where resources such as energy, water, stationery, air conditioning, among others, are used, which can be analyzed, replaced, and improved to have better sustainability practices, innovating at the same time.

Some previous studies show that innovation in the service sector is as varied as the types of existing services; many of the forms of innovation in the service sector correspond especially to their commercialization through

direct or online points of sale and configuration of the services, that is known in the Oslo Manual 1991 (OECD, 2018).

Recent studies affirm that the service sector has a particularity, and it is the moment in the life cycle of the organization when they must carry out innovations (Lee et al. al. 2021), especially when organizations decide to innovate under levels of uncertainty or in situations where innovating seems the only alternative to overcome crises. Recent studies (Turón, 2022; Wang et al., 2019; Baradarani & Kilic, 2018; Hajar et al., 2018; Zhao et al., 2019, Tronvoll and Edvardsson, 2020) regarding innovation in services are classified into five important categories: technological innovation, social innovation, environmental innovation, process innovation, and business method innovation; these recent studies present three common factors: a concern for the balance between technology and the environment, the effect of performance by innovation, the diversity of factors that lead the organization to sustainable practices through innovation.

**Innovation**

Innovation is defined as the creation of completely new goods, processes, methods, or improvements to existing ones (Oslo, 1991), which make it possible to implement a novelty in the market, that is, to make it available to the consumer. Innovation has been considered one of the main tools to improve corporate performance and the productivity of companies in the service sector. Recent studies (Rahman et al., 2022; Singh et al., 2022; Alam & Adeyinka, 2021) show that organizations that have innovative practices tend to be better in terms of performance either through sales and exports or from the creation of capacities that allow them to diversify their portfolio of services; some forms of innovation mean investing in more technology and research and development; however, these investments also mean an additional problem: the ecological sustainability of these forms of innovation.

Therefore, companies with the best innovation practices (see Graph 1) in the services sector require a balance between environmental sustainability and intensive use of technology. Maintaining both practices has become an important challenge for stakeholders, which is why, in the words of Bustinza, Gomes, Vendrell-Herrero, and Baines (2019), it has created a servitization where service innovations are developed that allow developing a competitive advantage.

Graph 1. Annual Innovations

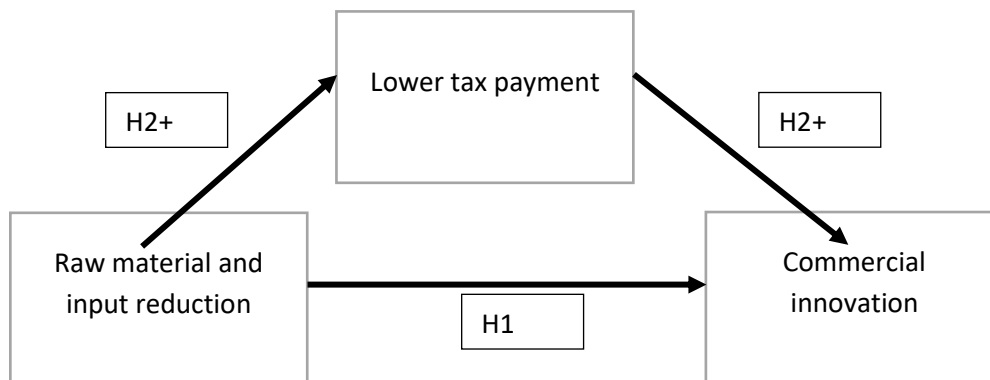


However, some companies in the service sector are unaware of the infinite possibilities of servitization; they consider that innovation in intangibles only translates into the massification of online sales and not in other after-sales services, for example, in the diversification of the service itself, the development of organizational methods that strengthen their staff and favor the development of organizational capacities and the construction of dynamic capacities. Some authors state (Gurnovich, 2021; Williams & Williams, 2021) that organizations centralize their resources in the short term to achieve innovations that allow access to higher sales levels but do not establish a long-term resource that drives them to build dynamic capabilities if the approach for some companies outside of the long term, including other policies, and some changes in the forms of management, the immediate consequence some studies suggest (Khan et al., 2022), would be environmental sustainability practices. Understanding both perspectives of sustainability and innovation, it is possible to argue that:

H1 Practices in ecological sustainability affect commercial innovation.

H2 The lower payment of taxes mediates the relationship between practices in ecological sustainability and commercial innovation.

Figure 1. Construct



## Methods

For the study of the services sector, the survey of development and technological innovation in services of the national department of Statistics (DANE), which developed a survey in the sector, this database has been filtered for organizations that carry out practices at some level of corporate social responsibility and that have at least one innovation practice at a commercial level, obtaining a sample of 689. The first phase of the analysis is descriptive, followed by regression analysis. Subsequently, mediation analysis is carried out in the macro process, model 4, to establish the relationship between sustainability practices and commercial innovation, with a lower tax payment variable as the mediator.

## Results

For companies in the service sector, having sustainability practices enables access to tax exemptions promoted in this context by government entities, facilitating the proper use of resources, which in the case of the service sector seem invisible to the final consumer, but essential for the development of the service. However, it is necessary to highlight that this better use of input does not generate innovative practices but rather an ecological approach to gain external incentives, such as reducing taxes. Very few companies manage to combine this practice of sustainability with the development of innovation in this context. However, once the tax incentives are in place, the organizations turn to making commercial innovations, possibly because they have more economic resources to invest in making these innovations. To understand this relationship, the model presents the following descriptive statistics and correlations (table 2), ANOVA (table 1) results (table 3):

**Table 1. Anova**

Model		ANOVA <sup>a</sup>				Sig.
		Sum Square	df	Mean Square	F	
1	Regression	9,562	1	9,562	13,162	<,001 <sup>b</sup>
	Residual	499,111	687	,727		
	Total	508,673	688			
2	Regression	12,405	2	6,202	8,573	<,001 <sup>c</sup>
	Residual	496,269	686	,723		
	Total	508,673	688			

a. Dependent Variable: Commercial innovation

b. Predictors: (Constant), Raw material and input reduction

c. Predictors: (Constant), Raw material and input reduction, Lower tax payment

**Table 2. Descriptive Statistics and Correlations**

	Minimum	Maximum	Mean	SD	1	2	3
1 Dependent variable commercial innovation	1	11	1,29	0,860	1		
2 Raw material and input reduction	1	3	2,49	0,647	0,137**	1	
3 Lower tax payment	1	4	2,64	0,616	0,008	0,433**	1

\*p < 0.05, \*\*p<0.01

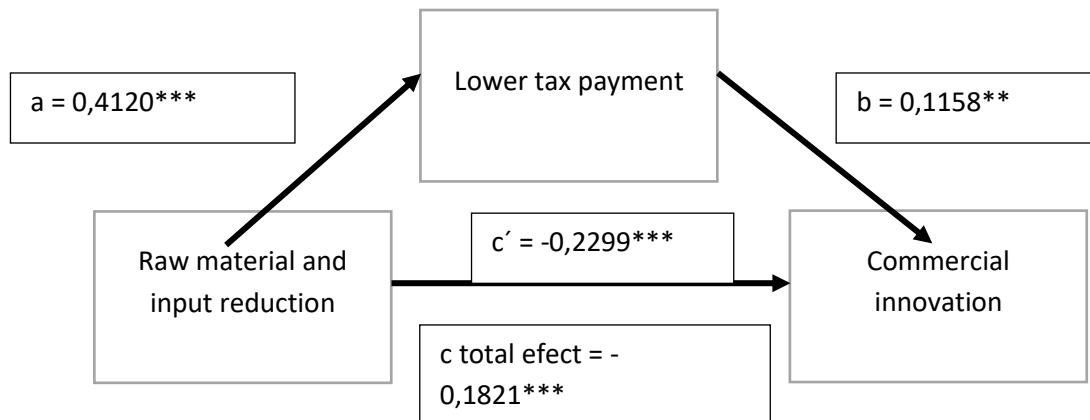
**Table 3. Hierarchical Model Regression**

	Modelo 1	Modelo 2
<b>Variable Raw material and input reduction</b>	-0,182*** (0,050)	-0,230*** (0,056)
<b>Variable Lower tax payment</b>		0,116** (0,058)
<b>Constant</b>	1,740*** (0,129)	1,554*** (0,160)
<b>R<sup>2</sup></b>	0,017	0,022
<b>Change in R<sup>2</sup></b>	0,019***	0,006**

\*p < 0.10, \*\*p<0.05, \*\*\*p<0.01;  
Standard deviation in parenthesis

The results explain an interesting relationship between the reduction of raw materials as a sustainability practice and its direct effect on commercial innovation, where the greater the reduction of raw materials, the company tends to carry out less innovation at the commercial level, which represents a sacrifice for the company in terms of investment to be ecological, and not innovative, however, with the mediating variable, an incentive such as the reduction of taxes, allows the indirect effect between the reduction of input and its effect on commercial innovation, to be positive. It can be explained by the effect that having sustainability practices means for a company in tax terms; the greater the tax incentives, the better results in terms of commercial innovation. Now it is possible to analyze in detail each variable of the model, its coefficient, effects, and fit (figure 2):

**Figure 2. Macro process results**



**Mediator Variable Lower tax payment:**

- Model Summary: The model explains 18.76% of the variance in lower tax payments, as indicated by the R-squared value of 0.1876. The F-test (F = 158.6524, p < 0.001) suggests the overall model is statistically significant.
- Model: The regression model shows that raw material and input reduction significantly predict lower tax payments. For a one-unit increase in raw material and input reduction, there is a 0.4120 increase in lower tax payment, controlling for other variables. Both coefficients have p-values less than 0.001, indicating statistical significance.
- Covariance matrix: The covariance matrix provides information about the relationship between the constant and raw material and input reduction in the regression model.

**COMMERCIAL INNOVATION:**

- Model Summary: The model explains 2.44% of the variance in commercial innovation, as indicated by the R-squared value of 0.0244. The F-test (F = 8.5735, p < 0.001) suggests that the overall model is statistically significant.
- Model: The regression model shows that both raw material and input reduction and lower tax payment are significant predictors of commercial innovation. For a one-unit increase in raw material and input reduction, commercial innovation decreases by 0.2299, and for a one-unit increase in lower tax payment, commercial innovation increases by 0.1158. The p-values indicate that all coefficients are statistically significant.
- Covariance matrix: The covariance matrix provides information about the relationships between the constant, raw material and input reduction, and lower tax payment in the regression model.

**Total Effect Model (COMMERCIAL INNOVATION):**

- Model Summary: The total effect model explains 1.88% of the variance in INNOVACIÓN COMERCIAL, as indicated by the R-squared value of 0.0188. The F-test (F = 13.1621, p < 0.001) suggests that the overall model is statistically significant.
- Model: The total effect model focuses on the direct effect of raw material and input reduction on INNOVACIÓN COMERCIAL. The regression coefficient for raw material and input reduction is -

0.1821, indicating that a one-unit increase in raw material and input reduction is associated with a decrease of 0.1821 in commercial innovation.

- The covariance matrix provides information about the relationship between the constant and raw material and input reduction in the total effect model.

#### **Total, Direct, and Indirect Effects:**

- The total effect of x (raw material and input reduction) on y (commercial innovation): The total effect of raw material and input reduction on commercial innovation is: -0.1821, indicating a negative relationship.
- The direct effect of x (raw material and input reduction) on y (commercial innovation): The direct effect of raw material and input reduction on commercial innovation is -0.2299, indicating a negative relationship.
- Indirect effect(s) of x (raw material and input reduction) on y (commercial innovation): The indirect effect of raw material and input reduction on commercial innovation through the mediator variable lower tax payment is 0.0477 positive.

This research allows us to contribute in two fundamental ways to the sustainability approach; firstly, it allows us to demonstrate that external incentives do improve the intensity of sustainable practices in service companies, it also improves the levels of commercial innovation, and secondly, it allows us to recognize that at least for the services sector, different from what happens in the manufacturing sector, companies cannot carry out the sustainability and innovation approaches simultaneously unless there is an external incentive such as reduction of taxes.

For the innovation approach, it would be important in future studies to establish other variables, such as research and development, technological intensity, or the hiring of specialized personnel or with a doctorate, to recognize whether these intervening variables can modify the effect in the service sector in terms of business innovation in particular.

#### **Conclusions**

In the services sector, the environmental impact is as high as in the manufacturing sector; it faces different challenges to the lower use of input such as fuel, water, electricity, cleaning material, and stationery, among others. However, this lower usage must meet customer expectations while responding to market trends. Transforming this use of raw materials into an ecological practice becomes a first step to creating opportunities for environmental innovation; however, in this sector, many companies require extra incentives that allow them to challenge their beliefs regarding innovation and sustainable performance.

To do so, the first factor that allows establishing the relationship between these two elements is economic viability, to what extent service organizations take advantage of an economic benefit translated into lower tax payments to use these resources and transform it into commercial innovations that directly impact the client. Integrating the two perspectives through a third arm, such as the economic one, is fundamental for developing economic policies that increase the incentives for this service sector and promote better development of ecological capacities and, consequently, innovation.

Establishing a joint work route for the service sector through public policymakers should be a priority that transforms the reduction of taxes into an incentive for better development of innovations, which in the long term makes the sector more competitive in international markets.

It is important to remember that this is a case where the context of this type of incentive for an adequate development between sustainability and innovation occurs; therefore, as a limitation of the study, the context of analysis and the type of sector does not make the conclusions of this research generalizable, but it does allow us to suppose at least that public policy in terms of incentives, can move towards ecological practices that are rewarded, and with these resources develop better skills in innovation, both at a commercial and technological level, thus covering an important gap in research such as the motivation of companies to establish better ecological practices and the barriers that arise to integrate innovation into this ecological strategy.

## References

- Aboramadan, M., & Karatepe, O. M. (2021). Green human resource management, perceived green organizational support and their effects on hotel employees' behavioral outcomes. *International Journal of Contemporary Hospitality Management*. <https://doi.org/10.1108/IJCHM-12-2020-1440>
- Alam, K., & Adeyinka, A. A. (2021). Does innovation stimulate performance? The case of small and medium enterprises in regional Australia. *Australian Economic Papers*, 60(3), 496-519. <https://doi.org/10.1111/1467-8454.12216>
- Baradarani, S., & Kilic, H. (2018). Service innovation in the hotel industry: culture, behavior, performance. *The Service Industries Journal*, 38(13-14), 897-924. <https://doi.org/10.1080/02642069.2017.1420172>
- Blichfeldt, H., & Faullant, R. (2021). Performance effects of digital technology adoption and product & service innovation—A process-industry perspective. *Technovation*, 105, 102275. <https://doi.org/10.1016/j.technovation.2021.102275>
- Blöcher, K., & Alt, R. (2021). AI and robotics in the European restaurant sector: Assessing potentials for process innovation in a high-contact service industry. *Electronic Markets*, 31(3), 529-551.
- Bustinza, O. F., Gomes, E., Vendrell-Herrero, F., & Baines, T. (2019). Product–service innovation and performance: the role of collaborative partnerships and R&D intensity. *R&D Management*, 49(1), 33-45. <https://doi.org/10.1111/radm.12269>
- Dane. (2019). Encuesta de Desarrollo e Innovación Tecnológica Servicios y comercio (EDITS VII) 2018-2019. Available in: [https://www.dane.gov.co/files/investigaciones/boletines/edit/Bol\\_EDIT\\_servicios\\_2018\\_2019.pdf](https://www.dane.gov.co/files/investigaciones/boletines/edit/Bol_EDIT_servicios_2018_2019.pdf)
- Gurnovich, T. G., Piterskaya, L. Y., Agarkova, L. V., Buraeva, E. V., & Chistyakova, M. K. (2021, April). Trends in the development and financing of investment and innovation activities in the agricultural sector of the economy. In *IOP Conference Series: Earth and Environmental Science* (Vol. 745, No. 1, p. 012013). IOP Publishing. DOI 10.1088/1755-1315/745/1/012013
- Hansen, E. G., Grosse-Dunker, F., & Reichwald, R. (2009). Sustainability innovation cube—a framework to evaluate sustainability-oriented innovations. *International Journal of Innovation Management*, 13(04), 683-713. <https://doi.org/10.1142/S1363919609002479>
- Hajar, M. A., Ibrahim, D. N., & Al-Sharafi, M. A. (2018, June). Value innovation in the Malaysian telecommunications service industry: Case study. In *International Conference of Reliable Information and Communication Technology* (pp. 892-901). Springer, Cham.
- Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, 280, 124715. <https://doi.org/10.1016/j.jclepro.2020.124715>
- Hsu, H. Y., Liu, F. H., Tsou, H. T., & Chen, L. J. (2018). Openness of technology adoption, top management support and service innovation: a social innovation perspective. *Journal of Business & Industrial Marketing*. <https://doi.org/10.1108/JBIM-03-2017-0068>
- Khan, H., Weili, L., & Khan, I. (2022). Environmental innovation, trade openness and quality institutions: an integrated investigation about environmental sustainability. *Environment, Development and Sustainability*, 24(3), 3832-3862.
- Klein, S. P., Spieth, P., & Heidenreich, S. (2021). Facilitating business model innovation: The influence of sustainability and the mediating role of strategic orientations. *Journal of Product Innovation Management*, 38(2), 271-288. <https://doi.org/10.1111/jpim.12563>
- Lee, M., Dutta, D. K., & Park, K. (2021). Technology-intensive ventures, R&D capability and innovation success: impact of firm lifecycle stage and CEO involvement. *Technology Analysis & Strategic Management*, 1-13. <https://doi.org/10.1080/09537325.2021.1971190>



Marcas Innovadoras y Ecológicas Available in: <https://themonopolitan.com/2020/11/productos-innovadores-y-ecologicos>

Made in Colombia Available in: <https://www.colombia.co/pais-colombia/made-in-colombia-productos-amigables-con-el-medio-ambiente-que-salvan-el-planeta/>

Mu, Z., Zheng, Y., & Sun, H. (2021). Cooperative green technology innovation of an e-commerce sales channel in a two-stage supply chain. *Sustainability*, 13(13), 7499. <https://doi.org/10.3390/su13137499>

Observatorio Desarrollo Económico (2022). Sector servicios inicia el 2022 con incremento del personal ocupado en 16 actividades. Available in: <https://observatorio.desarrolloeconomico.gov.co/servicios/sector-servicios-inicia-el-2022-con-incremento-del-personal-ocupado-en-16-actividades> Consultado el 2 de junio de 2022.

OECD, E. (2018). Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, The Measurement of Scientific, Technological and Innovation Activities. Handbook of Innovation Indicators and Measurement.

Rahman, M., Kamal, M. M., Aydin, E., & Haque, A. U. (2022). Impact of Industry 4.0 drivers on the performance of the service sector: comparative study of cargo logistic firms in developed and developing regions. *Production Planning & Control*, 33(2-3), 228-243. <https://doi.org/10.1080/09537287.2020.1810758>

Riccaboni, A., Neri, E., Trovarelli, F., & Pulselli, R. M. (2021). Sustainability-oriented research and innovation in 'farm to fork' value chains. *Current Opinion in Food Science*, 42, 102-112. <https://doi.org/10.1016/j.cofs.2021.04.006>

Singh, S. K., Del Giudice, M., Chiappetta Jabbour, C. J., Latan, H., & Sohal, A. S. (2022). Stakeholder pressure, green innovation, and performance in small and medium-sized enterprises: The role of green dynamic capabilities. *Business Strategy and the Environment*, 31(1), 500-514. <https://doi.org/10.1002/bse.2906>

Tajudeen, F. P., Nadarajah, D., Jaafar, N. I., & Sulaiman, A. (2021). The impact of digitalisation vision and information technology on organisations' innovation. *European Journal of Innovation Management*. <https://doi.org/10.1108/EJIM-10-2020-0423>

Tronvoll, B., & Edvardsson, B. (2020). Explaining how platforms foster innovation in service ecosystems. URI <http://hdl.handle.net/10125/63937>

Turoń, K. (2022). Open innovation business model as an opportunity to enhance the development of sustainable shared mobility industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1), 37. <https://doi.org/10.3390/joitmc8010037>

Wang, C. N., Day, J. D., & Farid, M. (2019). Service innovation model of the automobile service industry. *Applied Sciences*, 9(12), 2403. <https://doi.org/10.3390/app9122403>

Williams, B., & Williams, B. M. (2021). Real effects of financial reporting on innovation: Evidence from tax law and accounting standards. *The Accounting Review*, 96(6), 397-425. <https://doi.org/10.2308/TAR-2018-0582>

Zhao, Q., Tsai, P. H., & Wang, J. L. (2019). Improving financial service innovation strategies for enhancing china's banking industry competitive advantage during the fintech revolution: A Hybrid MCDM model. *Sustainability*, 11(5), 1419. <https://doi.org/10.3390/su11051419>

# Supply Chain Management

## **Managing Disruptions in International Distribution Channels: Effectuation, Business Model Innovation, and Channel Resilience**

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**Running head:** Channel Resilience

**Key words:** Effectuation, business model innovation, international distribution channels, resilience, deep uncertainty, multinational operations

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### **ABSTRACT**

Global environmental turbulence like the COVID-19 pandemic can unexpectedly disrupt international distribution channels, making channel resilience an important issue for firms distributing internationally. Effectuation process can help, but existing means may not always fit the changing market conditions. A firm often must supplement its existing means with new ones to deal with unexpected disruptions. Drawing from the international marketing and entrepreneurship literature, this study argues that business model innovation mediates in the relationship between effectuation process and channel resilience, and deep uncertainty moderates both stages of that mediation, from effectuation to business model innovation and from innovation to channel resilience. Using data on 115 firms that were based in Wuhan, China, and distributed internationally during the Covid-19 pandemic, this study finds empirical support for most of the hypotheses. However, deep uncertainty is not found to moderate the first stage of mediation, i.e., from effectuation process to business model innovation. Wuhan, China was the first city that experienced the COVID-19 pandemic and thus provides an appropriate context to test the impact of deep uncertainty in an international business context.

**Key words:** Effectuation, business model innovation, international distribution channels, resilience, deep uncertainty, multinational operations

### **INTRODUCTION**

Unexpected global turbulence such as the COVID-19 pandemic can disrupt international distribution channels (IDCs) abruptly, making channel resilience a crucial strategic objective for multinational enterprises (MNEs)

with IDCs. In this study, IDC resilience is defined as a firm's capacity to mitigate threats to its IDC so that the channel functions effectively across countries in the aftermath of an unexpected crisis. Unpredictable crises impose exogenous shocks of uncommon magnitude on MNEs, disrupting or even destroying their global value chains (Verbeke, 2020). However, published research on the resilience of IDCs has been limited, even though resilience has been widely examined in management and supply chain studies (e.g., Belhadi, Mani, Kamble, Khan, & Verma, 2021; Kahn, Fisher, Heaphy, Reid, & Rouse, 2018). Distribution channels are intra- and inter-organizational institutional configurations for directing and supporting the flow of value from production to use (Watson, Worm, Palmatier, & Ganesan, 2015). Their international nature leaves them badly exposed to major environmental disruptions (Hoppner & Griffith, 2015; Yang, Su, & Fam, 2012). Today, building channel resilience has been increasingly important for MNEs because uncertainty, together with volatility, complexity, and ambiguity, has been reshaping the global economic order in an unprecedented way (Buckley, 2020; Petricevic & Teece, 2019).

Studies of marketing and entrepreneurship suggest that firms can use effectuation process to manage their distribution channels and deal with uncertainty (e.g., Read, Dew, Sarasvathy, Song, & Wiltbank, 2009). Effectuation refers to “[taking] a set of means as given and [focusing] on selecting between possible effects that can be created with that set of means” (Sarasvathy, 2001: 245). However, having a variety of means available does not necessarily guarantee the IDC's resilience. The means available to a firm may not always be fit for dealing with an unexpected disruption it encounters even though the firm has multiple diverse means at its disposal. More importantly, firms must develop new means and combine new and existing means to fit changing market conditions. How to linking the means available with channel resilience remains poorly understood in the IDC context.

Novelty-centered business model innovation (BMI)—new ways of conducting economic exchanges—is one mechanism that might mediate in the relationship between effectuation and IDC resilience in the face of major disruption. BMI designs novel and non-trivial changes to the key elements of a firm's business model and links those elements (Foss & Saebi, 2017). With BMI firms can create new means and combine them with existing means in a new way to adapt to changed market conditions. That is the essence of channel resilience. Put differently, effectuation leads to BMI, which results in channel resilience. BMI mediation is particularly important when an MNE must deal with deep uncertainty.

This study integrated the international marketing and entrepreneurship literature to examine how novelty-centered BMI might mediate in the positive relationship between an MNE's effectuation process and the resilience of its international distribution channels. It also addressed how deep uncertainty from a major disruption might moderate the relationships between effectuation and BMI, and between BMI and channel resilience.

International distribution exposes a firm to uncertainties beyond those related to domestic channels (Bello & Gilliland, 1997; Hoppner & Griffith, 2015). Divergence of opinions, perceptions and understanding due to differences in culture, legal systems and organizational norms are compounded by geographical separation, fluctuations in exchange rates, geopolitical tensions, and the physical movement of products across borders can further limit channel members' responses to deep uncertainty (Eshghi & Ray, 2021). The limitations make it difficult for an MNE to establish and maintain resilience in its IDCs when the unexpected arises.

This study used data on Chinese and foreign firms to test its hypotheses. The sample firms were based in Wuhan, China and distributed internationally during the Covid-19 pandemic. On January 23, 2020 China imposed a lockdown in Wuhan in an effort to quarantine the spread of COVID-19. Within hours, travel restrictions were affecting 11 million people. The World Health Organization described the action as “unprecedented in public health history” (Bernstein & Craig, 2020). Similar actions were later enacted globally as the pandemic spread, but Wuhan in early 2020 provides a useful context in which to study market changes caused by deep uncertainty.

This study contributes to the international business (IB) literature on three fronts. First, its findings shed light on an important aspect of international channel management, channel resilience against major market disruptions, which IB scholars have largely overlooked. Building on work which suggests that effectuation can play a role in managing uncertainty in marketing (e.g., Read et al., 2009), BMI was tested as a mediating mechanism linking effectuation with resilience in international distribution channels. The study also examined the moderating effects of deep uncertainty on IDC relationships. BMI's mediation addresses “how” a firm's effectuation builds channel resilience; moderation by deep uncertainty clarifies “when” the process leads to resilience.

This study's findings also contribute to explaining BMI's role in the IB context. They show that effectuation process is an antecedent of BMI, and channel resilience can be one of its outcomes. Most BMI studies trace the antecedents of BMI to external dynamism or internal changes in strategy (for a review, see Foss & Saebi, 2017). This study tested the proposition that a firm's effectuation process generates a diverse set of means which serve as another antecedent for BMI. Similarly, prior scholarly work on BMI has shown that it improves firm performance (e.g., Zott & Amit, 2007) but this study addressed a more specific outcome: channel

resilience. Moreover, its data show that deep uncertainty moderates the relationship between BMI and channel resilience, adding to the evidence that environmental conditions such as turbulence moderate BMI and its outcomes (e.g., Zott & Amit, 2007).

Third, this study's findings shed new light on capability-building, particularly the development of capabilities in multinationals based in an emerging market (EMNEs). The findings demonstrate how EMNEs respond to major disruptions by applying effectuation to enable imagination and experimentation. They use BMI to turn threats into opportunities, an extension of the findings of prior scholarship (e.g., Read et al., 2009; Saebi, Lien, & Foss, 2017). Studies on EMNEs have been an important stream in recent IB research because emerging markets experience distinctive upheavals and EMNEs demonstrate unique innovativeness in managing them (Kumar, 2014). This study exhibits that innovativeness in the context of IDCs.

The remainder of this paper is organized as follows. In the next section the linkages among the constructs of the effectuation process, BMI, deep uncertainty, and channel resilience are first defined and explored. Hypotheses about the relationships among those constructs are then developed and tested. The research methodology and data analysis are described in detail. After a discussion of the results and their implications, the paper concludes with a summary and some suggestions for future research.

## **THEORETICAL BACKGROUND**

The marketing and entrepreneurship literature suggests that effectuation can be an effective way to enhance a firm's ability to manage unpredictable disruptions in its distribution channels (Read et al., 2009). The process enables a firm to adapt to market changes with a variety of means, easing the firm's knowledge limitations (Arend, Sarooghi, & Burkemper, 2015; Wiltbank, Dew, Read, & Sarasvathy, 2006). As such, effectuation is "means oriented" (Read et al., 2009: 3). In the process a firm makes an inventory of its means— what it has, what it knows and who it knows—and chooses appropriate means from the inventory to achieve its goals (Sarasvathy, 2001). The process helps a firm's managers imagine possibilities (Townsend, Hunt, & McMullen, 2018), and multiple possibilities enable experimentation to discover new or changing patterns (Zahra, Sapienza, & Davidsson, 2006). MNEs and their channel partners differ in terms of location-specific advantages and institutional constraints and have diverse assets and resources. That can expand the variety of means available to a firm (Petricevic & Teece, 2019; Zhang, Xie, Li, & Cheng, 2022). That can make effectuation particularly useful in the IB context. However, the means available may not always fit the needs of unexpected market disruptions. New means may be needed. Ideally the new and existing means should be integrated in a novel way to reap the benefits of entrepreneurial actions (Zahra, Petricevic, & Luo, 2022). Such innovation is often required by the heterogeneity of environmental changes (Zhang et al., 2022).

Business model innovation adds new means and combines them with existing ones to respond to unexpected market changes (Foss & Saebi, 2017). BMI helps to redefine the content (adding new activities), the structure (linking activities differently), and the governance (changing who conducts the activities) of a firm's means (Amit & Zott, 2012). Market disruption spurs firms to create new knowledge, engage in novel behavior, and build new patterns of assets that did not previously exist (Alvarze & Porac, 2020). That makes BMI a necessary response to discontinuities and disruptions (Doz & Kosonen, 2010).

BMI is particularly relevant for IDC management because each channel is an ecosystem integrating the specialized assets of diverse channel partners to deliver value across borders (Eshghi & Ray, 2021; Grewal, Kumar, Mallapragada, & Saini, 2013). In the context of IDCs, novelty-centered BMI includes actions to identify new channel partners, connect previously unconnected channel partners, link channel participants in new ways, and/or design new mechanisms for conducting channel transactions. Within an IDC, changes in a member's business model needs trust and may entail adjustments or modifications from other channel members to ensure the smooth continuation of the channel's operations (Katsikeas, Skarmeas, & Bello, 2009; Yang, Jiang, & Xie, 2019). The MNE plays the role of the ecosystem's "orchestrator" who incentivizes, coordinates and monitors all the other players (Pitelis, 2022).

BMI tends to be more common among MNEs than among firms operating only domestically (Pitelis, 2022). MNEs must meet different customer needs and experience different institutional constraints in different economies; the heterogeneity of needs and constraints drives BMI (Lundan & Li, 2019; Zhang et al., 2022). On the other hand, MNEs promote BMI faster than single-country marketers because they can spread successful new business models to different countries (Teece, 2018). For example, Amazon and Alibaba innovated different distribution business models which then spread quickly to many countries.

BMI enhances a distribution channel's strategic flexibility and thus builds up channel resilience. Resilience is a system's capacity to survive, adapt and grow in the face of turbulent change (Pettit, Croxton, & Fiksel, 2019). The qualities are embedded in a process by which individual members of a system and the system itself avert maladaptive tendencies and maintain positive adjustment or adaptability under challenging conditions (Sutcliffe & Vogus, 2003). With resilience a system not only absorbs and recovers from shocks but also transforms the system's structure, governance and elements to benefit from the shocks in the long run (van der Vegt, Essens, Wahlstrom, & George, 2015). Distribution channels are such systems (Watson et al., 2015). An

MNE's channel resilience enables its channels to resist the spread of disturbance, recover quickly and effectively, and restore the channel to a robust state of operations within an acceptable period of time (Kamalahmadi & Parast, 2016).

Both effectuation process and BMI contribute to IDC resilience. The future holds many possible outcomes and some of them are unknowable, but effectuation process helps a firm access more means in its IDCs, including outsourcing distribution facilities at different locations, so that at least some of them will survive unpredictable disruptions (Zahra et al., 2006). BMI, on the other hand, adds new means (Foss & Saebi, 2017), some of which may help to build resilience into its IDCs (Saebi et al., 2017).

Environmental conditions strongly influence the relationship between a firm's strategy and its outcomes (Kumar, 2019; McArthur & Nystrom, 1991; Zott & Amit, 2007). When the environment presents "unknown unknowns" (Teece, Peteraf, & Leith, 2016: 15) where managers haven't even thought of a possible event, that is an environment of deep uncertainty, which differs from risk. Risk can be quantified probabilistically, whereas uncertainty cannot (Alvarez & Porac, 2020; Knight, 1921). With risk, managers do not know what is going to happen but the probabilities of possible outcomes are more-or-less known. With deep uncertainty they are not (Teece & Leih, 2016). Deep uncertainty removes the assumption that a phenomenon can be modeled and that a firm can predict what will happen based on historical data (Read et al., 2009). It poses knowledge problems of enumerating, classifying and estimating a large number of effects among interacting factors (Knight, 1921; Rindova & Courtney, 2020). Consequently, learning is difficult, if not impossible, with deep uncertainty.

Full paper will be presented at the conference.

# On the integration and performance of supply chains: Examining the impact of internet of things constituent technologies

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## Abstract

The use of information and communication technology is inherently intertwined with supply chain management. Internet of things is a synthesis of technologies with a significant positive impact on business processes pertaining to: (i) the physical flows along the supply chain as well as (ii) the information concerning the aforementioned flows. However, earlier research approaches the internet of things as an undivided technology, not taking into account both its individual components and various configurations. Drawing on information and communication technology and supply chain management literature, the study develops its research hypotheses and proposes a model describing the relationships between constituent technologies of the internet of things and the integration and performance of supply chains.

## Keywords

cloud computing; information systems; internet-of-things; radio frequency identification; supply chain integration

## 1. Introduction

Supply chains as wittingly managed configurations were initially created and now constantly evolving as a result of technological progress (Lyall et al., 2018; Min et al., 2019). The relationship between technology and supply chain performance has been the subject of scientific research over time (e.g., Byrd & Davidson, 2003; Dehning et al., 2007; Fawcett et al., 2011; Naway & Rahmat, 2019; Singh & Teng, 2016; Vanpoucke et al., 2017).

The internet of things, reshapes the way business processes are conducted (Caputo et al., 2016; Chui et al., 2010; Ferretti & Schiavone, 2016; Li & Li, 2017), and therefore it is of interest to investigate: (i) in which way and (ii) to what extent internet of things can benefit supply chain performance. Recent studies recommending methods for measuring supply chain performance based on the internet of things (Dweekat et al., 2017; Rezaei et al., 2017; Tu et al., 2018), are demonstrative of the in-practice integration of the latter in supply chain operations. In respect to evaluating the impact of the internet of things itself on the operation and the performance of supply chains, previous literature is subject to further elaboration (De Vaas et al., 2018; Mostafa et al., 2019). This may be due to the variety of definitions (Li et al., 2015; Rose et al., 2015; Wortmann & Flüchter, 2015) and architectures (Madakam et al., 2015; Ray, 2018; Sethi & Sarangi, 2017) of the internet of things that does not allow for a single and universal approach.

This paper puts forward to propose a conceptual model that aims to elucidate the impact of the specific technologies that constitute the internet of things, on both supply chain integration and performance.

## 2. Information and communication technology, supply chain integration and management

Information and communication technology affects supply chain performance via the mediating effect of supply chain integration (e.g., Li et al., 2009; Yu, 2015). Supply chain integration is defined as the alignment, connection and coordination of people, processes, information, knowledge and strategies across supply chain points of contact and influence in order to facilitate the efficient and effective flow of materials, finances, information and knowledge in response to customer needs (Stevens & Johnson, 2016). Physical and information flows constitute the core of supply chain integration (Fayezi et al., 2017). However, between the physical and information flows -i.e., the representation of physical flows in information systems- a gap exists, as real-time knowledge of the processes taking place along the supply chain is nearly impossible (Lou et al., 2011).

The internet of things improves the transparency and the visibility of materials and information that "flow"

through supply chain business processes (Haddud et al., 2017) as well as the real-time detection of "things" (Aggarwal et al., 2013; Zhang et al., 2014). Consequently, the internet of things by contributing to the management of the physical and information flows is expected to have a positive effect on supply chain integration (Gu & Jing, 2011; Wakenshaw et al., 2017).

### **3. A conceptual approach to the internet of things**

The internet of things is a network of physical objects, digitally interconnected in order to sense, control and interact within either the company's internal operations or between the company and its supply chain partners, allowing for agility, visibility, tracking and exchange of information so as to facilitate timely planning, control and coordination of supply chain processes (Ben-Daya et al., 2019). Atzori et al. (2010) conceptualize the internet of things as a convergence of three visions: (i) the things-oriented vision, (ii) the internet-oriented vision, and (iii) the semantics-oriented vision. Gubbi et al. (2013) identify the three aforementioned visions with sensors, middleware and knowledge respectively. Gubbi et al. (2013) propose a differentiated two-perspective theoretical approach of the internet of things: (i) the thing-centric perspective and (ii) the internet-centric perspective, with the later focusing on the provision of internet services. For the capitalization on the internet services Gubbi et al. (2013) suggest the use of cloud computing. For the theoretical understanding of the internet of things, Chandrakanth et al. (2014) propose three interrelated models based on: (i) things - sensors, (ii) networks - middleware, and (iii) semantics - knowledge.

From the aforementioned it follows that the three notions that make up the internet of things are: (i) things, (ii) networking, and (iii) knowledge.

#### **3.1. Matching the internet of things notions with information and communication technologies**

The conception and development of internet of things is intertwined with radio frequency identification (RFID) (Ashton, 2009). RFID is an electromagnetic system that within its coverage range locates and identifies entities - i.e., "things"-, while at the same time reads and collects data that those "things" carry. RFID improves data processing in complement to existing technologies and aims to increase business process efficiency (Roberts, 2006). Atzori et al. (2010) identify the realization of their things-oriented vision with the utilization of RFID. Numerous publications emphasize the importance of RFID in identifying the "things" of the internet of things (e.g., Al-Fuqaha et al., 2015; Čolaković & Hadžialić, 2018; Silva et al., 2018). Additionally, a number of works highlight the importance of RFID for the performance of supply chain operations (e.g., Ali & Haseeb, 2019; Angeles, 2005; Tajima, 2007). Considering this study focuses on the realization of the internet of things in the supply chain, RFID is deemed appropriate for the realization of the "things" notion.

Cloud computing describes a pool of virtualized and distributed computing resources that come together in a completely diffuse and universally permeable way, that resembles a cloud (Buyya et al., 2009). Due to: (i) the heterogeneity and limited storage and processing capabilities of the "things" that make up the internet of things, and (ii) the number of applications involved in utilizing the data of these things, the middleware -i.e., the link between "things" and applications- plays a key role in the functioning of the internet of things (Botta et al., 2016). Ben-Daya et al. (2017), Gubbi et al. (2013), Leng & Zhao (2011), and Rui & Danpeng (2015) suggest that in the case of the internet of things, cloud computing act as the middleware.

The knowledge notion of the internet of things is intertwined with information systems which allow for the sharing and use of knowledge (Lezoche et al., 2012). Organizations rely on information systems to make their decisions and control their operations (Laudon & Laudon, 2020). Literature confirms the positive relationship between knowledge dissemination and the use of information systems (Al-Alawi et al., 2007; Choi et al., 2010; Davison et al., 2013; Levy et al., 2003; Pan & Leidner, 2003). The internet of things generates complex data sets widely known as "big data", which traditional information systems find it difficult to manage (Chen et al., 2014). At present, however, the internet of things is realized on vertical applications and systems utilizing data of limited scope (Maarala et al., 2016), allowing traditional information systems to retain their value in the context of realizing the notion of "knowledge".

## **4. Research hypotheses**

### **4.1 On the relationship between RFID and supply chain integration**

Information technology and supply chain integration are interrelated, as the development and implementation of information systems presupposes the integration of supply chain activities and processes, while information systems are necessary to integrate supply chain activities (Gunasekaran & Ngai, 2004). Assigning unique identities to "things" through the use of RFID tags, contributes substantially to the attainment of business processes integration (Bottani & Rizzi, 2008; Pålsson & Johansson, 2009). RFID enables the seamless connection of the material flows and the reciprocal information flows at all stages of the supply chain (Asif, 2005). Fosso Wamba (2012) concludes that RFID technology improves timely and accurate data flow between information systems, improves communication between systems, optimizes business processes through their automation, and enhances integration between internal and external organizational business processes. Based on



the above, we formulate the following

1st research hypothesis: *Utilizing radio frequency identification technology in the context of an internet of things system positively affects supply chain integration.*

#### 4.2 On the relationship between cloud computing and supply chain integration

Vanpoucke *et al.* (2017) identify two tactics for achieving supply chain integration: (i) operational integration and (ii) information exchange; operational integration is a prerequisite for maximizing the benefits derived from the exchange of information. Cloud computing, enabling real-time centralized data synchronization and unrestricted access to data, ensures the smooth flow of information regarding the "things", facilitates collaboration between supply chain members and enhances logistics integration (Dubey & Jain, 2014). Mehraei *et al.* (2013) argue that cloud computing is an attractive prospect for supply chain integration, promising flexible, simple and efficient data integration, replacing traditional information systems, which, through RFID technology, connect per diem supply chain operations with long-term planning and control supply chain strategies. Furthermore, Bruque-Camara *et al.* (2015) find positive relationships between: (i) cloud computing assimilation and supply chain integration and (ii) supply chain integration and company performance. Based on the above, we formulate the following

2nd research hypothesis: *Utilizing cloud computing in the context of an internet of things system positively affects supply chain integration.*

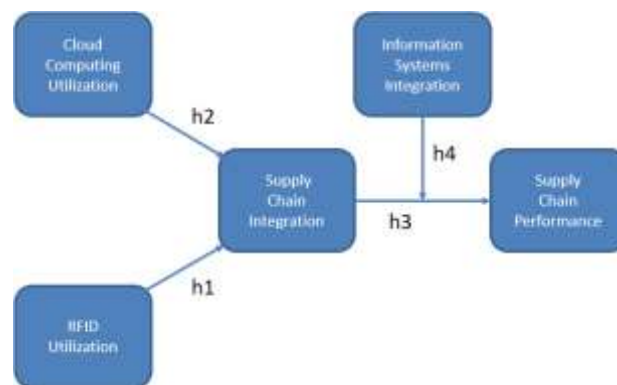


Figure 1: Research hypotheses of the proposed theoretical model

#### 4.3 On the relationship between supply chain integration and supply chain performance

Li *et al.* (2009) argue that information technology, by enabling real-time exchange of data and information relating to core business processes between supply chain partners, improves supply chain integration and consequently supply chain performance. Prajogo & Olhager (2012) assume that information and materials flow in opposite directions -information flows only upwards while materials flow only downwards- and argue that in order to achieve higher levels of performance, the integration of material flows needs to be supported by the integration of information flows. Prajogo & Olhager (2012) conclude that the integration of information flow is as important as the integration of material flow and that both have a significant impact on business performance. Cheung *et al.* (2012) create a knowledge-based customization system that supports supply chain integration and is verified to be useful for improving supply chain visibility, quantifying and exploiting holistic supply chain performance. The system utilizes three core technologies: (i) visualization of topologies, (ii) network analysis, and (iii) knowledge-based systems. The operation of this customized system is similar to that of the cloud of things, as: (i) the data necessary for the analysis of the network come from RFID tags, (ii) the efficiency of the system depends on the interpretation of real-time moving data and not by their volume, and (iii) the exchange of information requires a common interface on the one hand and an open, clear and scalable network on the other. Based on the above, we formulate the following

3rd research hypothesis: *In the context of an internet of things system supply chain integration positively affects supply chain performance.*

#### **4.4 On the effect of information systems integration on the relationship between supply chain integration and supply chain performance**

Information systems form the "nervous system" of supply chain management, transmitting information related to adding value business processes (Gunasekaran & Ngai, 2004), making the integration of information systems an important factor in enhancing corporate performance (Maiga et al., 2015), supply chain integration (Vickery et al., 2003) and supply chain performance (Rajaguru & Matanda, 2013; Ward & Zhou, 2006). Firms should align their information systems capabilities with the requirements emanating from their interactions with suppliers and customers (Shah et al., 2002). Companies that either bundle digital logistics activities to support their physical logistics activities within and across organizational borders, or have a more extensive set of digital logistics activity bundles and use them more intensively, tend to achieve better logistics performance related to services and costs (Lai et al., 2010). However, the relationship between supply chain integration and supply chain performance appears to be inconsistent due to the diversity of measures used to quantify both the aforementioned constructs (Tarifa-Fernandez & De Burgos-Jiménez, 2017).

Qrunfleh & Tarafdar (2014) claim that each supply chain strategy requires the support of the appropriate strategic information system, so as to increase its influence on the supply chain performance. Information systems for efficiency strategy focus on the operational support of organizational efficiency, allowing seamless coordination by means of, inter alia, workflow automation information systems - such as the internet of things. They conclude that information systems for efficiency as a whole positively moderate the relationship between lean supply chain strategy and supply chain performance.

Tarafdar & Qrunfleh (2017) examine the moderating effect of information systems capability for agility on the mediating effect of supply chain practices on the relationship between agile supply chain strategy and supply chain performance. Information systems capability for agility refers to corresponding applications that enable information sharing, market sensing and planning, and efficient and effective responses. Supply chain practices include inter alia, strategic supplier partnership and customer relationship processes and activities for developing a close and long-term relationship between the organization and its suppliers and customers respectively. Tarafdar & Qrunfleh (2017) conclude that the beneficial impact of an agile supply chain strategy on supply chain performance through the mediation of supply chain practices is enhanced when the focal firm implements applications that embody information systems capability for agility.

Bae (2016) verifies the moderating effect of logistics information systems on the relationship between inter-organizational collaboration and performance on logistics firms. Inter-organizational collaboration includes internal communication, joint decision-making processes and responsibility among supply chain partners, while performance is measured by means of internal efficiency and collaboration, and the enhancement of supply chain efficiency through inter-organizational collaboration.

González-Gallego et al. (2015) highlight that information and communication technologies constitute the technical foundation of information systems and are seldom able to directly affect corporate performance. On the contrary, their capitalization presupposes their integration into business activities. According to González-Gallego et al. (2015) the individual or fragmented integration of information systems does not imply better corporate performance. Information systems integration has a positive moderating effect on the relationship between the capabilities of information and communication technology and business performance. However, information systems integration moderates the relationship between the capabilities of information and communication technology and firm performance only when it includes suppliers or customers and not the supply chain as a whole. González-Gallego et al. (2015)'s model does not involve a supply chain integration construct. Based on the above, we formulate the following

4th research hypothesis: *In the context of an internet of things system, information systems integration moderates the relationship between supply chain integration and supply chain performance.*

#### **5. Conclusion**

The internet of things constitutes a synthesis of technologies -RFID, cloud computing, information systems- which act as a means of realizing its respective notions - (i) things, (ii) networking, and (iii) knowledge. Research to date has studied the effect of the internet of things on supply chain integration and performance not taking into account its multiformity. Existing literature substantiates that, individually, all aforementioned technologies have a positive impact on the integration and the performance of supply chains.

The work proposes a model that aims: (i) to describe the way and (ii) determine the significance of the effect of the internet of things technologies under study on the integration and the performance of supply chains in tandem with their constituent counterparts. Comprehension and evaluation of the contribution of each constituent internet of thing technology on the integration and the performance of supply chains will allow for more efficient and effective configurations and investments internet of things technologies.

The main limitation of the present study is reflected on the model entailing constituent technologies that, according to supply chain management literature, are expected to have a positive effect on the supply chain

performance, not taking into account other technologies which may be also appropriate for the realization of internet of things notions

## References

- Aggarwal, C.C., Ashish, N., & Sheth, A. (2013). The internet of things: A survey from the data-centric perspective, In: Aggarwal, C.C. (Ed.) *Managing & Mining Sensor Data*, Boston, MA: Springer, 383-428. [https://doi.org/10.1007/978-1-4614-6309-2\\_12](https://doi.org/10.1007/978-1-4614-6309-2_12)
- Al-Alawi, A. I., Al-Marzooqi, N. Y., & Mohammed, Y. F. (2007). Organizational culture and knowledge sharing: Critical success factors. *Journal of Knowledge Management*, 11(2), 22-42. <https://doi.org/10.1108/13673270710738898>
- Al-Fuqaha, A., Guizani, M., Mohammadi, M., Aledhari, M., & Ayyash, M. (2015). Internet of things: A survey on enabling technologies, protocols, and applications. *IEEE Communications Surveys & Tutorials*, 17(4), 2347-2376. <https://doi.org/10.1109/comst.2015.2444095>
- Ali, A. & Haseeb, M. (2019). Radio frequency identification (RFID) technology as a strategic tool towards higher performance of supply chain operations in textile and apparel industry of Malaysia. *Uncertain Supply Chain Management*, 7(2), 215-226. <https://doi.org/10.5267/j.uscm.2018.10.004>
- Angeles, R. (2005). RFID technologies: Supply-chain applications and implementation issues. *Information Systems Management*, 22(1), 51-65. <https://doi.org/10.1201/1078/44912.22.1.20051201/85739.7>
- Ashton, K. (2009). That "internet of things" thing. *RFID Journal*, 22(7), 97-114. <https://doi.org/10.1201/1078/44912.22.1.20051201/85739.7>
- Asif, Z. (2005). Integrating the supply chain with RFID: A technical and business analysis. *Communications of the Association for Information Systems*, 15(1), 393-427. <https://doi.org/10.17705/1cais.01524>
- Atzori, L., Iera, A., & Morabito, G. (2010). The internet of things: A survey. *Computer Networks*, 54(15), 2787-2805. <https://doi.org/10.1016/j.comnet.2010.05.010>
- Bae, H. S. (2016). The moderating effect of logistics information systems on inter-organizational collaboration and performance of Korean shipping and logistics firms. *International Journal of e-Navigation & Maritime Economy*, 5(December), 85-96. <https://doi.org/10.1016/j.enavi.2016.12.007>
- Ben-Daya, M., Hassini, E., & Bahroun, Z. (2019). Internet of things and supply chain management: A literature review. *International Journal of Production Research*, 57(15-16), 4719-4742. <https://doi.org/10.1080/00207543.2017.1402140>
- Botta, A., De Donato, W., Persico, V., & Pescapé, A. (2016). Integration of cloud computing and internet of things: A survey. *Future Generation Computer Systems*, 56(March), 684-700. <https://doi.org/10.1016/j.future.2015.09.021>
- Bottani, E. & Rizzi, A. (2008). Economical assessment of the impact of RFID technology and EPC system on the fast-moving consumer goods supply chain. *International Journal of Production Economics*, 112(2), 548-569. <https://doi.org/10.1016/j.ijpe.2007.05.007>
- Bruque-Camara, S., Moyano-Fuentes, J., & Maqueira-Marín, J. M. (2016). Supply chain integration through community cloud: Effects on operational performance. *Journal of Purchasing & Supply Management*, 22(2), 141-153. <http://dx.doi.org/10.1016/j.pursup.2016.04.003>
- Buyya, R., Yeo, C. S., Venugopal, S., Broberg, J., & Brandic, I. (2009). Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility. *Future Generation Computer Systems*, 25(6), 599-616. <https://doi.org/10.1016/j.future.2008.12.001>
- Byrd, T. A. & Davidson, N. W. (2003). Examining possible antecedents of IT impact on the supply chain and its effect on firm performance. *Information & Management*, 41(2), 243-255. [https://doi.org/10.1016/s0378-7206\(03\)00051-x](https://doi.org/10.1016/s0378-7206(03)00051-x)
- Caputo, A., Marzi, G., & Pellegrini, M. (2016). The internet of things in manufacturing innovation processes: Development and application of a conceptual framework. *Business Process Management Journal*, 22(2), 383-402. <https://doi.org/10.1108/bpmj-05-2015-0072>
- Chandrakanth, S., Venkatesh, K., Uma Mahesh, J., & Naganjaneyulu, K. V. (2014). Internet of things. *International Journal of Innovations & Advancement in Computer Science*, 3(8), 16-20. <https://doi.org/10.4236/jssm.2015.84056>
- Chen, M., Mao, S., & Liu, Y. (2014). Big data: A survey. *Mobile Networks & Applications*, 19(2), 171-209. <https://doi.org/10.1007/s11036-013-0489-0>
- Cheung, C. F., Cheung, C. M., & Kwok, S. K. (2012). A knowledge-based customization system for supply chain integration, *Expert Systems with Applications*, 39(4), 3906-3924. <https://doi.org/10.1016/j.eswa.2011.08.096>
- Choi, S. Y., Lee, H., & Yoo, Y. (2010). The impact of information technology and transactive memory systems on knowledge sharing, application, and team performance: A field study. *MIS Quarterly*, 34(4), 855-870. <https://doi.org/10.2307/25750708>
- Chui, M., Löffler, M., & Roberts R. (2010) The internet of things. *McKinsey Quarterly*, Retrieved February 25,

- 2023 from <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-internet-of-things>.
- Čolaković, A. & Hadžialić, M. (2018). Internet of things (IoT): A review of enabling technologies, challenges, and open research issues. *Computer Networks*, 144, 17-39. <https://doi.org/10.1016/j.comnet.2018.07.017>
- Davison, R. M., Ou, C. X., & Martinsons, M. G. (2013). Information technology to support informal knowledge sharing. *Information Systems Journal*, 23(1), 89-109. <https://doi.org/10.1111/j.1365-2575.2012.00400.x>
- De Vass, T., Shee, H., & Miah, S. J. (2018). The effect of "internet of things" on supply chain integration and performance: An organisational capability perspective. *Australasian Journal of Information Systems*, 22. <https://doi.org/10.3127/ajis.v22i0.1734>
- Dehning, B., Richardson, V. J., & Zmud, R. W. (2007). The financial performance effects of IT-based supply chain management systems in manufacturing firms. *Journal of Operations Management*, 25(4), 806-824. <https://doi.org/10.1016/j.jom.2006.09.001>
- Dubey, S. & Jain, S. (2014). Logistics information system and cloud computing. *Researchjournali's Journal of Computer Science*, 1(1), 42-47. <https://researchjournali.com/view.php?id=418>
- Dwekat, A. J., Hwang, G., & Park, J. (2017). A supply chain performance measurement approach using the internet of things: Toward more practical SCPMS. *Industrial Management & Data Systems*, 117(2), 267-286. <https://doi.org/10.1108/imds-03-2016-0096>
- Fawcett, S. E., Wallin, C., Allred, C., Fawcett, A. M., & Magnan, G. M. (2011). Information technology as an enabler of supply chain collaboration: A dynamic-capabilities perspective. *Journal of Supply Chain Management*, 47(1), 38-59. <https://doi.org/10.1111/j.1745-493x.2010.03213.x>
- Fayezi, S., Zutshi, A., & O'Loughlin, A. (2017). Understanding and development of supply chain agility and flexibility: A structured literature review. *International Journal of Management Reviews*, 19(4), 379-407. <https://doi.org/10.1111/ijmr.12096>
- Ferretti, M. & Schiavone, F. (2016). Internet of things and business processes redesign in seaports: The case of Hamburg. *Business Process Management Journal*, 22(2), 271-284. <https://doi.org/10.1108/bpmj-05-2015-0079>
- Fosso Wamba, S. (2012). Achieving supply chain integration using RFID technology: The case of emerging intelligent B-to-B e-commerce processes in a living laboratory. *Business Process Management Journal*, 18(1), 58-81. <https://doi.org/10.1108/14637151211215019>
- González-Gallego, N., Molina-Castillo, F. J., Soto-Acosta, P., Varajao, J., & Trigo, A. (2015). Using integrated information systems in supply chain management. *Enterprise Information Systems*, 9(2), 210-232. <https://doi.org/10.1080/17517575.2013.879209>
- Gu, Y. & Jing, T. (2011, August, 8-10). The IoT research in supply chain management of fresh agricultural products, *2nd International Conference on Artificial Intelligence, Management Science & Electronic Commerce*, Dengleng, IEEE, 7382-7385. <https://doi.org/10.1109/aimsec.2011.6011477>
- Gubbi, J., Buyya, R., Marusic, S., & Palaniswami, M. (2013) Internet of things (IoT): A vision, architectural elements, and future directions. *Future Generation Computer Systems*, 29(7), 1645-1660. <https://doi.org/10.1016/j.future.2013.01.010>
- Gunasekaran, A. & Ngai, E. W. (2004). Information systems in supply chain integration and management. *European Journal of Operational Research*, 159(2), 269-295. <https://doi.org/10.1016/j.ejor.2003.08.016>
- Haddud, A., De Souza, A., Khare, A., & Lee, H. (2017). Examining potential benefits and challenges associated with the internet of things integration in supply chains. *Journal of Manufacturing Technology Management*, 28(8), 1055-1085. <https://doi.org/10.1108/jmtm-05-2017-0094>
- Lai, K. H., Wong, C. W., & Cheng, T. C. E. (2010). Bundling digitized logistics activities and its performance implications. *Industrial Marketing Management*, 39(2), 273-286. <https://doi.org/10.1016/j.indmarman.2008.08.002>
- Laudon, K.C. & Laudon, J.P. (2020). *Management Information Systems: Managing the Digital Firm*, (16th ed.), New York, NY: Pearson.
- Leng, Y. & Zhao, L. (2011, August, 12-14). Novel design of intelligent internet-of-vehicles management system based on cloud-computing and internet-of-things. *Proceedings of 2011 International Conference on Electronic & Mechanical Engineering & Information Technology*, Harbin, China, IEEE, 3190-3193. <https://doi.org/10.1109/emeit.2011.6023763>
- Levy, M., Loebbecke, C., & Powell, P. (2003). SMEs, co-opetition and knowledge sharing: The role of information systems. *European Journal of Information Systems*, 12(1), 3-17. <https://doi.org/10.1057/palgrave.ejis.3000439>
- Lezoche, M., Yahia, E., Aubry, A., Panetto, H., and Zdravković, M. (2012). Conceptualising and structuring semantics in cooperative enterprise information systems models, *Computers in Industry*, 63(8), 775-787. <https://doi.org/10.1016/j.compind.2012.08.006>
- Li, B. & Li, Y. (2017). Internet of things drives supply chain innovation: A research framework. *International Journal of Organizational Innovation*, 9(3), 71-92. <https://www.ijoi-online.org/>
- Li, G., Yang, H., Sun, L., & Sohal, A. S. (2009). The impact of IT implementation on supply chain integration

- and performance. *International Journal of Production Economics*, 120(1), 125-138. <https://doi.org/10.1016/j.ijpe.2008.07.017>
- Li, S., Da Xu, L., & Zhao, S. (2015). The internet of things: A survey. *Information Systems Frontiers*, 17(2), 243-259. <https://doi.org/10.1007/s10796-014-9492-7>
- Lou, P., Liu, Q., Zhou, Z., & Wang, H. (2011, August, 12-14). Agile supply chain management over the internet of things. *2011 International Conference on Management and Service Science*, Wuhan, China, IEEE, 1-4. <https://doi.org/10.1109/icmss.2011.5998314>
- Lyall, A., Mercier, P., & Gstettner, S. (2018). The death of supply chain management. *Harvard Business Review*, Retrieved June 30, 2020, from <https://hbr.org/2018/06/the-death-of-supply-chain-management>.
- Maarala, A. I., Su, X., & Riekkii, J. (2016). Semantic reasoning for context-aware internet of things applications. *IEEE Internet of Things Journal*, 4(2), 461-473. <https://doi.org/10.1109/jiot.2016.2587060>
- Madakam, S., Ramaswamy, R., & Tripathi, S. (2015). Internet of things (IoT): A literature review. *Journal of Computer & Communications*, 3(5), [article ID:] 56616. <https://doi.org/10.4236/jcc.2015.35021>
- Maiga, A. S., Nilsson, A., & Ax, C. (2015). Relationships between internal and external information systems integration, cost and quality performance, and firm profitability. *International Journal of Production Economics*, 169(November), 422-434. <https://doi.org/10.1016/j.ijpe.2015.08.030>
- Mehrsai, A., Karimi, H. R., & Thoben, K. D. (2013). Integration of supply networks for customization with modularity in cloud and make-to-upgrade strategy. *Systems Science & Control Engineering: An Open Access Journal*, 1(1), 28-42. <http://dx.doi.org/10.1080/21642583.2013.817959>
- Min, S., Zacharia, Z. G., & Smith, C. D. (2019). Defining supply chain management: In the past, present, and future. *Journal of Business Logistics*, 40(1), 44-55. <https://doi.org/10.1111/jbl.12201>
- Mostafa, N., Hamdy, W., & Alawady, H. (2019). Impacts of internet of things on supply chains: A framework for warehousing. *Social Sciences*, 8(3), 84. <https://doi.org/10.3390/socsci8030084>
- Naway, F. & Rahmat, A. (2019). The mediating role of technology and logistic integration in the relationship between supply chain capability and supply chain operational performance. *Uncertain Supply Chain Management*, 7(3), 553-566. <https://doi.org/10.5267/j.uscm.2018.11.001>
- Pålsson, H. & Johansson, O. (2009). Supply chain integration obtained through uniquely labelled goods: A survey of Swedish manufacturing industries. *International Journal of Physical Distribution & Logistics Management*, 39(1), 28-46. <https://doi.org/10.1108/09600030910929174>
- Pan, S. L. & Leidner, D. E. (2003). Bridging communities of practice with information technology in pursuit of global knowledge sharing. *The Journal of Strategic Information Systems*, 12(1), 71-88. [https://doi.org/10.1016/S0963-8687\(02\)00023-9](https://doi.org/10.1016/S0963-8687(02)00023-9)
- Prajogo, D. & Olhager, J. (2012). Supply chain integration and performance: The effects of long-term relationships, information technology and sharing, and logistics integration. *International Journal of Production Economics*, 135(1), 514-522. <https://doi.org/10.1016/j.ijpe.2011.09.001>
- Qrunfleh, S. & Tarafdar, M. (2014). Supply chain information systems strategy: Impacts on supply chain performance and firm performance. *International Journal of Production Economics*, 147(B), 340-350. <https://doi.org/10.1016/j.ijpe.2012.09.018>
- Rajaguru, R. & Matanda, M. J. (2013). Effects of inter-organizational compatibility on supply chain capabilities: Exploring the mediating role of inter-organizational information systems (IOIS) integration. *Industrial Marketing Management*, 42(4), 620-632. <https://doi.org/10.1016/j.indmarman.2012.09.002>
- Ray, P. P. (2018). A survey on internet of things architectures. *Computer & Information Sciences*, 30(3), 291-319. <https://doi.org/10.1016/j.jksuci.2016.10.003>
- Rezaei, M., Shirazi, M. A., & Karimi, B. (2017). IoT-based framework for performance measurement. *Industrial Management & Data Systems*, 117(4), 688-712. <https://doi.org/10.1108/imds-08-2016-0331>
- Roberts, C. M. (2006) Radio frequency identification (RFID), *Computers & Security*, 25(1), 18-26. <https://doi.org/10.1016/j.cose.2005.12.003>
- Rose, K., Eldridge, S., & Chapin, L. (2015). The internet of things: An overview - Understanding the issues and challenges of a more connected world. *The Internet Society (ISOC)*, Retrieved September 8, 2020 from <https://www.internetsociety.org/wp-content/uploads/2017/08/ISOC-IoT-Overview-20151221-en.pdf>.
- Rui, J. & Danpeng, S. (2015, June, 13-14). Architecture design of the internet of things based on cloud computing. In: *2015 Seventh International Conference on Measuring Technology and Mechatronics Automation*, Nanchang, China, IEEE, 206-209. <https://doi.org/10.1109/icmtma.2015.57>
- Sethi, P. & Sarangi, S. R. (2017). Internet of things: Architectures, protocols, and applications. *Journal of Electrical & Computer Engineering*, 2017, [article ID:] 9324035. <https://doi.org/10.1155/2017/9324035>
- Shah, R., Goldstein, S. M., & Ward, P. T. (2002). Aligning supply chain management characteristics and interorganizational information system types: An exploratory study. *IEEE Transactions on Engineering Management*, 49(3), 282-292. <https://doi.org/10.1109/tem.2002.803382>
- Silva, B. N., Khan, M., & Han, K. (2018). Internet of things: A comprehensive review of enabling technologies, architecture, and challenges. *IETE Technical Review*, 35(2), 205-220.

<https://doi.org/10.1080/02564602.2016.1276416>

Singh, A. & Teng, J. T. (2016). Enhancing supply chain outcomes through information technology and trust. *Computers in Human Behavior*, 54(January), 290-300. <https://doi.org/10.1016/j.chb.2015.07.051>

Stevens, G. C. & Johnson, M. (2016). Integrating the supply chain ... 25 years on. *International Journal of Physical Distribution & Logistics Management*, 46(1), 19-42. <https://doi.org/10.1108/ijpdlm-07-2015-0175>

Tajima, M. (2007). Strategic value of RFID in supply chain management, *Journal of Purchasing & Supply Management*, 13(4), 261-273. <https://doi.org/10.1016/j.pursup.2007.11.001>

Tarafdar, M., & Qrunfleh, S. (2017). Agile supply chain strategy and supply chain performance: Complementary roles of supply chain practices and information systems capability for agility. *International Journal of Production Research*, 55(4), 925-938. <https://doi.org/10.1080/00207543.2016.1203079>

Tarifa-Fernandez, J. & De Burgos-Jiménez, J. (2017). Supply chain integration and performance relationship: A moderating effects review. *The International Journal of Logistics Management*, 28(4), 1243-1271. <https://doi.org/10.1108/ijlm-02-2016-0043>

Tu, M., Lim, M. K., & Yang, M. F. (2018). IoT-based production logistics and supply chain system - Part 2. IoT-based cyber-physical system: A framework and evaluation. *Industrial Management & Data Systems*, 118(1), 96-125. <https://doi.org/10.1108/imds-11-2016-0504>

Vanpoucke, E., Vereecke, A., & Muyile, S. (2017). Leveraging the impact of supply chain integration through information technology. *International Journal of Operations & Production Management*, 37(4), 510-530. <https://doi.org/10.1108/ijopm-07-2015-0441>

Vickery, S. K., Jayaram, J., Droge, C., & Calantone., R. (2003). The effects of an integrative supply chain strategy on customer service and financial performance: An analysis of direct versus indirect relationships. *Journal of Operations Management*, 21(5), 523-539. <http://dx.doi.org/10.1016/j.jom.2003.02.002>

Wakenshaw, S., Maple, C., Chen, D., & Micillo, R. (2017). An IoT-enabled supply chain integration framework: Empirical case studies. *Advances in Manufacturing Technology*, 31(6), 263-268. <https://doi.org/10.3233/978-1-61499-792-4-263>

Ward, P. & Zhou, H. (2006). Impact of information technology integration and lean/just-in-time practices on lead-time performance. *Decision Sciences*, 37(2), 177-203. <https://doi.org/10.1111/j.1540-5915.2006.00121.x>

Wortmann, F. & Flüchter, K. (2015). Internet of things. *Business & Information Systems Engineering*, 57(3), 221-224. <https://doi.org/10.1007/s12599-015-0383-3>

Yu, W. (2015). The effect of IT-enabled supply chain integration on performance. *Production Planning & Control*, 26(12), 945-957. <https://doi.org/10.1080/09537287.2014.1002021>

Zhang, D., Yang, L. T., Chen, M., Zhao, S., Guo, M., & Zhang, Y. (2014). Real-time locating systems using active RFID for internet of things. *IEEE Systems Journal*, 10(3), 1226-1235.

<https://doi.org/10.1109/jsyst.2014.2346625>

# Supply Chains and Operations based on Lean Thinking and Industry 5.0 - The Success Factors for the 8Ps in Marketing?

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## 1 Introduction

Recent developments demonstrated that supply chains (SC) are no longer stable but are rather significantly vulnerable. A selection of reasons were for example the COVID-19 crisis and the lockdowns, delayed shipments due to closed ports, scarce containers, lack of skilled staff, geopolitical turbulences, drastic increase of energy cost and material prices or the climate crisis. On top, customers expect sustainably created products that are available in stores at competitive prices. Therefore, companies need to find ways to deal with all these turbulence drivers in supply chains (SC) and still to make the products available and affordable for the customers. An appropriate framework to assess SC turbulences is the CORRIDOR Model (Ivanov et al., 2021, p. 528 - 530).

According to Kotler (2022) *“Marketing is the art of creating genuine **customer value**. It is the art of helping your customer become better off. The marketer’s watchwords are quality, service, and value”*. Kotler also formulated, that *“Marketing, more than any other business function, deals with customers. **Creating customer value and satisfaction are the heart of modern marketing thinking and practice. Marketing is the delivery of customer satisfaction at a profit. The two fold goal of marketing is to attract new customers by promising superior value and to keep current customers by delivering satisfaction.**”*

The purpose of this paper is to explore how state-of-the-art digital solutions can help companies at turbulent times. Digital solutions connected to SC are often connected to the term industry 4.0. But recent research has revealed that three fundamental aspects are not covered by industry 4.0, which are: i) the role of the human being during value creation, ii) SC resilience and iii) focus on sustainability. These three missing elements are covered in the **industry 5.0** paradigm. This is leading to the central theme of this paper and will be discussed in the following sections.

## 2 Methodology and research questions

Within this paper, the qualitative results of recently conducted empirical research (e. g. Surrow, 2021; Andrade, 2022; Stachowiak, 2022; Reif, 2021; Cheema 2022; Peimann, 2022; Papadomanolakis, 2023; Chia, 2023; Demir, 2023) connected to relevant literature is presented to better evaluate the concept of Industry 5.0 and its technologies, which is considered to be the next industrial revolution (Paschek et al. 2019; Frederico 2021). Thus, it is important to assess the requirements for successful Industry 5.0 implementations.

The research questions addressed to answer the title of this paper are:

1. How is Marketing connected to Lean SCM and Industry 5.0?
2. What are the Industry 5.0 prerequisites in connection to the elimination of Lean wastes?
3. What are recommended approaches for Industry 5.0 implementations?

As a result, the relevant qualitative results and empirical findings from the supervised theses are presented subsequently, that capture typical former Lean and digital solution implementation mistakes and summarize the necessary steps to move towards I5.0. Peer-reviewed literature, academic, fundamental sources and empirical research (50+ expert interviews conducted within supervised academic research, participant observation and the author’s exchange with practitioners at management conferences) were used to explore both theory and practice and thus obtain helpful insights as directly transferable results.

### 3 Answers to the research questions

The results of the research conducted between 2021 and 2023 are presented in the following sections. For detailed insights, the theses by Surrow (2021), Andrade (2022), Stachowiak (2022), Reif (2021), Cheema (2022), Peimann (2022), Papadomanolakis (2023), Chia (2023), Demir (2023) are recommended.

#### 3.1 How is Marketing connected to Lean SCM and Industry 5.0?

Flawless supply chains (SCs) are the crucial enablers to meet the above mentioned marketing objectives, which means fulfilling customer demands in a profitable way (Kotler et al., 2015, p. 9). Besides the classical 4 P's (**Product, Price, Place and Promotion**) there are the additional 3 P's (**Personnel/People, Processes and Physical-Facilities**) plus **Performance, leading to the 8 Ps** (Krempuls, 2019). This paper focuses on the driving attributes of value creation that are predominantly related to the following three P's: **Physical-Facilities, People and Processes, Performance**.

State of the art digital technology enables companies to deliver their products efficiently to their customers. First, the connection to Industry 4.0 (I 4.0) needs to be made, followed by a discussion of I 5.0. In principle, I4.0 is connected to the automation and improvement of SCOM processes, required to establish reconfigurable supply chains (Dolgui et al., 2020) and it plays a crucial role at times of climate change as well as in globally turbulent economic situations.

As Surrow (2021) pointed out, Industry 4.0 is representing key technologies to mitigate today's manufacturing challenges, such as increasingly shorter product life cycle or increasingly complex manufacturing processes (Schuh et al. 2017). The vision of Industry 4.0 includes real-time improvement and self-organized value adding networks that enable cost and resource efficient production processes (Kagermann et al. 2013). Although Industry 4.0 technologies are just in the process of being implemented especially in SMEs but there is already the next evolution, which is called Industry 5.0.

The linkage between Marketing, Lean SCM and Industry 4.0 / 5.0 is shown in the following figure:



Figure 1: Marketing needs Lean and Industry 4.0 / 5.0

The specific benefits of Industry 4.0 technology are not always clear (e. g. Kagermann et al. 2013; Jeschke et al. 2017; Oks et al. 2017; Nahavandi 2019). In contrast to that, the new concept of Industry 5.0 (as shown above) has been developed by the European Commission based on the already known technologies from Industry 4.0. But in addition to that, the three key elements of human-centricity, resilience and sustainability (Breque et al. 2021, p. 6) have been added. Breque et al. (2021) stated: "Industry 5.0 complements the existing Industry 4.0 paradigm by highlighting research and innovation as drivers for a transition to a sustainable, human-centric and resilient European industry. It moves focus from shareholder to stakeholder value, with benefits for all concerned. Industry 5.0 attempts to capture the value of new technologies, providing prosperity beyond jobs and growth, while respecting planetary boundaries, and placing the wellbeing of the industry worker at the centre of the production process."

Furthermore, Carayannis et al. (2021, p. 594) added to that "Industry 5.0, which can be considered the answer to the question of a renewed human centric industrial archetype, starting from the (cultural, managerial, organizational, philosophical, and structural) restructure of an industry's production processes. The importance of this new perspective originates by the fact that Industry 4.0 is just at the early stage of development and that its main achievements can be expected not earlier than 2020–2025."

In other words, it has been criticized, that the Industry 4.0 implementations are or were to a very high degree strongly connected to the pure implementation of digital technology and, thus lacking a focus on the human, environment and economic stability side (Breque et al. 2021, p. 5), which will be covered under the Industry 5.0



paradigm. It is clear, that Industry 4.0 as well as its enhancement – Industry 5.0 – are technologies to produce goods and services efficiently under usage of digital technology.

### 3.2 What are the Industry 5.0 prerequisites in connection to the elimination of Lean wastes?

For that, firstly, the Lean Thinking (see Womack et al., 2007) principles need to be applied, followed by Industry 4.0 / 5.0 technologies and strategies during value creation. What is the reasoning behind that? Lean Thinking is a Supply Chain and Operations Management (SCOM) philosophy connected to a variety of operational principles leading to competitive advantages, such as the reduction of costly non-value-added process steps, while at the same time improving quality, increasing customer focus and respecting people etc. (Ballé et al., 2017; Gaiardelli et al. 2019; Ivanov et al., 2021). This confirms, why all this is highly relevant in order to meet the 4+4 Marketing P's. Furthermore, the classical Lean approach aims to identify all aspects of value creation for the customer, at the same time eliminating the 7+x types of waste as classified by Tsioulanis (2018): 1) over-production, 2) waiting, 3) transport, 4) over-processing, 5) inventories, 6) motion and movement, 7) Defects, plus "x": not meeting customer needs, wasting talent & knowledge, water & energy, materials & resources... and thus increasing efficiency. According to Modig and Ahlstrom (2012), Lean as a means to manage "flow efficiency", which means that it simultaneously incorporates the ideas of quality management and continuous improvement (Stevenson, 2018, p. 610). *That means, Lean Thinking is strongly linked to the following Ps: process, physical-facility, price, people (and performance).*

Lean has a long history dating back into the beginning of mass production, but was shaped in the 1950s when the Toyota Production System was created, followed by intensive research on the Lean principles during the International Motor Vehicle Program (IMVP) that started in 1980. Importantly, a Lean implementation will in most cases not be a simple and easy task and will also not take place without problems. In order to benefit from Lean and to introduce it correctly, the typical mistakes need to be assessed beforehand.

As we are living at times of the digital transformation, it is also relevant to evaluate the relationship between Lean and Industry 4.0.

#### *Mistakes of past Lean implementations – the lessons learnt*

Andrade (2022) elaborated that Lean aims to increase efficiency and to remove wasteful, non-value adding steps (in the sense of e. g. unnecessary activities or processes etc.) through continuous improvement combined with increased quality and operational performance of an organization (Ukey et al. 2021). In the past, Lean has demonstrated to generate numerous advantages, but its application may be complex and time-consuming (Almeida Marodin et al. 2016; Bevilacqua et al. 2017).

But Lean implementations also failed in the past, as the research results by Andrade (2022) have shown. The author states, that the reasons for Lean failure originate in a "lack of understanding of the concepts" and inadequately taken implementation approaches. Lean should also not be considered as a "short term project to boost efficiency" that will end at a specific point in time. This is wrong, as the Lean principles clearly emphasize the focus of continuous improvement. Furthermore, Lean is also no pure "methodology toolbox" and cannot be implemented by simply applying or even copying methods from one company to another. Lean is not just "something for the production".

In contrast to that, Lean has to be considered as a "cultural change enabler" that must be introduced holistically and carefully specifically for and throughout the organisation (Dennis, 2010). That means, the specific Lean approach "needs to fit the company's culture" and it also needs to fit into the SC strategy. The success of Lean depends on "well-trained people", it requires a "new type of management and leadership" (no culture of blaming; respect for people; concept of continuous improvement). A common failure factor is the "non-involvement of people" in the Lean journey, which may lead to "non-acceptance and absence of commitment" (Mann, 2014; Liker and Trachilis, 2016). That means for the successful Lean implementation, that both management and employees need to be willing, convinced and enabled to adopt it. It can be concluded, that it is essential to have adequate change management and good communication strategies in place.

#### *From Lean to Industry 4.0 / 5.0 implementations*

The selection of the right technology for the right Lean process is necessary, so that the companies can significantly increase their improvement potential and thus leave the Lean plateau (Tsioulanis, 2019; Ivanov et al. 2021). In other words, the implementation of carefully selected digital technologies plays an important role for the effective elevation of digital Lean in SCM (Cagnetti et al. 2021). The sequence in the transformation process is crucial: before focusing on the implementation of digital technologies, the respective transformation processes must have been carefully analysed and improved (one should avoid the term optimized in line with Lean as stated above), so that the relevant processes are prepared for the technology implementation in order to secure, that they are stable / robust, waste-free, and thus efficient.

It is not a question of the number of processes to be supported by digital technology, but instead to identify the ones which offer the biggest opportunity for improvement. A clear vision and strategy of how to connect Lean

and Industry 4.0 / 5.0 needs to be crafted, formulated and communicated. This is extremely important, because if bad processes are digitized in an uncoordinated way, companies will get as a result bad digitized processes and will improve nothing. That's why the rule is to apply Lean first and then to consider digital solutions or Industry 4.0 / 5.0 applications.

Industry 4.0 / 5.0 is mainly built on the concept of Cyber Physical Systems (CPS), which let the real and the virtual world melt together. CPSs allow the interaction of machines, materials, devices etc. without human supervision (Bakhtari et al. 2020). Industry 4.0 solutions enable product customization, machine and material interconnectivity or also the collaboration among different SC parties, etc. (Dalmarco and Barros 2018). In this way, companies can automate and improve traditional industrial processes and thus increase their productivity and competitiveness (Zhang et al. 2021). Similar to Lean, also the I4.0 implementation will be challenging, as many factors need to be considered beforehand. But it is necessary to learn from the success and failure factors of Lean implementations (see the previous section).

Is Industry 4.0 already everywhere implemented? The clear answer is no! A non-representative poll at a management conference conducted by the author in 2022 has revealed, that 59% of 23 participating German SMEs companies have started I4.0 implementations, but were facing a lot of problems and challenges and that the majority (73%) was not satisfied with their I4.0 projects. Again, this was a conference poll, no representative survey, but it supports the findings of the supervised academic research projects.

The exchange with numerous experts at business conferences has revealed, that one of the biggest identified failure factors of I4.0 / 5.0 implementations is the lack of a clear vision and strategy. It is very similar to the Lean mistakes described above, which needs to be holistically deployed throughout the enterprise. Also, a lack of cross-functional cooperation during digital business and technology implementations has been diagnosed by numerous projects, that the author has been conducting in a broad variety of industries between 2021 and 2023 (e. g. healthcare / hospital, fashion e-commerce, food delivery, digital price comparison platforms, train producers, public transportation operators, consulting companies, electrical battery production and recycling as well as the construction industry). But the vision, objectives, and strategy are necessary to create a solid foundation for the digital technology implementation - and it needs to be built on the top management support and their leadership. Additionally, the implementation of technologies without proper requirements capturing along the value creating or involved functions beforehand has to be avoided and it is necessary to ensure the right digital fit for the company's needs. According to Stachowiak (2022), the implementation of the digital technology has to be feasible from the technical, economic, process and human perspective, i. e. the necessary technical infrastructure; the right and sufficient economic resources (enough budget and time, a skilled team); improved processes and high-skilled personnel to operate digital tools needs to be in place. As one can recognize, cross-functional collaboration from the creation of a vision, over requirements capturing and towards the implementation turns out to be critical success factors towards Industry 5.0.

The expert exchange has also revealed, that proper change management needs to be practiced and the early involvement of employees serves as fundamental prerequisites for a successful digitalization projects. A good and recommended strategy is to run workshops with selected representatives from all relevant functions e. g. to map current production processes, to identify improvements, to define future targets and to capture technology requirements mutually. This is to mitigate another frequent failure factor or mistake, which is to neglect the work force, respectively to forget explaining to them how their roles and tasks will develop and evolve. That means, adequate communication and involvement strategies, as well as continuous training, are necessary for the successful transition towards I5.0. Also in digitalization projects moving towards I5.0, the classical Lean motto should be followed: "Respect for People".

### 3.3 What are recommended approaches for Industry 5.0 implementations?

Digital transformation or implementation projects should in principle be built on the experience of the employees. It is necessary to actively involve the workforce and ask for their contribution but also to carefully listen to the fears of employees. As stated beforehand, it is essential to improve the processes (step 1: Lean) before digitizing them (step 2: Digital) or companies will end up with digitized, but bad processes. Stachowiak (2022, p. 44) developed a structured approach for digitalization projects with multiple steps.

Based upon these initial inputs, the following implementation checklist has been elaborated:

1. Formation of a cross-functional team for the target definition
2. Analysis of status quo and leaning the relevant processes
3. Feasibility study of digital technology / smart solution incl. impact – effort evaluation
4. Validation of requirements & priority setting
5. Concept creation / identification of use cases / light houses
6. Implementation & training

One research question is related to the term "Industry 5.0". So far, very limited literature about this topic exists, and in practice, not many experts have knowledge about I5.0. According to Andrade (2022) the experts he interviewed recommend that I4.0 first needs to be fully implemented before introducing a new concept like I5.0.

Furthermore, the research among his 13 interview partners has further shown that the term Industry 5.0 is discussed controversially (is it really the 5th industrial revolution or is it just an evolution of Industry 4.0?). This could also be a question for further research. Overall, it is clear, that I5.0 is definitely a new and visionary concept that prioritizes the three characteristics: human, social, and ecological values in addition to the mainly technological or industrial perspectives of I4.0 (Frederico 2021). That means, that the objective of I5.0 is to enhance the I4.0's highly technological focus by increasing the human-machine interaction/cooperation and incorporating environmental/resilient aspects into industrial processes (Fraga-Lamas et al. 2021). Accordingly, well-prepared change management, leadership, and communication strategies will be required to engage employees, inform them about their future (changing job roles and activities) and establish a culture of trust.

It is assumed that I5.0 will change people's traditional jobs by introducing digital technology or (autonomous) machines that are going to interact with humans. Therefore, companies will need to have digitally high-skilled personnel, which needs to be recruited or to be developed. i.e. the firms will need to provide ongoing training, run development and up-skilling initiatives and cover aspects such as safety, governance, ethics, etc. Industry experts and consultants highlighted that Industry 5.0 might even lead to the development of new business models, when existing value adding networks and industry knowledge is combined with state of the art technology to find answers for mega-trends such as climate change or environmental services: This could be digital or vertical farming, where SCOM and digital technology are combined in order to meet the growing food demand in a sustainable way. Another example is when traditional chimney sweepers will turn to become "heating-technology, energy-saving and emission-reduction consultants". Jobs that are traditionally highly repetitive (e. g. scanning, booking, manual data input) will be supported by technology or software robots often referred to as Robotic Process Automation, RPA (see for example Das, 2019; Knotte et al., 2020; Cheema, 2022). Also, future jobs will, to a high degree, be connected to the programming, maintenance and control of the digital devices that are used.

Sony and Naik (2019) developed a holistic digital maturity model, which integrates the key elements for assessing Industry 4.0 readiness. This then forms the basis for the implementation of advanced technologies. The implementation complexity varies depending on the digital application or system (Qin et al. 2016). To enhance this idea, Reif (2021, p. 38) further researched on the implementation of Industry 5.0. According to Reif (2021) it is needed to have a common digital strategy and culture. Without it, it is difficult to achieve an equal companywide digital maturity, but this is crucial for the successful implementation of digital tools. Especially when a company aims to implement a cross-department digital system, data availability and data harmonization are highly important. As an agile company structure leads to quicker decision-making processes and better communication flows, the organizational setting is highly relevant for extensive digitalization projects (Reif, 2021, p. 38). In her academic work, Reif presented four relevant pillars for the implementation of Industry 5.0, that "*shall be manifested at an enterprise before proceeding with the implementation of Industry 5.0.*". According to Reif (2021), the four basic elements for implementing Industry 5.0 are: i. Digital Strategy and Culture; ii. Agile Company Structure; iii. Data Harmonization and Data Lakes; iv. Equal Company Wide Digital Maturity. Related to it, also success and failure factors have been scientifically elaborated (compare Reif, 2021, p. 39-45) and summarized below: these factors enable a company to successfully transform towards a digitalized company and to achieve a high degree of efficiency enabled by new technologies and skilled employees.

- The purpose and business case must be clear and properly evaluated before starting a digitalization project.
- Enterprises should follow an agile project management approach, which should allow the implementation of a piloting case or demonstrator.
- Regular information and feedback meetings support a good internal communication.
- A holistic change management approach with the focus on enabling the employees to use a new technology leads to higher user acceptance and satisfaction. Moreover, employees are less afraid of losing their jobs when they are involved in the process.
- The employees shall be involved at early stages of the digitalization projects and during the whole digital transformation and implementation process. The humans play a crucial role: As Industry 5.0 aims to transform enterprises into digitally mature and human-centric organizations, the employees need to be the focus of the I5.0 implementation framework.

Demir (2023) researched how the humans beings can be integrated into the manufacturing process by digital technology (via Augmented Reality) and she developed a change management approach based on Kottler's 8 steps.

1. The first step includes *creating a sense of urgency*: The implementation of AR in a company can advance the state of I4.0, making the company more digital and future-proof, while also improving efficiency, reducing waste, accelerating processes, and replacing physical documents with a digital infrastructure
2. In order to implement AR successfully, *creating a guiding coalition* that includes important stakeholders such as users (quality department, maintenance staff), supervisors, IT department, and the works council members who possess the necessary skills and commitment is crucial.

3. *Developing a change vision* that is customized to the company and includes goals such as increasing efficiency, reducing costs, gaining flexibility, advancing I4.0, and improving digital security, can be crucial for successful implementation, with specific use cases, such as virtualizing prototype construction, offering significantly streamlined and accelerated production.
4. To *gain buy-in for the vision* in the fourth step, employees' fears and concerns about the introduction of AR should be actively addressed, including monitoring and control, performance pressure, liability issues, and fear of injury, with clear communication and sufficient training opportunities emphasizing the supportive and helpful nature of the technology.
5. *Empowering broad-based action* requires the removal of barriers and obstacles, including employee acceptance, overwhelming information for management, and financial outlay, which can be achieved through awareness-raising initiatives and professional advice, as well as support programs to reduce costs.
6. *Short-term targets* with minimal cost and complexity should be set to generate early successes, along with informative presentations, training sessions, technical infrastructure, identification of use cases and strategies, and industrialization concepts to ensure understanding, acceptance, and certainty among employees in the sixth step of AR introduction.
7. The implementation and sustainability of change involve *deepening the change initiatives* by ensuring all employees can use the software and hardware long-term, making relevant information available in the employee's field of vision, and developing individually adapted goals and projects aimed at increasing quality and reducing production costs.
8. To *maintain the change* in the company's culture, knowledge gained should be stored in the cloud for new employees to access, new behaviors should be maintained, and successes achieved should be kept in mind.

The 8 steps above definitely serve as an inspiration for the adaptation of similar change management initiatives, when a digital solution is going to be implemented.

#### 4 Conclusions and Outlook

It was shown that the principles of Lean Management, Industry 4.0 / 5.0 conceptually complement each other. Industry 5.0 uses the known technologies of Industry 4.0. The combination of Lean and I4.0 / 5.0 shows a significant potential for the elimination of lean wastes while being human-centric, ecologically oriented and resilient at the same time. Overall, it became evident, that cross-functional collaboration was already essential for former Lean implementations but it is also crucial for the implementation of digital technology, i. e. I 4.0 / 5.0.

The conclusion is: Do not digitalize everything, do not implement all possible technologies, just because the technology is there or there is a related “digital or technological hype”. First, evaluate the value adding processes in a cross-functional team, identify the problems and prioritise, craft the big picture, improve small projects without technology. Then try to identify the technology that further mitigates the problem and that fits into the big picture. In this sense, business experts clearly stated, that “mega-projects” would not be leading to success. They clearly stated that with too many projects and no structure, there is the very high risk to get “bogged down” or “being lost in too many projects”, so that the implementation will fail.

According to Demir (2023), Suroo (2021) and Reif (2021), for a successful implementation, the workforce need to be involved. Besides the investment in digital solutions, investments in qualification and training of the workforce is required (Andrade 2022). Otherwise, the applied technologies will not unfold their full potential. Industry 4.0 is perceived to be strongly technology driven and I 5.0 is connecting the human being, resilience and sustainability next to it. As a European idea, Industry 5.0 might provide an orientation framework for European firms, particularly in countries that lack worker participation. The needed focus of I 5.0 on the other two aspects (resilience and sustainability), became evident in the light of climate change and the implications of the corona pandemic or geo-political turbulences on global supply chains. Of course, the number of considered academic theses, the sample size of experts, the discussions with managers at conferences or the polls conducted were not representative and the exchange was primarily conducted with German interview partners and with experts of companies from various industries with different digital maturity levels.

In conclusion, when implementing Lean, I4.0, or I5.0, it is important:

- To form a cross-functional team, to have a clear vision and strategy fully supported by the top management.
- To develop the big picture (with its small elements), but also to design a solid change management and communication strategy.
- To involve the people from the very beginning, and ensure they have the necessary skills and competencies.
- To get the value adding foundations (leaning out process / removing the waste) right before introducing new technologies.
- To understand and communicate the reasons why processes are improved, reworked, new business opportunities assessed and relevant technology is being evaluated and implemented.
- To have the necessary monetary, time and staffing capacities.
- To remain innovative, open, and continuously improving.

- To work on small projects, that might cover a time-horizon of 6 months to keep flexibility in case of new challenges that require adjustments (avoiding mega-projects).

As a result, the presented findings need to be considered as highly practical indications with its above stated limitations. To mitigate these limitations, further research on the potentials of Industry 4.0 / 5.0 technologies may be conducted. Also repetitive patterns of success and failure factors as well as the successful formation of cross-functional teams will need to be further investigated.

The previous pages presented research findings that need to be considered as highly practical indications highlighting the strong linkage between the fulfilment of the Marketing objectives based on Lean principles and Industry 5.0. Of course, there are the above stated limitations. To mitigate these limitations, further research on the quantitative potentials of Industry 4.0 / 5.0 technologies may be conducted. Also repetitive patterns of success and failure factors as well as the successful formation of cross-functional teams will need to be further investigated and framework for successful digital projects needs to be developed, that should be added by the development of an appropriate KPI dashboard.

## References

- Almeida Marodin, G., Frank, A.G., Luz Tortorella, G., Abreu Saurin, T. (2016): Contextual factors and lean production implementation in the Brazilian automotive supply chain, *Supply Chain Management: An International Journal*, 21 (4)
- Andrade, J. (2022): Critical Evaluation of the Learnings from Land and Industry 4.0 – identification of the Requirements for Industry 5.0 Implementations; HWR Global Supply Chain and Operations Management Master's Thesis, supervised by Tspoulanidis and Ivanov
- Bakhtari, A.R., Kumar, V., Waris, M.M., Sanin, C., Szczerbicki, E. (2020): Industry 4.0 Implementation Challenges in Manufacturing Industries: an Interpretive Structural Modelling Approach, *Procedia Computer Science*
- Ballé M., Jones D., Chaize J., Fiume O. (2017): *The lean strategy – using lean to create competitive advantage, unleash innovation, and deliver sustainable growth*. McGraw-Hill, New York
- Bevilacqua, M., Ciarapica, F.E., De Sanctis, I. (2017): Lean practices implementation and their relationships with operational responsiveness and company performance- an Italian study, *International Journal of Production Research*, 55 (3)
- Breque, M., De Nul, L., Petridis, A. (2021): Industry 5.0: Towards a sustainable, human-centric and resilient European industry, European Commission, Directorate-General for Research and Innovation Publications Office of the European Union, Luxembourg. <https://data.europa.eu/doi/10.2777/308407/> (12.06.2022).
- Cagnetti, C., Gallo, T., Silvestri, C., Ruggieri, A. (2021): Lean production and Industry 4.0: Strategy/management or technique/implementation? A systematic literature review, *Procedia Computer Science*
- Carayannis, E.G., Christodoulou, K., Christodoulou, P., Chatzichristofis, S.A., Zinonos, Z. (2021): Known Unknowns in an Era of Technological and Viral Disruptions—Implications for Theory, Policy, and Practice, *Journal of the Knowledge Economy*, 1-24.
- Cheema, A. (2022): Digitalization in procurement - critical evaluation of success factors; HWR Global Supply Chain and Operations Management Master's Thesis, supervised by Tspoulanidis and Pflughaupt
- Chia, H., Z. (2023): A SCOR-BPMN framework to support the reverse logistics implementation for electric vehicle batteries in the German automotive industry: A visualization tool for strategic decision-making; HWR Global Supply Chain and Operations Management Master's Thesis, supervised by Tspoulanidis and Pflughaupt
- Dalmarco, G., Barros, A.C. (2018). Adoption of Industry 4.0 Technologies in Supply Chains. In: Carrizo Moreira, A., Ferreira, L.M.D.F., Zimmermann, R.A. (Editors): *Innovation and Supply Chain Management Relationship, Collaboration and Strategies*, Springer Nature
- Das A. (2019): Robotic process automation: assessment of the technology for transformation of business processes, *International Journal of Business Process Integration and Management*, July 2019
- Demir, M. (2023): The integration of humans via Augmented Reality into the manufacturing process – a successful implementation of Leandustry? HWR Global Supply Chain and Operations Management Master's Thesis, supervised by Tspoulanidis and Pflughaupt
- Dennis, P. (2010): *The Remedy: Bringing Lean Thinking Out of the Factory to Transform the Entire Organization*, Wiley
- Dolgui A., Ivanov D., Sokolov B. (2020): Reconfigurable supply chain: The X-Network. *International Journal of Production Research*, 58(13)
- Fraga-Lamas, P., Lopes, S.I., Fernández-Caramé, T.M. (2021): Green IoT and Edge AI as Key Technological Enablers for a Sustainable Digital Transition towards a Smart Circular Economy: An Industry 5.0 Use Case

- Frederico, G.F. (2021): From Supply Chain 4.0 to Supply Chain 5.0: Findings from a Systematic Literature Review and Research Directions. *Logistics*, 5 (49)
- Gaiardelli, P., Resta, B., Dotti, S. (2019): Exploring the role of human factors in lean management, *International Journal of Lean Six Sigma*, 10 (1)
- Ivanov, D., Tsipoulanidis, A., Schönberger, J. (2021): *Global Supply Chain and Operations Management: A Decision – Oriented Introduction to the Creation of Value*, Springer Nature, Switzerland.
- Jeschke, S., Brecher, C., Meisen, T., Özdemir, D., Eschert, T. (2017): *Industrial Internet of Things and Cyber Manufacturing Systems*. In Jeschke, S., Brecher, C., Song, H., Rawat, D. B. (Eds.) *Industrial Internet of Things*, Springer International Publishing
- Kagermann, H., Wahlster, W., Helbig, J. (2013): *Securing the future of German manufacturing industry: Recommendations for implementing the strategic initiative INDUSTRIE 4.0*, Final report of the Industrie 4.0 Working Group. <https://en.acatech.de/publication/recommendations-for-implementing-the-strategic-initiative-industrie-4-0-final-report-of-the-industrie-4-0-working-group/download-pdf/?lang=en> (12.05.2021).
- Knotte D., Senger E., Tsipoulanidis A. (2020): *Operational Excellence in Ihrem Purchase-to-Pay Prozess – Ein Guide zur Realisierung von Potenzialen im operativen Einkauf*, Capgemini Invent
- Kotler, P. (2022): <https://www.pkotler.org/quotes-from-pk> (11.06.2022)
- Kotler, P., Keller, K., Opresnik, M., (2015): *Marketing-Management – Konzepte – Instrumente - Unternehmensfallstudien*, Pearson, Halbergmoos
- Krempuls, L. (2019) *Marketing mix – Die 7 PS*, <https://www.mtp.org/magazin/2019/09/26/marketing-mix-die-7-ps/> (19.04.2023)
- Liker, J.; Trachilis, G. (2016): *Developing Lean Leaders at all Levels: A Practical Guide*; Lean Leadership Institute Publications
- Mann, D. (2014): *Creating a Lean Culture: Tools to Sustain Lean Conversions*, Third Edition, Routledge
- Modig, N., Ahlstrom, A. (2012): *This is Lean: Resolving the Efficiency Paradox*; Rheologica Publishing
- Nahavandi, S. (2019) *Industry 5.0—A Human-Centric Solution*, *Sustainability*, 11(16)
- Oks, S. J., Fritzsche, A., Möslin, K. M. (2017): *An Application Map for Industrial Cyber-Physical Systems*. In Jeschke, S., Brecher, C., Song, H., Rawat, D. B. (Eds.) *Industrial Internet of Things*, Springer International Publishing.
- Papadomanolakis, G. (2023): *Lean and Industry 4.0 in Warehousing – A combined implementation approach*. HWR Global Supply Chain and Operations Management Master’s Thesis, supervised by Tsipoulanidis and Nanos
- Paschek, D., Mocan, A., Draghici, A. (2019): *Industry 5.0 – The expected impact of next industrial revolution, Thriving on Future Education, Industry, Business, and Society*, Proceedings of the MakeLearn and TIIM
- Peimann, F. (2023): *Development of a concept for the implementation of an Artificial Intelligence system to automatize the production scheduling using the example of the Mercedes-Benz plant in Berlin Marienfelde*. HWR Global Supply Chain and Operations Management Master’s Thesis, supervised by Tsipoulanidis and Pflughaupt
- Qin, J., Y. Liu, and R. Grosvenor (2016): *A Categorical Framework of Manufacturing for Industry 4.0 and beyond*. *Procedia CIRP*, 52
- Reif, T., S. (2021): *Industry 5.0: A critical analysis of the achievements of the fourth industrial revolution - How to successfully transform into a more sustainable and human-centric company following the industry 5.0 paradigm?* HWR Global Supply Chain and Operations Management Master’s Thesis, supervised by Tsipoulanidis and Pflughaupt
- Schuh, A. G., Stich, V., Reuter, C., Blum, M., Brambring, F., Hempel, T., Reschke, J., Schiemann, D. (2017): *Cyber Physical Production Control*. In Jeschke, S., Brecher, C., Song, H., Rawat, D. B. (Eds.) *Industrial Internet of Things*, Springer International Publishing
- Sony, M., Naik, S. (2019): *Key ingredients for evaluating Industry 4.0 readiness for organizations: a literature review*, *Benchmarking - An International Journal*
- Stachowiak, N. (2022): *Implementation of Smart Warehousing – Analysis and Comparison of SCOM Potentials, Challenges and Barriers*; HWR Global Supply Chain and Operations Management Master’s Thesis, supervised by Tsipoulanidis and Rothländer
- Stevenson W. (2018): *Operations Management*, McGraw Hill, 13th edn., New York
- Surrow (2021): *From Lean Thinking to Industry 5.0 Excellence*, HWR Global Supply Chain and Operations Management Master’s Thesis, supervised by Tsipoulanidis and Pflughaupt
- Tsipoulanidis A. (2019): *Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer*, 7th International Conference Proceedings. Conference on Contemporary Marketing Issues (ICMI) 2019, Heraklion, Greece
- Ukey, P., Deshmukh, A., Arora, A. (2021): *Implementation of Lean Tools in Apparel Industry for Improving Productivity*, *Proceedings on Engineering Sciences*, 3 (2)

Womack J. P., Jones D. T., Roos D. (2007): *The Machine that changed the world*, Free Press, New York  
Zhang, C., Chen, Y., Chen, H., Chong, D. (2021): Industry 4.0 and its Implementation: a Review, *Information Systems Frontiers: A Journal of Research and Innovation*, 1-11.

## Exploring consumers' perceptions about traceability in food supply chain

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### **Extended abstract:**

During the past years several food crises have occurred (e.g. mad cow disease, e-coli outbreaks, dioxin scandals, covid-19 effects etc.), with serious impact on human health (such as diseases and even deaths) and on the economy (product recalls, waste of money and inventory etc.). Only at the United States and according to Food and Drug Administration (FDA, 2022), there are about 48 million cases of foodborne illnesses annually and these illnesses result in an estimated 128,000 hospitalizations and 3,000 deaths per year. As a result, studies show that consumers' trust and confidence in today's food system is limited (Wu et al., 2021). According to the World Union of Wholesale Markets (WUWM, 2022) the issues of food security, safety and quality are of great importance. Moreover, there is a need for innovative ideas, solutions and emerging technologies and a need for more efficient, reliable, sustainable and resilient supply chains. Towards this direction, the Food and Agriculture Organization of the United Nations (FAO, 2023) recommends implementing efficient logistics arrangements and traceability to ensure safety and reduce food loss, as well as investing in production, logistics, and technologies to increase efficiency and ensure food safety. Traceability in food supply chain means providing adequate information on food packaging, about product details, area/country of origin, nutrition facts, ingredients, cooking or consumption instructions, trademarks, quality certification signs, details of manufacturer/distributor etc. Traceability can also mean the use of emerging - Industry 4.0 technologies (such as IoT, Cloud computing, RFID, Blockchain etc.), in order to track and share information about the product in every part of the supply chain (Lin et al., 2021; Sun et al., 2021). Finally, traceability in food supply chain means the development and use of a food safety information system, powered by digital technologies and by health and safety quality assurance systems (such as ISO, HACCP etc.), in order to achieve internal and external traceability and information exchange in every part of the supply chain, from the point of origin to the point of final consumption (Aung & Chang, 2014). However, traceability in food supply chain has many issues and challenges, such as poor-ineffective information exchange, information asymmetry between parts of the supply chain and consumers, lack of transparency and finally, consumers's concerns about food system (Jin & Zhou, 2014; Sun et al., 2017).

Based on the above, the aim of this paper is to examine consumers' perceptions about traceability in food supply chain through a quantitative research with the use of an electronic questionnaire. The objectives of the research are the following: i) to identify and analyze the factors that affect the overall consumer's perceptions about traceability in food supply chain, ii) to investigate the factors that influence consumer's intention to purchase traceable food, iii) to measure the consumer's intention to purchase traceable food and iv) to analyze the factors that influence the consumer's behavior in purchasing traceable food. The research was based on the Theory of Planned Behavior, as modified and used by the research of Giampietri et al. (2018) and on the studies of Menozzi et al. (2015), Yuan et al. (2020) and Dorce et al. (2021). The simple random sampling method was applied, with a sample size of 222 respondents. The findings from the research indicate that consumers' perceptions about traceability influence their intention and behavior in buying traceable food. However, consumers seem to look only for some basic information (such as ingredients and nutritional value) when they purchase food and they rarely scan the QR-code to access the information. At the same time, they are not sure if they are covered with the information included on food products packaging. Also, consumers seem to have a positive attitude concerning traceable food. Moreover, attitude, subjective norm, trust and perceived behavioral control influence positively -but rather weakly- the intention to buy traceable food. Additionally, perceived behavioral control influences the behavior in buying traceable food and finally, consumer's intention to buy traceable food



influences their behavior in buying traceable food. The study contributes to the scientific knowledge on a research field of a great importance for the health and safety of consumers. Moreover, it provides results which can be used by researchers to study and explore food traceability in a national context and to question or validate results from similar empirical studies in international context. Finally, the outcomes of the study may help managers of the food sector to better understand consumers' perceptions about food traceability and to formulate accordingly their strategy. Future research may apply an extended version of the model, taking into account factors such as consumer expertise and consumption habits, in order to have a more complete coverage of the subject.

**Keywords:** traceability, food supply chain, consumer behavior

## References

- Aung, M. M., & Chang, Y. S. (2014). Traceability in a food supply chain: Safety and quality perspectives. *Food Control*, 39(1), 172–184. <https://doi.org/10.1016/j.foodcont.2013.11.007>
- Dorce, L.C., Correa da Silva, M., Carrijo Mauad, J.R., Faria Domingues, C.H., Rossi Borges, J.A. (2021). Extending the theory of planned behavior to understand consumer purchase behavior for organic vegetables in Brazil: The role of perceived health benefits, perceived sustainability benefits and perceived price. *Food Quality and Preference*, 91, 2021, 104191. <https://doi.org/10.1016/j.foodqual.2021.104191>
- FAO (2023). Traceability & recalls, Accessed 21/02/2023 from <https://www.fao.org/food-safety/food-control-systems/supply-chains-and-consumers/traceability-and-recalls/en/>
- FDA (2022). What You Need to Know about Foodborne Illnesses, Accessed 04/03/2023 from <https://www.fda.gov/food/consumers/what-you-need-know-about-foodborne-illnesses>
- Giampietri E., Verneau F., Del Giudice T., Carfora V., Finco A. (2018). A Theory of Planned behaviour perspective for investigating the role of trust in consumer purchasing decision related to short food supply chains. *Food Quality and Preference*, 64, 160-166, <https://doi.org/10.1016/j.foodqual.2017.09.012>
- Jin S. and Zhou, L. (2014). Consumer interest in information provided by food traceability systems in Japan. *Food Quality and Preference*, 36, 144–152. [10.1016/j.foodqual.2014.04.005](https://doi.org/10.1016/j.foodqual.2014.04.005)
- Lin, X., Chang, S. C., Chou, T. H., Chen, S. C., & Ruangkanjanases, A. (2021). Consumers' intention to adopt blockchain food traceability technology towards organic food products. *International Journal of Environmental Research and Public Health*, 18(3), 912.
- Menozi, D., Halawany-Darson, R., Mora, C., & Giraud, G. (2015). Motives towards traceable food choice: A comparison between French and Italian consumers, *Food Control*, 49, 40-48, <https://doi.org/10.1016/j.foodcont.2013.09.006>
- Sun, S., Wang, X., Zhang, Y. (2017). Sustainable Traceability in the Food Supply Chain: The Impact of Consumer Willingness to Pay. *Sustainability*. 9(6):999. <https://doi.org/10.3390/su9060999>
- Sun, R., Zhang, S., Wang, T., Hu, J., Ruan, J., & Ruan, J. (2021). Willingness and Influencing Factors of Pig Farmers to Adopt Internet of Things Technology in Food Traceability. *Sustainability*, 13(16), 8861
- Wu, W., Zhang, A., van Klinken, R.D., Schrobback, P., Muller, J.M. (2021). Consumer Trust in Food and the Food System: A Critical Review. *Foods*. 10(10):2490. [10.3390/foods10102490](https://doi.org/10.3390/foods10102490).
- WUWM (2022). WUWM Conference Report “Global food security in the XXI: Risks, challenges and solutions to ensure resilient and sustainable fresh food supply chains” Accessed 15/01/2023 from [https://wuwm.org/wp-content/uploads/2023/04/2022\\_Abu-Dhabi-Conference-Report-3.pdf](https://wuwm.org/wp-content/uploads/2023/04/2022_Abu-Dhabi-Conference-Report-3.pdf)
- Yuan, C., Wang, S. and Yu, X. (2020). The impact of food traceability system on consumer perceived value and purchase intention in China. *Industrial Management & Data Systems*, 120(4), 810-824. <https://doi.org/10.1108/IMDS-09-2019-0469>

# **Tourism Marketing and Management**

## The Significance of Technological Innovation in the Development of Educational Tourism

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It has long been acknowledged that technological innovation is probably the most significant external force that shapes and drives change in society and the economy in general. This is also true in the tourism sector. Recent technological innovation in artificial intelligence and virtual reality are going to exert major changes in the way individuals consume tourism services. Indicatively, the metaverse is expected to introduce significant changes in the way individual consumers experience tourism services Gursoy *et al.* (2022). In a similar fashion, technological innovations are expected to exert a significant impact in education and the way individuals learn Herold (2016), Raja, and Nagasubramani (2018).

Correspondingly, educational tourism, as an intersection of the abovementioned two-service provisions, is also going to face a massive transformation, because of technological innovations and change Komandyshko and Semenova (2017). Indicatively, Pittman (2012) argues that technological innovations could broaden the scope of educational tourism, while Zarzuela *et al.* (2013) indicate how serious games contribute towards foreign visitors' learning through interactivity. Overall, the trend that has started with the advent of distance learning is going to culminate with artificial intelligence and virtual reality in educational tourism. Hence, the impact of technological innovation is expected to revolutionise educational tourism provisions.

The purpose of this paper is to examine the linkage between educational tourism and technological innovation. More specifically, the paper aims to examine the contribution of technological innovations on the development of educational tourism in Greece and Cyprus. *First*, the paper considers the profile of individuals (in this case professionals associated with educational tourism in Greece and Cyprus) that consider technological innovation as an important factor in the development of educational tourism in Greece and Cyprus. *On a second note*, the paper examines the mechanism that links technological innovation with educational tourism and various forms of tourism development. *Third*, the analysis will examine the linkages between technological innovation and different facets of educational tourism.

The paper is based upon a primary on - line survey based questionnaire method. The sampling method used was based on a snowball method of data collection. The survey questionnaire was developed based on a thorough review of the relevant literature in the field. It also benefited from a round table discussion with tourism and educational experts in the area. Ten (10) educational and tourism experts were solicited to provide an opinion on the survey questions. The online survey questionnaire was performed through Google forms simultaneously in Greece and Cyprus during the period between June - September 2022, to a sample of 292 participants. Answers were first collected on a Google forms environment, then they were transported in excel for data cleaning and data coding, and finally onto SPSS where the main statistical analysis was performed. The analysis considers a binary logistic regression to derive empirical findings.

The empirical findings indicate that age and education are significant identifiers of those most likely to consider technological innovation as a statistically significant factor in developing educational tourism in Greece and Cyprus. At the same time, those who value technological innovations as an important factor for the development of educational tourism do perceive educational tourism as an avenue for social development and quality of life. Hence, respondents actually perceive that technological innovation could provide the means to improve social justice and quality of life in local societies. The same applies for

sustain- able tourism development, but not regarding the contribution of educational tourism in local economic development (through the extension of the tourism season). Finally, respondents indicate that technological innovations could serve very well educational tourism routes developed around a festival and a religious theme (but not the environment, heritage or architecture).

Keywords: Technological innovation, educational tourism, Greece, Cyprus, logistic regression

### References

Gursoy, D., Malodia, S. and Dhir, A. (2022), The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions, *Journal of Hospitality Marketing & Management* 31(5), 527–534.

Herold, B., (2016), Technology in education: An overview, *Education Week* 20 (7), 129–141.

Komandyshko, E. F. and Semenova, E. A., (2017), Educational tourism: Adoption of art management technologies in the activity of universities, *Journal of Environmental Management & Tourism* 8 (6 (22)), 1183–1188.

Pittman, J., (2012), Educational tourism empowerment: Implications for flexible learning and digital equity, *Journal of Tourism Hospitality* 3(1), 119–141.

Raja, R. and Nagasubramani, P., (2018), Impact of modern technology in education, *Journal of Applied and Advanced Research* 3(1), 33–35.

Zarzuela, M. M., Pernas, F. J. D., Calzon, S. M., Ortega, D. G. and Rodriguez, M. A., (2013), Educational tourism through a virtual reality platform, *Procedia Computer Science* 25, 382–388.

# The privatisation of tourism enterprises in albania, the decade 1991-2001, under the light of geopolitical analysis

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This article refers to the results of the privatization process of tourism enterprises in Albania in the light of geopolitical analysis and the dependency theory. It presents the involvement of international economic organizations and institutions in the process of privatization of tourism enterprises, as the first stage for the development of tourism, which is proposed as a means of rapid development in developing countries. Subsequently, the results of privatization are presented, focusing on the conditions of dependence of Albania on the powerful countries. Consequently, the geopolitical dimension of tourism emerges, which contributes to understanding and describing the competitive forces that arise during the planning of tourism production, with the aim of exerting influence in a specific geographical area.

**Keywords:** *geopolitical analysis, dependency theory, tourism development, developing countries*

## • INTRODUCTION

This article refers to the results of the privatization process of tourism enterprises in the light of geopolitics<sup>5</sup> and dependency theory<sup>6</sup>. In particular, it presents the involvement of international financial organizations and institutions (such as the World Bank, the International Monetary Fund, the European Bank for Reconstruction and Development and some specialized branches of the United Nations, that promote tourism development, such as United Nations Development Programme, International Labour Organization, World Tourism Organisation)<sup>7</sup>, in the process of privatization of tourism enterprises, as a precondition for the subsequent

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<sup>5</sup> Mostafanezhad, M and Norum, R (2016) Towards geopolitics of tourism. *Annals of Tourism Research*, 61, 226-228. <https://doi.org/10.1016/j.annals.2016.08.003>

Buckley R., Gretzel U., Scott D., Weaver D. & Becken S.(2015) Tourism megatrends. *Tourism Recreation Research*, 40(1), 59-70. <https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1080%2F02508281.2015.1005942>

Weaver, D (2010) Geopolitical dimensions of sustainable tourism. *Tourism Recreation Research*, 35(1), 47-53. <https://doi.org/10.1080/02508281.2010.11081618>

Hall, D (2000) Tourism as sustainable development? The Albanian experience of transition. *International journal of tourism research*, 2, 31-46. [https://doi.org/10.1002/\(SICI\)1522-1970\(200001/02\)2:1%3C31::AID-JTR181%3E3.0.CO;2-W](https://doi.org/10.1002/(SICI)1522-1970(200001/02)2:1%3C31::AID-JTR181%3E3.0.CO;2-W)

Hall, D (1992) Albania's changing tourism environment. *Journal of cultural geography*, 12(2), 35-44. <https://doi.org/10.1080/08873639209478407>

<sup>6</sup> "Dependency Theory" or "Theory of Underdevelopment" or "World Systems Theory" was formulated in 1980 and argues that developing countries have political, institutional and economic structures that keep them in a state of dependence on developed countries. Its theorists attributed the causes of underdevelopment to the interactions of economic and social structures within the international system. More specifically, they argue that the lack of progress of weak states is not due to their own inadequacies, but to the fact that powerful countries seek, deliberately, to keep them in a state of underdevelopment, in order to control them. (Holden, A. (2005). *Tourism -Studies-and-the-Social Sciences*. Routledge, p. 112-113 and P Bianchi, R. (2014). "Towards-a-Political Economy of Global Tourism Revisited", in Sharpley, Richard-and-Telfer, David-J.-(eds.) *Tourism-and-Development: Concepts and Issues*. Channel-View-Publications, pp. 287-331).

<sup>7</sup> Buckley et al. *ibid*.

Hall, C.M. (2008) *Tourism Planning: Policies, Processes and Relationships*, 2<sup>nd</sup> ed. Prentice Hall, Harlow.

development of tourism, which was proposed by the World Bank<sup>8</sup> as a means of rapid development of developing countries, at the end of the 1950s. Afterwards, the results of the privatization are presented, focusing on the conditions of dependence of Albania on the powerful countries, as a result of the lack of capital, technology and know-how.

#### • THE PRIVATIZATION PROGRAM

The collapse of the old regime in Albania in 1990 is attributed to the economic decline over the years, which was caused by the government's political repression of the population<sup>9</sup>. In early 1991 production began to collapse in both agriculture and industry. The economy entered a period of even greater crisis marked by mass destruction of state-owned property, including schools, hospitals, food distribution warehouses, transport and electrical systems. Popular manifestations of frustration over the political situation and the absence of consumer goods gave rise to an increase in street crime. In April 1992 the new government immediately launched ambitious political and economic reform programs. In order to do that Albania entered into a working relationship with the Bretton Woods institutions-the World Bank and the International Monetary Fund (IMF)-in 1991. Negotiations were completed in 1992 and until 1993 Albania benefited from a substantial inflow of foreign aid<sup>10</sup>.

Privatization of the economy was considered by the Albanian government as the core of economic reform, in order to join the free-market economy and to attract foreign investments. The Privatization Law<sup>11</sup> was approved in Albania in August 1991 and the program started after 10.08.1992<sup>12</sup>. It concerned agricultural land, housing and state-owned enterprises, but this article focuses on the privatization of tourism state enterprises.

In Albania the main privatization methods, which were closely related to the size of the enterprises, were:

1. direct sale for small objects and businesses (the so-called «small privatization»)
2. public auction for small and medium enterprises
3. mass privatization and strategic investor for medium and large enterprises.

#### • RESULTS OF THE PRIVATIZATION PROCESS

There is growing research in Albania concerning the results of the privatization process<sup>13</sup>. This article aims to present a summary of the results of the privatization, combining the relevant articles with archival material from

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Sharpley, R. Telfer D.J. (2015). *Tourism and Development: Concepts and Issues*. 2<sup>nd</sup>ed. Channel View Publications.

Holden, A. (2005). *Tourism Studies and the Social Sciences*. Routledge. <https://doi.org/10.4324/9780203502396>

Ashley, C., Roe, D., & Goodwin, H. (2001). *Pro-poor tourism strategies: making tourism work for the poor: a review of experience*. Overseas Development Institute.

Brown, F. (1998). *Tourism reassessed: blight or blessing?* Butterworth-Heinemann.

Lea, J. P. (1993). Tourism development ethics in the third world. In *Annals of Tourism Research* 20(4),701-715. <https://doi.org/10.4324/9780203040393>

<sup>8</sup> Holden, A. (2005). *Tourism Studies and the Social Sciences*. Routledge, p.118

<sup>9</sup> *Albania and the World Bank: building the future (English)*. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/175021468742469090/Albania-and-the-World-Bank-building-the-future>

<sup>10</sup> *Albania and the World Bank: building the future (English)*. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/175021468742469090/Albania-and-the-World-Bank-building-the-future>

<sup>11</sup> Law no.1, 10.08.1991 "On sanctioning and protecting private property, free initiative, independent private activities and privatization".

<sup>12</sup> MCD no. 347, 10.08.1992 "For a change in MCD no.284, 25.06.1992 "On the restarting of privatization process

<sup>13</sup> Konomi, I. (2015). An overview of the Albanian privatization process. In *European Scientific Journal* 11(31). <https://eujournal.org/index.php/esj/article/view/6617>

Papajorgji, E. (2014). A Critical Analysis of the Strategic Sector Privatization in Albania. *Academic Journal of Interdisciplinary Studies* 3(4) <https://doi.org/10.5901/ajis.2014.v3n4p319>

the Central Archive of the Albanian State, regarding the privatization of tourism businesses in the period 1991-2001.

- *PRIVATIZATION OF SMALL BUSINESSES*

The privatization of small businesses was carried out mainly in the years 1991-1992. After a hiatus, the process started again in 1995 and was completed by 1997. The process was quick and successful, resulting in the establishment of a new sector in the economy. The biggest part of new enterprises was established in trade and service sectors and the enterprises were given to former employees, mainly by the method of direct sale<sup>14</sup>.

- *PRIVATIZATION OF MEDIUM AND LARGE ENTERPRISES.*

The privatization of medium and large state-owned enterprises, using the mass method, did not have as positive results as the privatization of the small ones. Initially, 800 companies were announced to be privatised, but in the end, only 97 were privatised (3 of which belonged to the tourism sector)<sup>15</sup>. The process of mass privatization resulted in the distribution of the companies' shares to a large number of shareholders, mainly to the employees of the companies themselves. The lack of capital and the little business experience of the new owners led to poor performance of these businesses. In addition to that, the low price at which the privatization was carried out, led the new owners to show little interest in the performance of the business as a means of returning the investment they made. As a result, until 1996, the participation of foreign companies in the privatization of medium-sized enterprises was very small. The involvement of the powerful western countries, such as Germany and England, was limited, mainly to providing, through consulting companies<sup>16</sup>, the know-how, the guidance and the structuring of the strategies that the Albanian government had to implement in order to join the free market economic system<sup>17</sup>.

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Shehaj E. & Milo L (2007). "Lessons to be learned from mass and strategic sector privatisation in Albania" in: *The challenges of participation of local businessmen in strategic sector privatization. The case of Albania compared with the experience of Eastern Europe*. Albanian Socio-Economic Think Tank (ASET), Tirana.p.75-88.

Malaj, A.& Mema, F. (2003): *Strategic privatization: Its achievements and challenges*. BERG Working Paper Series on Government and Growth No.41, Bamberg University. Bamberg Economic Research Group.[https://econpapers.repec.org/scripts/redir\\_pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F39706%2F1%2F362952000.pdf;h=repec:zbw:bamber:41](https://econpapers.repec.org/scripts/redir_pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F39706%2F1%2F362952000.pdf;h=repec:zbw:bamber:41)

Pano V. (2001) *Privatization and its efficiency in Albania*: Bank of Albania 2nd annual Conference "Albania between domestic reforms and European integration"[https://www.bankofalbania.org/About\\_the\\_Bank/Conferences/Second\\_Conference.html](https://www.bankofalbania.org/About_the_Bank/Conferences/Second_Conference.html)

Mema, F. & Sallaku S. (2001) *Privatization and its efficiency in Albania*: Bank of Albania 2nd annual Conference "Albania between domestic reforms and European integration"[https://www.bankofalbania.org/About\\_the\\_Bank/Conferences/Second\\_Conference.html](https://www.bankofalbania.org/About_the_Bank/Conferences/Second_Conference.html)

Hashi, I., & Xhillari, L. (1999). Privatisation and transition in Albania. *Post-Communist Economies*, 11(1), 99–125. <https://doi.org/10.1080/14631379996066>

Mema F. (1998), *Privatisation in Albania: Achievements, Failures and Future*, Toena, Tirana

Åslund, A., & Sjöberg, Ö. (1992). Privatisation and Transition to a Market Economy in Albania. *Communist Economies and Economic Transformation*, 4(1), 135–150. <https://doi.org/10.1080/14631379208427714>

<sup>14</sup> Malaj, A.& Mema, F. (2003), *ibid*.

Pano V. (2001), *ibid*.

<sup>15</sup> Pano V. (2001), *ibid*.

Hashi, I., & Xhillari, L. (1999), *ibid*.

<sup>16</sup> The German Society for Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit GTZ). processed data on privatization on behalf of the Ministry of Finance of Albania. The English business consultancy firm Touche Ross prepared, at request of the Albanian government, the first tourism development strategy (1993-2010).

<sup>17</sup> "The challenges of participation of local businessmen in strategic sector privatization": The case of Albania compared with the experience of Eastern Europe, a publication of the Albanian Socio-Economic Think Tank (ASET),2007, p.75-88.

- *THE ESTABLISHMENT OF JOINT VENTURES.*

The establishment of joint ventures, meaning the cooperation of a foreign investor with the Albanian state, attracted more interest from foreign investors, however, it also had discouraging results for the Albanian state. Their creation reflected the Albania's need for foreign investments, in order that SOEs could enter the international market and that the foreign partner could provide SOEs with new technology, capital and know-how. By the end of 1993, 99 joint ventures had been created<sup>18</sup>. At that time, however, there was no experience of such partnerships and the country's legal framework was not complete. The result was that in many cases the technology on offer was both old and overrated<sup>19</sup>.

Documents from the General Directorate of Archives of Albania testify to the establishment of such joint ventures as early as 1991<sup>20</sup>. The countries that initially showed interest in cooperation with the Albanian state were Italy and Germany and their field of activity was mainly the construction of buildings, hotels and roads.

- *PRIVATIZATION OF STRATEGIC SECTOR COMPANIES*

The program of privatization of companies operating in sectors of particular importance for the economy began in Albania after 1998<sup>21</sup>. For the implementation of the goals of the program, the Albanian government cooperated with the International Monetary Fund, the World Bank and other international organizations. The program included, among other important sectors (such as those of oil, natural gas, power system, telecommunications, mining), the privatization of transport infrastructure<sup>22</sup>, which is indissolubly linked with the development of tourism, as it contains the airports, the ports and the railways. The main privatization method was that of the strategic investor, who would own either the entire company or its majority block of shares. The strategic sector attracted the interest of foreign investors, mainly after 2000, and the first foreign investments were made in the telecommunications, banking, mining and oil sector<sup>23</sup>. The first steps for the privatization in transport infrastructure were taken after 2003, as foreseen by the privatization program 2003-2005<sup>24</sup>.

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<sup>18</sup> Pano V. (2001), *ibid.*, p.172.

<sup>19</sup> Malaj, A. & Mema, F. (2003): *Strategic privatization: Its achievements and challenges*. BERG Working Paper Series on Government and Growth No.41, Bamberg University. Bamberg Economic Research Group. [https://econpapers.repec.org/scripts/redir\\_pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F39706%2F1%2F362952000.pdf;h=repec:zbw:bamber:41](https://econpapers.repec.org/scripts/redir_pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F39706%2F1%2F362952000.pdf;h=repec:zbw:bamber:41)

<sup>20</sup> Central Archive of the Albanian State:

- F.963, V. 1992, D.2-57: Decision 13, 08.12.1992, of the Ministry of Trade and Foreign-Economic-Cooperation-(Relations) on the creation of a joint Albanian-German company under the brand name "Albania Bay Handel" for the construction of houses, industrial buildings, hotels, etc.
- F.963, V. 1991, D.-2-111: Decision 5, 10.10.1991, of the Ministry of Trade and External Economic Cooperation; (Relations) on the creation of the joint venture "EDICOM", between Albanian company «Ndertim Banesa: Durrës» and the Italian company "EDICOM Bari", with the object of construction of tourist hotels, apartments, etc.
- F.963, V. 1991, D.-2-118: Decision-14, 31.08.1991, of the Ministry of Trade and Foreign-Economic Cooperation-(Relations) on the opening of a representative office of the Italian company "BEST -IMPEX- di" whose field of activity- includes: Construction of roads, hotels, restaurants and exercise of tourism activity.
- F.976, V.1991, 0.5: Decision 122, 28.03.1991, of the Council of Ministers approving the reconstruction of 4 tourist hotels by the General Directorate "ALBTURISM" of Albania; in cooperation with Italian company "ITALTRADE" of Rome. The hotels are located in the cities of Durres, Shkodra. Avlona and Berat.

<sup>21</sup> Law-No.-8306, 14.03.1998-"On-the-privatisation strategy of sectors of special-importance". The privatization of the strategic sector is referred to in this article, because its initiation falls within the time period under consideration. For its effectiveness, however, as well as for details regarding the involvement and investments of foreign countries in the strategic sectors, later periods of time (after 2001) must be examined, in order to draw safe conclusions.

<sup>22</sup> Malaj, A. & Mema, F. (2003), *ibid.*

<sup>23</sup> EBRD-(1994-2004), Transition-Report, European-Bank-for-Reconstruction-and-Development

<sup>24</sup> Malaj, A. & Mema, F. (2003), *ibid.*



- **PRIVATIZATION AND INVESTMENTS IN TOURISM SECTOR**

For the privatizations of former state-owned hotels and tourist accommodations<sup>25</sup> there is limited data both regarding their new owners and their subsequent course and evolution. From the information obtained from the General Directorate of Archives of Albania, it appears that the tourist facilities were given to former managers and their employees, and most of the time, with exemption from the legal auction process. For example, the hotel in the city of Fier was given on 26/11/1993 to its employees by direct sale and not by auction. The same happened with hotels in other cities, such as in Gramsh, Polican, Rreshen and Rogozhine<sup>26</sup>.

Despite the fact that foreign investments in tourism sector were limited, as mentioned before, there were some international companies that began the reconstruction of large hotels as early as 1990. The construction of Rogner Hotel began in 1990, after Austrian Robert Rogner decided to invest in the young republic of Albania<sup>27</sup>. In addition, MAK-Albania, a subsidiary of MALI Kharafi & Sons WLL based in Kuwait, has been operating in Albania since 1992 building the luxury hotel Chateau Liza Resort, in 1995, and the five-star Sheraton Tirana Hotel, in 2003. The same company owns the hotels Mali Robit Resort Golem and Butrint Hotel Saranda<sup>28</sup>. In addition to that, the Albanian government requests the preparation of the first Tourism development strategy (1993-2010) from business consulting companies (namely Touch Ross), with contracts from the European Bank for Reconstruction and Development. Thus, the encouragement of tourism development as a solution to the agricultural and social economic decline, that followed the fall of communism, emerges quite clearly.

As far as the joint ventures in tourism sector are concerned, there are several examples of partnerships, as files of the General Directorate of Archives testify. In 1991, a partnership between the General Directorate «ALBTURISM» of Albania and the Italian company «ITAL TRADE» was created for the establishment of four hotels located in the cities of Durres, Shkodra, Avlona and Berat. In 1991, "EDICOM" was also founded, a joint venture between Albanian company «Ndertim Banesa: Durrës» and the Italian company "EDICOM Bari", with the goal of building tourist hotels and apartments. In 1991, the Italian company "BEST -IMPEX- di", whose field of activity includes construction of roads, hotels, restaurants and exercise of tourism activity, opened a representative office in Tirana. In 1992, a joint Albanian-German company under the brand name "Albania Bay Handel" was created for the construction of houses, industrial buildings and hotels.

- **CONCLUSION**

In summary, it can be stated that the foreign aid was of great importance the first years of transition, when Albania urgently had to deal with economic and social crisis. However, as much as the aid was needed, the negative effects of the process of political and economic reform of Albania cannot be ignored. They can be summarized in the following points:

- Increasing loan dependence of Albania from the Western powers.
- Great dependence on developed countries in the field of technology and know-how.

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<sup>25</sup> According to what is mentioned in M. Vodenska (ed.), (2018). Hospitality and tourism-in-Transition-in-Central -and- Eastern Europe: a comparative analysis. Cambridge Scholar Publishing, pp. 4-46, until the 1990s there were only 16 state-owned hotels in Albania. In particular, after the 1970s, a hotel was built in the centre-of-every-major-city mainly for domestic tourism, in the form of social tourism. In the late 1970s and during the 1980s, organized tourism began and the main form of accommodation was in the homes of residents in selected destinations. In each main destination a social holiday building was built for the "best" workers and in some cities some holiday places for children were also built. Another form of accommodation was the holiday cabins located in the seaside towns of Durres, Vlora and Shengjin. Since their numbers were limited, the choice of families to be allowed to go was made by the management of the organizations they worked for.

<sup>26</sup> General Directorate of Archives of Albania:

- F.133, V. 1994, D.7-109 (Fier)
- F.963, V.1993, D.8-258 και F.505, V.1993, D.13-228 (Gramsh)
- F.505, V.1993, D.13-270 (Polican)
- F.963, V. 1993, D.8-266 (Rreshen)
- F.963, V. 1993, D.8-329 (Rogozhine)

<sup>27</sup> <https://www.hotel-europapark.com/overview/story.html>

<sup>28</sup> <https://www.investigate.co.uk/articlePrint.aspx?id=200806300700157976X>

<https://seenews.com/news/marriott-international-confirms-departure-of-sheraton-from-albania-597363>

<https://www.hhmsrl.it/hotels/chateau-linza-resort/>

• Delay in the development process which was mainly due to the fact that the development strategies proposed by the foreign companies were formulated without taking into account the particular social and political characteristics of the country and without any provision for the country's ability to implement the strategies.

For the former state-owned enterprises in the tourism sector, it can be observed that the privatization of small-medium hotels to their former employees led to a large number of shareholders, whose lack of capital and of business experience combined with their little interest in the returning of their investment resulted in poor performance of those enterprises.

As for the foreign investments in tourism sector, despite that the interest was limited, there were some international chains that began the construction of large hotels as early as 1990. In the contrary, foreign investors showed more interest as early as 1990 in joint ventures related to the construction of tourist accommodation, mainly in the coastal zone of the country. However, the lack of complete legislation on such partnerships at that period of time had as a result the technology given by the foreign partner to be old and overrated.

For the effectiveness of the privatisation process on strategic sectors, as well as for details regarding the involvement and investments of foreign countries in the strategic sectors, later periods of time (after 2003) must be examined, in order to draw safe conclusions. What would be, also, interesting for future research is to what extent Albania became a pole of attraction for foreign investment in the tourism sector in the years following the privatization and to what extent the country's economy depended on them and on tourism.

In conclusion, it could be stated that the basic features of neoliberalism – market economy, privatization, decentralization of political power – which were formed in Albania after the fall of communism, in combination with the inability of local power actors to resist the pressures of liberalization put the country under a regime of dependency from the capitalist centre and led it to adopt, without reservations, the tourism development strategies proposed from the outside as the vehicle for quick integration into the market economy.

## SOURCES & BIBLIOGRAPHY

### Archives

General Directorate of Archives of Albania:

- F.963, V 1992, D.2-57: Decision 13, 08.12.1992, of the Ministry of Trade and Foreign-Economic Cooperation-(Relations) on the creation of a joint Albanian-German company under the brand name "Albania Bau Handel" for the construction of houses, industrial buildings, hotels, etc.
- F.963, V. 1991, D. 2-111: Decision 5, 10.10.1991, of the Ministry of Trade and External Economic Cooperation; (Relations) on the creation of the joint venture "EDICOM", between company «Ndertim Banesa: Durrës» and the Italian company "EDICOM Bari", with the object of construction of tourist hotels, apartments, etc.
- F.963, V. 1991, D. 2-118: Decision-14, 31.08.1991, of the Ministry of Trade and Foreign-Economic Cooperation- (Relations) on the opening of a representative office of the Italian company "BEST - IMPEX- di" whose field of activity-includes: Construction of roads, hotels, restaurants and exercise of tourism activity.
- F.976, V.1991, D.5: Decision 122, 28.03.1991, of the Council of Ministers approving the reconstruction of 4 tourist hotels by the General Directorate "ALBTURISM" of Albania; in cooperation with Italian company "ITALTRADE" of Rome. The hotels are located in the cities of Durrës, Shkodra, Avlona and Berat.
- F.133, V. 1994, D.7-109 (Hotel privatization in Fier)
- F.963, V.1993, D.8-258 και F.505, V.1993, D.13-228 (Hotel privatization in Gramsh)
- F.505, V.1993, D.13-270 (Hotel privatization in Polican)
- F.963, V. 1993, D.8-266 (Hotel privatization in Reshen)
- F.963, V. 1993, D.8-329 (Hotel privatization in Rrogozhina)

### Legislation

Law no.7512, 10.08.1991 "On sanctioning and protecting private property, free initiative, independent private activities and privatization".

MCD (Minister Council Decree) no.307, 29.08.1991 "On the duties of the National Privatization Agency and of the preparatory commission for the privatization process".

MCD no.284, 25.06.1992 "On the restarting of privatization process".

- MCD no. 347, 10.08.1992 “For a change in MCD no.284, 25.06.1992 “On the restarting of privatization process”.
- Law no.7582, 13.07.1992 “On state-owned enterprises”.
- MCD no.51, 30.01.1995 “On some changes and improvements to acts of privatization process”.
- Law no.1030, 23.02.1995 “On the issuance and distribution of vouchers (Privatization Lek)”.
- MCD no.438, 14.08.1995 “On the transfer of state shares to the persons participating in the auctions of state trade companies”.
- Law No. 7979, 26.07.1995 “On Investment Funds”.
- Law No. 8306, 14.03.1998 “On the privatization strategy of sectors of special importance”.

#### Books

- I. Θ. Μάζης, *Γεωπολιτική των Υδάτων στη Μέση Ανατολή (Αραβικές Χώρες, Ισραήλ, Τουρκία, (Πρόλογος Σπ. Καλογερόπουλου – Στράτη), Τροχαλία, Αθήνα 1996*
- Ashley, C., Roe, D., & Goodwin, H. (2001). *Pro-poor tourism strategies: making tourism work for the poor: a review of experience*. Overseas Development Institute.
- Brown, F. (1998). *Tourism reassessed: blight or blessing?* Butterworth-Heinemann.
- Hall, C. M. (n.d.). *Tourism Planning Policies, Processes and Relationships Tourism Planning Policies, Processes and Relationships*, Second Edition, Prentice Hall, Harlow
- Holden, A. (2005). *Tourism Studies and the Social Sciences*. Routledge.
- Mema F. (1998), *Privatisation in Albania: Achievements, Failures and Future*, Toena, Tirana
- Sharpley, R., & Telfer, D. J. (n.d.). *Tourism and development: concepts and issues*. Second Edition. Channel View Publications.
- Vodenska M. (ed.), (2018). *Hospitality and tourism in Transition in Central and Eastern Europe: a comparative analysis*. Cambridge Scholar Publishing.

#### Articles

- Åslund, A., & Sjöberg, Ö. (1992). Privatisation and Transition to a Market Economy in Albania. *Communist Economies and Economic Transformation*, 4(1), 135–150. <https://doi.org/10.1080/14631379208427714>
- Buckley R., Gretzel U., Scott D., Weaver D. & Becken S. (2015) Tourism megatrends. *Tourism Recreation Research*, 40(1), 59-70. <https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1080%2F02508281.2015.1005942>
- Hall, D. R. Hall, D (2000) Tourism as sustainable development? The Albanian experience of transition. *International journal of tourism research*, 2, 31-46. [https://doi.org/10.1002/\(SICI\)1522-1970\(200001/02\)2:1%3C31::AID-JTR181%3E3.0.CO;2-W](https://doi.org/10.1002/(SICI)1522-1970(200001/02)2:1%3C31::AID-JTR181%3E3.0.CO;2-W)
- Hall, D (1992) Albania’s changing tourism environment. *Journal of cultural geography*, 12(2), 35-44. <https://doi.org/10.1080/08873639209478407>
- Hashi, I., & Xhillari, L. (1999). Privatisation and transition in Albania. *Post-Communist Economies*, 11(1), 99–125. <https://doi.org/10.1080/14631379996066>
- Konomi, I. (2015). An overview of the Albanian privatization process. *In European Scientific Journal* 11(31). <https://ejournal.org/index.php/esj/article/view/6617>
- Lea, J. P. (1993). Tourism development ethics in the third world. *Annals of Tourism Research* 20(4),701-715. <https://doi.org/10.4324/9780203040393>
- Mostafanezhad, M and Norum, R (2016) Towards geopolitics of tourism. *Annals of Tourism Research*, 61, 226-228. <https://doi.org/10.1016/j.annals.2016.08.003>
- Papajorgji, E. (2014). A Critical Analysis of the Strategic Sector Privatization in Albania. *Academic Journal of Interdisciplinary Studies*, 3(4) <https://doi.org/10.5901/ajis.2014.v3n4p319>
- Pashko, G. (1993). Obstacles to Economic Reform in Albania. *Europe-Asia Studies*, 45(5), 907–921. <https://doi.org/10.1080/09668139308412130>
- Weaver, D (2010) Geopolitical dimensions of sustainable tourism. *Tourism Recreation Research*, 35(1), 47-53. <https://doi.org/10.1080/02508281.2010.11081618>
- EBRD -annual-report-1991 english. <https://www.ebrd.com/publications/annual-report-1991-english.pdf>
- EBRD -annual-report-1992-english. <https://www.ebrd.com/publications/annual-report-1992-english.pdf>
- EBRD (1994-2004), *Transition Report, European Bank for Reconstruction and Development* <https://www.ebrd.com/publications/transition-report-archive>
- GTZ (1998), *Report on Privatisation Process in Albania 1991-1997*, Tirana

- Imami, D., Kächelein, H., & Lami, E. (2011). Political cycles in income from privatization: the case of Albania. *BERG Working Paper Series No77*, Bamberg University, Bamberg Economic Research Group. <https://econpapers.repec.org/scripts/redir.pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F45553%2F1%2F658136259.pdf;h=repec:zbw:bamber:77>
- Malaj, A., & Mema, F. (2003). Strategic privatization, its achievements and challenges. *BERG Working Paper Series No 41*, Bamberg University, Bamberg Economic Research Group. <https://econpapers.repec.org/scripts/redir.pf?u=https%3A%2F%2Fwww.econstor.eu%2Fbitstream%2F10419%2F39706%2F1%2F362952000.pdf;h=repec:zbw:bamber:41>
- Mema, F. & Sallaku S. (2001) Privatization and its efficiency in Albania: *Bank of Albania 2nd annual Conference "Albania between domestic reforms and European integration"* [https://www.bankofalbania.org/About\\_the\\_Bank/Conferences/Second\\_Conference.html](https://www.bankofalbania.org/About_the_Bank/Conferences/Second_Conference.html)
- Pano, V. (2001) Privatization and its efficiency in Albania: *Bank of Albania 2nd annual Conference "Albania between domestic reforms and European integration"* [https://www.bankofalbania.org/About\\_the\\_Bank/Conferences/Second\\_Conference.html](https://www.bankofalbania.org/About_the_Bank/Conferences/Second_Conference.html)
- Shehaj E. & Milo L (2007).” Lessons to be learned from mass and strategic sector privatization in Albania” in: *The challenges of participation of local businessmen in strategic sector privatization. The case of Albania compared with the experience of Eastern Europe*. Albanian Socio-Economic Think Tank (ASET), Tirana.p.75-88
- “World Bank. 1991. *World Development Report 1991: The Challenge of Development*. New York: Oxford University Press”. © World Bank. <https://openknowledge.worldbank.org/handle/10986/5974>

#### Websites

- <https://www.hotel-europapark.com/overview/story.html>
- <https://www.investigate.co.uk/articlePrint.aspx?id=200806300700157976X>
- <https://seenews.com/news/marriott-international-confirms-departure-of-sheraton-from-albania-597363>
- <https://www.hhmsrl.it/hotels/chateau-linza-resort/>

# Halkidiki menu: local products gastronomy in Halkidiki tourism marketing

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## Abstract

Tourism destinations and hotels are called upon to offer unique hospitality experiences to their guests, which are linked to the destination itself, its people and its products. The visitors' contact with gastronomy and the menus that base their delight on local recipes and above all on local products produced in the area and packed in local processing units is part of these tourism experiences. At a time when global and Greek tourism are recovering from the COVID-19 pandemic, the interactions of local value chains, the gastronomy as a tourism product, the production, distribution and consumption of local products, their marketing and branding in the context of their inclusion in the travel experience with the aim of an interaction that will satisfy the visitor and strengthen the local production and tourism potential, has been activating several areas of Greece, their local authorities and hospitality professionals. However, is local gastronomy so important in tourism marketing for the destination and hotels and for its combined function to enhance local production? Is it affected and/or does it affect pricing and distribution networks? What are the characteristics of the culinary product and the gastronomic visitors? What is the perception of local products and how are the plans and marketing actions of local authorities evaluated? How are tourism and other businesses involved and how active are they? These and many more questions about the tourism marketing and the local products of Halkidiki are answered by this dissertation, taking advantage of the international literature and focusing the research interest on a region with rich primary production and industry. For this research purpose, two field surveys are employed in order to gather, document and evaluate opinions and data both from the tourism sector and from the sector of local professional associations. With the completion of the surveys, useful conclusions are drawn, challenges and perspectives are gleaned and useful targeted actions are proposed in order for the tourism marketing of gastronomy to be a driver of tourism development as well as the development of the local production base of Halkidiki.

## The points of the subject and the research

- **Tourism:** Value system with multiple benefits for local communities
- **Gastronomy:** An important part of the travel experience and the tourism product
- **Marketing:** Customer-centric framework of active and multidimensional assessment of internal and external environment
- **Local products:** Unique elements of the development and tourism identity of a region
- **Menu:** Composition of products, materials and techniques with the aim of a targeted culinary result
- **Halkidiki:** A region of Greece with strong tourism and agri-food production as well as food processing industry
- **Literature review:** Cause and effect relation. Current trends and situations.
- **Field research:** Multisectoral and multitype methodology.
- **Halkidiki Food Marketing Handbook:** Conclusions and suggestions for useful results

## Literature review

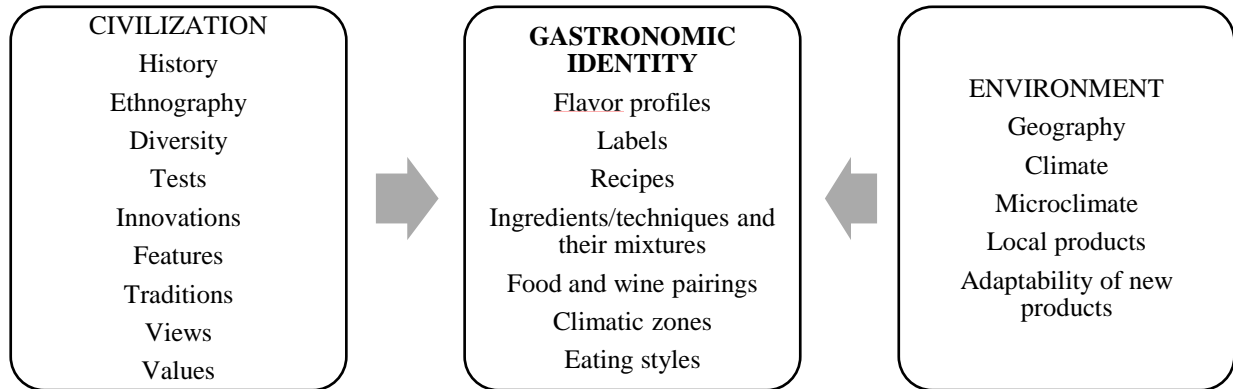
### Gastronomy is a specific type of tourism

Descending visitors' interest on gastronomy defines the following types:

- **Gourmet tourism:** All tourism activities are related to food. Primary motivation is to visit a specific restaurant, market or winery.

- **Gastronomy tourism:** Visit a food market or festival or restaurant as part of the travel program.
- **Culinary tourism:** Visit a restaurant, local food market, festival, winery, cheese factory just because is different or characteristic
- Any type of tourism: Visit a good restaurant during a visit because the visitor has to eat something.
- **Gastronomy VS tourism marketing**

Local natural and human-made environment i.e. main parts of the tourism product, contribute to the formulation of the gastronomy identity and branding of a destination.



### **Gastronomy today and tomorrow (trends)**

**Culinary experiences come 1st** when choosing a destination for...

- 33.6% of the Millennials (born 1981-1996)
- 33.5% of the Generation Z (born 1997-2012)
- 26.5% of the Generation X (born 1965-1980)
- 19% of the Baby Boomers (born 1946-1964)
- 79% of Millennials are particularly interested in culinary trials and experiments with products and recipes
- 37% of young people under the age of 30 are willing to spend significantly on culinary experiences.

### **Foreign visitors' semantic analysis (Greece)**

<i>Rank</i>	<i>Sector</i>	<i>Positive references</i>
1	Food & drinks	128.942
2	Hotels	75.133
3	Personnel	70.872
4	Experience	57.965
5	Cleanliness	48.466
6	Beaches	31.074
7	Services	21.787
8	Entertainment	19.458
9	Ambience	17.489

### **Gastronomy vs contemporary and future tourism trends**

- Sustainability
- Companionship

- Authenticity
- Healthy diet
- Gamification
- VR / AR
- Food sharing
- Education

### Research methodology

The research focused on the following axes of culinary tourism established by Henderson (2009):

- A. The culinary behavior of the guests.
- B. Gastronomy as a tourist product.
- C. Gastronomy as a marketing element.
- D. The importance of gastro-tourism in the creation of economic wealth in a specific geographical area (i.e. Halkidiki)

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### Qualitative field research (local stakeholders) – OBJECTIVES

*Interviews with qualitative characteristics on the basis of a semi-structured questionnaire aiming to record the opinions of the productive and other stakeholders of the region upon the following specific research objectives:* *Axis of culinary tourism*

Identification of local products produced in Halkidiki and their promotion by producers especially in the local tourist market.	(B)
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Evaluation of the sales of local producers to tourist enterprises in the region and investigation of the reasons that limit the broader channeling of local products to tourist enterprises.	(C)
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Local gastronomy marketing objectives and effectiveness, analysis of the elements of the marketing mix (4P) and more specific marketing actions that have been launched or implemented.	(C)
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Proposals of the stakeholders for the conjunction of supply and demand of products at the local level.	(D)
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Contribution of tourism to local development and of local producers / manufacturers / suppliers to tourism development.	(D)
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Capture of the culinary habits and requirements of the visitors of Halkidiki, inside and outside it	(A)
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Aiming to an integrated and stratified group, in the interviews participated representatives of all:

- primary sector (agricultural cooperative)
- secondary sector (chamber)
- tourism (hotels association)
- existing networks (cluster, partnership)
- organisations (DMO)

**Quantitative field research (hotels) – OBJECTIVES**

*Capture and evaluation of the conditions, perspectives, perceptions, problems of culinary tourism as perceived by the hoteliers of Halkidiki with structured questionnaires, and with more specific research objectives* *Axis of culinary tourism*

Operation of the hotel in terms of CATERING and culinary services provided to guests as well as to the local market and width of use of local food products (B)

Organization of the hotel's food supplies, especially with regard to PROCUREMENT of products from local suppliers/producers identifying the related problems faced by the hotels (C)

Perception of the local food and the culinary services of the hotel by the GUESTS by recording the data related to their culinary habits, motivations and interests in local food, both inside and outside the hotel. (A)

Participation of local products and/or local recipes in the formulation of MENUS (B)

The role of the hotel's culinary facilities in shaping its MARKETING strategy and mix (4P) (C)

Evaluation of the SYNERGIES with the local stakeholders for the marketing of the destination, the hoteliers' participation in them and especially in actions and topics of gastronomy (D)

Summary of the hotel profile

Summary of the hotel's guests profile

**Population and sample****Sample quality stratification****HALKIDIKI HOTELS that participated in the Quantitative Research**

CATEGORY	POPULATION	SAMPLE	Percentage
5*	19	18	95%
4*	24	15	63%
3*	23	13	57%
2*	33	9	27%
<b>TOTAL</b>	<b>99</b>	<b>55</b>	<b>56%</b>

**Sample quantity weighting**

- **95% Confidence Level**, which is the value in most research standards and is > 90% which is the acceptable limit
- **9% Error Margin**, a value < 10% which is the acceptable limit for small populations such as this
- **50% Normal Distribution**, so that the largest sample number is obtained in each case



## RESULTS

### Qualitative field research RESULTS

#### 1. Promotion activities of local products in the local market

- TASTE HALKIDIKI Project (Leader)
- Kalyves Exhibition Center (Leader)
- Seminars for hotel employees

#### 2. Problems in the sales of local products to tourist businesses

- Selling price of local products
- Inadequate distribution networks
- Weaknesses in promotion and marketing despite efforts.
- Ignorance of hotel staff about local products.
- Hoteliers and restaurateurs are not convinced of the added value of buying and offering local products despite past efforts.
- Preference of large food manufacturers in exports and weakness of small producers in systematic supply.
- Lack of shared vision and trust between local sectors (collaborative culture)
- Unfair competition of local products from cheaper and dubious quality imports.
- Lag of local products in price, distribution networks and availability of sufficient quantities.

#### 3. Local Gastronomy Marketing Mix Evaluation (4P)

Absence of a timely and coherent marketing plan that targets specific audiences, needs and problems.

- Product
  - The standardization of local products is a prerequisite to get added value
  - Price
  - The high prices of local products are becoming higher due to international circumstances and "poor" harvests (climate changes)
- Place
  - Inefficient and unprofitable local distribution networks
  - Lack of information for tourists about where they can find local products in their countries
  - SITHON honey maintains central and local networks
- Promotion
  - TASTE HALKIDIKI
    - Sampling in local production units
    - Organization of a local gastronomy festival
  - WE DO LOCAL
    - Locality standard for tourism businesses that respect the environment and authenticity and use local resources and products
  - AUTHENTIC GREECE
    - It highlights the authenticity of the culinary experience.
  - LOCAL & BRANDED
    - New program that capitalizes on the current travel trends of authenticity, locality and health with a focus on nutrition and especially branded local products (exportable only)
  - GREEK BREAKFAST
    - [Halkidiki Breakfast](#) (27 Hotels – 2 Presentations)
  - HALKIDIKI TOURISM ORGANIZATION
    - Participation in international exhibitions (20 per year)
    - Organization of fam trips with journalists and travel agents
    - Offices and showroom in Athens
  - ARISTOTLE PARTNERSHIP
    - Kouzina Festival (June)
    - Aristotle Menu (September)

#### 4. Intersectoral Local Development

- Cultivating a culture of cooperation between producers and manufacturers on the one hand and hoteliers on the other
- Perception of customer requirements both directly (price) and indirectly (branding)

- The beginning of the tourist season should find all the sectors involved ready
- Business Clustering for Development, Standardization and Marketing (HEN)
- Halkidiki Local Quality Agreement (Memorandum, Implementation Guide, Certification Standard)
- Tourism contributes as of 45% to Halkidiki's GDP being its most important industry.
- Lack of statistics dictates the creation of a LOCAL TOURISM OBSERVATORY
- Greek Tourism Program - Action Plans 2030.
- Special action plan for the destination Halkidiki
- Creating or upgrading accessibility to culinary destinations in the prefecture by improving road construction and signage
- Establishing museums with a culinary theme through the utilization of existing infrastructure, such as old wineries, old olive mills and beekeeping centers
- Creation of visitable laboratories for the production of local traditional food and drinks

The identity of the products with transparency (traceability) emphasizing on the trace of origin but also on the trace of consumption, strengthens the added value and the shared benefits when the two traces are identical. Halkidiki has to target on higher-end visitor markets, (taking advantage of the newly renovated and expanded Macedonia International Airport), and especially couples, through a new marketing plan, will elevate culinary tourism from a secondary, "ancillary" to a primary product.

### **Quantitative field research RESULTS**

- Local products are rarely offered in a standardized form (package), unlike cooked products, even though the demand for the former is stronger.
- The Halkidiki breakfast offer is significant, however there are no further food sections exclusively with local dishes, which leads customers to restaurants outside the hotel.
- Even though there are local dishes in the menus, there are no dedicated promotions of the local cuisine organized in the hotels, while their participation in collective actions organized by local stakeholders is minimal.
- Strengthening the participation of local products in their menus is mainly an internal affair of the hotels, although external support simply plays a role. The hotels' staff is trained on this goal.
- Although the hotels don't even have a sub-webpage for the hotel's culinary product and their participation in relevant social media groups is small, their sales are nevertheless quite targeted at special market categories with culinary tourists.
- Olive oil, honey and olives are for the majority of hotels the best-known local products and the ones most requested by their customers. What makes them stand out is mainly freshness, taste and nutrition.
- While in the qualitative research the price of local products was recorded as a dominant problem by all (except for the cluster HEN who spoke about the culture of cooperation), in the quantitative research the hoteliers themselves evaluated access and distribution networks as the dominant problem with the price of local products and their adequacy, together, ranked in second place.
- Local food products are mainly procured from central traders, although local distributors provide better service.
- Both the development of culinary tourism in Halkidiki and the marketing actions for its promotion by local stakeholders are evaluated at moderate levels by the representatives of the hotels.
- Culinary tourism strengthens local development and especially local producers.
- The export and consumption of local products abroad enhances the attractiveness of the tourist destination, confirming the importance of a gastronomy value cycle.

### **CHALLENGES**

On the way to further sectors coupling and creation of a local value system based on gastro-tourism:

- The price of local products which is mainly linked to the cost of their production and processing as well as other factors, such as priority in exports.
- The distribution channels that make it difficult to access many local products, despite the organized efforts of some producers, businesses and cooperatives.
- The export orientation of local manufacturing enterprises and the quantitative inadequacy of local products to meet local demand.

- The inability to produce all the dishes that require a complete menu with products from the region, resulting in the inability to operate food departments exclusively with local products.
- The lack of standardization of the traded products prevents their promotion as snacks or souvenirs.
- The unfair competition of local producers and manufacturers with mainly imported products of dubious quality.
- The need for branding and certification that would improve the sense of security of local products and reliability of local suppliers.
- The variety of non-combined but excellent initiatives to promote local gastronomy without being part of an organized framework, although some actions that are launched are in the right direction (standardized foods).
- The absence of gourmet tourists
- The COVID-19 pandemic and the war in Ukraine, require adjustments as they directly affect the region's tourism product

## CONCLUSION

A **Unified Marketing Manual** implementation is proposed in three main sectors as following:

- **Proposals for gastronomy destination marketing**
  - Upgrading and highlighting gastronomy as a prime tourist product
  - Creation of a database for the visitors characteristics and demands (Tourism Observatory)
  - Appointment of a Product Manager
  - Configuration of the gastronomy tourism product
  - Development of a comprehensive marketing plan
  - Creation of a team of copywriters, media archive managers and digital communication and social media experts and influencers.
  - Inclusion of hotels and restaurants, agroproducers and food manufacturers in the management and dissemination program of the local gastronomy brand.
  - Embedding the culinary experience as a cause, duty and profit for all stakeholders involved through seminars.
  - Creation of a catering manual for use in public and private sector events.
  - Cultivation and promotion of a "culinary localism".
  - Publication of manuals for the offer of culinary experiences with points and routes of culinary interest.
  - Incentives for organizing and participating in gastronomy themed events.
- **Proposals for Halkidiki hotels' gastronomy marketing**
  - Inclusion and upgrade of gastronomy in the tourist product of the hotel.
  - Connection of Breakfast with the rest of the food departments of the hotel.
  - Enrichment of the provided food services with local products.
  - Offers (accommodations etc.) for hosting journalists, influencers and contestants.
  - Creation of promotion content for hotel catering services with local products and menus.
  - Treatment of check-in guests upon arrival with local products.
  - Configuration of degustation menus with local products.
  - Activation of exclusive social media accounts for hotel restaurants.
  - Creation of hashtags and motivation of customers and followers to use them.
  - Placement of packed local products in points-of-sales and in rooms minibars.
  - Guests participation in festivals promoting local cuisine
  - Disposal of Hotel local food surpluses (remaining) in local NGOs (CSR)
  - Development of partnerships with wineries, beekeepers, olive producers for organized tours.
  - Creation of lists with drink suggestions with each dish (wine & beer pairing).
- **Proposals for local food manufacturing units marketing**
  - Design and build places to visit in the factories with the possibility of tasting local products and guide through their export network to the point of sales abroad

- Standardization of the local products and packaging in the form of snacks.
- Development of a local quality standard and mark. Participation and certification of local enterprises in order to strengthen the local identity and recognition of products.
- Formulation of an elaborated commercial policy to approach the markets of local commercial, restauration and hotel businesses with an attractive price and service mix.
- Establishment of a Halkidiki grocery e-shop with packaged products from the region and the aim of serving customers either during their visit or at their place of residence.
- Addition of a QR code to the labeling of the products so that the customer has the possibility to order the product through the e-shop, get information for the origin of the products (traceability) and the destination, participate in promotions, contests and raffles with travel gifts so that the consumer will come again and again to the destination.
- Synergies for the transportation of the products to the points of sale through common routes and shared means of distribution.

**KEYWORDS:** *Gastronomy, marketing, tourism, products, Halkidiki*

#### **REFERENCES**

- Andersson, T.D., Mossberg, L. & Therkelsen, A. (2017). Food and tourism synergies: perspectives on consumption, production and destination development. *Scandinavian Journal of Hospitality and Tourism*, Vol. 17 No. 1, pp. 1-8.
- Bjork, P. & Kauppinen-Raisanen H. (2019). Destination foodscape: a stage for travelers' food experience. *Tourism Management*, Vol. 71, pp. 466-475
- Boutsioukou K. (2018). *Key trends in culinary tourism*. Global Data
- Chaney, S.; Ryan, C. (2012). Analyzing the Evolution of Singapore's World Gourmet Summit: An Example of Gastronomic Tourism. *International Journal of Hospitality Management*, 31: (2), 309-318
- Choe J.Y. & Kim S. (2018). Effects on tourists' local food consumption value on attitude, food destination image and behavioral intention. *International Journal of Hospitality Management*, 71, 1-10
- Ellis, A.; Park, E.; Kim, S.; Yeoman, I. (2018) What is food tourism? *Tourist Management*, 68, 250–263.
- Eurobarometer (2021). Attitudes of Europeans towards tourism. European Commission. Flash Eurobarometer 499
- Hall, C.M. (2020). Improving the recipe for culinary and food tourism? The need for a new menu. *Tourism Recreation Research*, Vol. 45 No. 2, pp. 284-287.
- Harrington, R. J.; Ottenbacher, M. C. (2010). Culinary Tourism - A Case Study of the Gastronomic Capital. *Journal of Culinary Science & Technology*, 8: (1), 14-32.
- Hill, R. and Fountain, J. (2021), Expressing sense of place and terroir through wine tourism encounters: antipodal reflections from France and New Zealand, in Charters, S., Demossier, M., Dutton, J., Harding, G., Marks, D., Smith
- INSETE (2022). Special Edition: 2021 Review. *Statistic Report*, 70
- Maguire, J. and Unwin, T. (Eds), *Routledge Handbook of Wine and Culture*.
- Pestana, M. H., Parriera, A., & Moutinho, L. (2020). Motivations, emotions and satisfaction: The keys to a tourism destination choice. *Journal of Destination Marketing & Management*, 16. 100332.
- Smith S. (2022). *Determining samples size*. Qualtrics.
- Smithson A., Boland M., Kolo k., Wheelwright G. (2018). *Virtual & Augmented Reality for Business*. VR/AR Association White Paper
- Sthapit, E., Björk, P., & Jiménez Barreto, J. (2020). Negative memorable experience: North American and British Airbnb guests' perspectives. *Tourism Review*. Advance online publication. <https://doi.org/10.1108/TR-10-2019-0404>.
- Ting, H.; Tan, S. & John, A.N. (2017). Consumption intention towards ethnic food. Determinants of Dayak food choice by Malaysians. *Journal of Ethnic Foods*, 4, 21–27.

## **The attitude of young consumers in Greece and Cyprus towards educational tourism**

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### **Abstract:**

Educational tourism is an under-researched sector in the tourism field. Educational tourism is generally defined as a type of tourism in which the traveler's primary or secondary objective is learning. Nevertheless, there is still some ambiguity regarding the nature and scope of educational tourism, as well as its market segments (McGladdery and Lubbe, 2017). Additionally, the empirical studies in educational tourism are limited and mainly focused in university students (e.g. Castillo Arredondo et al., 2018; Xu and Ho, 2021).

The purpose of this paper is to investigate the broader perspectives of young consumers' attitudes in Greece and Cyprus regarding educational tourism. The main research objectives are the measurement of consumers' level of interest for educational tourism and the investigation of the factors that affect their overall attitude towards educational tourism services. This study contributes significantly to the literature since it is one of the few empirical studies to investigate consumers' perceptions towards educational tourism.

Methodologically, this research utilizes a survey questionnaire to collect empirical data on young consumers (up to 25 years old) in Greece and Cyprus. The questionnaires were distributed electronically and the final sample size consists of 904 respondents, including people of different social and economic profile.

The results reveal that the majority of participants have already been engaged in educational tourism activities with high level of satisfaction, and exhibit a high tendency to consume educational tourism services in the future. At the same time, they consider cost, the time period the activity takes place, as well as the theme of the tourist activity as the most significant factors affecting their selection/decision. Nevertheless, the non-parametric analysis shows differences between Greek and Cypriot respondents' beliefs and perceptions. The findings are considered to be useful to policy makers and marketers in tourism sector, since they can develop marketing strategies designed to attract and motivate educational tourists.

**Keywords:** *educational tourism, young tourists, destination management, Greece, Cyprus*

1.

### **1. INTRODUCTION**

Educational tourism is an under-researched sector in the tourism field. Educational tourism is generally defined as a type of tourism in which the traveler's primary or secondary objective is learning. Nevertheless, there is still some ambiguity regarding the nature and scope of educational tourism, as well as its market segments (McGladdery and Lubbe, 2017). Additionally, the empirical studies in educational tourism are limited and mainly focused in university students (e.g. Castillo Arredondo et al., 2018; Xu and Ho, 2021).

The purpose of this paper is to investigate the broader perspectives of young consumers' attitudes in Greece and Cyprus regarding educational tourism. The main research objectives are the measurement of consumers' level of interest for educational tourism and the investigation of the factors that affect their overall attitude towards educational tourism services. This study contributes significantly to the literature since it is one of the few empirical studies to investigate consumers' perceptions towards educational tourism. The present research differs from the existing literature as it examines young people's opinion on educational tourism from a broader perspective, without being limited to academic tourism, and is the first extensive research of this kind in Greece and Cyprus.

It is worth noting that the present research is part of a series of studies carried out in the framework of the project “Showcasing educational tourism for the promotion on environmental and cultural heritage” with the acronym EduTourism. The Project’s scope is the development of an integrated educational tourism product aimed towards young people, that will connect Crete and Cyprus in terms of history, culture, and environment. The Project is part of the Cooperation Programme Interreg V-A “Greece-Cyprus 2014-2020”, and it is co-funded by the European Union (more specifically the European Regional Development Fund) and National Funds of Greece and Cyprus.

The rest of the paper is organized as follows: A brief literature review is provided in the next section. The third section presents the research methodology, while the fourth section presents the empirical results. The last section of the paper includes the discussion of the outcomes, the managerial implications and directions for further research on educational tourism.

## 2. BACKGROUND

Educational tourism refers to travel experiences that combine elements of learning, exploration, and cultural exchange. It is a multifaceted concept that lacks a universally agreed-upon definition. However, there are common themes and characteristics that emerge from various definitions and scholarly discussions on the topic. One common understanding of educational tourism is that it involves travel away from one's home with the primary or secondary purpose of learning in a unique environment (McGladdery & Lubbe, 2017). This definition emphasizes the educational aspect of the tourism experience and highlights the idea that educational tourism is motivated by the aim of obtaining an education (Thoo et al., 2022).

Educational tourism can take various forms, such as visiting historical sites, scientific research institutes, or well-known universities to improve one's knowledge and cognition (Wang et al., 2022). Another perspective on educational tourism is that it is a distinct type of tourism that includes stays made in higher education institutions in places outside of one's usual environment for a period of less than one year (Culubret et al., 2022). This concept of academic tourism is closely related to other niches, such as scientific, cultural, or youth tourism, and can be complemented by activities like voluntourism or language tourism (Culubret et al., 2022).

Empirical research on educational tourism is relatively limited, and there is a need for further investigation in various areas to establish a better understanding of the links between education and tourism (Shu & Scott, 2014). The majority of the relative literature focuses on academic tourism, which refers to the mobility for higher education studies, where students travel abroad for the purpose of studying (Bento, 2014). Studies on university students explore various aspects of educational tourism including career paths, social media influence, the connection between education and tourism choices and the role of universities in local development. Indicatively, King et al. (2003) compared hospitality and tourism graduates in Australia and Hong Kong, examining their career paths and educational experiences, highlighting the differences in educational systems and industry practices between the two countries, providing insights into the factors that shape graduates' career trajectories. Castillo Arredondo et al. (2018) examine the motivations of university students in non-English-speaking destinations and reveal that languages are a key motivating factor for either growing personally through cultural enrichment, or growing professionally. Another study (Shu & Scott, 2014) focused on the influence of social media on Chinese students' choice of an overseas study destination, by investigating the information adoption model perspective and highlighted the role of social media in shaping students' decisions regarding educational tourism. Quintal & Polczynski (2010) explored the motivations and benefits that drive university students to revisit a destination, highlighting the distinct characteristics of this population and the potential financial rewards for destination marketing organizations (DMOs). The value of educational tourism for DMOs has been also studied by Xu & Ho (2021), who surveyed Chinese college students and graduates in order to reveal that study tour experiences resulted in destination associations among the students. The connection between educational choices and tourism choices has been explored in the context of students studying at overseas universities by Llewellyn-Smith & McCabe (2008). Finally, the role of universities in fostering local development through educational tourism has also been examined. A recent study (Tomasi et al., 2020) highlighted the potential benefits of international students as educational tourists and emphasized the importance of universities facilitating relationships between tourists and local stakeholders to enhance learning experiences and contribute to the sustainability of the local economy.

Ritchie's (2003) model for educational tourism is widely recognized and has been referenced in various studies. According to Ritchie (2003), educational tourism is defined by the desire to learn. He identifies four segments within educational tourism: ecotourism, heritage tourism, rural/farm tourism, and student exchanges between educational institutions. The model takes into account the subject matter of the educational experience and the demographic characteristics of the tourists. There have been discussions and critiques regarding the construction and applicability of the model, highlighting the need for adjustments and revisions to better explain the

complexities of educational tourism. McGladdery & Lubbe (2017) summarize all different educational tourism models in the literature and discuss the need for rethinking the concept of educational tourism while proposing a new, broader conceptual model which does not exclude certain sectors of tourism that can be considered educational.

In other words, there is still some ambiguity regarding the nature and scope of educational tourism, as well as its market segments. Empirical studies such as this one, enrich the relevant literature in this direction.

### 3. METHODOLOGY

The current research utilized a survey questionnaire as the main tool for collecting empirical data. The questionnaire consisted mainly of close-ended questions. For most of them a five-point Likert-type scale from “not at all” to “extremely” was used. The questionnaire was divided into four sections. Section A contained demographic questions, while section B attempted to gather data with respect to participants’ awareness and participation in educational tourism. Section C involved questions regarding their traveling behaviour that can be related to their broader attitude to educational tourism. Finally, section D questions aim to assess young peoples’ general perceptions towards educational tourism programs, as well as the opportunities/obstacles of Crete and Cyprus as educational tourism destinations.

A convenience sampling method was applied, with electronic distribution of the questionnaires. The promotion of the electronic questionnaire was made by the partners of Edutourism project in Crete and Cyprus, using personal and online contact methods in physical and digital areas where young people are active. The electronic questionnaires’ distribution took place during the last semester of 2022. The final sample consists of 904 young people, living in various cities of Greece and Cyprus.

The descriptive analysis of collected data was performed using Microsoft Excel and Jamovi software. In order to examine relationships between important variables and participants’ demographic or behavioural characteristics, a series of non-parametric tests were performed, using the Mann-Whitney U test which compares differences between two independent groups without the restriction of dependent variable to be normally distributed.

### 4. RESULTS

In terms of gender, age, educational level and ethnicity, the demographic characteristics of the sample are: male (34.51%) and female (65.49%), aged 19-25 years (77.88%) and 16-18 years (22.12%), mainly university graduates or undergraduate students (55.64%), Greeks (54.20%) and Cypriots (45.80%).

The empirical findings reveal that the level of respondents’ awareness towards the term “educational tourism” is moderate. Half of participants (46.79%) declared that they were “extremely” or “very” familiar with the notion of educational tourism and almost a quarter of the respondents (36.73%) expressed moderate levels of familiarity. The total level of awareness toward educational tourism has a mean value of 3.33 (1-“not at all” to 5-“extremely”), but is greater for Cypriot participants (mean 3.54) in contract to the Greek participants (mean 3.16) and this difference is considered as statistically significant according to Mann-Whitney U test ( $U = 78728$ ,  $p < .001$ ).

The majority of respondents had already participated in at least one type of educational tourism activity (Figure 1). Educational excursions in secondary or primary school is the most common educational tourism activity, while one out of four respondents in the sample had been participated in pupil/ student exchanges through initiatives like e-twinning or Erasmus. Almost 70% of the sample express high satisfaction from its past experience in educational tourism (Figure 2). The sample’s satisfaction level has a mean value of 3.87, but Greeks (mean 4.12) expressed much higher satisfaction than Cypriots (mean 3.60), this difference being statistically significant ( $U = 52664$ ,  $p < .001$ ).



Figure 1: Participation in educational tourism activities

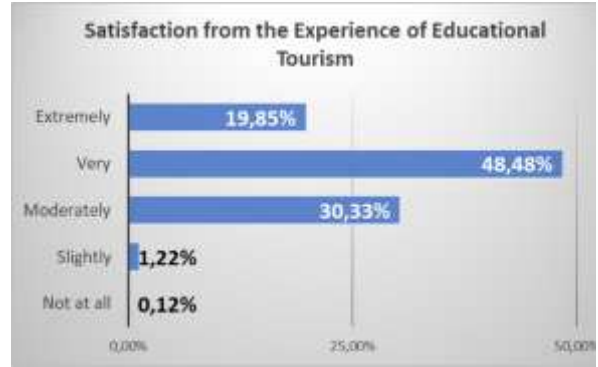


Figure 2: Satisfaction from educational tourism experience

The respondents' intention to participate in educational tourism activities in the future is high. In particular, 86,06% of the sample express its intention to participate in future educational tourism activities, while 17,92% is not sure. Again, some differences are indicated based on “country” variable, with Cypriots to show greater intention and Greeks to be more hesitant about future participation in educational tourism.

The question on the main motivation of the respondents to participate in educational tourism activities produced very interesting results. For the majority of respondents (65.82%) the main motivation for their participation in educational tourism is learning (option “I am interested in learning/it is part of my studies”), while 34.18% declared that their primary motivation is travelling (option “I want to visit new places”). Except for skills development / knowledge acquisition, the important secondary motivations/benefits associated with an educational tourism activity, are personal development and entertainment, followed by contacting with nature/culture of the destination, participation in extra educational activities and resting. Figure 3 shows the mean values in the above mentioned motivations for the whole sample and the differences among each country group.

Concerning respondents’ preferences for an educational tourism destination, Figure 4 shows the mean values in five destination attributes for the whole sample and each country group. The most preferred characteristics of a destination hosting educational activities are natural beauty, history/ heritage and local activities/events. Except for “natural beauty/ climate”, Cypriots show stronger preferences in all destination’s attractiveness characteristics, in contrast to Greek participants.

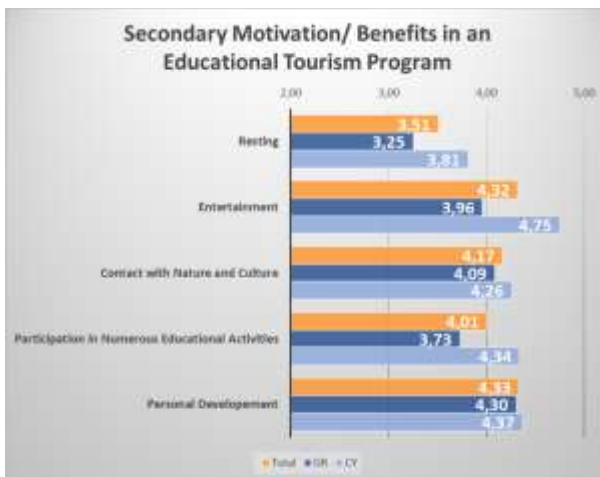


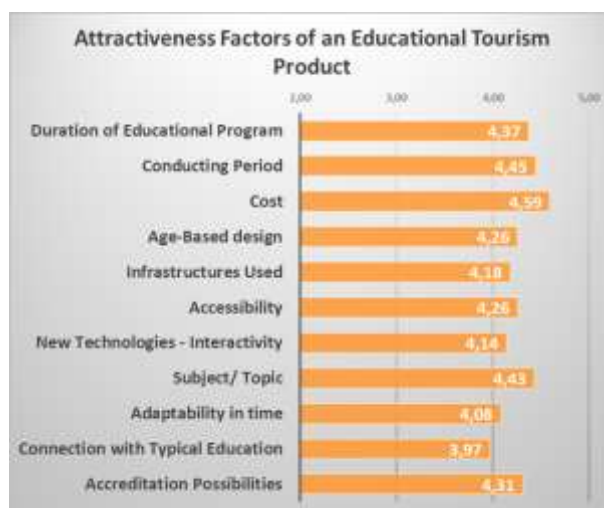
Figure 3: Secondary benefits of an educational tourism activity (mean values)



Figure 4: Evaluation of attributes for an educational tourism destination (mean values)

Respondents also expressed their preferences for factors that shape an educational tourism product. The mean values of eleven attractiveness factors of an educational/ training program implemented abroad, are shown in Figure 5. The cost, the educational subject, the duration of a program and a possible accreditation after program’s accomplishment, are the most attractive factors.





**Figure 5:** Attractiveness Factors of an Educational Tourism Product (mean values)

Since the attractiveness factors of an educational program abroad is crucial, non-parametric tests were performed among these factors and independent variables. Table 1 presents the differences based on the demographic variable "country" and reveal statistically significant differences in seven factors with the participants from Cyprus to have higher mean values in contrast to participants from Greece. These factors are: duration of a program, conducting period, age-based design, existence of new technologies – interactivity, subject/ topic, connection with typical education programs and accreditation possibilities. In the same manner, Table 2 presents the differences based on behavioural variable “main motivation for participation in educational tourism”. In contrast to respondents having “travelling” as main motivation in educational tourism, those who chose learning as main motivation seem to be attracted mostly in six factors (duration of a program, conducting period, existence of new technologies – interactivity, subject/ topic, connection with typical education programs, accreditation possibilities).

**Table 1:** Educational tourism program attractiveness factors related with the demographic variable “country of origin”

Variable	Country	Descriptives			Mann-Whitney U	
		Mean	Median	SD	Statistic	p
Duration of Educational Program	GR	4.06	4.00	0.790	50312	< .001
	CY	4.75	5.00	0.522		
Conducting Period	GR	4.17	4.00	0.838	58196	< .001
	CY	4.78	5.00	0.486		
Cost for Participants	GR	4.59	5.00	0.675	99634	0.580
	CY	4.60	5.00	0.581		
Age-Based design	GR	4.15	4.00	0.827	88174	< .001
	CY	4.38	4.00	0.577		
Destination's Infrastructures	GR	4.14	4.00	0.800	100057	0.692
	CY	4.22	4.00	0.516		
Accessibility	GR	4.31	4.00	0.810	85293	< .001
	CY	4.20	4.00	0.489		
New Technologies - Interactivity	GR	3.98	4.00	0.897	81455	< .001
	CY	4.33	4.00	0.588		
Subject/ Topic	GR	4.20	4.00	0.812	65104	< .001
	CY	4.71	5.00	0.548		
Adaptability in time	GR	4.03	4.00	0.910	98872	0.461
	CY	4.15	4.00	0.486		
Connected with Typical Education	GR	3.81	4.00	0.999	81626	< .001
	CY	4.16	4.00	0.620		
Accreditation Possibilities	GR	4.00	4.00	1.015	60706	< .001

	CY	4.67	5.00	0.691	
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**Table 2:** Educational tourism program attractiveness factors related with the behavioural variable “main motivation for educational tourism”

Variable	1 <sup>st</sup> Motivation	Descriptives			Mann-Whitney U	
		Mean	Median	SD	Statistic	p
<b>Duration of Educational Program</b>	Learn	4.57	5.00	0.665	49860	< .001
	Travel	4.09	4.00	0.815		
<b>Conducting Period</b>	Learn	4.63	5.00	0.659	51527	< .001
	Travel	4.17	4.00	0.835		
<b>Cost for Participants</b>	Learn	4.61	5.00	0.556	75816	0.943
	Travel	4.55	5.00	0.745		
<b>Age-Based design</b>	Learn	4.32	4.00	0.633	70515	0.060
	Travel	4.16	4.00	0.872		
<b>Destination's Infrastructures</b>	Learn	4.22	4.00	0.566	75957	0.985
	Travel	4.17	4.00	0.786		
<b>Accessibility</b>	Learn	4.25	4.00	0.572	67765	0.004
	Travel	4.32	4.00	0.795		
<b>New Technologies - Interactivity</b>	Learn	4.25	4.00	0.700	62164	< .001
	Travel	3.96	4.00	0.871		
<b>Subject</b>	Learn	4.62	5.00	0.596	54097	< .001
	Travel	4.17	4.00	0.863		
<b>Adaptability in time</b>	Learn	4.14	4.00	0.586	74485	0.589
	Travel	4.05	4.00	0.899		
<b>Connected with Typical Education</b>	Learn	4.10	4.00	0.709	64066	< .001
	Travel	3.80	4.00	1024		
<b>Accreditation Possibilities</b>	Learn	4.55	5.00	0.748	51256	< .001
	Travel	3.94	4.00	1072		

At the end, respondents express their perceptions about Cyprus and Crete as destinations of educational tourism. According to them, the factors that should be exploited for the promotion of Crete / Cyprus as educational tourism destination are in descending order: Gastronomy/ Enotourism (mean 4.62), Natural Environment (4.54), History/Archaeology (4.53), Tradition/ Customs (4.38), Combination of educational activity with tourist packages (4.28), Linkage with educational institutions in each destination (4.22), Religious Heritage (4.03), Architecture (3.40). Concerning the obstacles for Crete / Cyprus in developing educational tourism, respondents indicated the following factors in descending order: Difficulties in organizing educational tourism (61,62%), Lack of knowledge from stakeholders (53,58%), Lack of demand for this form of tourism (48,89%), Lack of funding (36,06%), Lack of attractive/identifiable points of interest (13,94%). Finally, the vast majority of participants (80,75%) declare that they would like to participate in future educational tourism activities with trips to Crete and Cyprus, while 17,92% is not sure.

## 5. CONCLUSIONS

The present study explores the broader perspectives of young consumers' attitudes in Greece and Cyprus regarding educational tourism. The main conclusions of the empirical findings, answer to the research questions. For the first research objective (measurement of consumers' level of interest for educational tourism), the main findings are summarized as follows: Firstly, there is still a moderate level of consumers' awareness/ knowledge towards educational tourism. Secondly, the majority of young people in two countries have already experience at least one type of educational tourism activity and they express high satisfaction for this past experience. Thirdly, one out of three respondents declare “travelling” and not “learning” as a main motivation of his/her

participation in educational tourism activities. Fourthly, there is a high intention for participation in future educational tourism activities.

The second research question concerned the investigation of the factors that affect consumers' overall attitude and preferences towards educational tourism services. Findings confirm the existing literature concerning the perceived benefits of an educational tourism program, with participants to declare that except for skills development / knowledge acquisition, their secondary motivations/ benefits associated with an educational tourism activity are personal development, entertainment and contacting with nature/ culture of the destination. For them, the most preferred characteristics of a destination hosting educational activities are natural beauty, history/ heritage and local activities/events. The results also show that for consumers the most important characteristics of an educational tourism product are the cost, the educational subject/ topic, the duration of the program and a possible accreditation after program's accomplishment.

An interesting finding of this study is the strong variation in responses based on demographic or behavioural variables. For example, the results demonstrate strong differences between Greek and Cypriot participants. This fact, which is unexpected because of the historical, social-economic and cultural similarities of Greeks and (Greek) Cypriots, leads to important extensions both for future academic research and for the managerial implication of the present study.

The findings are considered to be useful to policy makers, marketers and stakeholders in educational tourism sector in Greece and Cyprus. Young people in both countries seem to have a high readiness to participate in new, attractive educational tourism services. In order to exploit this market, relative organizations (universities, vocational training organizations, DMOs, travel agencies, etc.) should accelerate the development of high-value educational tourism programs. The findings of this research indicate some important points that educational tourism providers should take under consideration during the development of such programs: the main educational program should have a proper duration and lead to accreditation or be connected to typical education, there is a need for supplementary activities related with the destination's nature / culture, the enjoyment is also a desired benefit for young educational tourists, the creation of educational routes can enhance the provided product, etc. Furthermore, because of the different attitudes in several educational tourist aspects among Greek and (Greek) Cypriots that are recorded in this study, it is proposed for stakeholders to thoroughly study the preferences of the selected (national) target groups and design tailor-made programmes that meet the requirements of each target group to the maximum extent possible.

Despite its contribution, the present study has a number of limitations. A future research could include older participants, in order to capture the preferences of people who have long since complete their typical education studies. Additionally, a qualitative research could be applied, which would reveal further and in-depth information on the opinions, the attitudes and the beliefs of young consumers towards educational tourism.

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## References:

- Bento, J. (2014). The Determinants of International Academic Tourism Demand in Europe. *Tourism Economics*, 3(20), 611-628. <https://doi.org/10.5367/te.2013.0293>
- Castillo Arredondo, M.I., Rodríguez Zapatero, M.I., Pérez Naranjo, L.M. and López-Guzmán, T. (2018), "Motivations of Educational Tourists in Non-English-Speaking Countries: The Role of Languages", *Journal of Travel & Tourism Marketing*, Vol. 35 No. 4, pp. 437-448, doi: 10.1080/10548408.2017.1358238
- Culubret, C., González, A., Iglesias, M., Moreno, S., Roigé, V. (2022). Academic Tourism in Barcelona (Spain) In the Covid-19 Era. *REGION*, 2(9), 45-66. <https://doi.org/10.18335/region.v9i2.410>
- King, B., McKercher, B., Waryszak, R. (2003). A Comparative Study of Hospitality and Tourism Graduates in Australia and Hong Kong. *Int. J. Tourism Res.*, 6(5), 409-420. <https://doi.org/10.1002/jtr.447>
- Llewellyn-Smith, C., McCabe, V. (2008). What Is the Attraction for Exchange Students: The Host Destination or Host University? Empirical Evidence from a Study of an Australian University. *Int. J. Tourism Res.*, 6(10), 593-607. <https://doi.org/10.1002/jtr.692>
- McGladdery, C.A. and Lubbe, B.A. (2017), "Rethinking educational tourism: proposing a new model and future directions", *Tourism Review*, Vol. 72 No. 3, pp. 319-329. <https://doi.org/10.1108/TR-03-2017-0055>

- Quintal, V., Polczynski, A. (2010). Factors Influencing Tourists' Revisit Intentions. *Asia Pacific Journal of Marketing and Logistics*, 4(22), 554-578. <https://doi.org/10.1108/13555851011090565>
- Ritchie, B.W. (2003), *Managing Educational Tourism*, Channel View Publications, Clevedon.
- Shu, M., Scott, N. (2014). Influence of Social Media On Chinese Students' Choice of an Overseas Study Destination: An Information Adoption Model Perspective. *Journal of Travel & Tourism Marketing*, 2(31), 286-302. <https://doi.org/10.1080/10548408.2014.873318>
- Thoo, A., Lim, M., Huam, H., Sulaiman, Z. (2022). Increasing Destination Loyalty of International Students Towards Malaysian Higher Educational Institutions. *IJERE*, 1(11), 31. <https://doi.org/10.11591/ijere.v1i11.21619>
- Tomasi, S., Paviotti, G., Cavicchi, A. (2020). Educational Tourism and Local Development: The Role of Universities. *Sustainability*, 17(12), 6766. <https://doi.org/10.3390/su12176766>
- Wang, Y., Chu, C., Lan, T. (2022). Sentiment Classification of Educational Tourism Reviews Based On Parallel Cnn and Lstm with Attention Mechanism. *Mobile Information Systems*, (2022), 1-13. <https://doi.org/10.1155/2022/6177427>
- Xu, J. and Ho, P.S.Y. (2021), "Whether educational tourism can help destination marketing? An investigation of college students' study tour experiences, destination associations and revisit intentions", *Tourism Recreation Research*, doi: 10.1080/02508281.2021.1972723

## **Exploring the image, perceived authenticity and perceived value of Underground Built Heritage (UBH) and its role in motivation to visit: a case study of five different countries**

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**Abstract.** Underground Built Heritage (UBH) is a unique cultural resource, which attracts the attention of many scholars coming from the field of conservation, tourism, economy, IT, and many others. As defined by the COST Action Underground4value, typologies of UBH sites include natural and anthropic caves, underground burial/rites structures, mines and quarries, other human-made caves for exploitation and dwelling, underground infrastructures (cisterns, ancient drainage systems, tunnels, etc.), and ancient buried structures and settlements. As such, they represent very attractive cultural and tourism recourse, not only for foreign visitors but also for the local community and domestic visitors. Additionally, such sites are often located in the cities or their near surrounding, which makes them accessible and suitable for daily visits. The current literature on UBH mainly focuses on sustainability and conservation issues of these sites, their classification and definitions, while studies focusing on the tourism issues, motivation to visit and perception of their image are quite rare. Thus, the principal aim of the paper is to explore how heritage image, perceived authenticity and perceived value affect motivation to visit UHS (Underground Heritage Sites) and visitors' loyalty. To explore this aim, the survey was conducted in five countries (Albania, Bulgaria, Serbia, Poland, and Turkey) on five different underground heritage sites. The study sample included 504 domestic visitors (residents of the country where the research was conducted) of underground heritage sites - Bunkers (Albania), St. Sofia Basilica (Bulgaria), Petrovaradian Fortress Military Galleries (Serbia), Goreme (Turkey), and the Srebrna Góra Fortress (Poland). The results show significant positive influence of heritage image and perceived authenticity (objective and constructive authenticity) on motivation to visit UBH sites as well as on loyalty. Interestingly, perceived value has shown no influence on motivation to visit and loyalty except for social value which had significant positive effect. Differences between countries as well as implication of results are discussed in the paper.

**Keywords:** Underground Built Heritage; cultural tourism; heritage image; authenticity; perceived value; motivation to visit

## Conceptualization of entrepreneurship development in wine tourism activities

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Wine tourism has been developing rapidly in recent years in many wine-producing regions of the world and is a complex economic activity in constant evolution and in a continuous process of incorporating innovation, as it combines and includes three sectors: agriculture (agricultural activity and the cultivation of the vine), industry (the process of transforming the grape into wine) and services (because the activity has spread to tourism) (Trigo and Silva, 2022). The distinction between a simple visit to a winery and a wine tourism activity lies in the existence or otherwise of a desire to taste a wine or a dish from a region, which is the motivation for the trip. In fact, this need must be the primary motivation for making the trip in order to be classified as a wine tourist (Novelli, 2005).

Another typology of wine tourism emerges if the type of tourist or market segment is taken into account as a criterion (Rath and Han 2018): First, domestic wine tourism: This type of wine tourism involves residents of a particular country visiting local wineries and vineyards. Second, international wine tourism: this type of wine tourism involves tourists travelling to another country specifically to visit wineries and vineyards. Third, recreational wine tourism: This type of wine tourism takes place for leisure and recreational purposes. Fourth, Business wine tourism: this type of wine tourism is carried out for business purposes, such as attending industry conferences and trade fairs.

The following services offered by wineries, either individually or in combination are prominent in the literature.

1. Vineyard and Winery Tours: Visitors can take vineyard and winery tours to learn about the grape growing and winemaking process, as well as taste and purchase wine (Rath and Han 2018).
2. Wine Tastings: Visitors can participate in wine tastings to sample a variety of wines, often with the guidance of a wine expert or sommelier (Li, Wang, and Li 2020).
3. Grape picking and winemaking experiences: Tourists can participate in grape picking and winemaking experiences, often during the harvest season, to gain hands-on experience in the winemaking process (Li, Wang, and Li 2020).
4. Wine-related events: Tourists can attend wine-related events such as wine festivals, tastings and competitions (Rath and Han 2018).
5. Cultural and historical experiences: Tourists can learn about the cultural and historical aspects of winemaking by visiting historic wineries or learning about traditional winemaking practices in a particular region (Li, Wang, and Li 2020).
6. Food and wine pairing: Tourists can participate in food and wine pairing experiences, where they can learn how to pair different types of wine with different foods to enhance the overall dining experience (Li, Wang, and Li 2020).
7. Accommodation: Some wineries and vineyards offer accommodation facilities such as bed and breakfasts, holiday rentals or campsites to allow tourists to fully immerse themselves in the wine tourism experience (Rath and Han 2018).

According to Bell (2013), an entrepreneur is "never being in a state of doing nothing". Initially, wine producers to make the decision to embark on such an entrepreneurial venture choose a business model that focuses mainly on passion before profit, combining their lifestyle and interests with the ability to sustain a business (Presenza et al., 2016). Most entrepreneurs involved in the wine industry have a high level of education. This fact proves that the profile of professionals involved in the wine business has a particularly high level of education (Stavrinoudis, 2008). Brouder and O'Reilly (2015) found that entrepreneurs in the wine tourism industry were characterized by high levels of foresight and innovation, which were positively related to business performance. Similarly, a study by Carter and Shaw (2008) found that entrepreneurs in the wine tourism industry were

characterized by high levels of risk-taking and self-efficacy, which were also positively related to business performance.

Thus, the profile of winemakers may vary depending on the size and type of winery or vineyard, as well as the region and country in which it is located. However, some common characteristics of winemakers include:

1. Passion for wine: Many winemakers have a deep passion and appreciation for wine and often have a strong knowledge and understanding of the winemaking process and the various grape varieties (Rath and Han 2018).
2. Education and training: Many winemakers have formal education and training in winemaking, viticulture, or a related field, such as oenology, which is the study of wine and winemaking (Li, Wang, and Li 2020).
3. Entrepreneurship: Winemakers are often entrepreneurial as they are often involved in the operation and management of a business, from vineyard management to marketing and sales (Rath and Han 2018).
4. Flexibility and adaptability: Winemakers need to be flexible and adaptable, as they often need to make quick decisions and adapt to changing weather conditions, market conditions and other factors that can affect the grape growing and winemaking process (Li, Wang and Li 2020).
5. Attention to detail: Winemakers must pay attention to detail, as the winemaking process involves many small but important steps that can affect the final quality of the wine (Li, Wang, and Li 2020).
6. Physical labor: Winemakers often perform physical labor, such as working in the vineyard, harvesting grapes, and operating winery equipment (Rath and Han 2018).

As in most business sectors, networking is very important in the wine sector. Wine networks refer to the connections and relationships that exist between different actors in the wine industry, such as wineries, wine distributors, wine retailers, and wine consumers (Bartolini, Cagliano, & Caniato, 2017). These networks can take many forms, including formal organizations, informal associations, and online communities. Informal wine networks can also play an important role in the industry, such as the informal relationships that exist between wineries, wine retailers, and consumers (Pawlak, 2018). These relationships can be formed through personal connections, shared interests and participation in wine-related events.

Business networking in wine tourism refers to the process of building relationships with other professionals in the wine industry (Pawlak, 2018). Networking can be done through in-person events, such as wine tastings and trade shows, or online through social networking platforms such as LinkedIn and Twitter (Pawlak, 2018). An example of a successful wine industry networking event is the annual Wine Industry Networking Conference (WINCONF), which brings together wine industry professionals from around the world to network, share knowledge, and do business (Wine Industry Networking Conference, n.d.). Social media platforms also play an important role in wine tourism, as they can be used to promote wineries, share information about wine-related events, and connect wine lovers with industry professionals (Bartolini, C., Cagliano, R., & Caniato, F., 2017). Overall, networking and social media are key tools for building relationships and promoting businesses in the wine tourism industry (Pawlak, 2018).

The theory applied in this research is the Resource-based-view (RBV), because it is an integrated model in the context of entrepreneurship, as it focuses attention on the internal resources of a firm by including a wide range of characteristics and capabilities where it is possible to control and improve efficiency and effectiveness (Barney, 2001). In the context of wine tourism, the resources and capabilities of a winery, such as unique vineyards, a reputation for high quality wine and expertise in production and tastings, can be leveraged to attract and retain tourists (Rath, N. et al. 2018; Li, X. et al. 2020). Furthermore, the reputation and brand of a winery can also be a valuable resource, as tourists may be willing to pay more to visit an established winery with a strong brand image (Verganti, R. 2009; Li, X. et al. 2020). Contributions adopting the RBV of the firm in the literature on wine entrepreneurship are very limited and thus enriched with EntreComp framework for a more comprehensive approach to entrepreneurship in the wine tourism industry. According to Hashim et al (2018), the literature review of entrepreneurial competencies shows that the majority of empirical studies confirmed their significant influence on firm performance. Moreover, the resource-based view (RBV) theorists observed that entrepreneurial competencies are critical resources of firms that are also extremely useful. Based on RBV, business competencies are considered a valuable resource that enhances firm performance and gains sustainable competitive advantage (Tehseen & Ramayah, 2015; Sanchez, 2012).

The resource-based view (RBV) theory, as proposed by Wernerfelt (1984) and later developed by Barney (1991) suggests that a firm's resources and capabilities can be a source of sustainable competitive advantage. In the context of wine tourism, a winery's resources and capabilities, such as unique vineyards, a reputation for high-quality wine, and expertise in production and tastings, can be leveraged to attract and retain tourists (Rath, N. et al. 2018; Li, X. et al. 2020). For example, a winery with a history of producing award-winning wines may be able to charge a premium for tastings and tours, while a winery with a scenic vineyard location may attract more visitors for tours and events (Rath, N. et al. 2018). In addition, a winery's reputation and brand can also be a valuable resource, as tourists may be willing to pay more to visit an established winery with a strong brand image (Verganti, R. 2009; Li, X. et al. 2020).

According to Hashim et al (2018), the literature review of entrepreneurial competencies shows that the majority of empirical studies, which examine entrepreneurial competencies as a holistic approach, confirmed their

significant influence on firm performance. All these studies confirmed the significant relationship between entrepreneurial competencies and firm performance. Moreover, the resource-based view (RBV) theorists observed that entrepreneurial competencies are critical resources of firms that are also highly useful. Based on RBV, business competencies are considered a valuable resource that enhances firm performance and gains sustainable competitive advantage (Tehseen & Ramayah, 2015; Sanchez, 2012).

According to Tehseen & Ramayah (2015), RBV theorists have observed that the entrepreneur's skills are a key resource of firms that is also valuable. The valuable skills, knowledge and abilities of an entrepreneur can lead to sustainable competitive advantage for the firm because entrepreneurial competencies are usually very scarce and it is difficult for competitors to develop all the core competencies. Only competent entrepreneurs can develop and drive successful strategies towards business success. For example, the RBV theory of the firm relates the value creation process to the manager's ability to find or develop resources (Grant, 1991; Barney, 1991).

In this ongoing study, empirical research is conducted among entrepreneurs who are active in the wine industry, mainly in Greece. The duration of data collection is planned to be from eight to ten months. The questionnaire will be distributed electronically to each entrepreneur via email, in conjunction with interviews that will be conducted. Structural Equation Modeling (SEM) technique will be employed to measure the research model.

The research model on which the research is based is the combination of RBV and EntreComp, where it consists of dependent and independent variables. The dependent variable is the business performance of wine tourism activities. Based on the RBV articles on tourism in general and in wine tourism in particular, the following independent variables have been selected: Wine tourism entrepreneurs networking (Stavrinoudis et al., 2012), Wine tourism firm's performance (Stavrinoudis et al., 2012), Entrepreneurial business network (EBN) (Abbas, J., et al. (2019), Networks, Synergies and Collective Action in the Development of Wine Tourism (Kyriakaki, A., Trihas, N., & Sarantakou, E., 2019). Also, several independent variables included in the research are Innovation Capability, Organizational Agility (Wanasida, A., et al. (2021), Strategic Agility (Tallon and Pinsonneault (2011) and Kale et al. (2019), Vrontis D. et al. (2023)), Entrepreneurial Orientation (Boso et al, 2013), Social Capital (Faccin, K., Genari, D., & Macke, J., 2017), Competence Areas of EntreComp (Ideas and Opportunities, Resources, Into Action, Specific Knowledge) (Bacigalupo et al., 2016, Armuña et al., 2020). All the above variables will be included in the in order to draw appropriate conclusions for the research.

This work in progress is expected through the analysis and discussion of the results of the questionnaires to contribute to the theory in the field and to provide useful practical implications to wine producers by illustrating the factors that play an important role in entrepreneurship and networking in the wine industry and the effects of wine tourism.

## References

- Abbas, J., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The impact of entrepreneurial business networks on firms' performance through a mediating role of dynamic capabilities. *Sustainability*, 11(11), 3006.
- Armuña, C.; Ramos, S.; Juan, J.; Feijóo, C.; Arenal, A. From stand-up to start-up: Exploring entrepreneurship competences and STEM women's intention. *Int. Entrep. Manag. J.* 2020, 16, 69–92.
- Bacigalupo, M.; Kamylyis, P.; McCallum, E.; Punie, Y. Promoting the Entrepreneurship Competence of Young Adults in Europe: Towards a Self-Assessment Tool. In *Proceedings of the ICERI, Sevilla, Spain, 14–16 November 2016*.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Bartolini, C., Cagliano, R., & Caniato, F. (2017). Social media marketing in the wine industry: A case study of wineries in Napa Valley. *Journal of Wine Research*, 28(1), 3-19.
- Bell, S. J. (2013). The Librarian Entrepreneur? Demystifying an Oxymoron. *Against the Grain*, 21(4), pp. 18-20.
- Boso, N., Story, V. M., & Cadogan, J. W. (2013). Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy. *Journal of Business Venturing*, 28(6), 708–727. <https://doi.org/10.1016/j.jbusvent.2013.04.001>
- Brouder, P., & O'Reilly, N. (2015). Entrepreneurial personality and business performance: A study of the Irish wine industry. *Journal of Small Business and Enterprise Development*, 22(3), 464-478.
- Carter, S., & Shaw, E. (2008). *Entrepreneurial characteristics and success in the UK wine industry. International Journal of Wine Business Research*, 20(2), 99-114.
- [Hashim, N. A. B., Raza, S., & Minai, M. S. \(2018\). Relationship between entrepreneurial competencies and small firm performance: are dynamic capabilities the missing link? 17\(2\).](#)
- [Kale, E., Aknar, A., & Başar, Ö. \(2019\). Absorptive capacity and firm performance: The mediating role of strategic agility. International Journal of Hospitality Management, 78, 276-283.](#)



- [Kyriakaki, A., Trihas, N., & Sarantakou, E. \(2019\). The role of networks, synergies and collective action in the development of wine tourism: The case of 'Wines of Crete'. \*Wine Tourism Destination Management and Marketing: Theory and Cases\*, 551-569.](#)
- [Li, J., Wang, D., Wang, D., & Li, X. \(2020\). Government support and wine tourism development: Evidence from Napa Valley. \*Tourism Management\*, 74, 1-9.](#)
- [Faccin, K., Genari, D., & Macke, J. \(2017\). Interorganisational social capital and innovation: a multiple case study in wine producers networks in Serra Gaúcha. \*RAI Revista de Administração e Inovação\*, 14\(1\), 52-66.](#)
- Novelli Marina (2005), *Niche Tourism. Contemporary Issues, Trends and Cases*, Elsevier.
- Pritchard Annette, Ateljevic Irena (2011), *Hopeful Tourism. A New Transformative Perspective*, *Annals of Tourism Research*, vol. 38, 941-963.
- Pawlak, J. (2018). Networking and the wine industry. *Journal of Wine Research*, 29(2), 119-127.
- Presenza, A., Abbate, T., Meleddu, M., & Cesaroni, F. (2017). Small-and medium-scale Italian winemaking companies facing the open innovation challenge. *International Small Business Journal*, 35(3), 327-348.
- Rath, N., & Han, C. (2018). Wine tourism: A review of the literature. *Journal of Travel Research*, 57(6), 735-751.
- Stavrinoudis, T. (2008). Applying SWOT analysis methodology in the formulation of propositions aiming at a more effective operational application of timeshare in Greece. *tourismos*, 3(2), 113-138.
- Stavrinoudis, T. A., Tsartas, P., & Chatzidakis, G. (2012). Study of the major supply factors and business choices affecting the growth rate of wine tourism in Greece. *Current Issues in Tourism*, 15(7), 627-647. <https://doi.org/10.1080/13683500.2011.630457>
- Tallon, P. P., & Pinsonneault, A. (2011). Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. *Mis Quarterly*, pp. 463-486
- Tehseen, S. & Ramayah, T. (2015). Entrepreneurial competencies and SMEs business success: The contingent role of external integration. *Mediterranean Journal of Social Sciences*, 6(1), 50.
- Trigo, A., & Silva, P. (2022). Sustainable development directions for wine tourism in Douro wine region, Portugal. *Sustainability*, 14(7), 3949.
- Verganti, R. (2009). *Design-driven innovation: Changing the rules of competition by radically innovating what things mean*. Harvard Business Press.
- Vrontis, D., Belas, J., Thrassou, A., Santoro, G., & Christofi, M. (2023). Strategic agility, openness and performance: a mixed method comparative analysis of firms operating in developed and emerging markets. *Review of managerial science*, 17(4), 1365-1398.
- Wanasida, A. S., Bernarto, I., Sudibjo, N., & Purwanto, A. (2021). The role of business capabilities in supporting organization agility and performance during the COVID-19 pandemic: An empirical study in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 897-911.
- Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, pp. 171-180

## Tourism politics or tourism geopolitics? Demarcating two similar-sounding research fields

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### Abstract

The exceptional growth of tourism has converted it to a significant economic sector, reflecting characteristics of antagonisms on various levels, such as economic dependence and power projection. The present paper is a first attempt to approach the research differences between two research fields, which are not distinct enough yet. Moreover, the authors attempt a contribution to the delimitation of the research subject Geopolitics of Tourism, in the light of the classical geopolitical view. Firstly (Section 1), the role of the state in tourism policy will be briefly reviewed, before presenting (Section. 2 & 3), comparatively the two research fields under discussion and (Section 4) the authors' approach. Finally (Section 5) it will be shown how the methodological framework of Systemic Geopolitical Analysis can contribute to approach tourism as a geopolitical factor of power redistribution.

### Keywords

*geopolitics of tourism, tourism politics, national tourism policy, dependency theory, systemic geopolitical analysis*

### 1. The role of the state in tourism

Already at the beginning of the 1980s Marie-Francoise Lanfant noted the difficulty of defining the role of the state in tourism, pointing out that tourism should not be regarded as a system of action that can operate autonomously, independently of the established political power, since states have the task of defining tourism policy in the light of national objectives, but also because they assume an increasingly important role in matters of promotion, coordination, planning and financial support. In this sense the tourism industry and the state should not be considered in opposition to each other, thus it would be difficult to draw a dividing line between the private and public sectors, since reciprocal interpenetration occurred.<sup>29</sup>

Even though the private sector, whose goal was profit, and public sector, whose goal was national wealth, have joint powers, she notes the difficulty in pinpointing the state's role in tourism, because of the harmonization of management, planning and promotion methods and tourism policies tend to disappear even between ideologically different countries.<sup>30</sup>

In the 1980's, the role of multinational tourism corporations became stronger, due to: a. their progressing international connection, b. their dual position, attuned to both demand and supply, thus being able to control and regulate decision-making parameters in both originating and receiving societies, c. their monopoly position, resulting from the implementation of concentration and integration strategies, and d. the altogether occupation of special places within a particular mode of production.<sup>31</sup>

According to C. M.Hall and J. Jenkins this autonomy process of tourism companies and the form of government intervention in tourism is not a constant but it is affected by changing political ideologies. The tendency to

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<sup>29</sup> Lanfant, Marie-Francoise, (1980). Introduction: tourism in the process of internalization. In *The Anatomy of Tourism. International Social Science Journal*, UNESCO, p. 25

<sup>30</sup> Ibid., pp. 25-26

<sup>31</sup> Ibid., p. 23

privatize and commercialize functions that were once performed by governments which has been almost universal in Western nations since the late 1970s has substantially affected the nature of many national governments' involvement in the tourism industry. They identified three principal economic reasons for this trend: "governments are interested in reducing the dependency of public enterprises on public budgets, in reducing public debt by selling state assets, and in raising technical efficiencies by commercialization." In this context, the role of governments in tourism has undergone a dramatic shift from a traditional of public administration model which sought to implement government policy for a perceived public good, to a corporatist model (in the sense of a dominant ideology in Western society that claims rationality as its central attribute and which emphasizes the concept of individualism in terms of self-interest rather than the legitimacy of the individual citizen acting in the democratic interest of the public good), a model that emphasizes efficiency, investment returns, the role of the market and the relations with stakeholders, usually defined as industry. However, in many areas of politics, including tourism, the changing role of the state and the changing individual-state relationship have led to major policy dilemmas: On the one hand, the demand for less government intervention in the market, which would allow industries to develop and operate without government subsidy or assistance, while, on the other hand, industry interest groups sought to influence government policies in their favor, including maintaining government funding for promotion and development. This policy issue has generally been resolved through the restructuring of national and regional tourism organizations to (a) reduce their planning, policy and development roles and increase their marketing and promotion functions and (b) engage in a greater range of partnerships, networks, and collaborative relationships with stakeholders.<sup>32</sup>

Even within this very rapid process of internationalization of Tourism, Tsartas et al. include *National Tourism Policies* among the factors that have contributed to its rapid growth and its transformation into one of the main drivers of global development in the last twenty years: a. international organizations related to development, b. National tourism policies c. Private sector tourism companies (airline reservation systems, hotel businesses, tour operators), d. The social and professional interest groups in the tourist areas or countries, and e. Social and political interest groups especially in developing or geographically isolated areas.<sup>33</sup>

Regarding point b. Hall and Jenkins define *public tourism policy* as anything that governments choose to do or not do in relation to tourism. Despite growing skepticism about the effectiveness of central governments' tourism policies, they note that market failures indicate several areas in need of state regulatory intervention, including: a. improving economic competitiveness, b. amending property rights, c. enabling state decision-makers to take account of externalities, d. providing widely available public benefits, d. reducing risk and uncertainty, e. supporting projects with high capital costs and involving new technologies, and f. educating and providing information<sup>34</sup>.

An additional aspect, which justifies state intervention, is the observed cases of monopoly or oligopoly situations. Greek tourism for example, in addition to international competition from other tourist destinations, has been facing, since the beginning of the 2000s, oligopolistic and even monopolistic situations, which direct mass tourist flows. There is certainly also a trend of a small but expanding segment of the international market, which seeks independent transportation to selected destinations avoiding mass tourism and looking for alternative possibilities.<sup>35</sup>

Finally, the role of the bodies of local political power, such as municipalities and regions, in the developing process should be considered, strengthened especially in developed countries after the WWII, on the one hand due to the extremely complex effects of the tourism development on the local economic and social structure, and, on the other hand due to its increasingly international character. The factors that shape, on a long-term basis, the decision-making process on critical issues by the local authorities are the influence of the central political authority combined with the pressures to promote development processes at the local level.<sup>36</sup>

Despite the recorded elaboration of strategic tourism development plans at supra-state (e.g. state conglomerations), state and sub-state (e.g. regions and municipalities) scales, which apparently reflect their will

<sup>32</sup> C. Michael Hall and John Jenkins (2004). *Tourism and Public Policy*, p. 528

<sup>33</sup> *Ibid.* pp. 57-65

<sup>34</sup> John M. Jenkins et al., (2004). *Tourism and Public Policy*, pp. 527 - 528

<sup>35</sup> Tsartas, Paris & Lagos, Dimitrios. (2001). Greek tourism policy and international evolutions.

<sup>36</sup> Τσάρτας et al. (2020) *Τουρίστες, Ταξίδια, Τόποι*, p. 129

to control or even co-shape the tourism process to their advantage, the continuous internationalization of tourism, but also the internationalization of tourism policy, combined with the decisive importance that private tourism companies acquire in the formation of the tourist product, are the factors that, intertwining, decisively influence the course of tourism development. In this context, Chartas et al. especially consider that the importance of *national tourism policies* is decreasing in favor of dynamic interest groups influencing tourism development, as well as that critical questions and dilemmas arise regarding the controllability and feasibility of choosing tourism as a development sector by countries or regions that have competitive tourism resources.<sup>37</sup>

The need for a coordination among states and private sector is also being recognized also by the OECD, underlining a practical challenge, that is to ensure that developments in local tourism destinations align with the policies set in place at national level<sup>38</sup>, while the leadership role that governments are playing is to optimize the potential benefits, and mitigate the associated costs.<sup>39</sup>

## 2. Tourism policy

Lagos defines *tourism policy* as a specialized branch, whose research object is the selection of the appropriate mix of means and measures to be implemented by the public administration bodies, which have the responsibility of the proper functioning of the tourist market<sup>40</sup>. In the same direction, Velasco defines *tourism policy* as a set of discourses, decisions, and practices driven by governments, sometimes in collaboration with private or social actors, with the intention to achieve diverse objectives related to tourism.<sup>41</sup> She also defines 5 tourism policy objectives: a. to pursue tourism growth or remain competitive, in the case of mature destinations, b. the idea of planning, a process to achieve a better spatial distribution of tourism activities, promoting the use of untapped resources, or improving local participation in decision-making process related to sustainable strategies, c. to provide a safe, satisfying, and fulfilling experience for visitors, d. the need for coordination appears to be a central need due to the transversal nature of the issue, and e. investment in research and production of knowledge and ideas and creation of tools that enable innovation and improvement spread.<sup>42</sup>

From the above, but also from the tourism literature, Velasco's approach can be considered as representative, namely that the analysis of tourism policy could be conducted from an economic perspective, even though other perspectives should be considered when governments face designing tourism policy: they must also consider culture, environment, and social dynamics. In this sense it may be helpful and necessary to consider the issue from the perspective of the dispute between interests which have different power, ideologies, and values.<sup>43</sup>

Adding to the above the OECD perspective, namely that governments have adopted a variety of approaches to ensure that the sector is successfully developed, promoted, and regulated,<sup>44</sup> all the above lead to the conclusion that the usual research perception of *tourism policy* is linked mainly to the operation of the tourist market and management, in terms of an economic process aiming at private economic profit and satisfaction of individual needs.

## 3. Tourism Geopolitics

What must be at this point emphasized, is that the above forementioned focused on economy approach ignores accompanying phenomena, such as:

- a. the connection of tourism with international trade<sup>45</sup>,

<sup>37</sup> Τσάρτας et al. (2020) *Τουρίστες, Ταξίδια, Τόποι*, pp. 131 - 132

<sup>38</sup> <https://www.oecd-ilibrary.org/sites/555d8101-en/index.html?itemId=/content/component/555d8101-en#section-d1e5880>

<sup>39</sup> <https://www.oecd-ilibrary.org/sites/555d8101-en/index.html?itemId=/content/component/555d8101-en#section-d1e6624>

<sup>40</sup> Λαγός Γ. Δημήτρης (2018). *Τουριστική Οικονομική*, p. 30

<sup>41</sup> Velasco, M. (2016). *Tourism Policy*.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> <https://www.oecd-ilibrary.org/sites/555d8101-en/index.html?itemId=/content/component/555d8101-en#section-d1e5880>

<sup>45</sup> Λαγός Γ. Δημήτρης (2018). *Τουριστική Οικονομική*. pp. 98-99. According to D. Lagos, the differences between international trade and tourism are: a. the fact that the goal and direction of transfer of international exchanges of tourism goods and services are diametrically opposed to those of other goods in international

- b. the potential to exercise soft power through tourism<sup>46</sup>,
- c. the exercise of hard power by instrumentalizing tourism, through projection of economic power,
- d. the national protective policies, exercised either by state or private entities connected to the state or state policies or private companies, to serve national economic and political goals,
- e. the control of tourism supply and demand by powerful geopolitical players<sup>47</sup>,
- f. the role of tourism in maintaining peace<sup>48</sup>, but also peace and political stability as essential prerequisites for the development of the tourism sector.
- g. the security issues that arise for the protection of visitors,<sup>49</sup>
- and h. the research work on the role of tourism, generated by political scientists.

Regarding the last point, it is to say that the exaggeration of the tourist industry in the last decades has led the engagement of political science with tourism, offering some very stimulating approaches to the role of tourism in international relations, as well as to the political, economic, and social implications of tourism in host countries. Political scientists focused primarily on:

- a. the importance of tourism and tourism development as a kind of ideological political stake at local, national, and international level. Of particular importance is the role of tourism as an income source for the state or a region, but also the ideological and social importance attributed to its development or to the prohibitions that some countries have imposed on the free movement of tourists.
- b. the exploitation of tourism either as a means of strengthening national identity or as a means of projecting national sovereignty, or finally as a dynamic vehicle for political socialization at national level. Even though a large part of these analyses comes from developing countries, an interesting correlation between the political, social and economic levels of tourism development processes emerged.
- c. the question of the political and cultural dependence of developing countries on developed countries, which have political and economic power in international tourism and can thus play a key role in global tourism development. The continuous internationalization of tourism in recent years and the involvement in the processes of tourism development of many developing countries, have strengthened the importance of similar analyses in the field of tourism.<sup>50</sup>

Firstly, the term *geopolitics of tourism* must be related to the more general epistemological research object of Geopolitics, within which two dominant trends can be generally distinguished: a. Classical Geopolitics, which can be minimally defined as a geographical tool for analyzing (by considering anthropogeographical physical geographical elements) the redistribution of power,<sup>51</sup> and b. Critical Geopolitics, that emphasizes largely on

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trade, and b. that international tourism is only import or respectively export of goods and services and is carried out mainly by households. Ibid., p. 98

<sup>46</sup> On *Tourism and Soft Power*, see: Neal Rosendorf (2014). *Franco Sells Spain to America: Hollywood, Tourism and Public Relations as Postwar Spanish Soft Power*. Palgrave Macmillan; Ricci, Alessandro (2021). Tourism as a geopolitical weapon: case from Saudi Arabia. *Academia Letters* ; Tony S.M. Tse (2013). Chinese Outbound Tourism as a Form of Diplomacy, *Tourism Planning & Development*, 10:2, 149-158, DOI: 10.1080/21568316.2013.783738; Ozkan, B. I., & Boylu, Y. (2021). A Study on the Use of Tourism as a Soft Power Instrument in International Relations. *Journal of Tourismology*, 7(1), 73-99. <https://doi.org/10.26650/jot.2021.7.1.0004>

<sup>47</sup> Lanfant, Marie-Francoise, (1980). Introduction: tourism in the process of internalization, p. 25

<sup>48</sup> Levy, S. E., & Hawkins, D. E. (2009). Peace Through Tourism: Commerce Based Principles and Practices.

<sup>49</sup> Chien-Chiang Lee et al. (2021). p. 35

<sup>50</sup> Τσάρτας Πάρις et al. (2020). Ταξίδια, Τόποι. Κοινωνιολογικές προσεγγίσεις στον τουρισμό, pp. 57-65.

<sup>51</sup> Alexandros Stogiannos (2019). The Genesis of Geopolitics and Friedrich Ratzel, p. 4

semiotics, discourse analysis, and geopolitical reasonings, noting that the understanding and constituting of our social world is through the socially structured use of language.<sup>52</sup>

In this background, David B. Weaver, adopting a geopolitical mode or mode of analysis, introduced 2003 by S. Cohen, focuses on the interrelationships between space, territory, territoriality, and power<sup>53</sup> and explores the relationship between tourism and geopolitics from a sustainability perspective. While suggesting for each level the accurate indicators, Weaver investigates the geopolitical dimension of tourism at 4 levels, as follows:

**a. Super-state Focus: Global.** At this dimension the research focuses on the potential role of tourism as a factor in maintaining and promoting global and regional peace; According to Weaver, a related global agenda should include among its topics the potential role of tourism in increasing or eliminating the gap between economically developed and less developed regions and states, as well as the geographically uneven economic development, arising from deliberate policies of colonialism and corporate neo-colonialism that create and perpetuate the distinction between privileged ‘core’ and dependent ‘periphery’ regions, exacerbates geopolitical conflict. **b. Super-state Focus: Regional and Bilateral.** *This dimension focuses at regional, bilateral, and other more limited multilateral relationships, which are also implicated as geopolitical dimensions of sustainable tourism.* **c. State Focus.** *State-level deliberations include the role of domestic tourism as a unifying, nation-building or ‘centripetal’ force, and d, Sub-state Focus.* *The sub-state dimension, as considered earlier, is perhaps the most contentious from a sustainability perspective when it involves morally ambiguous attempts to secede from the parent state that are opposed by that state.*<sup>54</sup>

Azcárate et al. distance themselves from the view of Critical Geopolitics, basing precisely on the argument, that *tourism geopolitics*, as a tripartite conceptual tool, integrates the imaginaries, affects and infrastructures of tourism and politics as they occur *in place* and *across* geographical scales. It builds on academic literature from the fields of anthropology and geographies on tourism and in critical tourism studies, which highlight the relationships between tourism, space and power. However, rather than looking at these relations from an isolated theoretical standpoint - dependency theory, world system theory, or postcolonial approaches - or from a single discipline, they embrace an interdisciplinary approach to tackle the approximation and interpretation of how tourism’s imaginaries, affects, and infrastructures are mutually implicated in questions of geopolitical significance. They examine these relationships interdisciplinary in order to approach and interpret how tourism's imaginary constructions, impacts and infrastructures are mutually implicated in issues of geopolitical significance.<sup>55</sup>

Due to their point of view, *tourism geopolitics* adds to existing literature and research on both tourism and geopolitics and contributes to current efforts to bridge these two often divorced fields of study. Consequently, they outline five areas of research that offer promising frameworks from which to rethink tourism through geopolitics:

**a. Feminist and Everyday Geopolitics, b. Popular Geopolitics, c. Mobility Geopolitics, d. Environmental Geopolitics, and e. Security Geopolitics**<sup>56</sup>

#### **4. Geopolitics of Tourism: The authors research approach**

Within this generally described framework, the authors, propose a research approach basing on 3 main theoretical and methodological axes:

a. The general understanding of geopolitics as a geographical tool of analysis (using both physical geographical and human geographical data in interaction with each other) for the analysis of power redistribution<sup>57</sup>

<sup>52</sup> Córdoba Azcárate et al. (2021). Introduction, p. 5

<sup>53</sup> David B. Weaver (2010). Geopolitical Dimensions of Sustainable Tourism, pp. 35 - 48

<sup>54</sup> Ibid., pp. 48-51

<sup>55</sup> Córdoba Azcárate et al. (2021). Introduction, p.7

<sup>56</sup> Ibid., pp. 13-21

<sup>57</sup> Stogiannos, Alexandros (2019). The Genesis of Geopolitics and Friedrich Ratzel. Dismissing the Myth of the Ratzelian Geodeterminism. Springer. p.4

b. The interdisciplinary and state-centric framework of Systemic Geopolitical Analysis, the geographical method which studies, describes and predicts the behaviors and effects of the relations of opposed and distinct international political actions of redistribution of power and the ideological metaphysics that cover them, in the context of the geographical zones where these policies are applied.<sup>58</sup>

c. the Dependency Theory" or "Theory of Underdevelopment" or "World Systems Theory", which was formulated in 1980 and argues that developing countries have political, institutional and economic structures that keep them in a state of dependence on developed countries.<sup>59</sup>

On the above theoretical axes, the touristic geopolitical research is focused on following 3 main directions:



**A. The effects of geopolitical developments on tourism.** Such effects become for example evident in the case of Arab Spring in Egypt (Chart 1),<sup>60</sup> or in the case of the Greek islands (Chart 2)<sup>61</sup>, that faced illegal immigration, which peaked in 2015, when 911.471 illegal immigrants entered the country, crossing mainly (890.628) the borders with Turkey.<sup>62</sup>

**B. The acquisition of economic advantages through the exercise of protectionist or expansionist national tourism policies.** Protectionist or expansionist national tourism policies may be for instance expressed by promoting domestic tourism (Chart 3<sup>63</sup>) or in terms of controlling the money flow for benefit of the origin countries (Table 1<sup>64</sup>)

<sup>58</sup> Μάζης Ι. (2002). *Γεωπολιτική. Θεωρία και πράξη*, σ. 48, 111, 140.

<sup>59</sup> See: ts theorists attributed the causes of underdevelopment to the interactions of economic and social structures within the international system. More specifically, they argue that the lack of progress of weak states is not due to their own inadequacies, but to the fact that powerful countries seek, deliberately, to keep them in a state of underdevelopment, in order to control them. (Holden, A. (2005). *Tourism -Studies and the-Social Sciences*. Routledge, p. 112-113 and P Bianchi, R. (2014). "Towards-a-Political Economy of Global Tourism Revisited", in Sharpley, Richard-and-Telfer, David-J.-(eds.) *Tourism-and-Development: Concepts and Issues*. Channel-View-Publications, pp. 287-331).

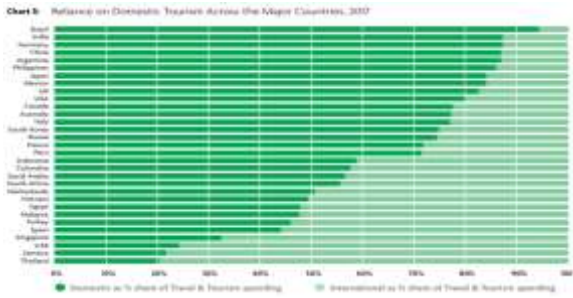
<sup>60</sup> [https://insete.gr/wp-content/uploads/2020/04/Bulletin\\_1601.pdf](https://insete.gr/wp-content/uploads/2020/04/Bulletin_1601.pdf), p. 27

<sup>61</sup> [https://insete.gr/wp-content/uploads/2020/04/Bulletin\\_1701.pdf](https://insete.gr/wp-content/uploads/2020/04/Bulletin_1701.pdf), p. 7

<sup>62</sup> <https://analyst.gr/2020/04/12/ellada-i-paranomi-metanasteysi-se-arithmous/>

<sup>63</sup> <https://wtic.org/Portals/0/Documents/Reports/2018/Domestic%20Tourism-Importance%20Economic%20Impact-Dec%2018.pdf?ver=2021-02-25-182514-683>

<sup>64</sup> Παπανίκος, Γρηγόρης (2005). *Οι Ελληνικές Τουριστικές Εισπράξεις*, p. 16



Country of origin	Average stay (days)	Payment at place of origin	Payment in Greece	Total cost of trip
G. Britain	11.2	699	472	1.171
Germany	13.7	738	343	1.081
Italy	11.7	760	420	1.180
France	10.7	791	420	1.211
USA	17.8	1.658	977	2.635
<b>Total</b>	<b>12.3</b>	<b>813</b>	<b>464</b>	<b>1.277</b>

**C. The exercise of economic and political power projection, through the external control of the tourism economy or the infrastructure of the host country.** This observation becomes for instance evident by processing passengers’ data of the Greek airports, revealing an oligopolistic situation, since almost 85% of the domestic and international passengers is being transported through airports controlled by private foreign enterprises. (Table 2 & Table 3)

	2021 <sup>65</sup>	2022 <sup>66</sup>
by ELEFThERIOS VENIZELOS & FRAPORT %	83,24	83,78
by NATIONAL AIRPORTS %	16,76	16,22

	2021	2022
by ELEFThERIOS VENIZELOS & FRAPORT %	81,68	83,97
By NATIONAL AIRPORTS %	18,32	16,03

It is to note, that in case A, tourism is considered as a receptor undergoing geopolitical developments, therefore the research question is “Which kinds of geopolitical changes and events affect tourist flows?”. In cases B and C, tourism constitutes a *geopolitical factor*<sup>67</sup> of shaping geopolitical power, in other words the research goal is to enlighten how tourism is instrumentalized aiming power redistribution.

**5. Tourism Geopolitics and Systemic Geopolitical Analysis**

Finally, it should be remarked that the interdisciplinary theoretical framework of Systemic Geopolitical Analysis (defining power as a resultant of four, ontologically distinct pillars: (1) Defense, (2) Economy, (3) Politics and (4) Culture / Information<sup>68</sup>) is highly favorable for the geopolitical analysis of tourism, a phenomenon of enormous complexity and significant economic, social, environmental, and cultural impacts, as shown briefly in table 2:

Geopolitical Pillar	Type of Power	Effect of Tourism
Defense	Hard Power	<ul style="list-style-type: none"> <li>• Control of critical national infrastructures (e.g., airports, ports) by foreign states</li> <li>• Security conditions for tourists (terrorism, organized crime)</li> </ul>
Economy	Hard Power	<ul style="list-style-type: none"> <li>• Excessive dependence of the economy on foreign tourism</li> </ul>

<sup>65</sup> <http://www.ypa.gr/profile/statistics/2021>, data processed by the authors.

<sup>66</sup> <http://www.ypa.gr/profile/statistics/2022>, data processed by the authors.

<sup>67</sup> Mazis, Ioannis., (2008): *Writing Methodology of a Geopolitical Analysis*, pp. 53-59

<sup>68</sup> Μάζης Ι.Ι (2002): *Γεωπολιτική. Θεωρία και πράξη*, pp. 48, 111, 140.



		• Control of tourist information
Politics	Soft Power	• Tourism as a means of rendering political identity (e.g., Spain) • Influence of large enterprises in decision-making, at all levels
Culture	Soft Power	• Hegemonic cultural influence

•

## 6. Conclusions and further Discussion

In the context of a comparative epistemological approach of the research fields *tourism politics* and *tourism geopolitics*, an attempt was made to highlight their different functionality within the framework of tourist studies, leading to the conclusion that *tourism politics* mainly refers to the market tourism management conditions, while *tourism geopolitics* (grounding on the classical geopolitical perception) concentrates on how the economic growth of tourism, combined with cultural, social and environmental effects, affects state power and interstate relations in almost every sector.

## 7. References

### Books

Córdoba Azcárate, M., Mostafanezhad, M. & Norum, R., (2021). Introduction. In *Tourism Geopolitics: Assemblages of Infrastructure, Affect, and Imagination*. Tucson: University of Arizona Press

Hall C. Michael and John Jenkins, (2004). *Tourism and Public Policy*. In Alan A. Lew, C. Michael Hall, Allan M. Williams (Eds.), *A Companion to Tourism*. Blackwell Publishing  
<https://doi.org/10.1002/9780470752272.ch42>

Jenkins M. John, Hall C. Michael, Mkonon Muchazondida. (2004): *Tourism and Public Policy. A Companion to Tourism*, Blackwell Publishing.

Λαγός Γ. Δημήτρης (2018). *Τουριστική Οικονομική*. 2η Έκδοση. Εκδόσεις Κριτική

Μάζης Θ. Ιωάννης (2002). *Γεωπολιτική. Θεωρία και πράξη*. ΕΛΙΑΜΕΠ & Εκδόσεις Παπαζήση, Αθήνα, 2002.

Stogiannos, Alexandros (2019). *The Genesis of Geopolitics and Friedrich Ratzel. Dismissing the Myth of the Ratzelian Geodeterminism*. Springer.

Τσάρτας Πάρις, Ζαγκότση Σμαράγδα, Κυριακάκη Άννα (2020). *Τουρίστες, Ταξίδια, Τόποι. Κοινωνιολογικές Προσεγγίσεις Στον Τουρισμό*. Εκδόσεις ΚΡΙΤΙΚΗ

Velasco, M. (2016). *Tourism Policy*. In Farazmand, A. (eds) *Global Encyclopedia of Public Administration, Public Policy, and Governance*. Springer, Cham. [https://doi.org/10.1007/978-3-319-31816-5\\_2674-1](https://doi.org/10.1007/978-3-319-31816-5_2674-1)

### Articles & Studies

Mazis, Ioannis., (2008): *Writing Methodology of a Geopolitical Analysis. Structure, Concepts and Terms*. In: DEFENSOR PACIS, May 2008 Special Issue IAA/CISS Vol.23, pp. 53-59

Levy, S. E., & Hawkins, D. E. (2009). Peace Through Tourism: Commerce Based Principles and Practices. *Journal of Business Ethics*, 89, 569–585. <http://www.jstor.org/stable/40605389>

Weaver B. David (2010). Geopolitical Dimensions of Sustainable Tourism. *TOURISM RECREATION RESEARCH*, VOL. 35(1),: 47–53, pp. 35. 48

Domestic Tourism Importance and Economic Impact December 2018). World Travel & Tourism Council (WTTC) <https://wtcc.org/Portals/0/Documents/Reports/2018/Domestic%20Tourism-Importance%20Economic%20Impact-Dec%2018.pdf?ver=2021-02-25-182514-683>

Παπανίκος Θ. Γρηγόρης (2005). *Οι Ελληνικές Τουριστικές Εισπράξεις*. Ινστιτούτο Τουριστικών Ερευνών και Προβλέψεων, Ειδικές Εκδόσεις: 5. Αθήνα

Tsartas, Paris & Lagos, Dimitrios. (2001). Greek tourism policy and international evolutions.

## **Websites**

[https://insete.gr/wp-content/uploads/2020/04/Bulletin\\_1601.pdf](https://insete.gr/wp-content/uploads/2020/04/Bulletin_1601.pdf).

[https://insete.gr/wp-content/uploads/2020/04/Bulletin\\_1609.pdf](https://insete.gr/wp-content/uploads/2020/04/Bulletin_1609.pdf).

[https://insete.gr/wp-content/uploads/2020/04/Bulletin\\_1701.pdf](https://insete.gr/wp-content/uploads/2020/04/Bulletin_1701.pdf).

<https://www.oecd-ilibrary.org/sites/555d8101-en/index.html?itemId=/content/component/555d8101-en#section-d1e5880>

<https://www.oecd-ilibrary.org/sites/555d8101-en/index.html?itemId=/content/component/555d8101-en#section-d1e6624>

# A Comprehensive Study of Empirical Literature on Airbnb Reviews

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**Abstract:** The sharing economy, particularly within the context of Airbnb, has gained significant attention from scholars who have approached it from various theoretical perspectives. Extensive literature reviews have been conducted to explore key themes and impacts associated with the Airbnb industry and the broader sharing economy. Several studies have categorized and analyzed existing research, covering topics such as conceptual development, regulation, macro-level impacts, host and guest behavior, marketing issues, and the relationship between Airbnb and hotels. The literature review also highlights the geographical distribution of research, with a focus on Europe, the USA/Canada, and selected Asian countries. Overall, these studies underscore the need for further analysis of the economic, social, and environmental effects of Airbnb, considering aspects such as consumer and host behavior, regulation, trust, and the impacts on the hotel and hospitality industry. In this paper we aim to present the latest empirical literature on Airbnb, encompassing studies that utilize reviews and we highlight the need for additional analysis of the effects on the economy, society, and environment.

**Keywords:** *Airbnb, sharing economy, empirical literature review*

## 1. Introduction

The sharing economy is a socioeconomic system in which people and organizations use online platforms to exchange resources like commodities, services, and information bringing people together and affecting the relationship among them (Daglis, 2022). Scholars and policymakers have given the sharing economy notion a lot of attention, and it has been the focus of vast academic research (Guttentag, 2019). This study tries to give an overview of the literature on sharing economy and attempts to provide insights from studies which have used Airbnb reviews.

In recent years, there has been a tremendous expansion of the sharing economy, with Airbnb becoming as one of the most widely tool used by online travel agencies (Hall *et al.*, 2022). Due to its growing popularity, it is crucial to investigate how Airbnb ratings impact the actions of both hosts and visitors. Since its launch in 2008, the Airbnb network has swiftly expanded, now featuring millions of listings all over the world. Within this framework of expansion, companies in the sharing economy can identify potential clients, comprehend their requirements and preferences, and create efficient marketing plans with the use of market research (Eckhardt *et al.*, 2019).

These businesses can also benefit from it by keeping an eye on market trends, examining client feedback, and spotting growth prospects. Therefore, by understanding the target markets, the customer needs, and industry trends, Airbnb companies can develop effective strategies that help raise the bar on their quality in a competitive marketplace and will assist them to improve the quality of the experience for all parties involved.

In this work we provide an extensive overview of the contemporary research regarding analyzing Airbnb reviews and extracting useful information about the touristic ecosystem. In addition, this study attempts to identify the potential gaps in the related research and compares insights from empirical evidence.

## 2. Review of the Literature on Airbnb

The sharing economy is a complex phenomenon that can be analyzed from different perspectives. Scholars have applied various theoretical frameworks to study the sharing economy which covers a wide range of themes. We searched the literature in the REPEC, Scopus and Web of Science databases using the keywords Airbnb and Sharing Economy. To the best of our knowledge, since 2017 there has been a large and growing

empirical literature in the field. In what follows we attempt to present the outcomes of the studies that have been conducted on several key themes of the Airbnb industry.

To the best of our knowledge, first studies which conducted extensive literature reviews on Airbnb industry and sharing economy in general, can be found in Prayag and Ozanne (2018), Guttentag (2019), Belarmino and Koh (2020), Sainaghi and Baggio (2020) and Negi and Tripathi (2022). Prayag and Ozanne (2018) in their systematic review included 71 papers within the 2010-16 period and identified the following seven key themes regarding the sharing economy: conceptual development; regulation; macro-level impacts; regime response; host behavior; guest/host experience; and marketing issues.

Guttentag (2019) conducted an extensive literature review on the extant literature on Airbnb solely. The review was based on 132 peer-reviewed journal articles from various disciplines, and the papers were divided into six thematic categories: Airbnb guests, Airbnb hosts, Airbnb supply and its impacts on destinations, Airbnb regulation, Airbnb's impacts on the tourism sector, and the Airbnb company. Belarmino and Koh (2020) critically reviewed 107 articles on P2P accommodations from 2010 to 2017. Their study categorized the studies of their sample into nine topics: consumer behavior, legal issues, conceptualization of P2P accommodations, revenue management, trust and mistrust, P2P accommodations and hotels, owner motivations, affordable housing concerns, and emerging fields.

Sainaghi and Baggio (2020) investigated papers focused on P2P accommodation platforms. The study recognized nine clusters (micro-level, and a research map is proposed structured around six blocks (macro-level). Three clusters relate directly to Airbnb industry. Airbnb: spatial patterns and substitution threats (cluster 3), Airbnb: determinants of performance (cluster 4), Airbnb and hotel strategies: qualitative comparisons (cluster 8). The most recent paper which tried to present literature on the Airbnb industry is written by Negi and Tripathi (2022). The authors gathered the related literature from the 2010-2022 period and categorized the studies onto the following eight segments: consumer behavior, host behavior, host-guest relationship (HGR), trust, dominant theories in Airbnb, Airbnb regulation, Airbnb and hotels and macro impacts of Airbnb. The study also found that most existing Airbnb research has been conducted in Europe, the USA/Canada, followed by Asian countries.

Overall, the research on Airbnb is broad and includes a wide range of topics, including, among other aspects, the consumer and host behavior, the regulation, the trust, and Airbnb's effects on the hotel and hospitality industry. The findings discussed by previous studies indicate the need for additional analysis of the effects on the economy, society, and environment.

The purpose of this section is to provide the findings of the most recent empirical literature on Airbnb, which uses reviews and primary or secondary data from Airbnb sector for their analysis. Table 1 depicts the key characteristics of each study reporting the place, the data, the model/method along with the findings of each one of them.

Overall, the literature on Airbnb is diverse and covers various aspects of the platform. In sum we would say that the sharing economy is a complex and rapidly evolving phenomenon that has attracted significant attention from scholars and policymakers. This literature review section identified some of the key themes and issues discussed in the academic literature, including customer behavior, trust, regulation, social and economic impact, and innovation. While there is still much to learn about the sharing economy, the existing research provides a valuable starting point for understanding this important socio-economic phenomenon.

The empirical literature suggests that Airbnb has had a significant impact on the hospitality industry, the sharing economy, and broader economy. While Airbnb has disrupted traditional accommodation options, it has also created new economic opportunities for hosts and affected tourism in many destinations. However, the platform has also been criticized for its impact on the labor market, income inequality, and the availability of affordable housing. Our search of the related literature points that the empirical research has explored several aspects regarding the Airbnb industry and that researchers have generated valuable outcomes for hospitality and tourism stakeholders. However, our study comes to highlight the need for more research on the economic, social, and environmental impacts which are the avenues to further improve the quality of the offered services and to increase the social and economic utility of modern societies. Therefore, it is essential to further investigate the cumulative effect of Airbnb industry considering both the benefits and drawbacks of Airbnb when evaluating its impact.

**Table 1. Recent Empirical Literature on Airbnb.**

Author(s)	Year of Publication	City/ Country/ Place	Data	Model/ Method	Key Findings
Bao <i>et al.</i>	2022	Hangzhou (China)	294 Airbnb Accommodations and 7606 Customer comments	Experience Economy Model	There is in general a lack of entertainment and escapist experience in Airbnb accommodation in Hangzhou.
Carnehl <i>et al.</i>	2022	Paris (France)	Airbnb transactions and corresponding ratings in Paris for 2017 (179,972 observations)	Panel regressions and a regression discontinuity design	Hosts strategically complement lower prices with higher effort more when ratings are relatively low. Moreover, upon entry, strategic hosts exploit the dominant value-for-money effect.
Kourtiti <i>et al.</i>	2022	6 world-cities (Barcelona, Beijing, London, Milan, New York, and Paris)	Data from the Inside Airbnb website ( <a href="http://insideairbnb.com/get-the-data.html">http://insideairbnb.com/get-the-data.html</a> )	Statistical analyses applying multilevel logistic regression	The findings demonstrate challenges for the Airbnb market as a whole as well as significant pricing volatility in the majority of the cities of the study.
Santos <i>et al.</i>	2022	Fortaleza, capital of Ceará (Brazil)	2353 reviews in Airbnb platform for the 2019-20 time-period related to 506 accommodation offers.	Quali-quantitative research, documentary research procedure, and data collection.	The study evidenced the positivity of the evaluations. In addition, positive comments had fewer characters, whereas negative ones presented more information.
Vassilikopoulou <i>et al.</i>	2022	Athens (Greece)	8,200 Airbnb reviews, which had at least one negative aspect	Aspect-based Sentiment Analysis (ABSA)	Location is a key aspect category. Moreover, Airbnb properties could focus on certain aspects related to negative sentiments in order to minimize negative reviews and increase customer satisfaction.
Xue <i>et al.</i>	2022	1354 hosts globally obtained using a random seed	10,068 reviews posted by Airbnb hosts	A combination of big data analysis with qualitative content analysis	The study finds that Airbnb is primarily considered a consumption space that stresses effective interaction between hosts and guests.
Del Chiappa <i>et al.</i>	2021	Italy	The study first examines Travellers' Airbnb use constraints, and then profiles 252 Airbnb non-users.	Mixed-methods approach (A cluster analysis divided non-users into three segments)	Barriers to using Airbnb include mistrust, a perception of danger, and a lack of efficacy. Other barriers include a lack of service quality, regulations and local experience.
Fradkin <i>et al.</i>	2021	USA	The sample consists of 119,789 transactions starting with checkout dates on May 10, 2014 and ending with checkout dates on June 12, 2014.	Large-scale experiment on Airbnb	The results suggest that whether the review is unveiled plays a critical role in the effects of the simultaneous reveal design. Moreover, the simultaneous reveal policy increased review rates and decreased the average valence of reviews. It also reduced retaliatory 1-star reviews as well as the correlation between guest and review ratings.

Madhi and Alhammad	2021	Amsterdam (Netherlands)	110,747 comments	Sentiments analysis and Regression analysis	Prices, the host being a super-host, and room type are the most important dimensions concerning the satisfaction of the customers.
Zervas <i>et al.</i>	2021	Worldwide	For Airbnb, data about Airbnb properties were obtained by airbnb.com (381,297 listings) (200,000 and 1 million Airbnb properties for the 2015 and 2018 datasets, Respectively). Authors also collected similar information from TripAdvisor to compare properties listed on both platforms.	Statistical and econometric analysis	Airbnb received the highest ratings in comparison to hotels, B&Bs, and vacation rentals worldwide.
Zheng	2021	Beijing (China)	15356 accommodations	OLS regressions	12 variables have been found to affect customer reviews of Airbnb.
Dogru <i>et al.</i>	2020	USA	The sample includes all hotels and Airbnb listings in the U.S. from the time-period 2002-2018. (192 observations)	OLS regressions	The results indicate that Airbnb has a negative influence on hotel performance measures across various organizational models. Nevertheless, occupancy rates were unaffected by Airbnb listings.
Liang <i>et al.</i>	2020	Hong Kong (China)	Secondary data from Airbnb	Multilevel liner regression model	The findings demonstrate that providing comprehensive and detailed descriptions related to both properties and hosts resulted in an increase in review volume.
Santos <i>et al.</i>	2020	Cities: Curitiba (Rio de Janeiro), and São Paulo, in Brazil, Boston, Las Vegas and New York, in the USA	Reviews form three Platforms: 648,030 (Booking), 115,760 (Airbnb), 8,589 (CouchSurfing)	Sentiment analysis	Reviews in the sharing economy have a tension to be much more positive than those in the traditional economy.
Cheng and Jin	2019	Sydney (Australia)	170,124 review comments from the Inside Airbnb website <a href="http://insideairbnb.com/">http://insideairbnb.com/</a>	Text mining and sentiment analysis	Users of Airbnb frequently assess their experiences through a lens created by prior hotel visits. The data identifies 'location', 'amenities', and 'host' as three crucial criteria, but not 'price'.
Cheng and Zhang	2019	Chinese guests who reside all over the world (mostly in North America, Europe, and Australia)	The Airbnb online community forum served as the primary source of data (final sample consisted of 25 posts with a total of 507 replies)	Four stages data analysis	Western Airbnb hosts' experience with Chinese guests was mediated by two Chinese cultural practices i.e. Mianzi and Guanxi. In general, the idea that "culture fits all" is prevailing.
Hernández- López	2019	UK	120 reviews (60 positive and 60 negative)	Computer-Mediated Discourse Analysis (CMDA)	The results show that being polite seems to be the norm, while being rude or offensive is the exception. Additionally, depersonalization and formality during communication by hosts are associated with dissatisfaction by reviewers.
Xu <i>et al.</i>	2019	Florida (USA)	All listed Airbnb properties were collected from the AIRDNA	OLS regression model	The study investigated the relationship between Airbnb and crime and found that while crime categories do not differ by

			<a href="https://www.airdna.co/">https://www.airdna.co/</a> ) by October 2016		listing type, crime-lodging relationships do. Only the shared room type consistently demonstrated a favorable correlation with both violent and property offences.
Zhang	2019	10 U.S. cities	2,799,420 reviews from 64,464 listings posted on the Airbnb platform	Latent Dirichlet allocation method	The study identifies 16 key topics of consumer reviews and shows that several factors can affect a listing's performance.
Bridges and Vásquez	2018	Portland, Albuquerque, Philadelphia, and Atlanta (USA)	400 publicly available reviews posted on Airbnb.com	Descriptive discourse analysis of review language	Authors point to existence of positivity bias in ratings on Airbnb.
Mauri <i>et al.</i>	2018	Italy and UK	A sample of 502 Airbnb listings was collected in November 2016.	Shapley Value Regression	Almost 40% of the variation in popularity in Airbnb can be attributed to personal reputation alone.
Wang and Jeong	2018	Sample for Airbnb reviews were obtained from a nationally-recognized online marketing company in August 2016 (in the U.S.)	Researchers conduct a self-administered online survey and obtained 212 valid responses.	Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT)	Personal innovativeness is a significant antecedent of perceived ease of use, usefulness, and trust.
Zhou <i>et al.</i>	2018	Global	Data from 43.8 million Airbnb users	Data Analysis	The study reveals the interactions between Airbnb users using a "review graph". It covers different aspects, including the user composition, the interactions between users, and the cross-country mobility patterns of the users.
Johnson and Neuhofer	2017	Jamaica	942 reviews within Jamaica's most visited regions of Montego Bay, Negril, Ocho Rios and Kingston covering 24 Airbnb accommodation listings.	Online content analysis	This study has demonstrated that the Airbnb value is strongly embedded in the Jamaica's society, making local-hosts as key value propositions of the guests' experience.
Karakas	2017	Budapest (Hungary)	Four interviews and 104 questionnaires	Data analysis from questionnaires and interviews	The majority of guests choose Airbnb due to lower cost for them (lower prices), but they spend more on services.
Mody <i>et al.</i>	2017	Pine and Gilmore (States in the U.S.)	Data from a survey of 630 customers who stayed at a hotel or an Airbnb	Multi-step analysis (centered on structural equation modeling to validate the model)	Airbnb performs better than the hotel sector, when it comes to the provision of all experience aspects.
Priporas <i>et al.</i>	2017	Phuket (Thailand)	Self-administered questionnaire 202 international tourists	Data Analysis from questionnaires	The findings support the existence of a positive link between service quality, customer satisfaction, and loyalty in Airbnb accommodation, and they also show that satisfaction mediates this relationship to some extent.
Wang and Nicolau	2017	33 cities all over the world	Sample of 180,533 accommodation rental offers listed on Airbnb.com	Ordinary Least Squares and Quantile Regression Analysis	The study examines the effects of 25 variables in the 5 categories regarding Airbnb. 24 of the 25 are good predictors of price, while Quantile Regression analysis indicates that all of them are significant.

Xie and Mao	2017	Austin (Texas) (USA)	5,805 active listings of 4,608 Airbnb hosts	Blend of regression models	This study provides evidence that listing performance is greatly influenced by host quality factors via cue-based trust. This study also identifies a "trade-off" between the quantity and quality of hosts' listings.
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## References

- Bao, Y., Ma, E., La, L., Xu, F., and Huang, L. (2022). Examining the Airbnb accommodation experience in Hangzhou through the lens of the Experience Economy Model. *Journal of Vacation Marketing*, 28(1), 95-116. <https://doi.org/10.1177/13567667211024707>
- Belarmino, A., and Koh, Y. (2020). A critical review of research regarding peer-to-peer accommodations. *International Journal of Hospitality Management*, 84, 102315. <https://doi.org/10.1016/j.ijhm.2019.05.011>.
- Bridges, J., and Vásquez, C. (2018). If nearly all Airbnb reviews are positive, does that make them meaningless? *Current Issues in Tourism*, 21(18), 2057-2075, DOI: 10.1080/13683500.2016.1267113.
- Carnehl C, Schaefer M, Stenzel A, and Tran, K. (2022). Value for money and selection: How pricing affects airbnb ratings. Discussion Paper 22/771, University of Bristol, Bristol.
- Cheng, M., and Jin, X. (2019). What do Airbnb users care about? An analysis of online review comments. *International Journal of Hospitality Management*, 76, 58-70. <https://doi.org/10.1016/j.ijhm.2018.04.004>.
- Cheng, M., and Zhang, G., (2019). When Western hosts meet Eastern guests: Airbnb hosts' experience with Chinese outbound tourists. *Annals of Tourism Research*, 75, 288-303, <https://doi.org/10.1016/j.annals.2019.02.006>.
- Daglis T. (2022). Sharing Economy. *Encyclopedia*, 2(3), 1322-1332. <https://doi.org/10.3390/encyclopedia2030088>.
- Del Chiappa, G., Pung, J.M., Atzeni, M., and Sini, L. (2021). What prevents consumers that are aware of Airbnb from using the platform? A mixed methods approach. *International Journal of Hospitality Management*, 93, 102775, <https://doi.org/10.1016/j.ijhm.2020.102775>.
- Dogru, T., Hanks, L., Ozdemir, O., Kizildag, M., Ampountolas, A., and Demirer, I. (2020). Does Airbnb have a homogenous impact? Examining Airbnb's effect on hotels with different organizational structures. *International Journal of Hospitality Management*, 86, 102451, <https://doi.org/10.1016/j.ijhm.2020.102451>.
- Eckhardt, G. M., Houston, M. B., Jiang, B., Lamberton, C., Rindfleisch, A., & Zervas, G. (2019). Marketing in the Sharing Economy. *Journal of Marketing*, 83(5), 5-27.
- Fradkin, A., Grewal, E., and Holtz, D. (2021). Reciprocity and unveiling in two-sided reputation systems: Evidence from an experiment on Airbnb. *Marketing Science*, 40(6): 1013-1029. <https://doi.org/10.1287/mksc.2021.1311>.
- Guttentag, D. (2019). Progress on Airbnb: a literature review. *Journal of Hospitality and Tourism Technology*, 10(4), 814-844.
- Hall, C. M., Prayag, G., Safonov, A., Coles, T., Gössling, S. and Koupaie S. N. (2022) Airbnb and the sharing economy, *Current Issues in Tourism*, 25(19), 3057-3067. <https://doi.org/10.1080/13683500.2022.2122418>
- Hernández-López, M.d. (2019). Relational Work in Airbnb reviews. *Russian Journal of Linguistics*, 23(4), 1088-1108. doi: 10.22363/2687-0088-2019-23-4-1088-1108.
- Johnson, A.G. and Neuhofer, B. (2017). Airbnb - an exploration of value co-creation experiences in Jamaica. *International Journal of Contemporary Hospitality Management*, 29(9), 2361-2376, <https://doi.org/10.1108/IJCHM-08-2016-0482>.
- Karakas, M.K. (2017). Satisfaction and characteristics of Airbnb demand in Budapest. *Researches Review DGTH*, 46(2), 76-88. 10.5937/ZbDght1702076M.
- Kourtit, K., Nijkamp, P., Östh, J., and Turk, U. (2022). Airbnb and Covid-19: Space-Time vulnerability effects in six world-cities, *Tourism Management*, 93, 104569, <https://doi.org/10.1016/j.tourman.2022.104569>.
- Liang, S., Schuckert, M., Law, R., and Chen, C.-C. (2020). The importance of marketer-generated content to peer-to-peer property rental platforms: Evidence from Airbnb. *International Journal of Hospitality Management*, 84, 102329, <https://doi.org/10.1016/j.ijhm.2019.102329>.
- Madhi, H.A.B., and Alhammad, M.M. (2021). What drives Airbnb customers' satisfaction in Amsterdam? A sentiment analysis. *International Journal of Advanced Computer Science and Applications*, 12(6), 255-263. <http://dx.doi.org/10.14569/IJACSA.2021.0120628>.
- Mauri, A.G., Minazzi, R., Nieto-García, M., and Viglia, G. (2018). Humanize your business. The role of personal reputation in the sharing economy. *International Journal of Hospitality Management*, 73, 36-43, <https://doi.org/10.1016/j.ijhm.2018.01.017>.

- Mody, M.A., Suess, C., and Lehto, X. (2017). The accommodation experience scape: a comparative assessment of hotels and Airbnb. *Contemporary Hospitality Management*, 29(9), 2377-2404, <http://dx.doi.org/10.1108/IJCHM-09-2016-0501>.
- Negi, G., and Tripathi, S. (2022). Airbnb phenomenon: a review of literature and future research directions. *Journal of Hospitality and Tourism Insights*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JHTI-04-2022-0133>.
- Prayag, G. and Ozanne, L.K. (2018). A systematic review of peer-to-peer (P2P) accommodation sharing research from 2010 to 2016: progress and prospects from the multi-level perspective. *Journal of Hospitality Marketing & Management*, 27(6), 649-678, DOI:10.1080/19368623.2018.1429977.
- Priporas, C-V, Stylos, N, Vedanthachari, LN, and Santiwatana, P. (2017). Service quality, satisfaction, and customer loyalty in Airbnb accommodation in Thailand. *International Journal of Tourism Research*, 19, 693-704. <https://doi.org/10.1002/jtr.2141>.
- Sainaghi, R. and Baggio, R. (2020). Clusters of topics and research designs in peer-to-peer accommodation platforms. *International Journal of Hospitality Management*, 88, 102393, <https://doi.org/10.1016/j.ijhm.2019.102393>.
- Santos, A.I.G.P., Perinotto, A.R.C., Soares, J.R.R., Mondo, T.S., Cembranel, P. (2022). Expressing the experience: An analysis of Airbnb customer sentiments. *Tourism and Hospitality*, 3(3): 685-705. <https://doi.org/10.3390/tourhosp3030042>.
- Santos, G., Mota, V.F.S., and Benevenuto, F. (2020). Neutrality may matter: sentiment analysis in reviews of Airbnb, Booking, and Couchsurfing in Brazil and USA. *Social Network Analysis and Mining*, 10(45), <https://doi.org/10.1007/s13278-020-00656-5>.
- Vassilikopoulou, A., Kamenidou, I., and Priporas, C.-V. (2022). Negative Airbnb reviews: an aspect-based sentiment analysis approach. *EuroMed Journal of Business*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/EMJB-03-2022-0052>.
- Wang, D., and Nicolau, J.L. (2017). Price determinants of sharing economy based accommodation rental: A study of listings from 33 cities on Airbnb.com. *International Journal of Hospitality Management*, 62, 120-131, <https://doi.org/10.1016/j.ijhm.2016.12.007>.
- Wang, C.(R.), and Jeong, M. (2018). What makes you choose Airbnb again? An examination of users' perceptions toward the website and their stay. *International Journal of Hospitality Management*, 74, 162-170, <https://doi.org/10.1016/j.ijhm.2018.04.006>.
- Xie, K., and Mao, Z. (2017). The impacts of quality and quantity attributes of Airbnb hosts on listing performance. *International Journal of Contemporary Hospitality Management*. 29. 10.1108/IJCHM-07-2016-0345.
- Xu, Y.-H., Pennington-Gray, L., and Kim, J. (2019). The sharing economy: A geographically weighted regression approach to examine crime and the shared lodging sector. *Journal of Travel Research*, 58(7), 1193-1208. 10.1177/0047287518797197.
- Xue, L., Leung, X.Y., and Ma, S.(D.). (2022). What makes a good “guest”: Evidence from Airbnb hosts' reviews. *Annals of Tourism Research*, 95, 103426, <https://doi.org/10.1016/j.annals.2022.103426>.
- Zhang, J. (2019). Listening to the consumer: Exploring review topics on Airbnb and their impact on listing performance. *Journal of Marketing Theory and Practice*, 27:4, 371-389, DOI: 10.1080/10696679.2019.1644953.
- Zervas, G., Proserpio, D., and Byers, J.W. (2021). A first look at online reputation on Airbnb, where every stay is above average. *Marketing Letters*, 32(1-16), <https://doi.org/10.1007/s11002-020-09546-4>.
- Zheng, Y. (2021). Research on the influencing factors of customer reviews of Airbnb, empirical evidence from Beijing, China. ICICM '21: Proceedings of the 11th International Conference on Information Communication and Management, August 2021, pages 68-74. <https://doi.org/10.1145/3484399.3484409>.
- Zhou, Q., Chen, Y., Ma, C., Li, F., Xiao, Y., Wang, X., and Fu, X. (2018). Measurement and analysis of the reviews in Airbnb. *2018 IFIP Networking Conference (IFIP Networking) and Workshops*, Zurich, Switzerland, 2018, 1-9, doi: 10.23919/IFIPNetworking.2018.8696543.

# Forecasting Overnight Stays Using TripAdvisor Monthly Review Counts: The Case of Ionian Islands

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## **Abstract:**

The tourism and hospitality industry relies significantly on the precise forecasting of touristic demand to efficiently allocate resources, devise marketing strategies, and facilitate informed decision-making by policymakers. This study presents an innovative approach based on Machine Learning (ML) for forecasting overnight stays, utilizing only the monthly count of reviews on TripAdvisor. The efficacy of this proposed approach is evaluated through experimentation in the Ionian Islands, a highly popular tourist region in Greece, using a dataset containing 511,578 forum comments addressing various concerns across all major Ionian islands (Corfu, Zakynthos, Kefalonia, Lefkada, Ithaki and Paxoi). The ML forecasting model introduced in this study predicts the number of overnight stays for the following month by utilizing all available historical information from TripAdvisor up until the present time. Quantitative results for data within the year 2013 and 2022 demonstrate the superior performance of this technique compared to traditional forecasting methods, indicating its resilience in adapting to global crises such as the recent Covid-19 pandemic.

**Keywords:** *TripAdvisor reviews, Forecasting, Machine Learning, Overnight Stays*

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## **1. Introduction**

Forecasting touristic demand and overnight stays holds immense significance within the tourism industry. Accurate predictions regarding the future demand for tourist destinations and the number of overnight stays empower businesses to make well-informed decisions about resource allocation, pricing strategies, and marketing endeavors. This optimization of operations leads to heightened profitability. For instance, hotels can align their staffing levels and inventory management with projected demand, ensuring that they are adequately prepared to meet guest needs. Similarly, tour operators can meticulously plan their itineraries and secure necessary resources in advance, sidestepping last-minute challenges and amplifying customer satisfaction.

Additionally, accurate touristic demand forecasting plays a pivotal role in assisting destination management organizations and tourism authorities in making strategic choices to foster sustainable tourism development. By comprehending visitor arrival patterns and trends in overnight stays, they can identify periods of heightened demand and develop strategies to manage visitor flows, thus averting overcrowding. This empowers them to implement measures that preserve the natural and cultural heritage of the destination, ensure positive visitor experiences, and mitigate any adverse impacts on the local community. Furthermore, accurate forecasting enables policymakers to effectively allocate resources, invest in infrastructure development, and devise targeted marketing campaigns aimed at attracting tourists during off-peak seasons, ultimately reducing seasonality and achieving a more balanced and sustainable tourism industry.

This study primarily concentrates on the Ionian Islands region and presents an innovative approach involving an ensemble of machine learning methods for forecasting overnight stays. The proposed methodology leverages dynamic and easily accessible data from TripAdvisor as input to predict the number of overnight stays for the subsequent month. Specifically, the input data comprises solely the monthly count of reviews, a variable found to exhibit a strong correlation with the actual number of overnight stays. The target variable, representing monthly overnight stays, is obtained annually from the Hellenic Statistical Authority (ELSTAT) for the previous

year. To the best of our knowledge, this study pioneers the exploration of such a domain shift in the context of forecasting. The rationale behind this approach lies in the utilization of a monthly available variable to predict short-term fluctuations in tourist behavior, including the patterns observed during the Covid-19 pandemic.

## 2. Methodology and Data

In this study, we aim to forecast monthly overnight stays utilizing machine learning (ML) models, inspired by the approach proposed by (Nasios & Vogklis, 2022). In their work (Nasios & Vogklis, 2023) introduced a novel blending methodology that combines ML models from two distinct families: (a) gradient boosted trees and (b) neural networks. Their methodology was successfully employed in the recent M5 Competition, achieving commendable performance in both the Accuracy and Uncertainty tracks. The fundamental aspects of this methodology include: (a) transforming the forecasting task into a regression problem; (b) incorporating lag-based feature engineering techniques; (c) maintaining a diverse ensemble of ML models; and (d) carefully selecting hold-out validation sets for fine-tuning the models. Notably, a significant deviation from previous attempts in tourist demand forecasting is observed in this study:

- (a) There is a notable domain shift, where we solely utilize the exogenous variable (TripAdvisor monthly counts) to forecast the primary variable (monthly overnight stays). This choice is driven by the availability of TripAdvisor data, whereas monthly overnight stay data is only provided on an annual basis.
- (b) In our work, we perform single-step predictions (one month ahead) by leveraging all available information up to the current point in time.

The forecasting problem at hand is thus transformed into a regression modelling problem where all lag-features are based on TripAdvisor monthly review count and the target value is the overnight stays for the corresponding month. For this study we gather TripAdvisor restaurant review data from all Ionian Islands using a customizable scraper of our own implementation. In total we use almost 500,000 reviews for all Ionian Islands for the years between 2013 and 2022. Monthly overnight stays were available from the Hellenic Statistics Authority but are provided to the users in a yearly manner (i.e., in single batch containing 12 months).

Along the lines of Nasios and Vogklis (2021) the quality of the forecast is based on the application of diverse regression models of different complexities and combining their output. The model used in this study were:

- LightGBM [see Ke G. *et al.* (2017)] is an open source Gradient Boosting Decision Tree (GBDT)[see Friedman (2002)] implementation by Microsoft.
- Neural Network models using Keras/TensorFlow library implementation (see Gurney (1997), Gulli *et al.* (2017))
- Support Vector Machines for Regression (SVR) from sklearn library

The models (classical and ML) used for forecasting are also presented in Table 1.

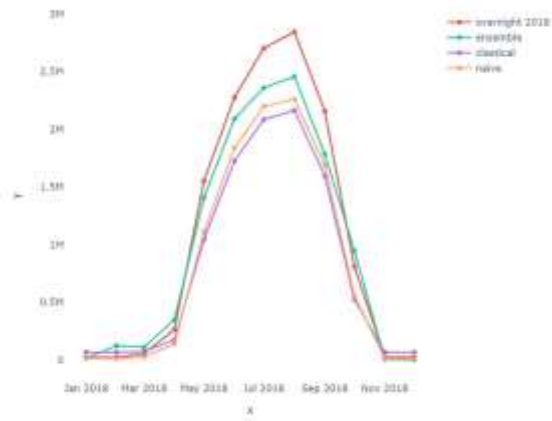
**Table 1 Short description of the forecasting methods compared**

Name	Family	Method	Input Data	Output	Comments
<b>Ensemble ML</b>	Machine Learning	LightGBM	TripAdvisor monthly review count	Single month at a time	Next month prediction
		FeedForward Neural Network	TripAdvisor monthly review count	Single month at a time	Next month prediction
		Support Vector Regression Model	TripAdvisor monthly review count	Single month at a time	Next month prediction
<b>Naive</b>		Naïve prediction	ELSTAT previous overnight stays for full years	Full 12 months (year)	Repeat previous year stats
<b>Classical</b>	Classic Forecasting models with seasonality 12	HoltWinters	ELSTAT previous overnight stays for full years	Full 12 months (year)	Extension of exponential smoothing for series that contain both trend and seasonality.
		AutoCES	ELSTAT previous overnight stays for full years	Full 12 months (year)	The best Complex Exponential Smoothing model using an information criterion

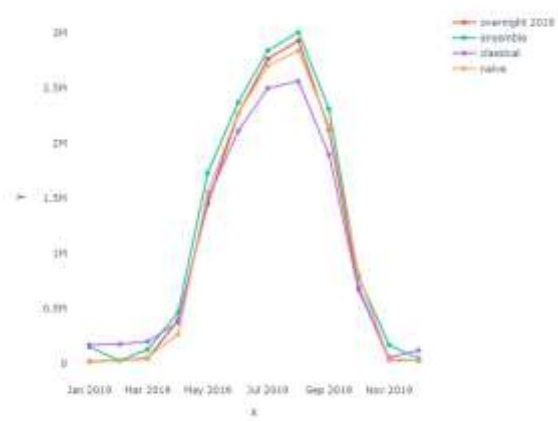
		Seasonal Exponential Smoothing Optimized	ELSTAT previous overnight stays for full years	Full 12 months (year)	Uses a weighted average of all past observations where the weights decrease exponentially
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The ML methodology proposed in this study is based on a weighted average of three ML techniques, as outlined in Table 1. Similarly, the classical forecasting methodology refers to a weighted average of three classic forecasting techniques listed in the same table. The evaluation of these methodologies is performed on four validation splits corresponding to the full years 2018, 2019, 2020, and 2021. The training data is used for model tuning, while the validation data is utilized to assess the generalization performance. The Maximum Absolute Error (MAE) metric is employed to evaluate the trained models.

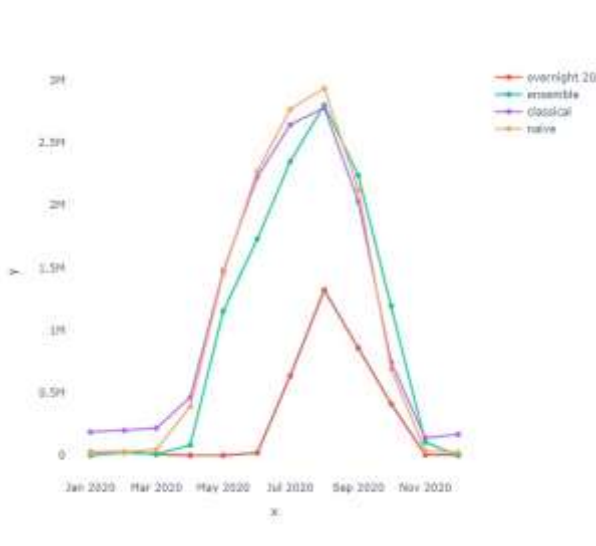
Figure 1 to Figure 4 present comparative results, while Table 2 displays the MAE for each predicted year. Notably, our proposed ensemble of ML techniques, driven solely by TripAdvisor review counts, exhibits superior performance compared to classical forecasting schemes in three out of the four validation periods. Specifically, during the post-Covid-19-year 2020, our predicted forecast (Figure 3) demonstrates a better fit to the actual overnight stays, particularly in the months from March to May. In the subsequent year (Figure 4), our proposed methodology accurately captures the trends during the first post-Covid-19 summer period.



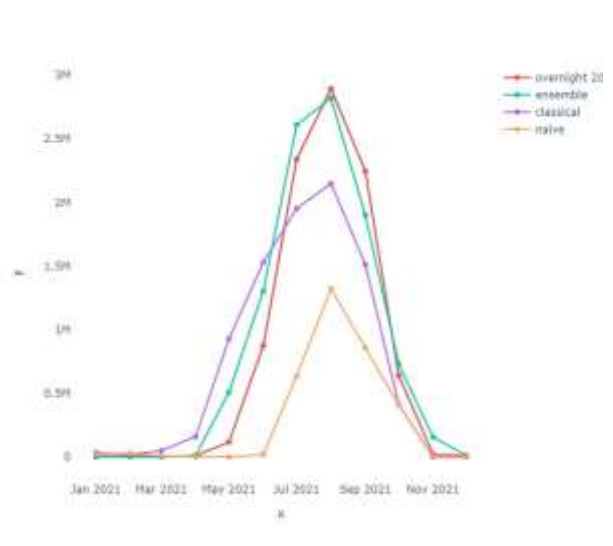
**FIGURE 1 PREDICTED RESULTS FOR 2018**



**FIGURE 2 PREDICTED RESULTS FOR 2019**



**FIGURE 3 PREDICTED RESULTS FOR 2020**



**Figure 4 Predicted results for 2021**

**Table 2 MAE error for the full validation year**

	<b>Ensemble ML</b>	<b>mix-classical</b>	<b>naive</b>
<b>2018</b>	<b>155854</b>	290555	240614
<b>2019</b>	104194	139016	<b>47534</b>
<b>2020</b>	<b>703323</b>	829553	789642
<b>2021</b>	<b>146298</b>	319697	495417

**References:**

- Brereton, R. G., & Lloyd, G. R. (2010). Support vector machines for classification and regression. *Analyst*, 135(2), 230-267.
- Brida, J. G., & Risso, W. A. (2011). A SARIMA-ARCH model for the overnight-stays tourism in South Tyrol. *Tourism Economics*, 17(1), 209-222.
- Friedman, J. H. (2002). Stochastic gradient boosting. *Computational statistics & data analysis*, 38(4), 367-378.
- Gulli, A., Kapoor, A., & Pal, S. (2019). *Deep learning with TensorFlow 2 and Keras: regression, ConvNets, GANs, RNNs, NLP, and more with TensorFlow 2 and the Keras API*. Packt Publishing Ltd.
- Gurney, K. (1997). *An introduction to neural networks*. CRC press.
- Havranek, T., & Zeynalov, A. (2021). Forecasting tourist arrivals: Google Trends meets mixed-frequency data. *Tourism Economics*, 27(1), 129-148.
- Ke, G., Meng, Q., Finley, T., Wang, T., Chen, W., Ma (2017). Lightgbm: A highly efficient gradient boosting decision tree. *Advances in neural information processing systems*, 31st Conference on Neural Information Processing Systems (NIPS 2017), Long Beach, CA, USA.
- Koutras, A., Panagopoulos, A., & Nikas, I. A. (2017). Forecasting tourism demand using linear and nonlinear prediction models. *Tourism and Innovation Journal*. 9(85).
- Lacerda, L., Ramos, F., & Curto, J. (2022). Modeling and forecasting tourism flow in Portugal: Perspectives for a strategic management. *European Journal of Applied Business and Management*. <https://doi.org/10.58869/EJABM>
- Makridakis, S., Spiliotis, E. & Assimakopoulos, V. (2018). Statistical and Machine Learning forecasting methods: Concerns and ways forward, *PLoS ONE* 13(3): e0194889. <https://doi.org/10.1371/journal.pone.0194889>
- Makridakis, S., Spiliotis, E. & Assimakopoulos, V. (2022). The M5 competition: Background, organization, and implementation, *International Journal of Forecasting*, 38(4), 1325-1336.
- Nasios, I. & Vogklis, K. (2022). Blending gradient boosted trees and neural networks for point and probabilistic forecasting of hierarchical time series, *International Journal of Forecasting*, 38(4), 1448-1459.
- Reina, M. Á. R. (2020). Big data: Forecasting and control for tourism demand. In *Theory and Applications of Time Series Analysis: Selected Contributions from ITISE 2019 6* (pp. 273-286). Springer International Publishing.
- Silva, I., & Alonso, H. (2020). New developments in the forecasting of monthly overnight stays in the North Region of Portugal. *Journal of Applied Statistics*, 47(13-15), 2927-2940.

## Peace Tourism: Spreading the Culture of Peace

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### **Abstract**

This paper attempts to explore the synergies between the worlds of tourism and peace.

At first, the global necessity towards a culture of peace is highlighted. The links among the concepts of peace and tourism are explored, and the concept of 'peace tourism' is introduced. Practical elements for the development and operation of peace tourism are examined. Hiroshima in Japan is presented as an example of a successful peace tourism brand.

The discussion is based mostly on literature review: on documents published by international organizations, and on independent researches.

It is suggested that building peace and promoting tourism are fundamental ethical issues as well as urgent global needs inextricably linked to sustainable development. For peace tourism to develop and operate, the key questions that need to be addressed are: (i) how the global tourism industry could be designed –or rather, at least to some extent, redesigned– to help foster a culture of peace in all parts of the world; and (ii) how tourism can promote the concept of positive peace and (iii) which tourism policies enhance the development of peace education and marketing.

Peace tourism is a recently emerging research area internationally, also with strong potentials for Greece; the contribution of the paper could be seen in this context. In addition, the paper could potentially serve as an attempt to encourage professionals involved in tourism policy making and marketing to integrate elements of peace tourism.

**Keywords:** *Peace Tourism, Peace Marketing, Positive Peace*

### **1. Introduction: towards a culture of peace**

In the twentieth century, humanity was faced with two world wars, many armed conflicts, the illegal use of military force and various other forms of violence, that is, a culture of violence and war associated to mistrust, racism, suspicion, intolerance, hatred, as well as discrimination on the basis of religion, gender or origin.

The transition from a culture of war to a culture of peace requires a new approach towards conflict. Building a culture of peace involves changing attitudes, beliefs and behaviours – from everyday life situations to high-level political and diplomatic negotiations (Symonides & Singh, 1996). The idea of promoting a culture of peace began to emerge at the UNESCO International Congress on Peace in the Minds of Men (Yamoussoukro Declaration, 1989). The congress recommended that UNESCO help construct a new vision of peace, *a culture of peace that is based on the universal values of respect for life, freedom, justice, solidarity, tolerance, human rights and equality between men and women* (UNESCO, 1989: 51).

The goal of a sustainable peace culture, according to Richards (1999), should be to enhance peace in an integrated manner by negotiating and mitigating conflict and avoiding processes and behaviours that could increase existing imbalance and destruction. This concept of a culture of peace became the basis of a UN resolution that defines a culture of peace as a set of values, attitudes, behaviours and lifestyles that reject violence and prevent conflict by addressing its root causes to solve problems through the education of a culture of peace that focuses on dialogue and negotiation between individuals, groups and nations.

The strategies, policies and sustainable development measures required for a sustainable culture of peace are extremely complex (Symonides & Singh, 1996). Sustainable development strategies, policies and structures need to influence values, change attitudes and open new avenues for conflict prevention and peace building. Peacebuilding refers to those conditions that enhance the transition from a situation of conflict to coexistence

and thus contribute to sustainable peace (Moshe 2001). Building a culture of peace requires a holistic approach, both in terms of values and in terms of ways and means. Among the different strategies for peacebuilding in the contemporary world, the broad concept of tourism is seen as a key tool.

## 2. Linking tourism to peace: the concept of 'peace tourism'

Tourism and peace are two global phenomena: tourism as one of the leading income-generating activities, and peace as a global social phenomenon. Tourism can contribute to world peace but, at the same time, tourism would be detrimental to peace if it did not operate through peaceful means itself.

In this context, the main questions addressed by scholars exploring the links between tourism and peace revolve around how tourism can be responsible and how tourism can contribute to a wider peace. The uncertainty and criticism about tourism as a factor for peace has two facets. One is the concept of peace often understood as the absence of war (Litvin, 1998; Moufakkir and Kelly, 2010), and the second is the dark-unseen side of tourism (Lytras & Papageorgiou, 2014) and its inability to address issues of social injustice and other types of conflict within the industry itself (Salazar, 2006).

Haessly (2010) challenges the concept of peace as the absence of war and conflict and considers peace to be present in all the daily activities of individuals, consisting of five thematic expressions: justice in relationships, respect for human rights, concern for the common good, protection of global security and engagement in peace-promoting activities. Similarly, Galtung (1969) introduced the concept of positive peace, which refers to the elimination of indirect or structural forms of violence, such as racial discrimination, economic inequalities, gender inequality, and lack of access to health services and education, among other structural conditions that inhibit the full potential of people. Peace is not only the absence of violence but also what Galtung (1969) called as positive peace in a society which is the ultimate goal to prevent occurrence of conflicts. Therefore, "*the value of the positive paradigm is its vision of bringing about peace rather than just resolving conflicts through political mechanisms*" (Grewal, 2003: 5).

Jimenez and Kloeze (2014) note that peace through tourism is not only about developing mutual understanding but also about understanding poverty, protection of cultural heritage, security and sustainability. Sustainable tourism development can be a catalyst for protecting the environment, safeguarding cultural heritage diversity and contributing to global peace. The development of sustainable tourism requires an effective link between tourism initiatives and peace (McKercher, 2003). In addition, there are many examples of good practices of alternative forms of tourism that contribute to conflict resolution, intercultural understanding and even global social justice. Therefore, there is a need to acknowledge that tourism can be a sensitive ally of peace and one of the sectors that promotes - cannot be an isolated tourism process - on a culture of peace (Salazar, 2006; Wintersteiner & Wohlmuther, 2014).

The links between tourism and peace can be seen from two perspectives: socio-cultural and political (Kunwar, 2010). From the socio-cultural perspective, tourism is referred to as an instrument of social and cultural understanding that helps towards creating friendship and achieving goodwill (Kunwar, 2010). The political perspective sees tourism as an instrument for creating and improving political relations between countries.

The link between tourism and peace is acknowledged by many organizations (see also Garland, 2011; D'amore, 2014), such as: United Nations, International Institute for Peace through Tourism, Organization for World Peace, Couchsurfing, Servas, Volunteers for Peace, and Global exchange - reality tours. International documents that discuss the link between tourism and peace are (see also Salazar, 2006):

- The Manila Declaration on World Tourism sees tourism as "a vital force for peace and international understanding" (UNWTO, 1980).
- The Tourism Bill of Rights and the Tourism Code acknowledges the contribution of tourism to "Improving mutual understanding, bringing people closer together and thus enhancing international cooperation" (UNWTO, 1985).
- The World Code of Conduct for Tourism states that "tourism is a vital force for peace and a factor of friendship and understanding among the people of the world" (Lytras & Papageorgiou, 2014).

## 3. Peace tourism: re-designing tourism, and peace marketing

For peace tourism to develop and operate, the key question that needs to be addressed is how the global tourism industry could be designed –or rather, at least to some extent, redesigned– to help foster a culture of peace in all parts of the world. To this end, proper planning in the tourism industry is required that would lead to sustainable tourism and could reduce many of the factors associated to conflict (Herath, 2010). Sustainable tourism requires careful planning as well as the involvement of key stakeholders at all levels of society. It requires proper allocation of resources to meet social, cultural and economic needs while maintaining the well-being of the natural environment.



For the relationship between tourism and peace, there are many examples of alternative forms of tourism that contribute to greater intercultural understanding, conflict resolution and global and social justice and therefore also lead to peace (Antoniou, 2022; Becken and Carmignani, 2016). In the context of sustainable tourism, peace tourism has emerged as an emerging millennial trend, particularly in post-war situations. Peace tourism generates new dimensions of peace as well as tourism, as it expresses the importance of having positive peace and also sees each traveller as an ambassador of peace (Herath, 2010).

Peace tourism involves trips that have specific tourism motives, oriented towards peace and includes specialized tourist subgroups interested in peace either for educational, ideological, professional or recreational purposes (Antoniou 2022). Peace tourism coexists with other forms such as dark tourism, cultural tourism, festival tourism, cross-border tourism, volunteer tourism, ecotourism, tourism for the poor, phoenix tourism (experiences related to the recovery of a destination) and cultural heritage tourism. Peace tourism can include a series of peace destinations such as (see also Van den Dungen, 2014):

- Peace museums: e.g. Hiroshima and Nagasaki in Japan, the Guernica Peace Museum in the Basque Country in Spain, and the Monument to Peace in Caen, France.
- Peace monuments: e.g. the Nobel Peace Center in Oslo, and the Peace Palace in The Hague.
- Peace parks: e.g. Nagasaki Peace Park, and Hiroshima Peace Memorial Park.
- Peace cities: e.g. The Hague, Hiroshima, Nagasaki, and Oslo.
- Transnational peace parks: e.g. Balkans Peace Park Project.
- Peace trails: e.g. Birmingham, Bradford, Cambridge, Coventry, Leeds, London and Manchester, Berlin, Budapest, Paris, Berlin, Paris and Turin.
- Peace pilgrimages: e.g. in the footsteps of Mahatma Gandhi, Martin Luther King, Nelson Mandela.
- Cities of international organizations: e.g. the League of Nations in The Hague, then the United Nations in New York and Geneva.
- Cities where peace treaties were signed: e.g. Utrecht, Westphalia, Osnabrück and Münster, Dayton.

Other key elements for peace tourism to develop and operate are education and marketing. Specifically, in order for peace tourism to transcend national, racial and regional boundaries (Bhoola, 2020), peace education should include the acquisition of values-states of conflict resolution through peaceful means, peace mediation, conducting dialogue and other social as well as political means to promote sustainable peace. "*Education is clearly a bulwark of peace. He who masters education can change the world, wrote Leibnitz*" (UNESCO, 1989:33). Education for peace through tourism is considered necessary to be integrated at all levels of tourism activity, such as in planning, management, marketing, as well as included in the main tourism courses in university curricula. Furthermore, marketing can influence people's learning about conflict resolution means in societies by enriching moral value, cooperation, discipline, cohesion and emotions among people, societies and countries (Singh & Pathak, 2022). Peace marketing is a tool and a mechanism for achieving sustainable peace and security.

#### **4. Peace tourism and peace marketing: the example of Hiroshima, Japan**

Japan developed as a peace brand after World War II. Japan's peace constitution is, according to Kotler (Kotler, 2022) an "excellent" cornerstone in peace and nuclear abolition education. Hiroshima is a good reference point for the establishment of a Global Peace Research and Development Laboratory and a model city for the world with its peace museums and parks and the peace education programs it runs at all levels of education (Van den Dungen, 2014; Snow, 2016; Singh & Pathak, 2022). Hiroshima, the City of Peace, spread each year the idea of peace. According to Kotler (2022) Hiroshima has trained more than 5.000 people from over 60 countries, who have come to contact Hiroshima's message of peace and learn from its post-conflict peacebuilding. The Hiroshima Peace Memorial (Genbaku Dome) is not only a symbol of the most destructive force ever created by humankind; it also expresses the Hiroshima's peace plan for sustainable world peace and total disarmament of nuclear weapons.

#### **5. Conclusion**

Building peace and promoting tourism are fundamental ethical issues as well as urgent global needs inextricably linked to sustainable development. Peace marketing wants to promote an idea, and tourism wants to promote a location (Bejan, 2017). Designing sustainable tourism policies to promote positive peace is a challenge for contemporary research. If positive peace is the goal, it is essential to learn how to prevent conflict and to strengthen conditions conducive to prosperity and justice.

But peace coaches are needed to create peace builders and peace ambassadors who will spread the message of peace as a way of life, a habit, like wearing our seatbelts (Snow, 2016). Thus, the greatest resource for building and spreading a culture of peace is people. Educating people to become ambassadors of positive peace movement is essential for peacebuilding, peacekeeping and peacemaking.

It is suggested that, for peace tourism to develop and operate, the key questions that need to be addressed are: (i) how the global tourism industry could be designed –or rather, at least to some extent, redesigned– to help foster a culture of peace in all parts of the world; (ii) how tourism can promote the concept of positive peace; and (iii) which tourism policies enhance the development of peace education and marketing;

## References

- Antoniou, K. (2022). Peace Tourism in D. Buhalis (ed.), *Encyclopedia of Tourism Management and Marketing*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
- Becken, S., & Carmignani, F. (2016). Does tourism lead to peace? *Annals of Tourism Research*, 61, 63–79. <https://doi.org/10.1016/j.annals.2016.09.002>
- Bejan, B.M. (2017). Peace Marketing. *Amfiteatru Economic*, 19(45), 600-611.
- Bhoola, B. (2020). Peace Tourism: Here's why travelling for Peace is so important. Retrieved from: [https://thedope.news/peace-tourism-heres-why-travelling-for-peace-is-so-important/?fbclid=IwAR1zpMHgI6Q960BQPqr-LRadonka6bIb1-pK\\_nq8x-uzOPZubHQ5u\\_ccWWk](https://thedope.news/peace-tourism-heres-why-travelling-for-peace-is-so-important/?fbclid=IwAR1zpMHgI6Q960BQPqr-LRadonka6bIb1-pK_nq8x-uzOPZubHQ5u_ccWWk)
- D'amore, L. (2014). Peace through Tourism: An Historical and Future Perspective in. C. Wohlmuther & W. Wintersteiner (Eds.), *International Handbook on Tourism and Peace*. Centre for Peace Research and Peace Education of the Klagenfurt University/Austria in cooperation with World Tourism Organization (UNWTO).
- Galtung, J. (1969). Violence, Peace, and Peace Research. *Journal of Peace Research*, 6(3), 167–191. <http://www.jstor.org/stable/42269>
- Garland, C. (2011). Organizations Focusing on Peace and Tourism. Retrieved from: <https://www.tourism-review.com/travel-tourism-magazine-the-key-organizations-in-peace-and-tourism-article1514>
- Grewal, B.S. (2003), Johan Galtung: Positive and Negative Peace. Retrieved from: [https://buildingpeaceforum.com/no/fred/Positive\\_Negative\\_peace.pdf](https://buildingpeaceforum.com/no/fred/Positive_Negative_peace.pdf)
- Haessly, Jacqueline. (2010). *Tourism and a Culture of Peace*. 10.1079/9781845936778.0001.
- Herath, N. (2010). Peace Through Tourism. Beyond Intractability. Retrieved from: <https://www.beyondintractability.org/essay/peace-through-tourism>
- Jimenez, C. & Kloeze, J.T. (2014). Analyzing the peace through tourism concept: The challenge for educators. *Sociology and Anthropology*, 2, 63-70.
- Kotler, Ph. (2022). Can Peace be marketed? – Philip Kotler and Christian Sarkar. *The Marketing Journal*. <https://www.marketingjournal.org/can-peace-be-marketed-philip-kotler-and-christian-sarkar/>
- Litvin, S. (1998), Tourism: The World's Peace Industry? *Journal of Travel Research*, 37(1), 63-66.
- McKercher, B. (1993) Some Fundamental Truths about Tourism: Understanding Tourism's Social and Environmental Impacts. *Journal of Sustainable Tourism*, 1(1), 6 - 16.
- Moufakkir, O, Kelly, I. (2010). *Tourism, Progress and Peace*, Oxfordshire, UK: CABI.
- Moshe, M. (2001). Peace Building: A conceptual Framework. *International Journal of Social Welfare*, 10, 14-26.
- Richards, H. (1999). On the concept of peacemaking. *Paideusis-Journal for Interdisciplinary and Cross-Cultural Studies*, 2, 25–43.
- Salazar, N.B. (2006). Building a Culture of Peace through tourism: Reflexive and analytical notes and queries. *Universitas Humanistica*, 62, 319–333.
- Singh, K. & Pathak, J. (2022). Perspectives in Peace Marketing: A Narrative Literature Review. *Journal of Positive School Psychology*, 6(11), 45-60.
- Snow, N. (2016). Can the ultimate marketing campaign sell peace? Retrieved from: <https://www.japantimes.co.jp/opinion/2016/10/26/commentary/japan-commentary/can-ultimate-marketing-campaign-sell-peace/>
- Symonides, J. & Singh K. (1996). Constructing a culture of peace: challenges and perspectives – an introductory note in UNESCO, (1996). *From a culture of violence to a culture of peace*. Retrieved from: <https://unesdoc.unesco.org/ark:/48223/pf0000105029>
- UNESCO, (1989). *International Congress on Peace in the Minds of Men*. Retrieved from: <https://fund-culturadepaz.org/wp-content/uploads/2021/02/Congreso-la-Paz-en-la-Mente-de-los-Hombres.pdf>
- UNWTO, (1985). *Tourism Bill of Rights and Tourist Code*. Retrieved from: <https://www.e-unwto.org/doi/epdf/10.18111/unwtogad.1985.1.hp408706117j8366?role=tab>
- UNWTO, (1980). *Manila Declaration on World Tourism*. Retrieved from: <https://www.e-unwto.org/doi/pdf/10.18111/unwtodeclarations.1980.01.01>
- Van den Dungen, P. (2014), Peace tourism, in C. Wohlmuther and W. Wintersteiner (eds), *International Handbook on Tourism and Peace*. Centre for Peace Research and Peace Education of the Klagenfurt University/Austria in cooperation with World Tourism Organization (UNWTO).
- Wintersteiner, W., & Wohlmuther, C. (2014). Peace Sensitive Tourism: How Tourism Can Contribute to Peace in. C. Wohlmuther & W. Wintersteiner (Eds.), *International Handbook on Tourism and Peace*. Centre for Peace

Research and Peace Education of the Klagenfurt University/Austria in cooperation with World Tourism Organization (UNWTO).