7th

# International Conference on Contemporary Marketing Issues

# CONFERENCE PROCEEDINGS

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Crete Greece

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Co-Organized by

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Alexander Technological Educational Institute of Thessaloniki, Greece (recently merged with International Hellenic University)

**7th International Conference on Contemporary Marketing Issues**
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# PREFACE

We welcome you to the **7th "International Conference on Contemporary Marketing Issues "** (ICCMI 2019) organized, this year, by **Leeds University Business School** and the **Alexander Technological Educational Institute (ATEI) of Thessaloniki** which recently merged with the **International Hellenic University** maintaining the name of the latter. The **7th ICCMI** is hosted in **Heraklion**, Crete, from **July 10th to July 12th, 2019**. The idea to organize this conference goes a long way back but it materialized, for the first time, seven years ago. The 1st ICCMI was held in June 2012 in Thessaloniki, Greece, jointly organized by the ATEI of Thessaloniki along with Bucks New University of the UK. The 2nd ICCMI was held in Athens, Greece, in June 2014, a collaboration of the ATEI with Manchester Metropolitan University. The 3rd ICCMI was organized by ATEI of Thessaloniki and Kingston University of the UK and was held in Kingston, UK, in June 2015. The 4th ICCMI was held in Heraklion, in the beautiful island of Crete, in 2016. In addition the special session in Santorini took place with a very interesting workshop. The 5th ICCMI was jointly organized by Alexander TEI of Thessaloniki and Manchester Metropolitan University and was held in Thessaloniki with a special session in Chalkidiki. The 6th ICCMI was organized again by ATEI and Manchester Metropolitan University and was held in Athens Greece again last year. During this year's conference a lot of manuscripts (papers or abstracts) on specific marketing topics will be presented. These manuscripts have been included, after review, in the conference proceedings. The majority of the papers address a wide range of issues that are crucial for today's world, analyze and discuss research findings in the fields of marketing and tourism and make significant contributions in the area. Moreover, we have two special panels which will be held. The first one, called **"Marketing and Generation wh(Y)? Rethinking Marketplace Changes and Future Trends"**, will have as panel speakers **Dr. Vasileios (Bill) Davvetas** from Leeds University Business School, UK, **Dr. Karolos – Konstantinos Papadas** from York Management School, UK and **Dr. Lamprini (Abby) Piha** from the department of Economics, University of Athens, Greece. The second panel is called **"Rethinking Family Business Research: Trends, Challenges and Opportunities"** and will have as panel speakers **Mrs Katerina Polizoi** from KPMG, Greece, **Dr Markos Tsogas** from the University of Piraeus, Greece and **Mrs Katerina Kampouri** from Aristotle University of Thessaloniki, Greece. We warmly thank all of them. This year's Conference is supported by notable scholars comprising the international advisory scientific board and the international scientific committee. Furthermore, the quality of the Conference is enhanced by a number of prestigious journals offering publication opportunities to a selected number of outstanding, high quality, papers submitted to ICCMI 2019.

This year we are honoured to have with us, as **Keynote Speaker**, Professor **Spyros Gounaris** of the **University of Strathclyde**. We warmly thank him for his great contribution to the success of the Conference.

We also express our sincere gratitude and thanks to all members of the **Organizing Committee** who volunteered their time and effort for the success of this event. We also thank the international advisory scientific board and the international scientific committee members who ensured the quality of the papers.

Last but not least we thank, the two universities, the papers' authors for their papers submitted and all the conference delegates who came to Heraklion, Crete to participate in this event, the sponsors of the conference, as well as the collaborating journals' editors for their willingness to contribute to the success of the conference. As the conference co-Chairs we would like to welcome you and assure you that it is a great honour for us we have all of you here.

Christos Sarmaniotis
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# ADVERTISING

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**Abstract**

Emotional appeals in advertising and their impact on consumers' emotions and attitudes have been the focus of a considerable body of academic research. Consumers' emotional reactions seem to be defined by social norms. Social desirability might drive consumers to reactions that are deemed consistent with the norms of society. Nevertheless, considering the potential moderating effect of social desirability, the measurement of consumer responses has to date been only narrowly tested both in terms of physiological and self-report measures. The present paper addressed a body of studies that focus on a) emotional appeals and b) physiological measures. Specifically, it highlights the importance of using physiological measures to unveil consumers' true reactions towards emotional advertising and postulates that reactions are subject to whether consumers watch the advertisement in private or in public. Building on the "game of impressions" and consumers' need to be socially desirable, this research anticipates that consumers will not disclose their actual feelings towards an emotional advertisement through a self-assessment questionnaire, whereas their facial expression will accurately portray their emotional reactions. The paper discusses significant implications for academic research.

**Introduction**

Evoking emotional responses is considered a potent strategy to engage consumers in advertisements, make them appreciate the advertisement and the brand more favorably. In general, emotional advertising appeals seek to trigger either negative or positive emotions that could lead to purchase (Kotler and Armstrong, 1994). Practitioners believe that advertising must provoke emotions to be effective. On one hand these emotions include fear, guilt and shame that lead people do things they should do or avoid doing things they shouldn't do. On the other hand, advertisers also use positive emotional appeals such as love, humor, pride, and joy. Yet, even though there is agreement about the usefulness for an emotional response to advertising, there is no consensus among advertising researchers about how emotional response in advertising can be measured or evaluated (Mehta and Purvis, 2006).

However, consumers' emotional reactions are tightly connected to and driven by societal norms. Social desirability bias refers to the tendency of people to answer surveys in a way that is considered to be socially desirable instead of expressing their true emotions (Grimm, 2010). Social desirability is considered as a personality trait that affects what a respondent wants to transpire in a survey, especially when the focus of the survey lies on sensitive issues (Johnson and Van de Vijver, 2003). As such, even though self-report measures can be exceptionally helpful in examining consumers' attitude and behavior towards advertising, consumers' need to be socially desirable might distort part of the information provided through these measures. Therefore, the potential bias of self-report methods to provide fully accurate feedback suggests the usefulness for applying physiological measures, such as the measurement of facial expressions or eye movements.

According to Walsh et al. (2017), one of the most widely used methods for facial expression analysis is automatic facial expression analysis (AFEA, e.g. FaceReader software). It is also claimed that combining explicit measures of

emotions (self-reported) and implicit measurements (physiological) to study emotional responses is a difficult but helpful approach to achieve a better understanding of consumers' reactions. On the other hand, eye tracking analysis captures time spent on watching advertisements (total fixation duration and time to first fixation). In that way, it does not only indicate attention, but may also suggest consumer preferences (Lohse, 1997).
The present study sheds light on the growing body of studies on emotions and physiological versus self-report measures in order to contribute to a broader understanding of consumers' reactions to emotional advertising appeals. Considering that choices and reactions made in group contexts yield a different pattern than those made individually (Ariely and Levav, 2014), it is expected that when consumers are exposed to emotional, advertising appeals in the presence of others, they will react differently compared to when they watch the ad alone. Particularly, the purpose of this study is to formulate specific propositions for the following research questions:
1. Does social desirability moderate the effect of emotional advertising appeals on consumers' emotions?
2. Are consumers' reactions towards emotional appeals similar when captured by self-report and physiological measures?

**Literature Review**

As products become more and more homogeneous, a brand's communication of emotional attributes becomes highly significant for its differentiation. As a result, advertising relies heavily on emotions in order to grasp consumers' interest (Huang, 1998). Emotion is a process that happens over time, varies in intensity (Simon 1982), valence (Russell 1980) and exhibits a variety of indices. These include conscious appraisals of internal states and physiological changes in heart rate, blood pressure, and adrenalin levels. An "emotional message" refers to a vehicle that creates a flow of feelings that people conceive as emotional experience (Friestad and Thorson, 1986). Consumers' needs for stimulation, personal expression, social approval and self-esteem relate to the benefits that they seek from emotional advertisements (Cutler and Javalgi, 1993). Research on emotions, in both fields of psychology and sociology, demonstrates the existence of basic emotions, such as happiness, anger, and fear that are based on global instinctual biological reactions (Ekman, 1984; Kemper, 1987; Shaver et al., 1987). On the other hand, social emotions such as humor, warmth, and nostalgia, derive from the above-mentioned basic emotions and from the socialization process, as a social reaction of human development (Harris and Saarni, 1989; Kemper, 1987; Malatesta and Wilson, 1988; Scheff, 1990). Consequently, the emotional responses of humans are tightly connected to and driven by the demands of their social environment. For instance, a person's need to be socially desirable might lead to him/her expressing his/her emotions in a way that is consistent with the norms of the society.
It is noteworthy that exemplary companies, such as Procter & Gamble and Unilever, collect high-frequency data on emotions from facial expressions in order to understand their influence on consumer behavior. Moment-to-moment measures can predict the actual emotions of consumers towards the advertisements (Teixeira, Wedel and Pieters, 2011). This kind of exposures enables people to respond as in real-life situations, which is fruitful for diagnostic purposes (Derbaix, 1995). This means that the consumer is driven by his/her need to be socially desirable and thus, led to hinder the expressions of true emotions, when his/her emotions are measured by self-report measures. Therefore, the following propositions are formulated:

**P1.** Social desirability moderates the effect of emotional advertising on consumers' emotional reactions, such that: Consumers who watch an emotional advertisement in public will express different emotions from those who watch the advertisement in private.

Most studies associated with emotions in advertising are based on self-report measurements. Such approaches hold specific limitations. It is very difficult for participants to indicate their actual emotions, since it requires a great level of cognitive processing to rely on their memory and ability to recall their emotions (Li et al., 2018). In contrast, facial expression measurements and phycho-physiological measurements are able to detect unconscious reactions (Hwang and Matsumoto, 2016). Another weakness of self-reported emotions is that questionnaires ask participants to summarize their feelings during all experimental stimuli, while facial expression analysis permits frame by frame analysis (Li et al., 2018), which provides a more detailed and transparent outcome. Several researchers have drawn attention to the biases of self-report measurements as they fail to reflect the actual experience and feelings at that moment (Hwang and Matsumoto, 2016; p. 135).Thus, the following proposition is formed:

**P2**. The self-reported emotions will differ from the emotions captured through the facial expressions' analysis.

## Conclusions

Propositions with respect to consumers' reactions to emotional advertising, considering the role of social desirability were constructed. It is expected that future empirical evidence on these propositions will provide fruitful implications for both managers and academics.
The literature review highlights that emotional, advertising appeals are one of the most creative strategies, the effectiveness of which depends on how consumers respond to emotions (Micu and Plummer, 2010). Previous studies demonstrate that emotions are considerably influenced by social contexts and that people either keep their emotions private or share them with others (Frijda and Mesquita, 1994). Social desirability represents one of the reasons why consumers decide to respond in a different way when they watch an advertisement in private rather than in public. As such, the synergy of self-reported measures and physiological methods could offer a more honest report of a subject's emotions and attitudes towards an emotional advertising appeal.

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# Applying Data Mining Techniques for Pattern Recognition in a Knowledge Data Base of Historical Greek Advertising Images

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**Abstract**

The Pattern Recognition through Data Mining Techniques of the Historical Advertisements is an essential task within the digital documentation of cultural heritage. The classification is a tedious task and habitually consumes a lot of time if implements in a large number of advertising images stored in aKnowledge Data Base. The existence of automated categorization techniques to facilitate these sorting tasks, would improve a significant part of the digital documentation process. Additionally, the proper sorting of available advertisement images, allows optimized management and more efficient search through specific terms, thus contributing to better knowledge and interpretation of these elements.
Especially, in advertisement research, data analysis and knowledge discovery capabilities of machine learning methods are proved very promising, supporting the human analyst in finding patterns and regularities in collections of real data. Association rules can be used to represent frequent patterns in data, in the form of dependencies among concepts-attributes. In this paper, a comparison of different classification techniques is presented for the task of classifying historical advertisement images data set. The comparison was conducted using WEKA, a tool and a library for machine learning and data mining algorithms that provides a broad spectrum of algorithms which are for data pre-processing, classification, regression, clustering, association rules, and visualization.
Promising results havebeen obtained in terms of application and it is considered that theseinnovative techniques can contribute significantly to the historical advertisement research.

***Keywords:****Historical Advertisements, Pattern Recognition, Data Mining, Image Classification*

# Association through Data Analysis of Children as Protagonists in Greek Advertisements

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## Abstract

Having studied approximately 20,000 printed Greek advertisements covering the period from 1875 to 2019, this article attempts to examine and describe the use of minors in them, depending on the type of product displayed, that is, the category to which this belongs. On the theoretical level, therefore, from the point of view of marketing science, the main concern of the study is to define the concept of "product category" and to examine it in conjunction with the consumer need or desire to meet and, in the same context, analyze and understand the "Product hypostases" on which the formation of his image is based on the public. The investigation of the large volume of empirical material resulted in 547 advertisements, in the visual part of which prominent minors. As we shall see, these ads are not evenly distributed across all product categories, which has caused the causal explanation of this inconsistency. In this sense, using the content analysis technique and applying association techniques using knowledge mining algorithms, first of all, the messages of these ads were examined, secondly, the age ratings of the minor children in these advertisements (babies, children, adolescents), thirdly, the presence of parents in them (mom, dad or both parents) and the environment in which this promotion takes place.
***Keywords:*** *Advertisements, Product Marketing, Children, Knowledge Mining, Content Analysis*

# Data Analysis of Greek Historical Advertisements Over Time in light of Psychology of Colors

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## Abstract

The psychology of colors associated with persuasion is one of the most interesting aspects of marketing. The way a color affects our psychology depends on many factors, such as genes, environment, gender, age, education, and social context. Color as a valuable tool and an integral part of marketing communication directly affects our subconscious and attracts or rejects us with its hidden meaning. It is therefore very important to choose the right color which achieves communication with the consumer. Marketing experts affect consumer behavior with integrated marketing communication through various market research. Better position of a product in the market and increased profits, can be achieved by proper selection and combination of colors.

The survey and statistical analysis of the data were conducted by using data mining algorithms applying classification rules. Segmentation is the process of classify advertisements according to the criterion of color into multiple homogeneous regions with similar properties whereas classification is the step that labels these regions. The main goal of this paper is to analyze the most popular methodologies and algorithms to segment and classify a series of historical printed Greek advertisements according to color that is being used over decades.

Then the collected data are analyzed and transformed to assume suitable form for the execution of the respective machine-learning algorithms provided by the software package *WEKA*.

The results indicate among others, that the use of data mining methods is an important tool to export and receive the conclusions and decisions especially in the field of psychological assessment, perception and cognition in general.

In conclusion, color segmentation according theories of psychology can be promoted and evaluated also by neuropsychological assessment tools and the findings of the present project can be possibly further expanded.

***Keywords:*** *Color Psychology, Segmentation, Cognition, Advertisement, Data Analysis*

# The Variable Importance of Cleanliness in Greek Advertisements. Data Analytics of Detergents' Historical Images(1900-2015)

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## Abstract

The chronological order and analysis of Greek print detergent advertisements in this article, aims to provide an elaborate model of observation of detergent advertisements and, in particular, their displacements in the period between 1902 and 2019. The empirical material of the study is composed of 300 detergent advertisements based on their use. The chronological tracking of advertisements is intended to capture the shifting of detergent products and, consequently, changes in our perception of cleanliness.The collected data of Advertisements are analyzed and transformed to assume suitable form for the execution of the respective machine-learning algorithms provided by the Google Vision API. that detect objects and faces, read printed and handwritten text and build valuable metadata for further data analysis. The used framework creates a Lucene index of image features for content-based image retrieval using local and global state-of-the-art methods.

According to theorists, this type of advertisements refers to the organizational principles of everyday life as well as to the practices of symbolic construction of social life, but it aims at the underlying cultural meanings, as its overall work refers to religious phenomena and ritual symbolic systems, for which it would be very difficult to find their correspondence with ads for detergents. Additionally, the previous analysis of this type of advertisements can be studied upon the theoretical framework of Maslow's model which focus in hierarchy of needs as indicated in the pyramid from the lower needs (physiological, security) to the higher needs (social, esteem, self-actualization). Cleanliness beyond practical need can also fulfil the need of one's sociability, so can be characterized as a need that is combined to others.

***Keywords:*** *Visual Advertisements, Historical Advertisements,Visual and Textual Diversity,Visual Retrieval,Google Vision API, Data Analytics*

# The effects of luxury and well-being in advertising and their impact on real consumption

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**Abstract**

The market of luxury products in Poland is relatively young and it does not pose the vital role for the global market. It is worth mentioning that the number of rich people in Poland is constantly rising, which in the nearest future may be an impulse for bidders of luxury products to pay more attention to the market.
Because, there are global luxury brands available on the polish market, there are many advertising activities. Close analysis of the methods, forms and techniques used by bidders, might be an inspiration for creative subjects belonging to the mass market.
Taking into consideration essence of the luxury product in terms of economy and marketing, it is worth analysing the consumption tendency of that kind of products one the global market, as well as consult the variability of the customer's luxury determinants. As a result, there are possibilities to chart the rules of creative usage of luxury and well-being themes in advertising that might potentially increase the offer interest and lead to the rise of consumption on the global market.
Numerous research of the luxury products market are done by diverse organizations all around the globe. Those researches feature a big variance because of the differences in the definition of luxury product as well as using distinct survey methods of the market value. On the other hand, generalizing world market data as well as polish luxury market, we can easily observe a dynamic development. In the last 15 years the market has doubled its value. In 2008 economic circulation of this market has totalled from 90 to 225 milliard euros. In 2013 the market reached 218 milliard euro, whereas the evaluation of 2014 projected a rise to 223 milliard euros.
In 2009 there was a significant 7-13% drop of the market value. This situation was brought by the global economic crisis that also left its mark on this market. Limiting the expenses on luxury goods, however, was not a long-term process. What is more, in the following year the value of the global luxury market increased from 153 to 173 milliard euros, which is about 13%. Europe, North America and Japan have been achieving the highest turnover in the luxury goods market for many years.
However, this situation may change due to the dynamic development of emerging Asian markets, which account for 25% of the demand for luxury goods. The highest demand in this region is observed in China. In 2013, the share of both Americas in the global luxury goods market increased. The market of luxury goods in North and South America accounts for 32% of the world market, thanks to which it is the most dynamically developing market in the world.
Global rankings and analysis still do not treat Poland as an important participant in the luxury goods market. Home luxury brands are valued about a thousand times less than the world's most expensive luxury goods brands. The expenses of Poles for luxury goods, however, are growing very dynamically. From 2005 to 2010, the Polish market of luxury consumer goods increased by 50% in real terms, thus taking the fourth place in the world in terms of growth dynamics.
The availability of global luxury brands in Poland is also growing. Based on numerous data describing the market, over the years 2009-2010, the availability of luxury brands on the Polish market increased by 8% and amounted to 61% in 2010, currently in 2019 it is estimated that it is almost 65%, which means that only every third luxury brand is not present on the Polish market.
The degree of availability of luxury brands on the Polish market is diversified in individual sectors. 86% of the world's largest luxury brands are available on the hi-tech market, not much less, 82% of brands - among alcoholic beverages and stimulants. The hotel services segment is still open to many luxury brands. Penetration of this market totals 34%.
The effects of luxury and well-being as the main theme of advertising messages is a popular way of attracting public attention. In this way, numerous mass products are given a unique character of a prestigious offer, and consumers

are put on a slightly different, emotionally created - higher position compared to the general public. However, it is difficult to state clearly that in this way the consumption of mass products clearly increases.

It can certainly be said that the luxury goods market is definitely diverse from the markets offering mass consumer products. Therefore, different marketing strategies and tools should be used for these markets to achieve marketing objectives. However, there is nothing to prevent the use of the best practices known from the luxury market in terms of mass products that aspire to prestige. In this way, you can stand out from the competition companies, and ultimately increase the possibility of consumption of products offered on a mass scale.

On the luxury goods market the goal of all marketing activities is to create the image of prestige. The product must be known and visible to the consumer, but at the same time the offer must be wrapped in the aura of valuables, unavailability and resistance to fashion and consumption trends. The consumer is required to make an effort to gain a luxury good. It is a very niche approach to marketing activities that makes sense when the product brand has a strong identity and an established position in consumer awareness.

Knowing, the specificity of consumption of luxury products and the characteristic features of this type of offer, producers on the mass market are trying to imitate these activities, to at least partially distinguish themselves from the competition. Thus, even though the very effect of luxury, ostentatious consumption and well-being, created in advertising messages, is interesting and very attractive, it is not enough to ensure a long-term increase in the consumption of products offered on the mass market. Careful analysis of advertising methods, forms and techniques used by these entities can certainly be an inspiration for creative entities belonging to the mass market.

***Keywords***: *advertising, luxury products, consumption trends, consumer behaviour, luxury market*

# Branding

# Can brand perceptions be changed through innovation and environmental profiling?

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**Abstract**

It is possible for a company to make various tactical choices in order to achieve the desired positioning of the brand name in a market. Two such tactical choices are to develop an environmental profile, and/or to pursue innovative design. This study will look at how a Norwegian shipping company, The Fjords, has strengthened its brand profile through investments in new and environment-friendly technology using innovative design. The year 2016 saw The Fjords launching its vessel "*Vision of the Fjords*". The vessel represents evolution in various ways. Firstly, it is one of the first hybrid vessels to enter commercial passenger traffic. The ship is more environment-friendly than conventional ferries. What's more, the vessel is unique in its design. The design is claimed to have found inspiration in the Oslo Opera House as well as the Trollstigen mountain road in Geiranger. The *Vision of the Fjords* runs scheduled operations on the Nærøyfjorden, a side branch to the Sognefjord. Further to this vessel, the company also operates more traditional ships on the Nærøyfjorden. These are ageing car ferries that have been decommissioned from ordinary traffic, and have been deployed here to cater to the tourist trade. One of these older ferries is the "*Fanaraaken*". During the summer of 2016, both *Fanaraaken* and *Vision of the Fjords* carried international tourists around the Nærøyfjord. The route made the return trip between Flåm and Gudvangen. The results from this study are based on a questionnaire where 573 international tourists answered questions regarding their perception of the vessels and the corporate image.

The travel sector is a growth business, with an underpinning of small and medium businesses offering travel products and services such as accommodation, restaurants, and transport, as well as various adventures and activities. One result of this is that providers of various travel-related products and services must to a greater extent than earlier be seen as innovative, and capable of positioning their products for survival in this competitive situation. One innovative strategy for a travel industry provider will be the developing of a unique design. Research has previously shown that product design has a direct influence on consumer response (Bloch, 1995; Crilly et al., 2004), perceived value (Rindova&Petkova, 2007; Kumar & Noble, 2016), attitudes and endorsements (Homburg, Schwemmle, &Kuehnl, 2015; Oklevik, Nysveen & Pedersen 2018). Research has further indicated that the introduction of new *greener* products has a positive effect on the customers' attitudes to the brand names launching these green products (Olsen et al., 2014), and that the perception of a company's green image contributes positively to the general public's attitude towards the company (Jeoung et al., 2014). A common trait with all these studies is that standardised metrics were used on the consumers' or tourists' responses, typically in the form of linear scales with 1 to 5 questions. For the current study, we wish to step outside standardised metrics, by testing whether the effects of product design and environmental profile on the perceived corporate image will also hold true while using as a basis such image elements as the company itself defines as important. The contribution here is accordingly both contextual and relevant for travel business management, in that we are demonstrating that the launching of a travel product that comprises both innovative design and a distinct environmental profile, produces a significant improvement of the corporate image along 7 out of 8 dimensions that the company regards as important. Even if the literature cites examples of the effects of design and environment profile on consumer perceptions, these two factors have largely been evaluated separately (Crilly et al. 2004, Jeoung et al. 2014). The current study accordingly contributes to the research tradition by studying the effects of these two factors concurrently.

For the purpose of this study, a natural experiment, was conducted, whereby tourists on the two boats *Fanaraaken* and *Vision of the Fjords* were interviewed in parallel over the course of four days during August of 2016. A total of 345 tourists were interviewed on board the *Vision of the Fjords* and 296 on the *Fanaraaken*. The shipowner – The Fjords – has defined 8 dimensions as essential for the brand: innovative, storytelling, safe, identity-promoting,

different, environment-friendly, media-friendly, professional hosting. The results from the study indicate that the corporate profile was significantly improved among tourists travelling on board the *Vision of the Fjords* compared to tourists on the *Fanaraaken*. This applies to seven of the eight brand dimensions. For the eighth dimension, storytelling, there was no significant difference in the perceptions among the two groups of tourists being interviewed. A factor may be that the audio system on the *Vision of the Fjords* was out of service during the days when the interviews were being conducted. The travellers were therefore not exposed to guiding during the trip, which would ordinarily have been the case. This may explain some of the missing findings in this dimension.

The results show that a company can improve its corporate image through the implementing of a service and product innovation. In the example used in the current study, this innovation comprises the development of a unique and environment-friendly design on a fjord boat. Still, the study displays some nuances. Tourists who have purchased the trip as a part of a fuller package, perceive the corporate image as consistently better than other tourists. This difference is clearly apparent for the older vessel «*Fanaraaken*», and much less so on the hybrid vessel «*Vision of the Fjords*». The company's efforts on the newly designed and environment-friendly vessel accordingly contribute to the perceived corporate image being more evenly spread between package tourists and individually booking travellers. The study also shows that different geographical segments among the travellers perceive 5 of the 8 corporate image dimensions differently. The three dimensions of innovative, safe and media-friendly were perceived the same across all the geographical segments. This lays the grounds for employing various elements in the market communication towards the different segments. For instance, Asians perceive the company as being more environment-friendly than other travellers do. This means that market communication utilising elements of environment and corporate profiling will probably be more effective when addressing the Asian markets than with the European or North American markets. Correspondingly, corporate profiling vs. the North American market may see a relative advantage in focusing on elements like different and professional hosts.

*Keywords: Corporate Image, innovative design, green image*

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# Making the past fashionable: Heritage marketing in the service of luxury fashion brands

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**Abstract**

Introduction - Since the publishing in 2007 of the seminal study by Urde, Greyser and Balmer on brand heritage, i.e. a dimension of a brand's identity found on its track record, longevity, core values, use of symbols and organisational belief in the importance of its history, a flourishing field of research has emerged. For the past decade, a growing number of marketing scholars have been investigating how corporate brands create and deploy this dimension of their identity, and how this can benefit brand authenticity, appeal, identity, and customer engagement.
Despite the effervescence of this field, the current challenges in the luxury market (Kapferer, 2007), and the important role heritage plays in the building of a luxury brand (Fionda & Moore, 2009), there's a noticeable lack of research focused on how luxury fashion brands can create and benefit from heritage marketing strategies as a whole.

Purpose/Objective - Acknowledging the aforementioned lack of a holistic approach to heritage marketing of luxury fashion brands, this research paper aims to provide an overview of the different ways a brand can build a heritage and how it can be employed in their marketing strategy.

Methodology - This paper is based on the analysis of an extensive literature in order to propose the different ways the reported cases can be applied to the case of luxury fashion brands.

Findings - Through the analysis of the available literature on the subject matter, this research highlights the concepts of heritage and the processes through which a brand can develop and use it in its favour.

Research limitations - This paper aims to further the debate and knowledge on heritage branding strategies for the particular market that is luxury. As it is an ongoing research, further practical findings shall be presented in the future.

Originality - This research paper proposes to be the first of its kind to propose a comprehensive approach to how heritage branding works and how it can be applied to the case of luxury fashion brands.

Practical implications - This paper will be instructive to future researchers and scholars in both the heritage marketing and the luxury branding fields as well as to brand managers and other internal brand stakeholders in stewardship positions.

Paper type - General review based research paper.

*Keywords: heritage marketing; branding; luxury branding; fashion marketing; heritage brands*

# The Influences of Market Orientation and Internationalization on Brand Innovation and Brand Equity in Greek Food and Beverage Companies

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## Introduction

The proposed research aims at exploring the concept of Brand Innovation in Greek food and drink industry.Most studies and researches in the international literature focus on product innovation. Brand Innovation on the other hand, receives little attention in the branding literature. Brand Innovation is a field that has not been adequately explored, resulting in a significant gap in literature. Furthermore, there has not been developed a clear conceptual framework concerning Brand Innovation (Keeley et al., 2013; Grant 2007; Chien and Yuan, 2013).

In this context, the main purpose of this paper is to investigate: 1) the impact of Brand Innovation on Brand Equity 2) the relationship between Market Orientation and Brand Innovation and 3) the relationship between Internationalization and Brand Innovation

## Methodology

Primary data were collected from questionnaires sent to Greek export companies operating in the food and beverage industry. Regarding the sampling method, random selection was followed. The size of sample was set at 317 companies.
The reliability of our questionnaire was evaluated using the following criteria: a) Internal consistency reliability, that was examined using the Cronbach's coefficient, criterion is >0.7, for each question group and each scale. b) Test-retest reliability using the Pearson correlation, criterion is >0.7.
Exploratory factor analysis was used to examine the correlation among individual measures, in order to identify the underlying latent factors, and evaluate the proposed factors.
The relationships between study parameters were investigated using the Pearson product moment correlation coefficient (r), the data were analyzed with SPSS 20 statistical package (Statistical Package for Social Sciences) and significance was set at $p<0.05$.

**Conclusions**

Conclusions were derived from the above mentioned data analyses. Concerning the relationship between Brand Innovation and Brand Equity, the analysis suggests that Brand Innovation directly and positively affects Brand Equity. Furthermore, concerning the relations between Market Orientation and Brand Innovation, the analysis confirms that there is a positive link between Market Orientation and Brand Innovation. Furthermore, Market Orientation is a critical factor for Brand Innovation. Finally, concerning the link between Internationalization and Brand Innovation, data analysis confirms that the degree of Internationalization of the company, directly and positively affects Brand Innovation.

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# Brand anthropomorphism in Twitter

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This paper aims to shed light on how brand messages are processed by the consumer in social media environments. Approaching this question from an anthropomorphic angle, this research ultimately proposes that a social media platform works to facilitate consumer's anthropomorphic processing of brands: to their detriment, but also potential benefit.

The authors approach the anthropomorphic power of Twitter in layers. Twitter was chosen specifically as the content make-up of social networks has been shown to be distinct (Smith, Fischer and Yongjian, 2012; Roma and Aloini, 2019)). Beginning with a review of the brand anthropomorphism literature, definitions and determinants will be established, before illustrating how anthropomorphic processing is often evoked by brands, with largely positive effects. Zooming in further, the focus of this paper will then turn to Twitter specifically, wherein it will describe how the platform's design and population indulge anthropomorphism's determinants. Aggregately, Twitter will be shown to be conducive to anthropomorphic processing,providing a potential explanation for brand's outsider status on social media (Fournier and Avery, 2011).

*An innate human processing bias*

Anthropomorphism is the process by which humans have been known to ascribe morphological human features or human behavioural characteristics to non-human objects and agents (Epley, Waytz and Cacioppo, 2007; 2010; Guthrie, 1993). Guthrie (1993) describes how anthropomorphism broadly manifests to varying degrees in everyday life: it can be either 'partial' (when the entity is ascribed human traits), 'literal' (when it is believed that the entity is a person) or 'accidental' (coincidentally human-looking). This habit of humans to see others in inanimate or non-human entities is not only far-reaching in its application, but has been shown to be present in human processing mechanisms across time, having been first described by the ancient Greek philosopher, Xenophanes (cited in Waytz and Cacioppo and Epley, 2010), who noted how believers imposed a human form on abstract concepts and supernatural entities.

The process of anthropomorphism is inductive, andis a cognitive bias hardwired into the human psyche (Guthrie, 1993; Waytz and Cacioppo and Epley, 2010; Delbaere, McQuarrie and Phillips, 2011).Epley, Waytz and Cacioppo (2007) by no means exhaust the psychological determinants of anthropomorphism but have, through a series of studies, identified three: the likelihood of human schemas or knowledge bases being triggered or related to an agent (a cognitive determinant), the need to understand or make decisions about the agent, and the desire to form a social connection (motivational determinants). These motivational contributors to anthropomorphic processing('sociality' and 'effectance') were subsequently investigated in more depth (Epley, Waytz, Akalisand Cacioppo, 2008), wherein it was also noted how a lack of one of these determinants might also serve to dehumanize an entity.This being said it should also be noted that Waytz, Cacioppo and Epley's (2010) development of the IDAQ (the Individual Differences in Anthropomorphism Questionnaire), a scale that measures individual differences in anthropomorphism of agents, demonstrates how different people can be more or less able to assign human characteristics to non-human agents. Twitter therefore may be capable of creating an ideal environment for anthropomorphic induction, but an individual's tendency to anthropomorphise also works to moderate these determinants. This individual fluctuation has been specifically demonstrated by Aggarwaland McGill's (2011) research, wherein anthropomorphism was associated with a servant or partner brand 'role' (see also Kim and

Kramer (2015)), which in turn was shown to be either assimilated or contrasted by an individual as a consequence of their unique processing-schema.

*Anthropomorphising brands*
Marketing literature has explored how consumers tend to process brands anthropomorphically, assigning them both human morphological and behavioural characteristics. Brands not only inscribe smiles on car radiators (Aggarwal and McGill, 2007), but are analysed through projective techniques in marketing research (Aggarwall, 2004).A range of techniques have been used by marketing managers to trigger anthropomorphic processing, from the use of animal-like or product-based spokespeople (Hosany, Prayag, Martin and Lee, 2013)- such as Mickey Mouse or the Microsoft Paperclip - to the way a brand can be said to exhibit a personality.

The notion of brand personality (Fournier, 1998; Aaker, 1997), or the process by which the brand is assigned personality traits by a consumer observing its behaviour (as actioned by a brand manager), is borne out of brand-consumer relationship dyads (Fournier, 1998). Indeed, Aaker's (1997) seminal paper on the dimensions of brand personality maps the 'Big Five' personality traits from individuals onto brands, finding that consumers sought relationship partners based on their own personality traits. Similar studies into brand personality have shown that consumer-brand relations have followed friendship templates over time, with 'exciting' brands experiencing more short-lived relationships over 'sincere' brands (Aaker, Fournier and Brasel, 2004); that brand personalities are considered more effective if they are congruent with the real self rather than the ideal self (Malär, Krohmer, Hoyer and Nyffenegger, 2011); and that brand personalities can also be perceived to be more masculine or feminine, with masculine or feminine consumers responding better to gender-role-congruent brands (Grohmann, 2009). However, Capara, Barbaranelli and Guido's (2001) research has shown that although the concept of brand personality may be useful, brands and individuals describe their personalities in different terms, with only certain human personality characteristics translating onto brand personality attributions. This research is pertinent in reiterating the role of the individual in moderating brand anthropomorphism.

Marketing research has further evidenced the benefits of triggering anthropomorphic processes (both morphic and behavioural) for brands. Delbaere, McQuarrie and Phillips (2011) found that visual personification in advertisements led to more positive emotions (as well as greater brand liking);Aggarwal (2004) describes how consistent brand behaviour across multiple channels provides an opportunity to influence brand evaluations, and Aggarwal and McGill (2011; 2007) illustrate how anthropomorphism can influence positive brand associations and behaviour through human schema-based processing. However,brands which are perceived to act intentionally (Puzakova, Kwak and Rocereto, 2013; Caruso, Waytz and Epley, 2010), have also led to consumers expecting unrealistic support from brands in the event of negative publicity (Puzakova, Kwak and Rocereto, 2013) or a 'transgression' (Aaker, Fournier and Brasel, 2004). Further to this, consumers have been shown to hold onto anthropomorphic products for longer, to the detriment ofplanned obsolescence business models(Chandler and Schwartz, 2010).

In sum, anthropomorphism can be said to be a cognitively and motivationally determined inductive bias (Epley, Waytz and Cacioppo, 2007; Epley, Waytz, Akalis and Cacioppo, 2008) which is innate in humans, and which is in part driven by the activation of human processing schemas and the need to form a social connection as key drivers (Epley, Waytz and Cacioppo, 2007). However, this being said, the individual remains a moderator of anthropomorphic processing (Waytz, Cacioppo and Epley, 2010). For brands, anthropomorphic processing is (with a few exceptions (Aaker, Fournier and Brasel, 2004; Puzakova, Kwak and Rocereto, 2013; Chandler and Schwartz, 2010) considered to have positive outcomes (Aggarwal, 2004; Delbaere, McQuarrie and Phillips, 2011; Aggarwal and McGill, 2007; 2011). Why are these benefits struggling to translate online?

*Anthropomorphising on Twitter*
Zooming in further still, Twitter's platform may further contribute to consumers' anthropomorphic processing of brandsin two respects: (1) in the way it requires a brand to present as a user (a factor which may trigger human schematic processing (Epley, Waytz and Cacioppo, 2007)) and (2) through the unique context in which brand-content is consumed (a setting which may enhance a user's desire to interact socially (Epley, Waytz, Akalis and Cacioppo, 2008)).

Firstly, Twitter requests that a brand squeezes its essence into human clothing - a requirement which has the potential to facilitate human schematic processing(Epley, Waytz and Cacioppo, 2007). Creation of a Twitter profile requires brands to take on a handful of anthropomorphic features: they must fill out a 'bio', they are required to 'follow' others (a verb that semantically implies agency) and they must complete a standardised' profile', including the optional declaration of a birthday. Fittingly in the context of this paper, the word 'profile' is one that is inherently anthropomorphic, defined as pertaining to a person, and is a word which in other contexts serves to describe the outline of a human face (OED, 2019). Brands are expected to do just this as they join Twitter, moulding themselves into the form of a human user through image, network and tweets. This self-presentation element of social networks has been explored in relation to individuals (Rettberg, 2013;Marwick, 2013), and to a degree is also present in marketing literature through the phenomena of self-branding amongst 'micro-celebrities' (Senft, 2013). However, this is a process which brands are subjected to too, as they are forced to adopt a human shape, whether their brand is intentionally anthropomorphic or not. Indeed, Singh and Sonnenburg (2012) have described how brands are required to *perform* on social networks, a metaphor which evokes a person, not a brand.

Furthermore, brand content is socially framed by user-generated content when viewed viauser's newsfeeds, meaning brand communications may be more likely to be viewed as an attempt at 'sociality' (Epley, Waytz, Akalis and Cacioppo, 2008; Epley, Waytz and Cacioppo, 2007). On a fundamental level, Twitter affords users power (Labrecque, v.d.Esche, Mathwick, Novak and Hofacker, 2013), resulting in the opportunity to interact with brands in a non-hierarchical fashion, unlike in traditional communications(Deighton and Kornfield, 2009; Singh and Sonnenburg, 2012; Fournier and Avery, 2011; Hennig-Thurau, Hofacker and Bloching, 2013). Further to this, the user-generated content which pervades Twitter is, at least in part, socially motivated. For example, Hennig-Thureau, Gwinner, Walsh and Gremler's (2004) study ofcustomer eWOM motivations (which Kaplan and Haenlein (2010) locate under the umbrella of user-generated content) evidenced that users are partially motivated to share content as a result of perceived 'social benefits'. Similarly, Whiting and Williams (2013) and Daugherty, Eastin and Bright (2008)identify that user-generated content in online environments is motivated by the need to connect with others. As a result ofuser's social motivations behind posts, the context of brand's content could mean they are more likely to bethought of as a relationship partner (Fournier, 1998), or their communications as an act that requires reciprocation (Moon, 2000).Twitter's populated nature, to a more acute degree than through other communication channels, may be viewed to cast consumer-brand interactionsexplicitly in the shape of a human relationship.

On account of the individual moderation of brand anthropomorphism (Waytz, Cacioppo and Epley, 2010), theoretically speaking, such an anthropic environment could work in a brand's favour, as well as to its detriment, depending on an individual's response. Generally speaking, brands on social media have continued to be met with resistance by users (Fournier and Avery, 2011; Kaplan and Haenlein, 2010), and have found greater success through the use of brand communities (Zaglia, 2013; Muniz and O'Guinn, 2001) or the employment of 'influencers' (Senft, 2013; Thompson, 2006) wherein they can hide behind the authentic personages of others. However, the anthropomorphic frame Twitter provides could, in line with the benefits associated with brand anthropomorphism (Delbaere, McQuarrie and Phillips, 2011; Aggarwal, 2004; Aggarwal and McGill, 2007; 2011) mean that employing intentionally anthropomorphic techniques on this platformare particularly effective.

This studyproposes that consumers might feel more inclined to anthropomorphise brands when they are encountered via Twitter. Anthropomorphic processing has been shown to be an innate process in humans (Guthrie, 1993; Waytz and Cacioppo and Epley 2010; Delbaere, McQuarrie and Phillips, 2011) and has been identified as having both cognitive and motivational determinants (Epley, Waytz and Cacioppo, 2007; Epley, Waytz, Akalis and Cacioppo, 2008), including the ability to access human schematic processing and the desire to form a social connection. It has been illustrated how Twitter's computer-mediated nature and its platform designindulgesthese determinants, with users approaching computer-mediated communication ssocially (Moon, 2000), and through brands being forced into a human guise, whose communications mustpursue social interaction (Rettburg, 2013; Marwick, 2013; Hennig-Thureau, Gwinner Walsh and Gremler, 2004).

This research contributes to brand anthropomorphism literature in its designation of a communication channel as a moderator of anthropomorphic processing. Furthermore, in showing Twitter to be a contributing factor in a consumer's likelihood to anthropomorphically process, it may offer further theoretical explanation for why brands often feel unwelcome on social networks (Fournier and Avery, 2011; Labrecque et. al, 2013). For brand managers, understanding platforms themselves as more or less conducive to anthropomorphic processing, might provide useful insights into how best to approach and engage consumers on social platforms. For example, brands might use this research to justify intentionally leaning into their brand's existing anthropomorphic behaviours, or to introduce more overtly anthropomorphic techniques (such as personification, imagery, or the incorporation of morphological brand elements (Aggarwal and McGill, 2011)) in their direct communications. Ultimately, the understanding of this process as anthropomorphic could help brands to use the prescribed costume-party of Twitter in their favour.

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# Branding and Destination Image

# Factors Affecting Tourism Expenditure Patterns in a Traditional Mass Tourist Destination

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This paper examines tourists' expenditure patterns to Crete. Crete is the archetypal mass tourist Mediterranean destination, attracting a record number of visitors every year, without experiencing a proportionate increase on tourism receipts. The main research aim discussed in the paper delves around ways through which a traditional mass tourist destination such as Crete could improve on its touristic balance of payments through higher tourist expenditure. Using a number of demand side characteristics, we explore the possible effects of a number of person specific variables on tourist expenditure in Crete. This analysis helps to improve the competitiveness of the Cretan tourism product.

The objective here is to examine the impact of a number of covariates on tourists' expenditure patterns while on holidays in Crete. This information will provide useful insights as far as tourism policy making and planning is concerned. The current paper utilised primary survey data to examine the research problem on hand. In particular, the team of researchers collected the empirical data through the design, distribution, and analysis of 1833 survey questionnaires in Eastern Crete. The empirical data was collected during the summer period (April to October period) from a team of experienced research assistants. In particular, the paper considers the following variables: Previous visits to Crete, Type of trip, Duration of stay, Perceived value of the destination, and respondents' socio-demographic characteristics (age, marital status, gender, employment status, country of origin, income levels). The dependent variable is average daily expenditure per person during their stay in Crete.

There are a number of interesting observations derived from the examination of the empirical results. In particular, traditional visitors (i.e., those staying up to two weeks in Crete) are more likely to spend up to 100€ and more than 101€ respectively, as compared to the short stay visitors (those staying in Crete for less than a week). In addition, it appears that all age groups but the reference group (those older than 65 years of age) are more likely to spend up to 100€ and more than 101€ respectively. Thus, Gen Z (up to 25 years of age), millenials (those up to 45 years of age) and Gen X (those up to 65 years of age) are more likely to spend more than the baby boomers in the respective expenditure categories. Furthermore, it appears that French and Dutch nationals are particularly negative towards spending more money in Crete as compared to other nationals in the island. Thus, French and Dutch visitors are less likely to spend either up to 100€, or more than 101€ respectively, as compared to other nationals visiting Crete for holiday purposes. Finally, the empirical finding also point out that factors such as income, marital status, and respondents' perceived value of the destination also have a negative effect on their expenditure patterns.

***Keywords:*** Crete, Tourism Expenditure, Multinomial Logit Model

## INTRODUCTION

The region of Crete is one of the most dynamic and vibrant tourist destinations in Europe. Along with an extraordinary coastline that has attracted numerous blue flag awards over the years (Apostolakis 2014, Agaliou 2015), the island boast the first civilization in Europe (the Minoans). At the same time, Crete is regarded as the '*gorge capital of Europe*' due to the large concentration of gorges on the island. Consequently, the island is a prime tourist destination, and it represents the first tourism destination for many visitors. According to the Greek National Statistical Service, Crete attracts more that 2.5 million visitors each year (GNS, *various years*). Thus, one could argue that Crete represents an archetypal mass tourist destination in the Mediterranean sea.

However, this impressive number of tourist arrivals (that has been achieved for a number of years since the beginning of the 2010s') is considered problematic and in many respects troubling. This is the case for two main reasons. First, Crete attracts a record number of visitors every year, without experiencing a proportionate increase on tourism receipts. Thus, Crete receives an ever-growing number of visitors (with the associated pressure on natural resources) who do not generate proportionate economic returns. Second, the continuous increase on visitor numbers put additional pressure on the island's scarce natural resources (mainly water and energy).

The main purpose of the survey is to study the spending profile of foreign visitors in Eastern Crete, in order to find the potential prospects of the tourist industry in that area. The focus of the paper is Eastern Crete, since most of tourism activity on the island is concentrated in that part of Crete. Using a number of demand side characteristics, we explore the possible effects of a number of person specific variables on tourist expenditure in Crete. This analysis helps to improve the competitiveness of the Cretan tourism product. By studying Crete visitors' spending patterns, we explore their travel habits, their perceptions about the prefecture of Heraklion and the prefecture of Lassithi, their intentions and activities during their visit to Crete. An important part of the research is the study of the visitors' tourist expenses in terms of their accommodation and the total cost of their holidays. This information is collected for the first time in Crete and therefore we believe it can be an important element of tourism policy development.

## LITERATURE REVIEW

Lambrou and Ikkos (2017) have undertaken a recent and rather comprehensive account of the economic impact of tourist activity in Greece. According to their analysis, tourists in Crete spend around 685€ per visit, and around 80€ on a daily basis. Based on these figures, Crete tops the list of Greek tourist destinations in terms of daily expenditure patterns. The empirical findings by Lambrou and Ikkos (2017) are also confirmed in Baourakis *et al.* (2015), albeit with lower figures regarding tourists' stay and expenditure patterns. Nevertheless, there seems to be some sort of disagreement in the relevant literature as far as how much tourists spend during their holidays in Crete. On the one hand, Baourakis *et al.* (2015) and Matsatsinis *et al.* (2008) report that Eastern Crete tends to perform a bit better as compared to Western Crete. Opposite to this, Messaritaki *et al.* (2018) reached to the opposite conclusion, albeit using a qualitative research methodology. Despite the contrasting findings in the literature, the case is still that Crete performs short of its major tourist destination competitors (Ikkos and Koutsos 2019, MRB Hellas 2015, Nikaki and Ikonomou 2011). This is also the point raised by Lambrou and Ikkos (2017) in their analysis of tourism expenditure patterns across Greek regions. Crete is performing well, but is lagging behind in terms of tourism receipts, when compared to other Greek and international tourist destinations.

## MEHODOLOGY

Initially, a pilot survey was conducted prior to the 'official' release of the survey questionnaire in order to reveal any errors or omissions from the researchers' part. In addition to that, the survey questionnaire was translated into three (3) languages, namely (English, German, Russian), which according to surveys cover the largest number of visitors on the island. The target group selected were visitors in the island of Crete, over 18, who chose to stay at least one (1) night in Crete and visit one or more areas in Eastern Crete. The collection of the empirical data was done through convenience sampling. In order to alleviate adverse effects derived from convenience sampling, an effort was made to ensure the representativeness of the main sample characteristics (sex, age, income, length of stay, country of origin) to other like-minded surveys conducted in Crete over the recent past. With these 'restrictions' in mind, the study managed to collect 1833 responses of men and women over 18 years of age, who stayed in Crete for at least one night and visit Heraklion and/or Lassithi at least one day during their holidays in Crete.

The empirical data was collected during the summer period (April to October period) from a team of experienced research assistants. Specifically for this survey, the main points of touristic interest in Eastern Crete were selected (i.e., main cultural resources in Heraklion, city centers in Heraklion and Lasithi prefectures, big hotel establishments in the two geographical locations, as well as other points of touristic interest).

The questionnaire consisted of four different sections with the majority of questions to be of a closed-ended format. The first section of the survey questionnaire referred to respondents' general travel habits (how often they travel and for how long). The second section focused on respondents' consumption patterns during their travel in Crete and the evaluation of the relationship between quality and price (cost of stay, travel budget, price-quality ratio). The third section consisted of questions about the visit to Eastern Crete areas (activities, factor assessment, visit and prices, intentions). Finally, the fourth and final section enquired about the sample's socio-demographic characteristics (age, occupation, income, etc.).

## EMPIRICAL FINDINGS

The paper utilises a number of attributes (independent variables) to examine their effect on tourism expenditure patterns during their holidays in Crete. In particular, the paper considers the following variables: *Previous visits* to Crete, *Type of trip*, *Duration of stay*, *Perceived value of the destination*, and respondents' socio-demographic characteristics (*age*, *marital status*, *gender*, *employment status*, *country of origin*, *income levels*). The dependent variable is average daily expenditure per person during their stay in Crete. For the purposes of the current study, tourism expenditure outcomes can be defined on the basis of different thresholds of expenditure categories. The outcome variable that we have used in our multinomial analysis in this paper has three categories indicating whether an individual has experienced:

- *Low levels* of spending patterns (a daily expenditure of up to 50€) (base category)
- *Medium levels* of spending patterns (a daily expenditure of up to 100€)
- *High levels* of spending patterns (a daily expenditure of more than 101€)

The empirical investigation differentiates the dependent variables into two categories; the first category refers to medium levels of daily tourism expenditure (51€ to 100€), whereas the second category refers to high levels of daily tourism expenditure (101€ +).

The empirical analysis considers a multinomial logit model to examine the effect of the abovementioned variables upon different levels of tourism expenditure in the island. Multinomial logistic regression (MNL) models consider the way that the statistically significant independent variables affect the dependent variable (in this case low level of expenditure). In order to facilitate comparisons within independent variables, a left-out category has been identified for each independent variable. So for example, the left-out category for the 1st independent variable in Table 1 below, are frequent visitors to Crete (those that have visited more than twice before). Table 1 below summarises the empirical findings.

According to the results, ***previous visits*** have a significantly negative effect on 1st time visitors with high levels of daily expenditure (more than 100€) as compared to frequent visitors. First time visitors to Crete are less likely to spend more than 100€ per day, as compared to their frequent counterparts. One could argue that this finding is rather justified simply because 1st time visitors may feel a bit unfamiliar with the island and its offerings, thus more hesitant in spending money. In addition, the ***type of ones' trip*** to Crete seems to have a positive and significant effect. Those who visit Crete independently, or those who purchased a holiday package are more likely to spend more than 100€ per day, in comparison to visitors who travelled to Crete through an all-inclusive deal. Again, the difference is spending patterns is located among the high levels of tourism expenditure.

In terms of the effect of ***length of stay,*** the results indicate that those who stay longer as compared to the left – out category (less than a week) are more likely to spend more than 50€ per day. The same applies for the higher expenditure category, where longer staying visitors (over 14 days) tend to spend more as compared to short stay visitors. Thus, it appears that the longer someone stays in Crete, the more likely he|she will spend more on average per day, as compared to those staying for shorter periods of time. This finding could justify recent developments in policymaking at the destination and the expressed intention to actively support the extension of tourists' stay in Crete (Messaritaki *et al.* 2018). The empirical results from Table 1 point out that those ***who perceive Crete*** to be on par with other competing destinations are less likely to spend more than 100€ per day, as compared to those who perceive Crete to be of lower quality to other tourist destinations. This is a rather unexpected finding and rather difficult to justify.

Next, the analysis considers respondents' ***socio-demographic variables***. In particular, marital as well as occupational status seems to exert an influence on daily expenditure patterns. Married respondents appear to be more likely to consume larger amounts of money daily, as compared to those with unidentified marital status. The contrary applies to students who as a whole are less likely to overspend as compared to those with unidentified occupational status. This is rather expected given that students are on a relatively tight budget. Apparently, respondents' ***age*** seems to exert a significant effect on tourists' expenditure patterns. More specifically, all *age groups* but the reference group (those older than 65 years of age) are more likely to spend more than 100€ respectively per day. Another significant association comes from visitors between 26 to 65 years of age who, as anticipated, are more likely to spend up to 100€ per day, as compared to their elder counterparts.

***Income*** is a factor that naturally affects propensity to spend. The results showed that low and middle-income households (up to 40.000€) are less likely to overspend during their visit to Crete, as compared to those on high income levels. Again, this seems as a rather expected finding. ***French, German and Dutch*** visitors are particularly negative towards spending anything between 50€ to 100€ euros per day during their stay in Crete, as compared to other nationals in the island. At the same time Dutch visitors are less likely to spend more than 100€, as compared to other nationals visiting Crete for holiday purposes. On the other hand, Israelis seem to have a positive effect on daily expenditure patterns because as presented in the results, they are more likely to spend more than 100€ per day.

**Table 1: MNL Results | Beta Coefficients** *[βs]*

| | | *(50€ to 100€)* | *(More than 100€)* |
|---|---|---|---|
| | Constant…..………………….... | -.002 (.997) | -.564 (.489) |
| **Number of Visits** | | | |
| | 1st time……………………….... | -.104 (.558) | *-.524*** (.002)* |
| | 2nd time……………………….. | .120 (.575) | .216 (.249) |
| **Type of Trip** | | | |
| | Independent…………….……... | .020 (.906) | *.526*** (.003)* |
| | Package……………...………. | .220 (.209) | *.693*** (.000)* |
| **Length of Stay** | | | |
| | Traditional stay……….…..…. | *.947*** (.000)* | *.895*** (.000)* |
| | Long stay…………….…...…. | *.682*** (.004)* | .206 (.370) |
| **Perceived Value** | | | |
| | Value_same…………………… | -.337 (.121) | *-.438** (.043)* |
| | Value_high……………………. | -.241 (.291) | -.197 (.385) |
| **Age** | | | |
| | Up to 25……………………… | .660 (.116) | *1.596*** (.000)* |
| | 26 – 45……………………….. | *1.024*** (.007)* | *1.822*** (.000)* |
| | 46 – 65……………………….. | *.638* (.083)* | *1.242*** (.001)* |
| **Marital Status** | | | |
| | Single……………...……….. | -.236 (.266) | -.007 (.973) |
| | Married……………………..…. | .073 (.720) | *.644*** (.002)* |
| | Partnership……………………. | -.402 (.114) | .319 (.214) |
| **Gender** | | | |
| | Female………………………… | -.192 (.137) | -.157 (.221) |
| **Occupational Status** | | | |
| | Employed……………………… | .455 (.273) | .181 (.641) |
| | Student………………………… | -.355 (.444) | *-.786* (.077)* |
| | Retired…………………………. | .800 (.112) | .679 (.156) |
| | Unemployed…………………… | -.056 (.686) | -.080 (.552) |
| **Nationality** | | | |
| | UK…………………………….. | -.662 (.197) | -.400 (.454) |
| | Germany………………………. | *-.788** (.045)* | -.555 (.174) |
| | France…………………………. | *-.840** (.016)* | -.547 (.127) |
| | Netherlands……………………. | *-.182*** (.009)* | *-.212*** (.004)* |
| | Russians……………………….. | -.041 (.877) | .255 (.358) |
| | Italy……………………………. | -.068 (.802) | .026 (.926) |

| | | | |
|---|---|---|---|
| | Israel…………………………… | 1,123 (.186) | *1.976** (.016)* |
| **Income levels** | | | |
| | Low income group…………….. | -.213 (.223) | *-.711*** (.000)* |
| | Medium income group………… | -.216 (.206) | *-.433*** (.009)* |

*Significance: *=1%, **=5%, ***=10% level*

Table 2 below presents the marginal effect results. The first significant observation indicates that visitors who came to Crete on holidays for the first time are 11.1% less likely to spend more than 100€, as compared to frequent visitors in Crete.. Respondents who traveled to Crete independently are almost 7% less likely to spend between 50€ to 100€. On the other hand, they are 12.3% more likely to spend higher amount of money (over 100€). Visitors who purchased a holiday package are 13.5% more likely to overspend, as compared to the reference group (all-inclusive visitors). Thus, the empirical findings in the current setting provide some strong directions for future policy making in the area. Based on the empirical results, all – inclusive visitors do not really add much to the local economy, or to put it differently, all other types of visitors to Crete seem to spend more, as compared to their all-inclusive counterparts.

Visitors staying for two weeks or more will probably spend more money (50€+) than those who came for a shorter time period. Specifically, *traditional staying* visitors are 9% more likely to spend 50€ to 100€ and 8.1% more likely to spend more than 100€ per day. Respondents staying in Crete for more than two weeks are 12.6% more likely to spend between 50€ to 100€ per day. The abovementioned empirical findings are rather interesting. What these results mean is that the duration of one's stay in Crete is not a 'problem' (we do not necessarily need to "fix" the duration that tourists spend in Crete). What needs fixing is the provision of 'opportunities' for tourists to embark into expenditure whilst in Crete. In other words, what seems to be missing are the various events, activities, tourism packaged options (i.e. organized guides and activities) where tourists could spend their money.

Expenditure patterns seem to be affected rather seriously from tourists' age and marital status attributes. In particular, travelers *up to 45* years of age are 29% more likely to overspend. Additionally, those from *46 to 65* years of age are 21% more likely to have a daily expenditure of more than 100€. Furthermore, *married* respondents are 14.4% more likely to spend more than 100€ per day, as compared to visitors with an unidentified marital status. *French and German* visitors are 11.4% and 10.1% less likely to spend 50€ to 100€ per day, respectively. This is a quite interesting finding considering the fact that French and Germans are two of the top five national markets for Cretan tourism (Lambrou and Ikkos 2017, Messaritaki *et al*. 2018) Dutch are also 2.5% less likely to have higher travel expenses daily. On the other hand, Israelis seems to be 31.5% more likely to overspend. According to the results on table 2, it is 14% less possible for respondents, whose *income* is low (up to 20.000€), to spend more than 100€ per day Approximately the same happens regarding visitors with higher income levels (up to 40.000) where the only difference appears to be in the rate, i.e they are 7.3% less likely to overspend.

**Table 2: Marginal Effects**

| | | *(50€ to 100€)* | *(More than 100€)* |
|---|---|---|---|
| **Number of Visits** | | | |
| | 1st time………………………... | .050 | *-.111* |
| | 2nd time……………………….. | -.003 | .034 |
| **Type of Trip** | | | |
| | Independent……………….……... | *-.069* | *.123* |
| | Package……………….…..……… | -.047 | *.135* |
| **Length of Stay** | | | |
| | Traditional stay……………….…. | *.090* | *.081* |
| | Long stay……………………...…. | .128 | -.046 |
| **Perceived Value** | | | |
| | Value_same…………………… | -.015 | -.057 |
| | Value_high………..………..…. | -.027 | -.013 |
| **Age** | | | |
| | Up to 25……………………… | -.074 | *.289* |
| | 26 – 45……………………….. | *.062* | *.292* |
| | 46 – 65……………………….. | -.029 | *.207* |

| | | | |
|---|---|---|---|
| **Marital Status** | | | |
| | Single…………………...………… | -.053 | -.031 |
| | Married…………………….….… | .076 | *.144* |
| | Partnership……………………. | -.191 | .133 |
| **Gender** | | | |
| | Female………………………… | -.021 | -.010 |
| **Occupational Status** | | | |
| | Employed……………………… | .078 | .020 |
| | Student………………………… | .029 | *-.138* |
| | Retired…………………………. | .087 | .050 |
| | Unemployed…………………… | -.001 | -.011 |
| **Nationality** | | | |
| | UK…………………………….. | -.094 | -.002 |
| | Germany………………………. | *-.101* | -.022 |
| | France…………………………. | *-.114* | -.012 |
| | Netherlands……………………. | *-.014* | *-.025* |
| | Russians……………………….. | -.045 | .067 |
| | Italy……………………………. | -.019 | .015 |
| | Israel…………………………… | -.021 | *.315* |
| **Income levels** | | | |
| | Low income group…………….. | .051 | *-.140* |
| | Medium income group………… | .011 | *-.073* |

## CONCLUSION

The current paper focused on the examination of tourists' expenditure patterns during their holidays in Crete. What is more the paper focused exclusively upon Eastern Crete (Heraklion and Lasithi prefectures). The paper utilised a convenience sampling method to collect 1833 responses from tourists visiting Crete during the 2017 – 18 period. Although the sampling frame does not allow us to make conclusive generalisations, the sample has proven to be representative of the typical tourism demand in Crete. According to the empirical findings independent travelers to the island as well as those staying for longer tend to be the ones more likely to spend high (more than 100€ on a daily basis). On the opposite hand, first time visitors to Crete, students (but not necessarily the younger visitors), those on a low or medium income group, and mature or senior visitors tend to be more tight when it comes to their spending patterns in Eastern Crete. In addition, some of the more numerous national markets in the island (French and German visitors) tend to spend below par, as compared to everyone else.

A careful analysis of the abovementioned empirical results points out to a number of policy recommendations for managers and policy makers alike. *First*, it becomes apparent from the analysis of the empirical findings that Crete as a region, and Eastern Crete at a sub-regional level should reconsider the national markets it has traditionally relied upon. This has been the case with Western Crete and their focus on the Scandinavian market predominantly. Such a focus does not exist in the Eastern part (or at least the focus on traditional national markets) ought to be re-evaluated. Visitors from Israel have reported very positive signs and similar is the case with other nationalities. At the same time, traditional national markets (such as Germans and French) seem to be rather idle or stagnant (in terms of tourism expenditure).

*Second*, the empirical results tend to confirm the point that the all-inclusive model of tourism development may serve a purpose for destinations at the early stages of their life cycle. For Crete, this particular model of tourism development seems to be outdated and does not really serve the purpose of the region. Instead, regional authorities would need to put more emphasis into the creation of new tourism products and tourist packages. The international literature in the field indicates that successful tourist destinations need to develop new tourist offerings that would combine real experiences with must – see attractions and (cultural or heritage) resources. Thus, the existence of internationally renowned cultural resources, the existence of gastronomic traditions (Cretan diet and olive oil), as well as a strong concentration of natural resources (gorges) on their own is not enough. Policy makers and tourism managers and entrepreneurs would need to combine these resources into new tourist packages and offerings to attract new visitors and | or to entice existing ones to spend more.

*Finally,* the fact that frequent visitors to Crete have exhibited such a positive impact on tourism expenditure could signify the strong image and brand that Crete exerts on these visitors. Accordingly, this could be taken to imply two things. On the one hand, policy makers and officials do not need to emphasise that much on attracting new visitors and tourists (through their participation on international events and expos). Instead, attention should be given towards capitalizing on existing and past visitors that are already familiar with the destination. Hence, rather than creating new information for new visitors, the island should reconsider its priorities toward reminding existing and past visitors of their positive experiences with Crete. This also implies a completely new mix of marketing and promotional tools for the island. On the other hand, the island (or at least the sub – region) should make a serious effort to re-invent itself. Relying on the all familiar 3S model of tourism development may be adequate for some markets and some types of visitors, but not enough for everyone. The emergence of new markets (in either geographical or socio-demographic terms) implies that policy makers would need to try harder to promote alternative or new features of the island. Experiential tourism activity, authentic offerings, as well as comprehension of the drivers that affect young but increasingly affluent tourists (Gen Z) to a destination seem to be all critical factors for the competitiveness of Crete as a tourist destination.

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# Shedding light upon the shadows between country destination image and dark tourism: the case of Turkey

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**Abstract**

Country destination image influences perceptions about any given tourism type (to be) developed in a given country (Kladou et al., 2014). A tourism type recently receiving attention is dark tourism that refers to destinations related to warfare and battle or death, misery or 'shadows' in some sense (e.g. Smith, 1998; Stone, 2006; Biran et al., 2011). The present research aims to explore the relationship between country destination image and dark tourism, studying the case of Turkey and the (potential) development of places in Turkey as dark tourism destinations. A survey conducted among 300 international travelers revealed respondents' perceptions on country and destination image (Alvarez & Campo, 2014), as well as travel motives including dark tourism motivators (adjusted by Crompton, 1979, Jang & Cai, 2002, Yuill 2003).Findings, among others, suggest that in Turkey (1) destination image perceptions are more positive than country image perceptions and (2) the potential development of specific places as dark tourism destinations leads to negative evaluation when seeking to develop dark tourism in the country overall. Our findings pave the ground for significant theoretical and practical implications when countries and destinations think to build upon dark tourism initiatives to help them move beyond their 'shadows of the past'.

*Keywords: country image, destination image, dark tourism*

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# The Modality of Tourist Advertising Promotion as Place Branding in Greece. A Visual Retrieval Framework

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## Abstract

Print advertisements are a good ground for studying phenomena of textual and visual diversity. As a combination of text and image, the advertisements represent a large number of varieties of social and commercial reality through which they reproduce and reinforce specific ideologies and correspondingly imaginative ones. Advertising is a reason for the commodity society and the mass culture that it entails, and as such defines textual (linguistic) behavior in the sense that it aligns the projected with linguistic and visual homogeneity and consequently stereotypes resulting from this. The aim of this article is to record and visualize the textual and visual signs in the printed advertisements concerning the way of showing Greece as a tourist destination between 1920 and 2019. The theoretical framework of this reading is based on two theoretical frameworks: first, in polygraphism and secondly in that of destination marketing and place branding.Furthermore, the technical framework provides a simple way to retrieve images and photos based on color and texture characteristics of the presented type of advertisements. Then, the referred framework creates a Lucene index of image features for content-based image retrieval using local and global state-of-the-art methods. The ultimate goal of this recording is to reveal and retrieve the textual and visual varieties (mainly of the latter because of their unequal frequency in the empirical material), which indicates the self-determination of the Greeks, in relation to history and ethnography.

***Keywords:*** *Visual Advertisements,Destination Marketing Visual Culture,Visual and Textual Diversity, Polygraphisms, Place Branding, Visual Retrieval*

# Consumer Behaviour

# Validating a beauty product purchase intention scale within the South African context

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**Abstract**
Beauty product consumption is increasing at a significant rate. This is evident as the global beauty product industry had an estimated value of 532 billion USDollar in 2017, expected to reach 863 billion USDollar by 2024. Similarly, with a current revenue valued at 180 million USDollar and aprojected growth of up to 260 million USDollar by 2023, the South African personal care market is highly lucrative.As such, it is imperative for marketers to understand the consumption behaviour of beauty product consumers. In generational studies, Generation Y female consumers have proven to be an important segment within this industry, as they have a significant interest in beauty products and spend a considerable amount of their disposable income on clothing, jewellery and beauty products. The South African Generation Y cohort, which includes individuals born between 1986 and 2005, accounts for 36 percent of the country's population and therefore represents a noticeable current and future market segment. Scales measuring purchase intention of consumers in other countries may not be apt for use in South Africa. Therefore, this paper describes the process undertaken to validate beauty product purchase intention as a four-factor model in the South African context.
A structured, self-administered questionnaire was used to gather the necessary data. This questionnaire was distributed to a convenience sample of 610 students registered at three higher education institutions within the Gauteng province. Data were analysed using Pearson's Product-Moment correlation, confirmatory factor analysis, measures of reliability and validity, andfit indices.
The results provided acceptable model fit, inferring that beauty product purchase intention is a four-factor model, including attitude, subjective norms, beauty product innovativeness and purchase intention. According to the results, the model shows internal-consistency reliability, composite reliability, as well as construct, convergent, discriminant and nomological validity. Furthermore, there was no evidence of multicollinearity between factors and acceptable model fit indices were produced by AMOS, indicating a well-fitting model.
The proposed model was validated, and as such provides a useful research instrument for measuring beauty product purchase intention of South African Generation Y consumers.

*Keywords: Beauty product, purchase intention, scale validation, South Africa, structural equation modelling*

## INTRODUCTION

Beauty products are becoming more important in everyday life (The Shaz World, 2017), and is applied externally by individuals to care for and beautify the body. Beauty products or cosmetics have been traced back to the fourth millennium BC, when archaeologists found remains of artefacts used for eye make-up and for applying scented unguents (Britannica, 2019). Individuals apply beauty products to the skin, hair, nails, lips, or eyes with the goal of cleansing, colouring, softening, or protecting (Khraim, 2011). Such products may include bath oils, creams, deodorants, eye and facial makeup, hair colours, lipsticks, nail polish, perfumes, permanent waves, skin-care, and mouthwashes (Britannica, 2019). Consumers are increasingly becoming aware of appearance, beauty, grooming and choice of personal care products, and subsequently, the value of cosmetics and beauty product markets have increased significantly (Khraim, 2011). This is evident as the global cosmetics market was valued at 532 billion US Dollar in 2017, with a projected growth of 62 percent by 2024 (Zion Market Research, 2018). According to Global CosmeticsNews (2019), Africa represents three percent of the global cosmetics market value. Furthermore, Chinedu and Baloyi (2016) state that Nigeria and South Africa accounts for majority of the value added to the personal care and beauty markets on the continent, with these markets valued at 3.4 billion US Dollarand2 billion US Dollar respectively.

Female consumers have been the dominant gender within the beauty product industry over the years (Pudaruth, Juwaheer&Seewoo, 2015), particularlythe younger segment, as they are more interested in beauty products than other generations (Nezakati, Yen &Akhoundi, 2013). This young generation, Generation Y (individuals born between 1986 and 2005) (Markert, 2004), is also the first generation with more females obtaining degrees than their male counterparts (Blumenthal & Warren, 2011). Furthermore, individuals forming part of this cohort can be described as sophisticated and consumption-orientated (Eastman &Lui, 2012) with high potential spending power (Noble, Haytko& Phillips, 2009). This may be due to the fact that they are becoming the most educated generation with a high tertiary education enrolment rate (Blumenthal & Warren, 2011). Within South Africa, Generation Y constitutes 36 percent of the total population (Statistics South Africa, 2018). The student portion attracts more attention, as tertiary educated individuals are likely to have greater spending power due to their higher earning potential (Bevan-Dye &Akpojivi, 2016). Furthermore, these individuals are tech-savvy, informed and connected, being saturatedby information and media throughout the majority of their lives (Bevan-Dye &Surujlal, 2011). Being continuously exposed to numerous mass-marketing efforts (Branigan&Mitsis, 2014), as well as the way these individuals respond to traditional marketing messages,serve as reason for marketers and retailers to target this consumer segment in a creative and different way.As such, an understanding of the intention of consumers, especially young female consumers, to purchase beauty products will assist marketers and retailers in targeting this consumer segment effectively.

**LITERATURE**

The theory of reasoned action (TRA) and the theory of planned behaviour (TPB) have been applied extensively to measure behavioural intention and actual behaviour (Conner & Armitage, 1998; Madden, Ellen &Ajzen, 1992). The TPB was developed by Ajzen (1985) as an extension of the TRA (Fishbein&Ajzen, 1975), by adding perceived behavioural control as a construct.The TPB should therefore be used to measure intention or behaviour when individuals do not have complete volitional control over the considered behaviour (Montano &Kasprzyk, 2015). Intention to purchase a product is deemed as volitional, and therefore it was decided to use the TRA when measuring beauty product purchase intention. According to the TRA,individuals are rational beings, makingdecisions based on the information available to them and generally acting the way they intend to. This theory suggests that behaviour of an individual is predicted by an individual's intention (Fishbein&Ajzen, 1975) and a function of attitude toward the behaviour and the influence of subjective norms (Ling & Yuan, 2012).

An attitude refers tothe level of positive or negative evaluations, feelings and tendencies an individual has towards a behaviour, product or service (Parumasur& Roberts-Lombard, 2013; Tajuddin, Zainol&Sahil, 2014).According to Schiffman and Kanuk (2014:194), an attitude is an individual's assessment summary of a behaviour, product or service.When individuals have a positive attitude towards a specific behaviour, they are inclined to undertake that specific behaviour (Ajzen, 1985).Attitude predicts behavioural intention (Ajzen 1991), which in turn predicts actual behaviour (Oreg& Katz-Gerro, 2006). Therefore, individuals with a more positive attitude towards a behaviour will have a stronger intention to perform the specific behaviour (Yeon-Kim & Chung, 2011).

Subjective norms are described as the social pressure an individual perceives to perform a specific behaviour (Ajzen, 1991). This perceived social pressure is due to the beliefs and perceptions of people in an individual's social environment (Oreg& Katz-Gerro, 2006). These people generally include those related and close to the individual, such as family and friends. Individuals findsignificant other's opinion important and will seek advice from them before making decisions (Tajuddin*et al*., 2014).If an individual perceives significant others to be positive towards a specific product, the individual will be more inclined to purchase that product(Yeon-Kim & Chung, 2011). Some studies found subjective norms to be a strong predictor of intention (Al-Debei*et al.*, 2013; Chen, 2007; Kim, 2009; Yeon-Kim & Chung, 2011; Summers, Belleau & Xu, 2006), while others reported subjective norms to have a significant influence on attitude (Schepers&Wetzels, 2007;Tarkiainen&Sundqvist, 2005). Whether directly or indirectly, subjective norms are believed to have a significant influence on intention.

The TRA is used to identify, measure, and combine beliefs relevant to individuals or groups in order to interpret individuals' behaviour and, as such providing some insight on the motivations behind the behaviour of interest (Montano &Kaspryk, 2015).Some researchers (Ajzen, 1991; Conner & Armitage, 1998) state that the TRA can be extended by the addition of factors identified as possible predictors of consumers' intent. Morgan and Birtwistle (2009) found fashion innovativeness to be a predictor of fashion product purchase behaviour of young female consumers, whileCitrin, Sprott, Silverman and Stem (2000) found fashion innovativeness to have a positive influence on consumers' attitude towards online fashion shopping. Therefore, for the purpose of this paper, beauty product innovativeness was included as a factor influencing beauty product purchase intention.

The term innovativeness describes a consumer'sinclination and attitude towardsthe acceptance of new products(Ling & Yuan, 2012). Domain- or product category-specific innovativeness refers to the tendency consumers have to learn about and adopt new products within a specific domain of interest (Citrin*et al*., 2000). Innovative individuals are associated withknowledge of and involvement with a specific product category. They are heavy users of the product in question and tend to seek information about the product category, and can therefore be classified as opinion leaders (Goldsmith, Flynn & Kim, 2010). Furthermore, these new adopters are known to be social individuals, engaging in word-of-mouth communication, and thereby proving to be an important segment for marketers and retailers as they promote new products (Phau& Lo, 2004).

**PURPOSE OF THE STUDY**

The purpose of this study was to validate beauty product purchase intention as a four-factor model comprising attitude, subjective norms, beauty product innovativeness and purchase intention amongst female Generation Y students in the South African context. Female Generation Y students were considered a suitable sample for this study for various reasons. The Generation Y cohort (individuals born between 1986 and 2005) (Markert, 2004) represented 36 percent of the total South African population in 2018 (Statistics South Africa, 2018). The student portion of this cohort is deemed as an important segment for retailers due to their future earning potential, spending power and social status (Bevan-Dye &Akpojivi, 2016). Furthermore, females are responsible for 70 to 80 percent of all consumer purchasing, whether it is through their buying power or the influence they exert (Brennan, 2015). According to Pudaruth*et al.*(2013), the impact of female consumersin the cosmetic and beauty care industry is prevailing. As such, the study aimed to answer the following research question:

- Is beauty product purchase intention amongst female Generation Y students a four dimensional structure comprising attitude, subjective norms, beauty product innovativeness and purchase intention?

**RESEARCH METHODOLOGY**

**Research design and sampling method**

This study followed a descriptive, single cross-sectional design. The target population for this study was demarcated as Generation Y students aged between 18 and 24 years, enrolled at public SouthAfrican higher education institutions (HEIs). From the original sampling frame of 26 HEIs, judgement sampling was utilised to select the campuses of three HEIs within the Gauteng province. These HEIs comprised a university of technology, a comprehensive university and a traditional university. By making use of non-probability convenience sampling, a sample of 780 full-time female Generation Y students (260 per institution) was drawn from the sampling frame.

**Measurement instrument and data collection**

In order to collect the necessary data for this study, a self-administered questionnaire was used. This questionnaire gathered data pertaining to attitude towards beauty products (four items), subjective norms (four items), beauty product innovativeness (four items), and beauty product purchase intention (three items) of Generation Y female students. These questions were adapted from existing scales by Goldsmith and Hofacker (1991), Kim and Karpova (2010), and Song, You, Reisinger, Lee and Lee, (2014). The attitude towards beauty products factor comprises four observed variables, namely 'I think using beauty products is a good thing to do', 'Using beauty products is valuable to me', 'Using beauty products is beneficial to me' and 'I think using beauty products is a necessary thing to do'. The subjective norms factors consists of four observed variables, namely 'People who influence my behaviour would approve of me buying beauty products', 'People who are important in my life would approve of me buying beauty products', 'People who influence my behaviour would encourage me to buy beauty products', and 'People who are important in my life would encourage me to buy beauty products'. The beauty product innovativeness factor has four observed variables, namely 'In general, I am among the first in my circle of friends to buy a new beauty product when it appears', 'If I heard a new beauty product was available in store, I would be interested enough to buy it', 'I will buy a new beauty product, even if I haven't tested it' and 'I know the names of new beauty products before other people do'. The beauty product purchase intention factor includes four observed variable, namely 'I intend to buy beauty products in the future', 'Iwill try to buy beauty products in the future' and 'I will make an effort to buy beauty products in the future'.The responses to these 15 scaled items were recorded using a six point Likert scale, ranging from strongly disagree (1) to strongly agree (6). In order to overcome the limitations of using a convenience sampling method, a section gathering the demographic data was included. Furthermore, the questionnaire comprised a cover letter explaining the purpose of the study as well as the confidentiality of the data gathered.The three HEI campuses chosen for this study were contacted to obtain approval for the distribution of the questionnaires. After approval was granted, questionnaires were distributed and students were informed that participation was strictly voluntary.

**Data analysis**

The Statistical Package for Social Sciences (IBM SPSS) and Analysis of Moment Structures (AMOS), Version 25 was used to analyse the captured data.The methods used to analyse the data included Pearson's product-moment correlation analysis, multicollinearity analysis, reliability and validity measures, confirmatory factor analysis and structural equation modelling (SEM).

**RESULTS**

Following data collection, 610from the 780 completed questionnaires were viable, demarcating a 78 percent response rate. Each of the specified age groups, each of the 11 official South African languages, as well as all nine provinces were represented in the sample.Majority of the sample indicated that their age is 20 (18.7%), their province of origin as the Gauteng province (61.3%) and their mother-tongue language as SeSotho (23.8%). A detailed description of the sample is given in Table 1.

**Table1: Sample description**

| Age | n (%) | Language | n (%) | Province of origin | n (%) | Institution | n (%) |
|---|---|---|---|---|---|---|---|
| 18 | 101 (16.6) | Afrikaans | 19 (3.1) | Eastern Cape | 18 (3) | Traditional university | 214 (35.1) |
| 19 | 110 (18) | English | 41 (6.7) | Free State | 46 (7.5) | | |
| 20 | 114 (18.7) | IsiNdebele | 8 (1.3) | Gauteng | 374 (61.3) | University of Technology | 196 (32.1) |
| 21 | 111 (18.2) | IsiXhosa | 50 (8.2) | KwaZulu-Natal | 15 (2.5) | | |
| 22 | 85 (13.9) | IsiZulu | 116 (19) | Limpopo | 77 (12.6) | Comprehensive university | 200 (32.8) |
| 23 | 59 (9.7) | SePedi | 71 (11.6) | Mpumalanga | 35 (5.7) | | |
| 24 | 30 (4.9) | SeSotho | 145 (23.8) | Northern Cape | 2 (0.3) | | |
| | | SeTswana | 73 (12) | North-West | 37 (6.1) | | |
| | | SiSwati | 26 (4.3) | Western Cape | 3 (0.5) | | |
| | | Venda | 23 (3.8) | Missing | 3 (0.5) | | |
| | | Tsonga | 36 (5.9) | | | | |
| | | Other | 1 (0.2) | | | | |
| | | Missing | 1 (0.2) | | | | |

The proposed measurement model entailed that Generation Y female students' beauty product purchase intention is a four-factor model comprising attitude, subjective norms, beauty product innovativeness and purchase intention. The first step taken to test this model was to construct the Pearson's Product-Moment correlation coefficients in order to assert nomological validity. Table 2 shows the correlation matrix.

**Table 2: Correlation matrix**

| Latent factors | | F1 | F2 | F3 | F4 |
|---|---|---|---|---|---|
| Attitude | F1 | | | | |
| Subjective norms | F2 | .511* | | | |
| Beauty product innovativeness | F3 | .286* | .322* | | |
| Purchase intention | F4 | .343* | .341* | .299* | |
| *Significant at $p \leq 0.01$ | | | | | |

As shown in Table 2, the computedcorrelation coefficients indicate positive and statistically significant ($p \leq 0.01$) relationships between each of the pairs of latent factors of the proposed model, suggestingnomological validity (Hair, Black, Babin, & Anderson, 2010). Furthermore, the possibility of multicollinearity is eliminated, as none of the correlating coefficients were above the recommended cut-off level of 0.8 (Field, 2009).

The measurement model specified included four latent factors namelyattitude (four indicators), subjective norms (four indicators), beauty product innovativeness (four indicators) and purchase intention (three indicators). For model identification, the first loading of each of the four latent factors were fixed at 1.0. This resulted in 120 distinct sample moments and 36 parameters to be estimated, which left 84 degrees of freedom (df) based on the overidentified model.

The model was examined for any problematic estimates, such as Heywood cases (negative error variances) and any standardised factor loadings above 1.0 or below -1.0 (Hair *et al.*, 2010). The standardised factor loadings, error variances, correlations, composite reliability (CR), average variance extracted (AVE), square-root of the AVE (√AVE) and Cronbach alpha values are presented in Table 3.

**Table 3: Measurement model estimates**

| Latent factors | Standardisedfactor loadings | Error variance estimates | *a* | CR | AVE | √AVE |
|---|---|---|---|---|---|---|
| | .759 | .576 | .857 | .800 | .50 | .71 |
| Attitude | .851 | .727 | | | | |
| F1 | .795 | .632 | | | | |
| | .733 | .537 | | | | |
| Subjective norms | .686 | .470 | .870 | .781 | .50 | .70 |
| F2 | .775 | .601 | | | | |
| | .864 | .746 | | | | |
| | .836 | .699 | | | | |
| Beauty product innovativeness | .636 | .405 | .758 | .800 | .50 | .71 |
| F3 | .741 | .549 | | | | |
| | .584 | .341 | | | | |
| | .700 | .490 | | | | |
| Purchase intention | .847 | .717 | .891 | .750 | .50 | .71 |
| F4 | .879 | .773 | | | | |
| | .844 | .713 | | | | |
| Correlations | F1↔F2: 0.582 | F1↔F4: 0.394 | | F2↔F4: 0.371 | | |
| | F1↔F3: 0.356 | F2↔F3: 0.394 | | F3↔F4: 0.369 | | |

The information provided in Table 3 provides strong evidence that there were no problematic estimates.Cronbach alpha values and CR values above 0.70, provides evidence of internal-consistencyand composite reliability.Furthermore, construct and convergent validity can be inferred from factor loadingsand AVE values exceeding 0.50 (Malhotra, 2010). Square root AVE values larger than the correlation coefficients associated with each respective latent factor indicate discriminant validity (Hair *et al*., 2010).

After establishing the construct validity and reliability of the model, structural equation modelling (SEM), using the maximum likelihood approach was undertaken to determine the model fit by means of the AMOS program. The model-fit was assessed using Chi-square, the Goodness-of-Fit Index (GFI), 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).A significant chi-square value of 237.284 with 84 degrees of freedom (df) were computed. As this statistic is known to be sensitive to large sample sizes, the supplementary indices were measured to assess model fit. A SRMR value of 0.0378, a RMSEA value of 0.055, a GFI of 0.95, an IFI of 0.966, a TLI of 0.957, and a CFI of 0.966 all indicate acceptable model fit (Byrne, 2016; Hair *et al*., 2010; Malhotra, 2010). Taken together, this suggests that beauty product purchase intention amongst female Generation Y students is a four-factor model that exhibits construct validity, reliability and acceptable model fit.

## CONCLUSION

The primary objective of this study was to determine whether beauty product purchase intention is a four-factor structure. The results, using a South Africanfemale Generation Y student sample, validated that beauty product purchase intentionis a four-factor structure that consists of attitude, subjective norms, beauty product innovativeness and purchase intention. The specified measurement model exhibited internal-consistency reliability, composite reliability, as well as construct, convergent and discriminant validity. Furthermore, the measurement model displayed no evidence of multicollinearity between the factors. In addition, all goodness-of-fit indices fell within the acceptable levels, indicating a good model fit. In conclusion, the results of this study suggest that this four-factor model is a suitable measuring instrument of beauty product purchase intention within the South African context. As such, the validated scale can be used to assist marketers and retailers in the beauty product industry, or even the fashion industry in understanding the motivations behind consumers' purchase intention. However, it should be noted that a convenience sample was used and as such, care should be taken when generalising the results to the South African population.

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# The effect of media and group influence on female Generation Y students' attitude towards beauty products within the South African context

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**Abstract**
In today's society, consumers, especially young consumers are influenced by theirsocial environment. Factors influencing consumers from their social environment can include peer pressure and conformity compliance, among other. Before consumers make a decision when purchasing products, they seek additional information, such information may emanate from personal sources, including friends, family members, salespeople or even strangers, as well as media sources including magazines and the internet. Consumers spend a remarkable amount of time on the internet, listening to the radio, watching television and reading newspapers and magazines. As such, it is evident that media forms an imperative part of consumers' lives, and therefore influences consumers' attitude towards products. A consumer is subject to group influence when acting in accordance with prescribed norms or standards determined by that specific group. Young consumers, as well as consumers who purchase products and services that are noticeable to others are more susceptible to these types of influences. Fashion products are primarily purchasedfor the symbolic message they carry, and are therefore susceptible to social influences. Fashion comprises a vast array of consumer products, such as clothing, footwear, food, housing, music, automobiles, perfumery and cosmetics. Beauty products, also known as cosmetics, include any product used to care for, clean and improve the human body. The beauty product industry represents a significant portion of the international economy, and is expanding at a rapid pace, estimated to be worth 532 billion US Dollars in 2017 and expected to reach 863 billion USD by 2024. The Generation Y female consumer segment, which includes females born between 1986 and 2005, is a salient target market for retailers and marketers in this industry, as they spend a significant amount of time and energy on shopping, particularly fashion shopping. These consumers are also becoming an emerging financial force, with well-paid jobs and substantial spending power. Furthermore, they spend a considerable portion of their disposable income on fashion products. As such, this paper sought to determine the influence that reference groups and media have on female Generation Y students' attitude towards beauty products via their influence on subjective norms. A self-administered questionnaire was distributed to a convenience sample of 610 students across the campuses of three higher education institutions within the Gauteng province in South Africa. The captured data was analysed using descriptive statistics, correlation analysis, reliability and validity measures and structural equation modelling. The findings suggest that media and group influence have a significant indirect influence on Generation Y female students' attitude towards beauty products via their influence on subjective norms. The results presented in this paper will aid marketing academics as well as marketing practitioners in understanding the factors influencing South African female Generation Y students' attitude towards beauty products. This can be used to effectively market beauty products to this specific market.

*Keywords: Attitude, Generation Y, group influence, media influence, South Africa*

## 1. INTRODUCTION

Fashion comprises a vast array of consumer products, such as clothing, footwear, food, housing, music, automobiles, perfumery and cosmetics (Macchion, Moretto, Caniato, Caridi, Danese&Vinelli, 2015). In particular, the beauty product industry represents a significant portion of the international economy, and is expanding at a rapid pace. In 2017, beauty products accounted for around 532 billion US Dollars in consumer spending and is expected to reach 863 billion USDollars by 2024 (Zion Market Research, 2018).In South Africa, the beauty products market is worth 2 billion US Dollars (Chinedu&Baloyi, 2016) and continues to experience significant growth (Vorster, 2014). The growth in the beauty products market may be attributed to consumers becoming increasingly aware about appearance, beauty, grooming and choice of personal care products (Khraim, 2011). In a market that has reached such a level of vigorous development, it is imperative to understand consumer's consumption regarding beauty products (Chen, Chen & Lin, 2011).

In today's society, consumers, especially young consumers are influenced by their social environment (Fernandez, 2009). Factors influencing consumers from their social environment can include peer pressure and conformity compliance, among other(Giovannini, Xu & Thomas, 2015). Before consumers make a decision when purchasing products, they seek additional information, such information may emanate from personal sources, including friends, family members, salespeople or even strangers, as well as media sources including magazines and the internet(Solomon &Rabolt, 2009). Consumers spend a remarkable amount of time on the internet, listening to the radio, watching television and reading newspapers and magazines(Anderson &Gabszewicz, 2006). As such, it is evident that media forms an imperative part of consumers' lives, and therefore influences their attitude towards products. In addition, a consumer is subject to group influence when acting in accordance with prescribed norms or standards determined by that specific group (Madahi&Sukati, 2012). Young consumers, as well as consumers who purchase products and services that are noticeable to others are more susceptible to these types of influences(Park &Lessig, 1977). Fashion productsbeing primarily purchased for the symbolic message they carry are therefore susceptible to social influences (Pentecost & Andrews, 2010).

In generational studies, the youth are currently classified under Generation Y, which includes individuals born between 1986 and 2005 (Markert, 2004). Having grown up in a media- and information-saturated world, individuals of the Generation Y segment are tech-savvy, informed and connected and therefore needs to be targeted differently (Bevan-Dye &Surujlal, 2011). The importance of social media, such as Facebook, MySpace and Twitter is significant in the lives of Generation Y members, including how they interact with their friends and family (Timeforge, 2010). The Generation Y female segment is becoming an emerging financial force, as they are receiving more undergraduate and graduate degrees in comparison to their male counterparts (Blumenthal & Warren, 2011),have well-paid jobs and substantial spending power (Pudaruth, Juwaheer&Seewoo, 2015).Controlling 20 trillion US Dollars in annual consumer spending (Barmann, 2014), they spenda significant amount of their disposable income on fashion products (Hawkins &Mothersbaugh, 2013), especially on beauty products (Pudaruth*et al*., 2015), which makes them especially salient to fashion marketers and retailers (Nezakati, Yen &Akhoundi, 2013).In South Africa, members of the Generation Y cohort comprised approximately 36 percent of the country's total population of approximately 57million people in 2018 (Statistics South Africa, 2018). The size of this cohort makes them important to South African marketers and retailers. Generation Y members who have engaged in tertiary education are especially important to marketers, as higher education correlates with higher future earning potential and higher social standing (Bevan-Dye &Surujlal, 2011). In general, studies pertaining to students at tertiary institutions typically define them as individuals between the ages of 18 and 24 (Kumar & Lim, 2008).The purpose of this paper was to determine the influence reference groups and media have on female Generation Y students' attitude towards beauty products.

## 2. LITERATURE REVIEW

### Beauty products defined

Beauty products, also known as cosmetics, comprise any product used to care for, clean and improve the human body (Khraim, 2011). These products are designed for use of applying to the face, hair and body and include products such as creams, makeup, deodorants, skin-care, hair colours, nail polish, perfumes and mouthwashes (Britannica, 2019). Ergin, Özdemir&Parıltı (2005) posit that consumers use these products to protect the body from environmental effects and the aging process, as well as to enhance the appearance and improve the odour of the body.Beauty products play an important role in enhancing an individual's inherent beauty and physical features(Sahota, 2014) and are generally used by women to enhance physical attractiveness (Guthrie, Kim & Jung, 2008).

### Attitudes and subjective norms towards beauty products

In order to develop effective marketing strategies, retailers and marketers need to understand consumers' behaviour (Solomon, 2013), which is a complex process, influenced by a number of factors (Hawkins &Mothersbaugh, 2013), including consumers' attitudes and subjective norms (Ajzen&Fishbein, 1980). Attitudes are defined as a "learned predisposition to respond to a situation in a favourable or unfavourable way" (Huang, Lee &Ho, 2004). Consumers' attitudes are a determining factor in understanding consumer behaviour as it is considered to be highly correlated with one's intentions, which in turn is a noteworthy predictor of behaviour (Ajzen&Fishbein, 1980). A consumer with a more favourable attitude regarding a behaviour will have a stronger intention to perform the behaviour under consideration (Ajzen, 1991), therefore the measurement of these attitudes is important for retailers and marketers (Blythe, 2013). Together with attitude, behavioural intention is influenced by the social pressure a consumer feels to engage or not engage in the behaviour, namely subjective norms (Maduku, 2013). Subjective norms are defined as the social pressure an individual perceives, with regard to performing or not performing a certain behaviour (Ajzen, 1991). This pressure is determined by an individual’s normative beliefs concerning others’ expectations (Kim, Ham, Yang & Choi, 2013) and has a significant influence on attitude (Schepers&Wetzels, 2007).

**Media and group influence**

Media and reference groups play an essential role in the consumer’s purchase decision (Belch & Belch, 2015).Media is defined as communication channels, used by businesses, through which news, entertainment, education, data, or promotional messages are distributed (Blythe, 2013). Media involves every broadcasting and narrowcasting medium, and comprises various formats, such as print media (books, magazines, newspapers), television, movies, video games, music, cell phones, several kinds of software and the internet (BusinessDictionary, 2019).Most businesses spend a significant amount of their advertising expenditures on these types of media(Anderson &Gabszewicz, 2006). Therefore, it is imperative to identify the type of media that best suits the product being advertised to ensurethat the target audience will be reached cost-effectively. These target markets are defined by age, ethnic group, social class, or stage in their family life cycle, and therefore differ in terms of their media preferences (Hawkins &Mothersbaugh, 2013). In order to reach these target markets, a message should be transmitted through the selected medium or channel (Solomon &Rabolt, 2009). The majority of consumers are influenced by some sort of advertisement or promotion to a certain extent (Arshad & Aslam, 2015). When consumers are exposed to advertisements pertaining to the latest fashion trends, it encourages them to recognise a problem because of a change in their desired state (Workman &Studak, 2006), which initiates the consumer decision-making process. Media has proven to have a strong influence on emerging adults’ behaviour (Craig, 2013) and is a sound source of product relevant and brand information, especially when it comes to beauty products (Coulter, Feick& Price, 2002). Moreover, female consumers are more active users of media and most likely to choose catalogues, brochures, and newspaper, magazine and television advertisements as information sources (Coulter *et al.*, 2002). For the purpose of this paper, media is described as the medium or communication channels that beauty product businesses use to deliver an advertising or promotional message to their target market, including television, radio and magazines.

Reference groups have a significant influence on consumers’ purchasing and consumption behaviours (Madahi&Sukati, 2012). Schiffman and Kanuk (2015) define reference groups as “groups that serve as frames of reference for individuals in their consumption decisions because they are perceived as credible sources”. These groups also influence the sentiment consumers have towards certain products or brands (Schulz, 2015). Although the influence of groups is identified in most consumers’ behaviour, young consumers are more exposed to reference group influence persuading their consumption behaviour (Park &Lessig, 1977). In order to uphold group identity, adolescents generally consult with their peers before purchasing a product or service (Mascarenhas&Higby, 1993). Some reference groups exist solely around the consumption of certain brands or products (Muniz &O’Guinn, 2001). Typically, reference groups are composed of friends, colleagues, family members and celebrities (Joubert, 2013) of which friends or peers are perceived to be more egalitarian than other relationships between consumers (Barry &Wentzel, 2006).The youth seek acceptance from their peers in order to blend in with their social environments and to uphold their self-confidence (Fernandez, 2009). As such, group influence, especially friends, has a significant influence on young consumers’ purchase behaviour (Madahi&Sukati, 2012). Because subjective norms refer to social influence, which is a function of how referent others’ opinions influence a consumer (Lim & Dubinsky, 2005), it is theorised that group influence will have a significant influence on consumers’ subjective norms, which, in turn, will influence their purchase behaviour.

## 3. RESEARCH METHODOLOGY

### 3.1 Research design and sampling method

A descriptive, single cross-sectional research design was followed in this study. The target population for this study comprised female Generation Y students between the ages of 18 and 24 years, registered at public South African higher education institutions (HEIs). The sampling frame consist of the 26 HEIs in South Africa. From the sampling frame, three HEI campuses within the Gauteng province was selected by means of judgement sampling. Thereafter, a non-probability convenience sample of 780 full-time female Generation Y students (260 per institution) was taken.

### 3.2 Measurement instrument and data collection

A self-administered survey questionnaire comprising structured questions was used to gather the necessary data. This questionnaire gathered data pertaining to the participants' demographical information, as well as media influence (five items) and group influence (four items), subjective norms (four items), and attitude towards beauty products (four items). These questions were adapted from existing scales by Kim and Karpova (2010), Mascaren has and Higby (1993), Moschis (1976) and Song, You, Reisinger, Lee & Lee (2014). Scaled items were measured using a six-point Likert scale, ranging from strongly disagree (1) to strongly agree (6). In order to explain the purpose of the study and confirm confidentiality of the data gathered, the questionnaire included a cover letter. After receiving ethical clearance, the three HEI campuses chosen for this study was contacted to request permission for the distribution of the questionnaires. Once permission was granted, questionnaires were distributed for voluntary completion.

### 3.3 Data analysis

The captured data was analysed by making use of the IBM Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Version 25. Data analyses included Pearson's product-moment correlation analysis, collinearity analysis, reliability and validity measures, confirmatory factor analysis and path analysis.

## 4. RESULTS

The questionnaire produced a 78 percent response rate, as 610 of 780 returned questionnaires were usable. The sample included participants from all nine provinces of the country, all of the specified age groups, and all of the 11 official South African languages. The bulk of the sample were 20 years of age (18.7%), closely followed by those 21 years of age (18.2%). The majority indicated their province of origin as the Gauteng province (61.3%) and their mother-tongue language as SeSotho (23.8%). Table 1 presents a detailed profile of the participants.

**Table 1: Sample description**

| Age | n (%) | Language | n (%) | Province of origin | n (%) | Institution | n (%) |
|---|---|---|---|---|---|---|---|
| 18 | 101 (16.6) | Afrikaans | 19 (3.1) | Eastern Cape | 18 (3) | Comprehensive university | 200 (32.8) |
| 19 | 110 (18) | English | 41 (6.7) | Free State | 46 (7.5) | | |
| 20 | 114 (18.7) | IsiNdebele | 8 (1.3) | Gauteng | 374 (61.3) | Traditional university | 214 (35.1) |
| 21 | 111 (18.2) | IsiXhosa | 50 (8.2) | KwaZulu-Natal | 15 (2.5) | | |
| 22 | 85 (13.9) | IsiZulu | 116 (19) | Limpopo | 77 (12.6) | University of Technology | 196 (32.1) |
| 23 | 59 (9.7) | SePedi | 71 (11.6) | Mpumalanga | 35 (5.7) | | |
| 24 | 30 (4.9) | SeSotho | 145 (23.8) | Northern Cape | 2 (0.3) | | |
| | | SeTswana | 73 (12) | North-West | 37 (6.1) | | |
| | | SiSwati | 26 (4.3) | Western Cape | 3 (0.5) | | |
| | | Venda | 23 (3.8) | Missing | 3 (0.5) | | |
| | | Tsonga | 36 (5.9) | | | | |
| | | Other | 1 (0.2) | | | | |
| | | Missing | 1 (0.2) | | | | |

Descriptive statistics including measures of location and variability were computed for all measured items, as well as Pearson's product-moment correlation coefficients for each pair of constructs. Correlation analysis was done to evaluate nomological validity and to identify any multicollinearity concerns. Themeans, standard deviations and correlation coefficients are illustrated in Table 2.

**Table 2: Descriptive statistics and correlation coefficients**

| Constructs | Mean | Standard deviation | Media influence | Group influence | Subjective norms |
|---|---|---|---|---|---|
| Media influence | 3.34 | 1.12 | | | |
| Group influence | 3.33 | 1.24 | .333* | | |
| Subjective norms | 3.83 | 1.24 | .314* | .282* | |
| Attitude | 4.32 | 1.08 | .186* | .143* | .511* |

*Significant at $p \leq 0.01$

Given that the six-point Likert scale ranged from 'strongly disagree' (1) to 'strongly agree' (6), the means delineated in Table 2 shows that female Generation Y students have a positive attitude towards beauty products, and that the opinions of people they hold in high esteem, such as friends, family and peers, as well as media have an influence on their attitude towards beauty products. Furthermore, the computed correlation coefficients presented in Table 2 indicate that statistically significant ($p \leq 0.01$) and positive relationships between each of the pairs of constructs were found, suggesting nomological validity (Hair, Black, Babin& Anderson, 2014). In addition, the correlation coefficients did not exceed the recommended cut-off level of 0.80, indicating no obvious multicollinearity issues (Field, 2009).

The measurement model specified was assessed by computing the standardised loading estimates, error variance estimates, composite reliability and average variance extracted values. The following table reports on these values.

**Table 3: Measurement model estimates**

| Latent factors | Standardised factor loadings | Error variance estimates | CR | *a* | AVE | √AVE |
|---|---|---|---|---|---|---|
| Media influence | .774 | .559 | .831 | .798 | .50 | .71 |
| F1 | .810 | .656 | | | | |
| | .494 | .244 | | | | |
| | .581 | .337 | | | | |
| | .642 | .421 | | | | |
| Group influence | .731 | .534 | .800 | .863 | .50 | .71 |
| F2 | .788 | .620 | | | | |
| | .863 | .744 | | | | |
| | .753 | .567 | | | | |
| Subjective norms | .683 | .467 | .800 | .870 | .50 | .71 |
| F3 | .773 | .598 | | | | |
| | .867 | .752 | | | | |
| | .836 | .698 | | | | |
| Attitude | .756 | .572 | .800 | .857 | .50 | .71 |
| F4 | .849 | .721 | | | | |
| | .799 | .638 | | | | |
| | .737 | .543 | | | | |
| Correlations | F1↔F2: 0.376 | F1↔F3: 0.399 | | F2↔F3: 0.309 | | |
| | F1↔F4: 0.241 | F2↔F4: 0.160 | | F3↔F4: 0.582 | | |

The Cronbach alpha values for each of the constructs were computed in order to assess the internal consistency reliability of the scale. As depicted in the above table, the Cronbach alpha values ranged between 0.798 and 0.870, which is above the recommended level of 0.70 (Pallant, 2016), thereby indicating acceptable internal consistency reliability. As indicated in Table 3, all CR values exceeded 0.70, demonstrating composite reliability (Malhotra, 2010). The factor loadings and AVE values larger than 0.50 provides evidence of convergent validity (Malhotra, 2010). Furthermore, the square root AVE values exceeded the correlation coefficients suggesting discriminant validity (Hair*et al*., 2014). Although a significant chi-square value of 384.152 with 113 degrees of freedom (df) were computed, all other fit indices suggested good model fit, with a SRMR value of 0.0406, a RMSEA value of 0.063, a GFI of 0.93, an IFI of 0.945, a TLI of 0.934, and a CFI of 0.945.

In accordance with the measurement model, a structural model was then specified to test whether media and group influence have a significant indirect positive influence on female Generation Y students' attitude towards beauty products via their influence on subjective norms, by making use of a 95 percent confidence interval (p=0.000 < 0.05) (Byrne, 2010). These results are presented in Table 4.

**Table 4: Standardised regression estimates and *p*-values**

| | Estimates | p-values | Results |
|---|---|---|---|
| Media influence → Subjective norms | 0.331 | 0.000 | Significant |
| Group influence → Subjective norms | 0.182 | 0.000 | Significant |
| Subjective norms → Attitude | 0.582 | 0.000 | Significant |

The results in Table 4 indicate that media influence (β = 0.331, *p* = 0.000 < 0.05)and group influence (β = 0.182, *p* = 0.000 < 0.05) have a positive significant impact on subjective norms. Similarly, subjective norms (β = 0.182, *p* = 0.000 < 0.05)has a significant positive impact on attitude. In figure 1, the regression path estimates are graphically illustrated.

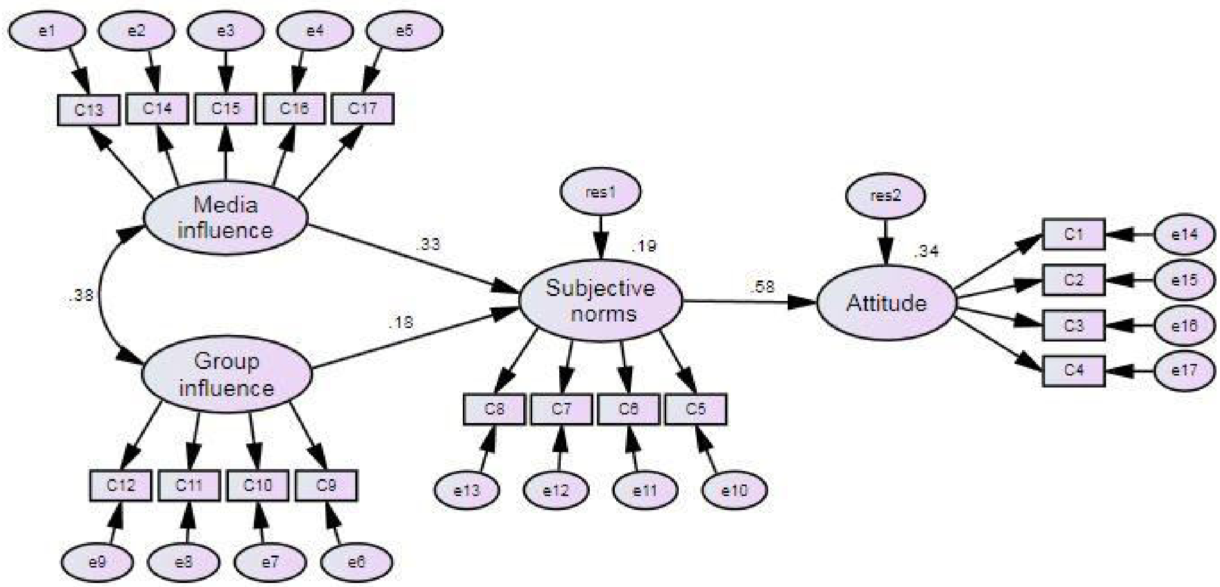


**Figure 1: Structural model**

The findings depicted in both Table 4 and Figure 1 are in line with a number of previous studies(Lopez-Nicolas, Molina-Castillo &Bouwman, 2008;Mangleburg,Doney& Bristol, 2004; Schepers&Wetzels, 2007; Shi &Xie, 2013).Whilst the structural model again returned a significant chi-square value of 384.530, the other incremental fit indices returned good model fit values. The values comprised GFI = 0.930, NFI = 0.924, IFI = 0.945, TLI = 0.935, CFI = 0.945 and RMSEA = 0.062.The squared multiple correlation coefficient for attitude is 0.34, demonstrating that media influence, group influence and subjective norms collectively explain 34 percent of the variance in female Generation Y students' attitude towards beauty products. There is a possibility that other factors might contribute in explaining female Generation Y students' attitude towards beauty products.

## 5. CONCLUSION

This paper sought to determine the impact media and reference groups have on female Generation Y students' attitude towards beauty products. The insights gained from this study may assist researchers, marketers and retailers in understanding the factors that influence female Generation Y students' attitude towards beauty products. Similar to previous studies (Lopez-Nicolas *et al.,* 2008;Mangleburg*et al.,* .2004; Shi &Xie, 2013), the findings of this study indicate that media, as well as the opinions of people consumers hold in high esteem, such as friends, family and peers have a significant impact on their attitude towards beauty products. This impact is an indirect influence via subjective norms. As such, researchers, marketers and retailers should use media together with the opinions of consumers to target this segment. Because Generation Y consumers make use of the internet and social media networks on a regular basis (Moreno, Lafuente, Carreon & Moreno, 2017), they should be provided with a user-friendly digital platform to express their satisfaction with products or services. In this way, both media and group influence are used in marketing products and services to current and potential consumers.

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# The role of quality labelling on agrofood marketing: Consumers' perception in Greece

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**Abstract**

Although consumers' interest in quality agrofood has been increased, the relative marketing literature over the last years is still in a debate on how this increasing consumers' interest translated into strong willingness to pay and increased demand of those products. The purpose of this study is to examine Greek consumers' perceptions towards the agrofood quality labels. The main research objectives are the measurement of consumers' level of awareness and their overall attitude towards agrofood quality labelling, as well as the analysis of consumers' profile whose purchasing behaviour is mainly affected by food labels.Methodologically, this research uses survey questionnaires to collect the empirical data, using Heraklion (Greece) as the case study area. The sample size consists of 605 consumersof different socio-economic profile. Descriptive analyses were performed to explore consumer perceptions, while nonparametric hypothesis tests for statistical dependency were performed in order to investigate different perception between consumers with different demographic characteristics.The results show a low awareness of food quality labels and moderateperceptionthat quality labelling adds value to agrofood products. The nonparametric hypothesis analyses reveal that consumers' perception for food labels mainly depends on the demographic variablesof age and gender.

***Keywords****: Food Label, Consumer Perceptions, Agrofood, Quality, Greece*

## INTRODUCTION

Quality dependson the different perspective from which it is assessed and its' technical and production definitionand may differ from the consumers' perception (Steenkamp, 1990). The term "food quality" has several definitions but it is commonly agreed that food quality has an objective (physical/ technical characteristics) and a subjective dimension (consumers' perceptions) (Grunert, 2005). Consumers assess the quality of food products considering a variety of aspects including freshness, price, origin, production method, healthfulness and brand. For consumers, quality labels and certifications act as guidance to form expectations about the quality of a product.

Supranational (e.g. European Union), national and private sector quality schemes (such as Protected Designation of Origin – PDO, Protected Geographical Indication – PGI and Traditional Speciality Guaranteed - TSG), have been adopted in order to award with quality labels agrofood products fulfilling certain conditions. Several studies show that consumers' interest in quality of agrofood has been increased (EU, 2018), but the relative marketing literature over the last years is still in a debate on how this increasing consumers' interest translated into strong willingness to pay and increased demand. Empirical studies in several countries with different market conditions, reveal various socio-economic characteristicsand environmental factorsmaking labelling a more or less effective marketing tool for agrofood products (Grunert and Aachmann, 2016).

The purpose of this paper is to examine Greek consumers' perceptions towards the agrofood quality labels. The main research objectives are the measurement of consumers' level of awareness and their overall attitude towards agrofood quality labelling, as well as the description of consumers' profile whose purchasing behaviour is mainly affected by food labels. This study contributes significantly to the literature since it is one of the few empirical researches that investigates consumer perceptions towards agrofood quality labelling in Greece which is a country where a large proportion of consumers is involved in agricultural productionwith professional or amateur status.

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 fifth section presents the empirical results. The sixth section in the paper concludes the discussion.

## LITERATURE REVIEW

Grunert(2005)mentions that there three main streams of research on food quality and safetydealing with: a) provision of quality / safety, b) consumer perception of quality / safety, and c) consumer demand for quality / safety. The literature in consumer perception of food quality is strongly related with the other two research streams and usually includes the measurement of consumers' willingness to pay a premium price for quality products.

As indicated in various literature reviews researches such as a review of Sadilek (2019), all theoretical and empirical research efforts indicate that food quality concept for consumers is multidimensional, subjective, situation-specificand dynamic. Concerning multidimensionality, Cazes-Valette (in Marchesini et al.2007) propose thatthere are seven distinct facets that could define quality in food: nutritional, hygienic, functional, organoleptic, social, symbolic and humanistic quality.It is broadly accepted that modern consumers in order to define food products' quality, evaluate both intrinsic (taste, aroma and other organoleptic properties) and extrinsic features of the product (traceability, origin, geographical indications, certification, etc.).

Especially for extrinsic quality aspects, quality labels involving certifications act as guidance for consumers to form expectations about the quality of a food product and consequently they affect consumers' attitude and purchasing behaviour. European Union's agrofood quality labels have been introduced in order to help consumers' decision making and simultaneously to enhance food safety, since these labels provide assurance about the area of production and occasionally about the way and/or the know-how of production. Several studies point to the existence of a relationship between EU quality labels (such as PDO and PGI) and consumer response. For example, a recent study of Erraach et al. (2017) suggest that in Spain, olive oil consumers' utilities regarding the quality labels are positive and this fact significantly increase the probability of purchase by consumers. Or Aprile et al. (2012) found that consumers in Italy are also influenced positively by quality labels and are also willing to pay more for PDO, EU organic logo and PGI labelled olive oil products. Hence, quality labelling seems to be a significant marketing tool for firms in agrofood sector. If consumers' needs and perceptions are defined, then quality certification allowsfirms to impose higher prices for their products. Chever et al. (2012) found that in 2011 the premium price of EU PDO / PGI products was 2.23 times higher than the one of similar non-certified products.

Nevertheless, it should be mentioned that the studies in European consumer perceptions of food quality or their willingness to pay, employ differentmethodologies and to some extent have conflicting results, since they do not give a clearinsight for the actual use of the labels in consumers'decision-making (Grunert and Aachmann, 2016).

Greece is among top five European countries in products' registrations in PDO, PGI and TSG certification schemes. Concerning the literature exploring Greek consumers' response in agrofood quality labelling,Fotopoulos and Krystallis(2001,2003)use conjoint analysis in exploring Greek consumers' willingness to pay for PDO label on olive oil and apples. In both researches, their findings reveal that the existence of PDO label increase Greek consumers' utility and their willingness to pay but in a different way for the two products (olive oil and apples).Krystallisand Ness(2005)evaluate the importance of various quality cues in selected olive oil brands and reveal that consumers attach the highest importance to country of origin attribute, followed by organic label, health information, HACCP or ISO certification and PDO label. Botonaki et al. (2006) examine the role of two types of quality certifications(organicproducts and products produced under the system of integrated management) on consumers' food choices and their findings suggest that consumers' level of awareness and information towards thestudied certification systems is rather low. Tsakiridou et al. (2011) exploringGreek consumers' awareness, attitudes and buying intention toward quality cues in fruitsand vegetables, conclude that the most important factors affecting willingness to pay for quality agrofood products are the positive attitude toward healthyfood, the level of awareness, andthe consumers' education level.

## METHODOLOGY

The current research utilized a survey questionnaire as the main tool for collecting empirical data. Survey questionnaires have been distributed across the city of Heraklion (Crete), one of the largest cities in Greece. Although Heraklion is an urban area, a large proportion of population is involved in agricultural production, having a professional or amateur status. This was also one of the reasons behind the selection of Heraklion as a case study area, as it was expected that consumers aresomehow aware and exposed to agrofood quality certification schemes. The survey questionnaire was divided into three major sections. Section A included demographic questions. Section B attempted to gather data for consumers' general behaviour in agrofood products, while section C involved questions assessing consumers' perceptions about quality labelling / certification of agrofoods.

A group of research assistants was selected and properly trained by the principal investigator in survey administration. This group was dispersed at various geographical locations across the city to collect the required data. The questionnaires were distributed and the final sample size consists of 605 consumers, including people of different socio-economic profile. Descriptive analyses were performed to explore consumer perceptions for certified agrofood products, while nonparametric hypothesis tests for statistical dependency were performed in order to investigate different perception between consumers with different demographic characteristics.

## RESULTS

In brief, the socio - demographic characteristics of the survey's participants are summarized in Table 1.

**Table 1**: Respondents' Demographic Statistics

| **GENDER** | | **MARITAL STATUS** | | **INCOME** | |
|---|---|---|---|---|---|
| **WOMEN** | 59.77% | Single with Children | 3.81% | ≤12.000€ | 45.86% |
| **MEN** | 40.23% | Single without Children | 55.13% | 12.001-24.000€ | 32.78% |
| **AGE** | | Married with Children | 32.28% | 24.001-36.000€ | 8.94% |
| **18-25** | 36.09% | Married without Children | 7.45% | ≥36.001€ | 5.96% |
| **26-35** | 17.38% | n.a. | 1.32% | n.a. | 6.46% |
| **36-45** | 16.56% | | | | |
| **46-55** | 15.23% | **Educational Level** | | | |
| **>56** | 14.57% | High School | 31,29% | | |
| **66>** | 1.75% | College / University | 45.03% | | |
| **N.A.** | 0,17% | MSc / PhD | 9,77% | | |
| | | Other | 12.42% | | |
| | | n.a. | 1.49% | | |

In addition to the demographic data mentioned in Table 1, it should be noted that the 36.09% of the respondents declare that are agrofood producers in professional or amateur mode.

Starting with some findings about consumers' general behaviour in agrofood products, 72.68% of consumers showed their preference toward buyingagrofoodsin unpackaged form, probably because in this manner they can select the products by themselves. Almost half of the consumers (45.53%), declare that they buy agrofoodsmainly from supermarkets, while 29.30% of them stated that they buy agrofoods mainly from producers (streets markets). The rest of them, stated that they make their purchases from smaller or neighbourhoodagrofood shops.

Through a five-point Likert scale, respondents ratedthe most important criteriafor the selection of agrofood products. By summing the responsesreferring to "important" and "very important", the results show that the most important criteria for consumers in selecting agrofood products are (in descending order): (Perceived) Quality (88.74%), Quality Certification (66.06%), Place of Origin (61.59%), Price (43.21%) and Packing (25.83%).Another important result forthe general consumers' behaviour towards agrofoods, is that the overwhelming majority of respondents (77.65%)declared they trust more local agrofood products than those produced in other regions.

The results capturing the most specialized consumers' preferences / opinions for the certification of agrofood products, are also of great interest.Only one out of three consumers (33.11%) feel they are well or very well aware of the significance of certifiedagrofoods. At the same time, only 24.17% of respondents were aware of and could report a certification standard for agrofood products.Regarding the extent of seeking agrofoods during shopping, 42.05% of the sample stated that seeks certified agrofoods products to a moderate extent, while about almost one third of the sample (30.96%) is looking for quality labeled agrofoods to a greater extent. The aforementioned results are in line with the part of the answers referring to the percentage of certified agro-food products that consumers believe they eventually buy. Almost one third of Cretan consumers (32.95%) believe that the percentage of certified agrofoods is up to 25% of their total agrofood purchases, while 42.88% and 17.05%of the respondents believe that the percentage of certified products in their total agrofood purchases is up to 50% and 75%, respectively.

The perceptions of consumers about some major agrofood quality products' attributes (healthiness, taste, environmental friendliness, etc.) are presented in Table 2. In general, in most of these attributes only half of respondents believe that quality labelled products are significantly better against the non-certified ones. Respondents believe that in contrast to non-certified products, agrofoods having quality label are more expensive (64.57%) but also more ideal for children (59.44%), more guaranteed – safe (58.28%), healthier (56.46%) and friendlier for the environment (56.46%). On the other hand, most consumers seem confident that foods certified for their quality, are more expensive (64.57%) and at the same time they do not link them with attributes like the lack of preservatives (35.26%) and the better taste (43.71%).

The desired outcome of the research's objectives, was completed with the findings in two very important variables: the overall consumers' perception about whether certification adds value to agrofood products and their willingness to pay more for them. Almost half of respondents (55.30%) believeor strongly believe that quality labelling adds real value to agrofood products, a quarter of them (27.15%) are not sure and the rest of them seems not to believe in certification added value. Considering consumers' willingness to pay, almost six out of ten consumers (58.94%) are willing to pay 1-3% higher prices for quality labelled agrofood products, one out of four respondents (19.54%) express their willingness to pay up to 1% more, while only eleven percent of them (11.26%) declare that can pay more than 3% higher prices for certified agrofoods. Almost one out of ten consumers (8.94%) have no intension to pay higher prices.

**Table 2**: Respondents' Attitudes for Certified Agrofood Products

| *Agreement with the following statements.* ***Certified Agrofood Products...*** | ***Disagree / Strongly Disagree*** | ***Neither Agree nor Disagree*** | ***Agree / Strongly Agree*** |
|---|---|---|---|
| *... are more healthy* | 11.42% | 30.79% | 56.46% |
| *... have no preservatives* | 23.68% | 39.24% | 35.26% |
| *... are more ideal for children* | 12.09% | 25.50% | 59.44% |
| *... better for the environment* | 15.75% | 25.83% | 56.46% |
| *... more expensive* | 8.28% | 25.66% | 64.57% |
| *... have a better taste* | 20.20% | 34.60% | 43.71% |
| *... are guaranteed (safe) due to certification* | 11.42% | 29.47% | 58.28% |

* Missing responses are not presented in the table

In order to evaluate the relationship between quality labelling importance in agrofoods and the respondents' demographic characteristics, thePearson's chi-square test for independence, was used. The nonparametric hypothesis analyses reveal statistically significant relationships between quality's added value withconsumers' gender, age and family status (Table 3). On the other hand, there is not a statistically significant relationship with consumers' income and educational level, while for these variables the p-value is greater than 0.05 (not significant at 5% level of significance). From the cross tabulationanalysis we have more evidence about the nature of these relationships. For example, on consumers' age case, the results show that the higher consumers' age is, the higher the perceived added value of quality labelling in agrofood products, is. Nevertheless, considering the strength of the pre-mentioned relationships, the values of φand Cramer's V statistics do not show a very strong statistical relationship between the quality labelling's added value and demographic characteristics.

**Table 3**: Measures of Association for Relationship between Quality Labelling's Added Value and Demographic Characteristics

| | ***Relationship Between Quality Labelling's Added Value and…*** | | | | | |
|---|---|---|---|---|---|---|
| | **$\chi^2$** | **Df** | **P value** | **φ** | **Cramer's V** | **Trends of Relationship** |
| ***Gender*** | 13.929 | 4 | .008 | .153 | .153 | Men believe more than women that quality certification gives added value to agrofood products |
| ***Age*** | 56.518 | 16 | .000 | .308 | .154 | The higher the age, the higher the added value of quality labelling |
| ***Income*** | 14.732 | 12 | .256 | .162 | .094 | Independent |
| ***Marital status*** | 58.678 | 12 | .000 | .315 | .182 | Married consumers (with or withoutchildren) consider higher the added value of quality labelling |
| ***Education*** | 17.780 | 12 | .123 | .174 | .100 | Independent |

In a similar way, the analysis showsstatistically significant relationships between willingness to pay with consumers' gender, age, income and educational level (Table 4). The assumptions of Pearson's chi-square test are not met in case of the variable consumers' family status. The cross tabulation analysis provides the necessary evidence about the nature of these relationships and the findings are presented in Table 4.

**Table 4**: Measures of Association for Relationship between Willingness to Payand Demographic Characteristics

| | ***Relationship Between Willingness to Pay and…*** | | | | | |
|---|---|---|---|---|---|---|
| | **$\chi^2$** | **Df** | **P value** | **φ** | **Cramer's V** | **Trends of Relationship** |
| ***Gender*** | 11.729 | 4 | .019 | .140 | .140 | Men have greater willingness to pay for quality certifiedagrofoodsthan women |
| ***Age*** | 35.250 | 16 | .004 | .243 | .122 | Consumers aged 36-55 have greater the willingness to pay for quality certifiedagrofoods |
| ***Income*** | 27.031 | 12 | .008 | .220 | .127 | The higher the income, the greater the willingness to pay for quality certified agrofoods |
| ***Education*** | 33.527 | 12 | .001 | .239 | .138 | The higher the education, the greater willingness to pay for quality certified agrofood products |

## 5. CONCLUSIONS

The present study examinedGreek consumers' perceptions toward the agrofood quality labels. The survey's data analysis lead to some interesting insights, which are strongly linked to our research objectives. Firstly, quality labelling seems to be as important selection criterion as the place of origin for agrofood products. Nevertheless, the first selection criterion for consumers in Greece is by far their individual perceived quality of agrofood products. In other words, consumers choose agrofoods based mainly on their personal values, experience, beliefsand evaluation scheme. This finding: a) seems interrelated with the rest of the results of this research that capture the general behaviour of Greek consumers (high preference in unpacked agrofoods, high percentage of consumers buying directly from producers and relative high individual involvement in agricultural production), and b)is in line with Hoogland et al. (2007) who found that the detailed information on agrofood packages / labelsprovideadded value, not because of its' net impact on purchase intensions, but because it enable consumers to make their purchasing decisions in greater agreement with their personal values.

Moreover, there is a relative low awareness for the quality labels / certifications of agrofood products. The vast majority of Greek consumers are unaware both on the significance of quality certification and on certification standards onagrofoods. The low or relative low level of awareness of the EU quality labels have been indicated also in previous studies (Grunert and Aachmann, 2016).

Furthermore, there is evidence that quality labelling isnot yet a powerful marketing tool in Greece. Only half of Greek consumers believeor strongly believe that quality labelling adds real value to agrofood products, while consumers' willingness to payfor quality certified agrofood products is relative low (low premium prices are preferred).

Last but not least, the degree to which quality labelling plays an important role in consumers' choice patterns varies according to their demographic profile. Middle-aged and older, male and married consumers perceive better the added value of quality labelling. Concerning the willingness to pay, the research shows that consumers willing to pay more for quality certified agrofoodsare more likely to be middle-aged or older, male, higher educated and with high income.

The findings are considered useful to food policy makers and marketers in agrofood sector, since they can enhance their marketing efforts and consequently increase the demand of quality agrofood products. Producers, resellers and other stakeholders should undertake all necessary communication/ promotingactions in order to increase consumer awareness in agrofood quality labels / certifications. Consumers' perceptions and attitudes towards quality labels, will also be improved if the marketing effort succeed to relate quality labelling with local consuming behaviors and individuals' perceived quality of agrofood products.

Our analysis and literature certainly motivate further research in this area. In order to make the sample more representative, future research should increase the sample size and raise the proportion of higher-income and elder participants who are unwilling to accept investigation. Additionally, more qualitative data from consumers are required in order to confirm the quantitative results of this study.

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# Validating a model of usage frequency of online consumer reviews amongst Generation Y students

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**Abstract**

*The digital age has brought about significant changes to the reach, longevity and speed of dispersion of word-of-mouth communication. From a marketing perspective, one specific form of digital word-of-mouth communication that is growing in importance is that of online consumer reviews. These online consumer reviews are especially relevant to marketers targeting the Youth, currently labelled Generation Y (individuals born between 1986 and 2005), who are known to be major users of and contributors toonline review sites.Despite popular media indicating that Generation Y are frequent users of these reviews, there is a lack of empirical research on this topic. As a point of departure in addressing this gap in the marketing literature, this paper reports on the validation of a model of usage frequency of online consumer reviews amongst Generation Y students. Data were collected using self-administered questionnaires from a sample of 538 university students enrolled at the campuses of three South African public higher education institutions. The measurement model specified for confirmatory factor analysis included the latent factors of perceived information andentertainment value, perceived credibility, overall perceived value and usage frequency of online consumer reviews. Data analysis included collinearity diagnostics, confirmatory factor analysis using the maximum likelihood method, construct validity analysis, internal-consistency and composite reliability analysis and model fit assessment. The findings indicate that usage frequency of online consumer reviews amongst Generation Y students is a five-factor model, with no serious multi-collinearity issues that exhibits nomological, convergent and discriminant validity, internal-consistency and composite reliability, and acceptable model fit.This model provides marketing academics and practitioners with a starting point for better understanding Generation Y members use of online consumer reviews.*

***Keywords***:*Usage frequency of online consumer reviews, Generation Y, Model validation, South Africa.*

## INTRODUCTION

The digital age has brought about significant changes to the reach, longevity and speed of dispersion of word-of-mouth communication (Kucukemiroglu& Kara, 2015; Cheung & Lee, 2012). From a marketing perspective, one specific form of digital word-of-mouth communication that is growing in importance is that of online consumer reviews (Park & Lee, 2009). These online consumer reviews are especially relevant to marketers targeting the Youth, currently labelled Generation Y (individuals born between 1986 and 2005) (Markert, 2004), who are known to be major users of and contributors to online review sites (Hall, 2018; Katz, 2018). Despite popular media indicating that Generation Y are frequent users of these reviews, there is a lack of empirical research on this topic, especially in terms of the factors associated with their usage frequency of such reviews.As a point of departure in addressing this gap in the marketing literature, this paper reports on the validation of a model of usage frequency of online consumer reviews amongst Generation Yuniversity students. The focus on university students as the study's target population is based on the assumption that a tertiary qualification is typically associated with a higher future earning potential and higher social standing, thereby rendering graduates as trend setters and opinion leaders amongst their peers (Bevan-Dye & Akpovjivi,2016).

## LITERATURE REVIEW

The underlying premise of generational studies is that shared life experiences, prevailing social trends and historical events during an individual's formative years merge into a collective generational consciousnessthat differentiates one generation's attitudes, values and behaviour (Howe & Strauss, 2007), including consumption-based preferences and behaviour (Schewe& Meredith, 2004) from that characteristic of other generations.Possibly one of the single most important shared life experience to have shaped the persona of members of Generation Y is that they grew up in the digital age (Taylor &Keeter, 2010; Brown, 2019), resulting in them being technologically astute individuals who use digital tools such as the Internet, smartphones and social media as an integral part of their daily lives (Barton et al., 2012). A salient marketing consequence of the digital age is that it has transferred significant market power into the hands of consumers (Schiffman et al., 2010), allowing them for the first time in history to compare the features and prices of a diverse range of goods from geographically-dispersed sellers time- and cost-effectively, and to access other consumers' reviews of their first-hand experience with those goods (Shrosbree, 2014). Generation Y individuals understand the power that digital technologies give them as consumers and readily share their consumption-related experiences across platforms, thereby relying on each other to make informed purchase decisions (Gailewicz, 2014; Fromm, 2016).

The findings of a 2016 study spanning 50 countries indicate that Generation Y tend to consult online consumer reviews while shopping (KPMG, 2017). This generation's frequent use of online consumer reviews is reiterated in the findings of other studies. For example, a study in the United Kingdom (UK) found that eight out of ten Generation Y consumers never make a purchase without first consulting online consumer reviews (Hall, 2018), while a study in the United States of America (USA) found that 37.3 percent of Generation Y individuals always consult online reviews prior to purchase and 42.9 percent often consult such reviews (Kats, 2018). Similarly, reports indicate that online consumer reviews are Generation Y individuals' most trusted source of consumption-related information in Africa (Zinkevych, 2018). That being said, there is a lack of academic studies concerning the factors associated with Generation Y consumers' prevalent use of online consumer reviews.

One potentially useful model to help understand the usage frequency of online consumer reviews is Ducoffe's (1995,1996) advertising value model. This model is derived from the uses and gratifications (U&G) theory that seeks to explain individuals' media consumption in terms of why they use certain media and the gratifications they derive from that consumption (Katz et al., 1973). The Ducoffe model has been used to explain consumers' perceived value of Web advertising (Ducoffe, 1996; Brackett et al., 2001; Zha et al., 2015), email advertising (Chang et al., 2013), mobile advertising (Tsang et al., 2004; Kim & Han, 2014; Martins et al., 2019) and social media advertising (Saxena& Khanna, 2013;Shareef et al., 2019).

Ducoffe (1995) explainsthe perceived value of consumption-related communication as being consumers' subjective evaluation of the relative worth or utility of that communication. The U&G theory suggests that communication is goal-directed behaviour and that individuals' choice to engage with a particular media, as well as their level of participation with that media depends on the degree to which it satisfies their needs; that is, their perceived value of that media (Rubin, 1993). Studies on social media that are grounded in the U&G theory confirm that there is a positive relationship between users'perceived value and their pervasive use of that media (Park et al., 2009; Ifinedo, 2016). With specific reference to online consumer reviews, Park and Lee (2009) found a significant positive association between the perceived utility of such reviews and theuse of such reviews.

In accordance with the U&G theory, Ducoffe (1996) identifies perceived informativeness and entertainment as salient factors that account for how consumers appraise thevalue of consumption-related communication.The perceived informativeness of online consumer reviewsrefers to the utilitarian value of the content of the review, in terms of the comprehensiveness, objectivity, concreteness (Park & Lee, 2008) and currency of the review (Rose, 2017). In contrast,perceived entertainment refers to the hedonic value of perusing online consumer reviews for pleasure and enjoyment (Elwalda et al. 2016), and relates to the readability of such reviews (Ghose&Ipeirotis, 2011) in terms of them being understandable, uncomplicated, of a reasonable length and devoid of grammar and spelling errors (Ghose&Ipeirotis, 2011; Liu & Park, 2015). This suggests the need to balance the comprehensiveness of online consumer reviews with their comprehensibility and length.

In an extension of the Ducoffe (1996) study, Brackett et al. (2001) added credibility as a contributor to the advertising value model. Subsequent studies have confirmed the role of credibility in accounting for a target audience's assessment of value of advertisements (Kim & Han, 2014; Zha et al., 2015; Martins et al., 2019).In the case of online consumer reviews, perceived credibility becomes even more important given that such reviews are typically provided by anonymous consumers(Park & Lee, 2008). Unfortunately, the illegal practice of posting fake positive reviews to promote one's own product/service/organisation or fake negative reviews targeting one's competitors' reputations (Zhang et al., 2016), together with the legal but unethical practice of only publishing positive reviewshave brought the authenticity of online consumer reviews into question (O'Neil, 2015; Kim et al., 2018). These practices render the perceived credibility of such reviews even more critical to consumers' assessment of their value.

In accordance with the literature, this study theorises that Generation Y students' usage frequency of online consumer reviews is a five-factor model comprising perceived information and entertainment value, perceived credibility, overall perceived value and usage frequency of online consumer reviews.

## RESEARCH METHODOLOGY

A descriptive research design, with the single cross-sectional sampling approach informed the research methodology applied in this study.

### Sampling and data collection

As per the primary objective of the study, the target population was defined as Generation Y university students registered at South African public higher education institutions (HEIs), who were aged between 18 and 24 years. The sampling frame was limited to HEI campuses in South Africa's Gauteng province and judgement sampling was used to select one campus from a traditional university, one from a university of technology and one from a comprehensive university, therebyensuring that the sample comprised participants from each of South Africa's three types of public HEIs. Using the mall-intercept survey approach, fieldworkers distributed 600 questionnaires across theselected three campuses (200 per campus) to a convenience sample of students.

### Research instrument

A self-reportingsurvey questionnaire was used to gather the required data. This questionnaire included an introductory letter explaining the aim of the study and providing a guarantee of the anonymity of the sample participants, a section for capturing demographic data and a section containing scaled-responseitemsfrom published studies. These scales included perceived informativeness, entertainment and value of online consumer reviews, which were adapted from the scales developed by Ducoffe (1996). The perceived credibility of online reviews was measured using a scale developed by Ohanian (1990) and the usage frequency of online consumer reviews was measured using the scale developed by Park and Lee (2009). The responses to these 23 scaled items were recorded on a six-point Likert-type scale that ranged from strongly disagree (1) to strongly agree (6).

### Data analysis

The gathered data were analysed using Versions 25 of IBM's Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS). Data analysis included frequencies, nomological validity analysis, collinearity diagnostics, confirmatory factor analysis, internal-consistency and composite reliability analysis, and convergent and discriminant validity analysis.

In order to assess nomological validity, a matrix of Pearson's Product-Moment correlation coefficients was calculated. Nomological validity is inferred when there arestatistically significant relationships in the theoretically correct direction between pairs of latent factors planned for inclusion in a model(Hair et al., 2010). Given that excessively high correlation coefficients between latent factors can cause problems in interpreting the results of multivariate statistical analysis methods, a screening for multi-collinearity was undertaken by computing the tolerance values and the variance inflation factors (VIF).Tolerance values less than 0.10 and an average VIF above 10 are warning indications of multi-collinearity (Pallant, 2010). Confirmatory factor analysis using the maximum likelihood method was conducted whereby a five-factor measurement model was specified for testing. As per convention, the first loading on each of the five latent factors was fixed at 1.0, which resulted in 276 distinct sample moments and 56 distinct parameters to be estimated, which equates to 220 degrees of freedom (df) based on an over-identified model and a chi-square value of 539.274, with a probability level equal to 0.000. While a statistically significant chi-square is a sign of poor model fit, the literature indicates that this statistic is vulnerable to large sample sizes, which is why the use of other model fit induces is advised (Byrne, 2010). In this study, the model fit indices computed included the goodness-of-fit index (GFI), the incremental-fit index (IFI), the Tucker-Lewis index (TLI), the standardised root mean square residual (SRMR) and the root mean square error of approximation (RMSEA), where GFI, IFI and TLI values above 0.90, together with SRMR and RMSEA values below 0.08 are indicative of acceptable model fit (Malhotra, 2010). Latent factor loading estimates and average variance extracted (AVE) values of 0.50 or higher are required to concludeconvergent validity, whilst discriminant validity necessitates that the square root of the AVE values exceeds the correlation estimates between the relevant latent factors (Hair et al., 2010). Reliability was tested using Cronbach's alpha (a) and composite reliability (CR), where values of 0.70 and above are indicative of acceptable reliability (Malhotra, 2010).The level of statistical significance was set at $p \leq 0.01$ throughout.

**RESULTS**

Following data collection, 538 complete questionnaires were received back of the 600 distributed (90% response rate).The sample comprised 251 (46.7%) females and 280 (52%) males, with seven responses missing (1.3%). Each of the specified seven age categories and each of South Africa's nine provinces were represented in the sample.

The measurement model proposed in this study was that Generation Y students' usage frequency of online consumer reviews is a five-factor model comprising perceived information and entertainmentvalue, perceived credibility, perceived overall value and usage frequency of online consumer reviews. As a first step in testing this model, a matrix of Pearson's Product-Moment correlation coefficients was constructed to test for nomological validity. Thereafter, as is customary with multivariate statistical techniques, collinearity diagnostics, including tolerance values and average variance inflation factor (VIF) values, were run to ascertain if the proposed model of latent factors had any serious multi-collinearity issues. The correlation matrix and collinearity diagnostic results are reported in Table 1.

**Table 1:** Correlation matrix and collinearity diagnostic results

| | **F1** | **F2** | **F3** | **F4** | **Tolerance** | **VIF** |
|---|---|---|---|---|---|---|
| Information value (F1) | | | | | .646 | 1.548 |
| Entertainment value (F2) | .324* | | | | .766 | 1.306 |
| Credibility(F3) | .522* | .352* | | | .616 | 1.622 |
| Value (F4) | .495* | .346* | .525* | | .611 | 1.636 |
| Usage frequency (F5) | .313* | .396* | .303* | .397* | .559 | 1.318 |

*Significant at $p \leq 0.01$

As is shown in Table 1, the correlation coefficients between each of the pairs of latent factors proposed for inclusion in the model are in the correct direction and are statistically significant ($p \leq 0.01$), which suggests nomological validity. Concerning the collinearity diagnostics run, with tolerance values ranging from 0.559 to 0.766 and an average VIF1.486 there were no multi-collinearity issues worth noting.

Following on from this,confirmatory factor analysis of the measurement model was run using AMOS. Table

2 reports on the estimates for the measurement model, including the standardised loading estimates, error variance estimates, Cronbach alphas, CR, AVE and square root of the AVE values.

**Table 2:** Estimates for measurement model

| **Latent factors** | **Standardised loading estimates** | **Error variance estimates** | ***a*** | **CR** | **AVE** | **√AVE** |
|---|---|---|---|---|---|---|
| Information value (F1) | .544 | .296 | .775 | .778 | .50 | .71 |
| | .657 | .431 | | | | |
| | .550 | .303 | | | | |
| | .609 | .371 | | | | |
| | .557 | .309 | | | | |
| | .530 | .281 | | | | |
| | .594 | .353 | | | | |
| Entertainment value (F2) | .801 | .642 | .910 | .912 | .50 | .71 |
| | .873 | .762 | | | | |
| | .782 | .612 | | | | |
| | .832 | .693 | | | | |
| | .815 | .665 | | | | |
| Perceived credibility (F3) | .540 | .292 | .847 | .854 | .50 | .71 |
| | .742 | .551 | | | | |
| | .809 | .655 | | | | |
| | .735 | .540 | | | | |
| | .826 | .682 | | | | |
| Perceived value (F4) | .738 | .545 | .788 | .792 | .50 | .71 |
| | .820 | .672 | | | | |
| | .683 | .467 | | | | |
| Usage frequency (F5) | .774 | .599 | .827 | .831 | .50 | .71 |
| | .858 | .737 | | | | |
| | .728 | .530 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Correlations | F1↔F2: .378 | F1↔F3: .598 | F1↔F4: .632 | F1↔F5: .383 | F2↔F3: .384 |
| | F2↔F4: .409 | F2↔F5: .446 | F3↔F4: .626 | F3↔F5: .355 | F4↔F5: .462 |

The results reported in Table 2 indicate that with standardised loading estimates all exceeding 0.50 and AVE values equalling 0.50 there is convergent validity. Discriminant validity is evident in Table 2 in that the square root of the AVE values for each of the five latent factors exceeds their respective correlation coefficients. The computed Cronbach alphas and CR values for each of the latent factors exceed 0.70, thereby indicating both internal-consistency and composite reliability. Having established the reliability and construct validity of the model, attention was then turned to evaluating the model fit indices computed by AMOS.

The computed model fit indices all suggested acceptable model fit with a GFI of 0.919, an IFI of 0.943, a TLI of 0.934, a SRMR of 0.047 and a RMSEA of 0.052. Taken together, this suggests that usage frequency of online consumer reviews amongst Generation Y students is a five-factor model that exhibits construct validity, reliability and acceptable model fit.

**CONCLUSIONS**

The study reported in this paper sought to validate of a model of the usage frequency of online consumer reviews amongst Generation Y students in the South African context. Given the growing popularity of online consumer reviews, particularly amongst members of Generation Y, it is necessary for marketers to have a valid model to measure and understand their usage frequency of such reviews. The results of this study indicate that Generation Y students' usage frequency of online consumer reviews is a five-factor model comprising perceived information and entertainment value, perceived credibility, overall perceived value and usage frequency. The measurement model tested exhibited internal-consistency and composite reliability, no multi-collinearity issues and construct validity in terms of nomological, convergent and discriminant validity. Moreover, the fit indices computed indicate acceptable model fit. This model provides marketing academics and practitioners with a starting point for better understanding Generation Y members use of online consumer reviews.

Future research into the relationship between these five factors is necessary to aid marketers in designing strategies to integrate online consumer reviews into their marketing communication mix targeting Generation Y in an improved manner.

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# Influence of perceived information and entertainment value, perceived credibility and perceived value on Generation Y students' usage frequency of online consumer reviews

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**Abstract**

*In the contemporary marketing environment, online consumer reviews are playing an ever increasing role in influencing consumers' choice of products and services across a range of industries. This is especially true amongst the Youth, who in 2019 were classified as Generation Y (individuals born between 1986 and 2005). Market reports and newspaper articles highlight that as technologically astute individuals who grew up in the age of Internet connectivity, mobile telephony and, for the later cohort of this generation, social media, they understand the power that digital technologies afford them as consumers, and readily share their consumption-related experiences across platforms, thereby relying more on each other than on marketing messages to make informed purchase decisions. This generation's proclivity to consult and contribute to online consumer reviews highlights the salience of marketers integrating online consumer reviews into their marketing communication strategy when targeting Generation Y. The strategic success of online consumer reviews as part of the marketing communication strategy depends on Generation Y consumers' perceived value and usage frequency of such reviews, which, in turn, are dependent on certain factors that influence that perceived value. Understanding the factors that influence Generation Y consumers' perceived value and usage frequency of online consumer reviews will contribute to marketers' ability to leverage online consumer reviews to their advantage. As such, the study reported on in this paper focused on determining the influence of perceived information and entertainment value, perceived credibility and perceived value on Generation Y students' usage frequency of online consumer reviews. Self-reporting survey questionnaires were used to collect the required data from a convenience sample of 538 students registered at three campuses from South Africa's three main types of public higher education institutions – a traditional university, a university of technology and a comprehensive university. Data analysis included descriptive statistics, reliability and construct validity analysis and path analysis. The results infer that Generation Y students perceive online reviews to be informative, entertaining, credible and valuable, and that they frequently consult such reviews. Furthermore, the perceived information and entertainment value and perceived credibility had a statistically significant ($p \leq 0.01$) positive influence on the perceived value that they attached to such reviews, which, in turn, was a statistically significant positive predictor of the usage frequency of online consumer reviews. These findings suggest the importance of having filtering mechanisms to ensure that only authentic reviews are published and the need to implement tactics to ensure that these reviews are informative and entertaining and, consequently, of value.*

***Keywords**:Perceived value and usage frequency of online consumer reviews, Generation Y, path analysis, South Africa.*

## INTRODUCTION

In the contemporary marketing environment, online consumer reviews are playing an ever increasing role in influencing consumers' choice of products and services across a range of industries (Cheung et al., 2012; Fish, 2018). This is especially true amongst the Youth (Kats, 2018; Murphy, 2018), who in 2019 were classified as Generation Y (individuals born between 1986 and 2005) (Markert, 2004). Market reports and newspaper articles highlight that as technologically astute individuals who grew up in the age of Internet connectivity, mobile telephony and, for the later cohort of this generation, social media (KPMG, 2015), they understand the power that digital technologies afford them as consumers, and readily share their consumption-related experiences across platforms, thereby relying more on each other than on marketing messages to make informed purchase decisions (Gailewicz, 2014). This generation's proclivity to consult and contribute to online consumer reviews (Hall, 2018) highlights the salience of marketers integrating online consumer reviews into their marketing communication strategy when targeting Generation Y. The strategic success of online consumer reviews as part of the marketing communication strategy depends on Generation Y consumers' perceived value and usage frequency of such reviews, which, in turn, are dependent on certain factors that influence that perceived value. Understanding the factors that influence Generation Y consumers' perceived value and usage frequency of online consumer reviews will contribute to marketers' ability to leverage online consumer reviews to their advantage.

As such, the study reported on in this paper focused on determining Generation Y university students' usage frequency of online consumer reviews and the extent to which they perceive such reviews as being informative, entertaining, credible and of value. In addition, the study sought to determine the influence of perceived information and entertainment value, perceived credibility and perceived value on Generation Y students' usage frequency of online consumer reviews.

## LITERATUREREVIEW

The usage frequency of consumption-related communication, whether formal or informal, is likely to depend on the extent to which such communication is perceived to be of value in consumption-related decision making (Park & Lee, 2009). This perceived value refers to the overall representation of the worth of consumption-related communication (Ducoffe, 1996; Zeng et al., 2009), where consumption-related communicationthat isperceived as being of valueis associated with a positive attitude towards that communication (Bakr et al., 2019) and, hence, the active use of that communication (Park & Lee, 2009; Bailey et al., 2018).

According to a study conducted by Ducoffe (1996) on the value of Web-based advertising, the perceived informativeness value and entertainment value of advertising are significant positive predictors of a target audiences' perceived value of Web advertisements. More recent studies confirm the positive influence of perceived informativeness and entertainment value on the perceived value of online advertisements (Wang & Sun, 2010; Saxena& Khanna, 2013), mobile advertising (Wang &Genç, 2018), advertising on social networking sites (Hassan et al., 2013)and electronic word-of-mouth communication (Lien & Cao, 2014).

In replicating the Ducoffe (1996) study, Brackett and Carr (2001) found perceived credibility to also be a significant positive antecedent of the perceived value of Web advertisements. Similarly, Wang and Genç (2018) found that a significant positive relationship between perceived credibility and attitude towards mobile advertising.

In terms of online consumer reviews, perceived informativeness refers to the quality of the information provided in the review, which reduces the uncertainty of a purchase decision and, thereby, contributes to the perceived value of the review (Mudambi&Schuff, 2010). This informative quality relates to the currency (Rose, 2017), objectivity, concreteness and completeness of the content provided in the review (Park & Lee, 2008). The perceived enjoyment attained from perusing online consumer reviews relates to the readability of such reviews (Ghose&Ipeirotis, 2011), where understandable, uncomplicated reviews of a reasonable length that are devoid of grammar and spelling errors have been foundto add to their reading enjoyment (Ghose&Ipeirotis, 2011; Liu & Park, 2015).Typically, online reviews are created by unknown consumers, so the perceived credibility of such reviews is an important contributor to their perceived value (Park & Lee, 2008). The credibility of online consumer reviews is rooted in their authenticity, which highlights the importance of marketers not cherry-picking reviews, censoring negative reviews or disguising paid-for or organisational-generated reviews as authentic consumer reviews (Weinberg, 2016).

Based on a review of the literature, this study theorises that Generation Y students' perceived informativeness, enjoyment and credibility of online consumer reviews will positively influence their perceived value of such reviews, which, in turn, will influence the frequency with which they peruse such reviews.

## RESEARCH METHODOLOGY

The research methodology followed in this study was the descriptive research design, usinga self-administered survey questionnaire and the single cross-sectional sampling approach.

### Sampling and data collection

The study's target population was specified as Generation Y university students registered at South African public higher education institutions (HEIs), aged between 18 and 24 years. In order to narrow the sampling frame, judgement sampling was applied to select campuses in South Africa's Gauteng province. These included one campus from a traditional university, one from a university of technology and one from a comprehensive university.Fieldworkers, using the mall-intercept survey approach,then distributed 600 questionnaires across theselected three campuses (200 per campus) to a convenience sample of students who, upon request, volunteered to complete the questionnaires.

### Research instrument

The survey questionnaire used to gather the required data included a cover letter describing the purpose of the study and providing a guarantee of the anonymity of the sample participants. This was followed by a section requesting demographic information and a section containing scaled-responseitems that were adapted from published studies. Perceived information value included the seven items of online consumer reviews "are a good source of product information', 'supply relevant productinformation', 'provide timely product information', 'are a good source of up-to-date product information', 'make product information immediately accessible', 'are a convenient source of product information' and 'supply complete product information'. Perceivedentertainment value consisted of the five items of online consumer reviews are "entertaining", "enjoyable", "pleasing", "fun to use" and "exciting". Perceived value was measured using the three items of online consumer reviews are "useful", "valuable" and "important". These three scales were adapted from the scales developed by Ducoffe (1996), who reported Cronbach alpha values of 0.82 for the information scale, 0.85 for the entertainment scale and 0.84 for the value scale.The perceived credibility of online reviews was measured using a scale developed by Ohanian (1990) and comprised five items, namely online consumer reviews are "dependable", "honest", "reliable", "sincere" and "trustworthy". In the original study, the Cronbach alpha values reported for this scale equated to 0.89 for both samples utilised.Usage frequency was measured using a scale developed by Park and Lee (2009), which included the three items of "I read online consumer reviews frequently", "I often search consumer reviews on the Internet" and "I refer to online consumer reviews whenever I need information on companies or goods".In the 2009 study, this scale returned a Cronbach alpha value of 0.93 for their Korean sample and 0.94 for their U.S. sample. A six-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (6) was used to measure responses to these 23 scaled items.

### Data analysis

IBM's Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Versions 25 were used to analyse the gathered data.In this study, data analysis comprised frequencies and percentages, descriptive statistics, a one-sample t-test and structural path analysis. The previously validated measurement model exhibited internal-consistency and composite reliability (CR),with Cronbach alpha and CR values all exceeding 0.70. In addition, there was construct validity, with all standardised loading estimates exceeding 0.50 and AVE values equalling 0.50 indicating convergent validity, and withthe square root of the AVE values for each of the five latent factors exceeding their respective correlation coefficients, indicating discriminant validity.Acceptable model fit was also evident (Bevan-Dye, 2019).The structural model specified in the current study is based on this validated model and utilised the same sample participants.

## RESULTS

From the 600 questionnaires distributed, 538 complete questionnaires were returned, which represents a 90 percent response rate. A description of the sample participants is summarised inTable 1.

**Table 1:** Sample description

| | Frequency | Percent (%) | | Frequency | Percent (%) |
|---|---|---|---|---|---|
| **Gender** | | | **Language** | | |
| Female | 251 | 46.7 | Afrikaans | 8 | 1.5 |
| Male | 280 | 52.0 | English | 126 | 23.4 |
| Missing | 7 | 1.3 | Ndebele | 16 | 3.0 |
| **Age** | | | Xhosa | 36 | 6.7 |
| 18 | 153 | 28.4 | Zulu | 97 | 18.0 |
| 19 | 165 | 30.7 | Northern Sotho | 67 | 12.5 |
| 20 | 86 | 16.0 | Southern Sotho | 56 | 10.4 |
| 21 | 67 | 12.5 | Tswana | 38 | 7.1 |
| 22 | 35 | 6.5 | Swati | 29 | 5.4 |
| 23 | 21 | 3.9 | Venda | 27 | 5.0 |
| 24 | 11 | 2.0 | Tsonga | 37 | 6.9 |
| **Province of origin** | | | Missing | 1 | 0.2 |
| Eastern Cape | 20 | 3.7 | **Institution** | | |
| Free State | 23 | 4.3 | Traditional | 181 | 33.6 |
| Gauteng | 288 | 53.5 | UoT | 170 | 31.6 |
| Kwazulu-Natal | 37 | 6.9 | Comprehensive | 187 | 34.8 |
| Limpopo | 92 | 17.1 | | | |
| Mpumalanga | 50 | 9.3 | | | |
| North West | 16 | 3.0 | | | |
| Northern Cape | 1 | 0.2 | | | |
| Western Cape | 7 | 1.3 | | | |
| Missing | 4 | 0.7 | | | |

According to the information presented in Table 1 and in line with the target population definition, the sample included both male (52%) and female (47%)participants from each of the seven age categories specified, spread relatively evenly across the traditional university (Traditional) (34%), university of technology (UoT) (32%) and comprehensive university (Comprehensive) (35%) campuses. In addition, there were representatives from each of South Africa's nine provinces and 11 official language groups.

Descriptive statistics, namely the means and standard deviations,together with a one sample t-test where the expected mean was set at 3.5, were computed in order to assess the extent to which Generation Y students perceive online consumer reviews as being informative, entertaining, credible and valuable, as well as their usage frequency of such reviews. The means, standard deviations, t-values and *p*-valuesfor the five latent factors are reported in Table 2.

**Table 2:** Descriptive statistics, t-values and p-values

| **Latent factors** | **Means** | **Standard deviations** | **t-values** | ***p*-values** |
|---|---|---|---|---|
| Perceived informativeness | 4.33 | .761 | 25.235 | .000 |
| Perceived entertainment | 4.17 | 1.083 | 14.285 | .000 |
| Perceived credibility | 3.61 | .957 | 2.531 | .012 |
| Perceived value | 4.47 | .892 | 25.236 | .000 |
| Usage frequency | 3.87 | 1.321 | 6.571 | .000 |
| Statistically significant at $p \leq 0.01$ | | | | |

The means of the responses recorded on the six-point Likert-type scale were all significantly ($p \leq 0.01$)above the expected mean of 3.5, thereby suggesting that Generation Y students perceive online consumer reviews favourably. The highest means were returned for value (mean = 4.47), informativeness (mean = 4.33) and entertainment (mean = 4.17), which infers that Generation Y students view online consumer reviews as important, useful and valuable, as a convenient and good source of relevant, timely and up-to-date information, and as pleasing and fun to use. Whilst still significantly ($p \leq 0.01$) in the agreement area of the scale, lower means were computed on usage frequency (mean = 3.87) and perceived credibility (mean = 3.61), which is somewhat surprising given the high mean recorded for perceived value.Marketers need to remain vigilant regarding the authenticity of theironline consumer reviews, as this will affect both Generation Y members' perceived value and usage frequency of such reviews.Moreover, the statistically significant means recorded on all of the latent factors emphasises the importance of marketers integrating online consumer reviews into their marketing communication strategy when targeting Generation Y consumers.

Based on the literature reviewed, a structuralmodel was specified to test the theorised paths that Generation Y students' perceived informativeness, entertainment and credibility of online consumer reviews have a direct positive influenceon their perceived value of such reviews, which, in turn, has a direct positive influence on their usage frequency of online consumer reviews. This structural model is illustrated in Figure 1.

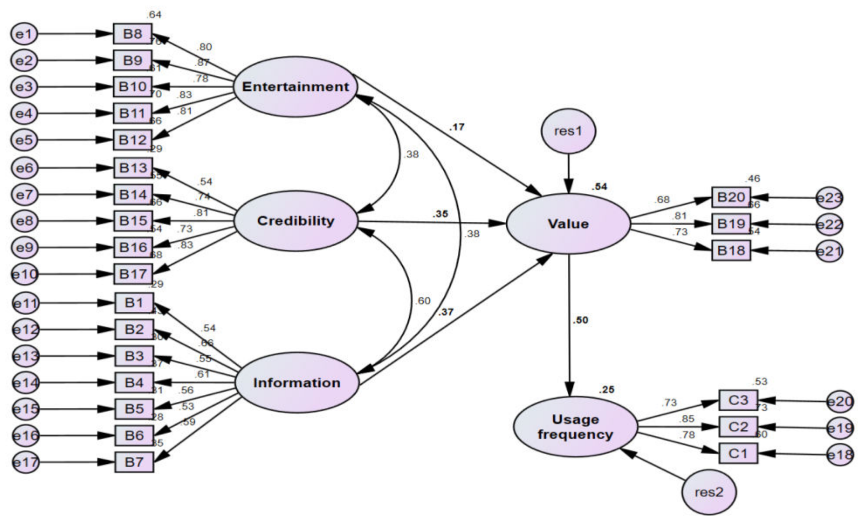


**Figure 1:** Structural model

With both the standardised root mean square residual (0.06) and the root mean square error of approximation (0.05) below 0.08 and the goodness-of-fit index (0.914), the incremental-fit index (0.937), the Tucker-Lewis index (0.928) above 0.90, the structural model in Figure 1 exhibited acceptable model fit (Malhotra, 2010). Table 3 contains 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 β** | **Standardisedβ** | **SE** | ***p*** |
|---|---|---|---|---|
| Perceived informativeness → Perceived value | .44 | .37 | .079 | 0.00 |
| Perceived entertainment → Perceived value | .11 | .17 | .031 | 0.00 |
| Perceived credibility → Perceived value | .40 | .35 | .071 | 0.00 |
| Perceived value → Usage frequency | .78 | .50 | .085 | 0.00 |

β: beta coefficient; SE: standardised error; *p*: two-tailed statistical significance

The estimates provided in Table 3 indicate that all of the regression paths tested were positive and statistically significant ($p \leq 0.01$). In terms of the standardised regression estimates, perceived informativeness (β = 0.37, $p< 0.01$), credibility (β = 0.35, $p< 0.01$) and, to a lesser extent, entertainment (β = 0.17, $p< 0.01$) are statistically significant predictors of Generation Y students' perceived value of online consumer reviews. With a squared multiple correlation coefficient (SMC) of 0.54, these three factors explain 54 percent of the variance in Generation Y students' perceived value of online consumer reviews. Perceived value (β = 0.50, $p< 0.01$), in turn, is a statistically significant predictor of Generation Y students' usage frequency of online consumer reviews and, together with its predictors, explains 25 percent of the variance in their usage frequency of such reviews.

## CONCLUSIONS

The results reported in this study infer that Generation Y students perceive online reviews to be informative, entertaining, credible and valuable, and that they frequently consult such reviews. Perceived informativeness, entertainment and credibility all had a statistically significant ($p \leq 0.01$) positive influence on the perceived value of such reviews, which, in turn, was a statistically significant positive predictor of the usage frequency of online consumer reviews. The strongest predictor of Generation Y students'perceived value of online consumer reviews was perceived informativeness, followed closely by perceived credibility and, to a much lesser degree, perceived entertainment. Despite the influence that perceived credibility has on Generation Y students' assessment of the value of online consumer reviews, the lower mean recorded on this factor suggests that they are not completely convinced that these reviews are always trustworthy and reliable.This finding suggests the importance of having filtering mechanisms to ensure that only authentic reviews are published and of not censoring negative reviews. The results also suggest the need to implement tactics to ensure that these reviews are informative. Possible tactics include providing a review template with sections for specific usage experience advantages and disadvantages, a word-limit count and a spell check application.

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# Exploring the influence of attitudes on collaborative consumer behaviour in the tourist sector

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**Abstract**

Collaborative economy ventures in tourism have increased in scope and scale in the last few years. Collaborative consumption implies a mindset change where shared use of products and services prevails and access to products substitutes their ownership (Kelly, 2009; Bostman y Rogers, 2010; Gansky, 2010; Bardhi y Eckhardt, 2012; Belk y Llamas, 2011; Schor y Fitsmaurice, 2015). The idea is that collaborative economy can contribute towards the generation of a more sustainable touristic paradigm creating new alternatives and permitting for new exchange relationships and systems to flourish between guests and hosts.

The notion of collaborative economy has become quite popular in the last few years (Botsman y Rogers, 2010; Belk, 2014b; Guttentag, 2015), although it remains a heterogeneous concept including for profit and non for profits projects and initiatives with diverse business orientations to create social, environmental and economic value (Schor, 2014; Belk, 2014a). For that reason, it is important to place more emphasis on the exchange relationship between the participating actors and differentiate among the platforms with a more commercial orientation versus those with a procommons attitude.

In fact, in recent years the volume of research about the positive and negative impact of the collaborative economy is burgeoning generating richer insights for academics and practitioners (Schor, 2014; Cheng, 2016). In theory, collaborative economy has been promoted to have a positive economic, social and environmental impact on the individual and on the society. However, much research emphasises the utility against other considerations when it comes to the intention to use sharing platforms. Barnes and Mattson (2017) have previously tested the Theory of Planned Behaviour in the car sharing context and have found that intentions to participate in a Danish car sharing platform are mainly utilitarian in line with previous studies about commercial car sharing platforms (Bardhi and Eckhardt 2012; Fraiberger and Sundararajan, 2015; Tussyadiah, 2015; Möhlmann, 2015; Hamari et al, 2016). Utility also appears to be significant in the sharing accommodation context and in concrete for the intention to repeat using Airbnb (Möhlmann, 2015). Similarly, utility emerges as a central construct in the use of platforms (Belk, 2010; Lamberton y Rose, 2012) especially in terms of financial savings (Luchs et al, 2011).

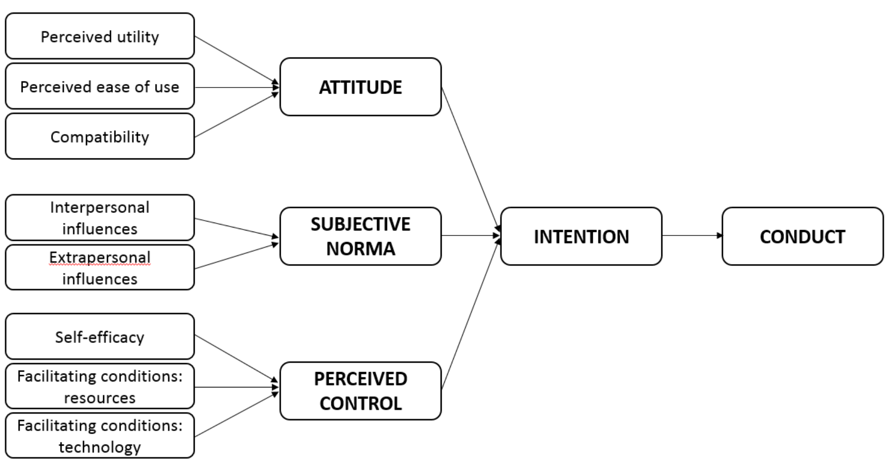
However, the type and orientation of the platform should be taken into account as it may relate to the particular motives behind the intention to participate. This can be largely related to the norms, exchange systems and values that guide the platform's functioning inviting for diverse profiles of users. With that in mind we have decided to carry out a comparison between two sharing accommodation platforms which have distinct orientations. The first platform is the widely known Airbnb and the second platform is Home Exchange. Airbnb is platform for holiday accommodations (marketplace) through which private homes are published and reserved. Its name comes from the acronym "airbed" and "breakfast". Its mission is to connect travelers from all over the world with people who want to rent their house, apartment, caravan, and even boat, through an economic transaction. However, Home Exchange is a social network or community and through its platform private homes are published and exchanged for holiday use through peer to peer agreements between owners, without this implying any kind of monetary change. Currently Home Exchange has a new platform resulting from the union of seven platforms of tourism accommodation (Hosteltur, 2019). The values of Home Exchange are focused on trust, honesty and hospitality. Its main mission is the exchange of homes in a simple, pleasant and safe way based on the principle of reciprocity and mutual collaboration.

By comparing two platforms with distinct orientations and exchange systems, we want to examine whether the type and the orientation of the platform accounts for differences to explain collaborative tourists' intention to participate in these sharing platforms. Furthermore, Geiger et al (2017) has previously discussed that there is a gap between platforms such as Airbnb and others that are not based on a commercial monetary exchange among peers. In spite of this gap, there are no studies that present a comparison among commercially oriented and socially oriented tourism accommodation platforms. It is timely to explore intentions to use each type of platform given the growth they experience. For instance, a report from the European Union estimates that most gross revenue from collaborative economy platforms comes from tourist sectors especially accommodation and transportation (EU Report, 2017).

Attitudes are a decisive factor of consumer behaviour that explains why individuals show a positive or negative intention towards the use of collaborative holiday accommodation (Ajzen, 1991). There is some research regarding attitudes in this field (e.g. Bray et al., 2011; Hamari et al., 2016; Mao y Lyu, 2017), but insights are still limited regarding what defines the intention to participate in these platforms.

This study is centered on exploring the relationship between beliefs, attitudes, intention and behaviour of the collaborative consumer in vacation accommodation. Given the central role of new technologies in the use of these platforms, we will use the Decomposed Theory of Planned Behaviour by Taylor y Todd (1995) as the more appropriate model to understand the motivational underpinnings and attitudes formed towards the use of the two platforms (figure 1). This theory was built on the Theory of Planned Behavior (TPB) by Schiften and Ajzen (1985), widely used in different academic fields to predict human intentions and behaviors. The TPB analyzes the dimensions of attitudes, subjective norms and perceived control, decomposing each dimension into specific sets of beliefs. A quantitative methodological design is employed using the survey data recollection method to users of Airbnb platforms, users of HomeExchange and non-users of holiday accommodation platforms. The objective is to gather data that would allow comparing the users' attitudes and intentions according to the orientation and type of each platform.

**Figure 1:**Decomposed Theory of Planned Behaviour




Source: Adaptation of Taylor and Todd (1995)

*Keywords: Decomposed Theory of Planned Behaviour, attitude, intention, Collaborative economy, tourism*

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# Understanding tourists' motivations, behavior and satisfaction in Agios Nikolaos, Crete

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**Abstract:**
In today's era where competition among existing or emerging tourism destinations is becoming more and more intense, understanding tourist's motivations and behavior is imperative to success. Without tourists there can be no tourism, so a deep understanding of their behaviour is essential for the effective management and promotion of tourist destinations (Horner & Swarbrooke, 2007). Understanding tourists and their behavior is becoming more and more important, but also difficult, as they become more and more demanding, constantly differentiating their motivations and preferences and exhibiting complex purchasing decisions. In brief, tourist is at the heart of any tourism business activity and his behavior has become a cornerstone of any marketing strategy and action. Choosing, buying, and consuming tourism products and services involves a range of psychosocial processes and a number of personal and environmental influences that researchers and managers should take into account (Kozak and Decrop, 2009).

The aim of this study is to investigate the characteristics, motivations, preferences and perceptions of tourists who visited Agios Nikolaos in Crete, Greece during the summer season of 2018, providing a better understanding of the main features of tourists' behavior and expectations from a summer tourism destination. Moreover, another purpose of the research was to examine their satisfaction regarding accommodation, food, attractions, accessibility, amenities, prices, public services and locals' behavior at the destination. Their future holiday intentions regarding Agios Nikolaos are also investigated. Agios Nikolaos is a small coastal town of 11,500 residents situated in the Eastern part of Crete and is the capital of the Lasithi Prefecture. Since 1960, Aghios Nikolaos has grown into a well established international and cosmopolitan summer resort that welcomes thousands of visitors every year. Its tourism development was based on the 3S model (sea, sun, sand) (Simantiraki, Skivalou and Trihas, 2016).

In order to meet the above objective, survey was conducted via personal interviews with a structured questionnaire in a sample of 217 tourists who visited Agios Nikolaos from May to September 2018. The results of the study revealed some interesting facts about the profile of tourists in Agios Nikolaos: the majority of them were first-time visitors, travelling with partners and staying in the destination for 8 to 14 days. The main motives that drove them to choose Agios Nikolaos for their holidays (pull factors) were the climate/beaches/nature of the area, following by culture/history and prices. Their main sources of information regarding the destination in the pre-trip phase were the internet, tour operators and the personal experience (repeated visitors). They used multiple means to move around in the destination, and visited a number of popular attractions both in the city and in the wider area. They were more satisfied with the nature/beaches, the climate, the accommodation, the safety, the food, and locals' behavior, and less satisfied with the road network, the entertainment choices, the accessibility and the means of transport. Finally, participants were quite positive when they were asked if they would visit again Agios Nikolaos in the future and recommend the destination to others. Some statistically significant effects of the demographic characteristics of the participants (gender, age, family status, education, income, nationality) were also identified in their answers.

Findings and discussion of this study are useful primarily to the destination managers of Agios Nikolaos in order to help them effectively market and promote their destination and to meet the specific needs of their visitors, and secondarily to DMOs of other mass tourism destinations with similar characteristics, to industry practitioners, and to academic researchers interested in tourist behavior.
*Keywords: tourist behavior, motivations, satisfaction, Crete*

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# Ignorance and Unconcern Restrain Pro-environmental Purchase

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## ABSTRACT

This paper presents the examination of the pro-environmental purchase behaviour (PPB) by Greek consumers during the years of the economic crisis.
It was found that the segment of the Greek consumers, who are more frequently than their counterparts engaged in PPB,has been substantially reduced since the pre-economic crisis years.The most frequently adopted modes of pro-environmental purchase are more probably influenced by financial than “genuine” environmental motives. Correlations indicated that negative attitudes towards the physical protection, namely Environmental Unconcern, inhibit somehow strongly PPB while objective consumers’ knowledge, namely Eco-literacy, is able to affect positively and moderately the engagement in PPB. Multiple Regression indicated that the interaction between Environmental Unconcern and Eco-literacy can explain 30% of the variance in Pro-environmental Purchase. Consumers of 35-54 years of age, holding a post-graduate degree, earning more than 30,000€ and being self-employed are those, who enhance PPB.
The results of this study implicate that business marketers should realize that, over time, fewer consumers will buy ecological products if these are not comparable enough to the conventional products in terms of price and efficacy. In high school environmental protection courses, educators in charge in collaboration with public policy makers should focus mostly on what inhibits pro-environmental change than just on what is theoretically supposed to motivate it.
*Keywords: Pro-environmental purchase behaviour, Environmental Unconcern, Eco-literacy, Clustering*

## INTRODUCTION

It has been oftentimes reported that environmental problems bring forward a constantly worsening ecological crisis (Peattie, 1995; McCarty and Shrum, 2001; Diamantopoulos et al., 2003; Jackson, 2005; Klöckner, 2013; Steg et al, 2014; Van Dam and Fischer, 2015; Nuttavuthisit and Thøgersen, 2017). In recent human history, the natural environment has been used just as an inadvertent provider of raw material by the big oligopolistic businesses. Sustained concerted, interdisciplinary efforts are clearly needed at multinational levels (Barr and Gilg, 2007; Peattie, 2010). Among other suggestions many scholars (Kalafatis et al., 1999; Laroche et al., 2001; Peattie, 2010) postulate that understanding how citizens make decisions regarding households’ consumption is crucial to address global environmental challenges. According to Klöckner (2013), a shift to consumers' pro-environmental behaviours can make a significant contribution to environmental protection.

Ecologically related research has not been in the mainstreamof the marketing academic community over the course of the decades (Kinnear et al. 1974;Schlegelmilch et al., 1996; Peattie and Crane,2006). On the other hand, there has always been a small but dynamic team of scholars, who have paid attention to the ecologically related marketing research during the last four decades (see, among others: Fisk, 1973; Henion and Kinnear, 1976;Antil, 1984; Balderjahn, 1988; Prothero, 1990; Peattie, 1995; Roberts, 1996; Kilbourne and Beckmann, 1998; Laroche et al., 2001; Diamantopoulos et al., 2003; Cleveland et al., 2005;Jackson, 2005, Lee, 2008; Tilikidou, 2013; Pagiaslis and Krystallis, 2014).

In a plethora of consumer behaviour models, the impacts of demographics, situational factors, attitudes and a variety of psychographic variables on pro-environmental behaviours were investigated(Larocheet al., 2001;Gilg et al., 2005; Peattie, 2010; Kirmani and Kahn, 2016).The demographic profile of pro-environmental purchasers varies from country to country(Diamantopoulos et al., 2003, Gilg et al., 2005), a gap between attitudes and behaviours has been many times indicated (Hines et al., 1987; Cowe and Williams, 2000; Bamberg and Möser, 2007; Carrington et al., 2010; Goh and Balajai, 2016; Kirmani and Kahn, 2016),while a variety of individual differences areindicated to have rather weak linkages to behaviours over time(Thørgesen, 2006; Gilg et al., 2005; Papaoikonomou et al., 2011).In comparison to other factors, the potential role of environmental knowledge in pro-environmental behaviours has been certainly neglected by marketing research over time (Kirmani and Kahn, 2016), although it has been suggested as a person's characteristic that influences all phases in consumers' decision making process (Maloney and Ward, 1973; Synodinos, 1990; Larocheet al., 2001; Pagiaslis and Krystallis, 2014; Maniatis, 2016).

In Greece, the ecological marketing research was introduced in middle 1990s, ratherlate in comparison to other EU countries (Tilikidou and Zotos,1999).The relevant research remained rather scant in the following years (Fotopoulos and Krystallis, 2002; Tilikidou and Delistavrou, 2001; 2005; 2008; 2014;Pagiaslis and Krystallis, 2014; Michail, et al., 2007; Abeliotis et al., 2010). Focusing on pro-environmental purchasing, it might be said, in overall, that better educated, more concerned or less indifferent towards environmental issues, also less materialists, more politically confident consumers, are those who have been more frequently engaged in pro-environmental behaviours, over time (Tilikidou, 2013).

It is to be noted that during 2009-2010 a serious economic crisis burst out in the country and everything started to change. The relevant changes in the Greek economy and society, beyond everything else, bring forward are search challenge to understand the impact of these new conditions on Greeks' pro-environmental behaviours. The challenge has always been to reach an efficient balance between consumers' preferences and business offerings (Peattie and Charter, 2003; Young et al., 2010, Maniatis, 2016). Hence, it was considered that pro-environmental purchasing behaviour should be revisited with three aims in mind:

- First, to examine the extent to which Greek consumers adopt pro-environmental purchase behaviour; moreover, reveal the impact of economic crisis and the changes (if any) that were imposed on this type of consumer behaviour over time
- Second, to segment Greek consumers based on pro-environmental purchase and develop the profile of the identified segments
- Third, to reveal drivers and barriers of pro-environmental choices, to focus on the interplay between consumers' (negative) environmental attitudes towards environment and consumers' objective knowledge and the consequent impact on behaviour.

In the following section, we review the relevant body of literature in terms of consumers' engagement in pro-environmental purchase behaviour as well as in term of the antecedents of the behaviour.

## LITERATURE REVIEW

### Pro-environmental Purchase

Although green consumption is a term that has come to mean all things to all people(Gilg et al 2005), pro-environmental purchase has been customarily understood as a broad area that includes purchasing products and services that are considered environmentally friendly and avoiding products that are considered environmentally harmful (Peattie,1995;Gilg et al., 2005;Peattie, 2010).

Review of the relevant literature indicated that early research (e.g. Kinnear et al.,1974; Webster, 1975) focused mainly on conservation of energy and water. Later on, consumption choices were incorporated (Antil, 1984; Balderjahn, 1988) while even later the agenda was lengthened as more eco-friendly products appeared in the marketplaces (Schlegelmilch et al., 1996; Roberts and Bacon, 1997; Laroche et al., 2001; Maniatis, 2016).

There have been claims that many organizations are recently adopting ecological marketing initiatives in both production and delivery of green products in various sectors including food and agriculture, construction, energy, automobiles, consumer durables, hospitality, tourism, home improvement, and so on (Goh and Balaji, 2016).It is to be noted, though, that the green market remains limited, worldwide. Limited consumer response implies that there are many obstacles that inhibit the actual market growth.

With reference to Greece, pro-environmental purchase was lately examined at a crucial point in time, coinciding with the pick of economic crisis in the country (Tilikidou and Delistavrou, 2014). The study found that the segment of frequent purchasers (18.08%) was certainly smaller than it was in a similar study 10 years earlier

(24.10%; in Tilikidou and Delistavrou, 2005). On the contrary, the size (41.65%) of the segment of consumers who almost never act pro-environmentally was found definitely larger (41.65% vs. 34.14% respectively).

**Demographics**

Avariety of demographics have been employed in order toprofilethe pro-environmental purchasers. Previous results indicated that educationlevelhas been found to be a positive predictor of pro-environmental purchase (Balderjahn,1988; Arcury, 1990; Scott andWillits, 1994; Roberts, 1996; Fotopoulos and Krystallis, 2002; Tilikidouand Delistavrou, 2005; Gilg et al., 2005; Barbarossa and De Pelsmacker, 2016). Almost all other demographic characteristics, though, haveprovided contradictory results (Diamantopoulos et al., 2003).

**Attitudes**

Positive relationships, usually moderate, have been reported between pro-environmental attitudes and purchasing behaviour (Antil, 1984; Balderjahn, 1988; Schlegelmilch et al., 1996; Roberts, 1996; Tilikidou, 2001; Fotopoulos and Krystallis,2002; Mostafa, 2006; Lee, 2008; Newton et al., 2015). In pro-environmental research, it is expected to estimate high levelsof concern and agreement to the necessity of environmental protection due to social desirability (ThøgersenandÖlander, 2003). However, when behaviour is examined, the relevant results are never encouraging. This phenomenon has been named the "attitude-behaviour" gap (Krystallis et al., 2012) or the "30:3 syndrome" by Cowe and Williams (2000), who argued that although most surveys reveal that around 30% of the population is particularly motivated to buy ethical products, these products make up only fewer than 3% of their individual markets.

Moreover, it was observed that most of the scales used to measure attitudes, so far, were designed to estimate "positive" pro-environmental concern scores (e.g. Bohlenet al., 1993; Tilikidou, 2001). A meta-analysis of the determinants ofpro-environmental behavioursbyBamberg and Möser (2007) indicated similar findings tothose reported by Hines et al. (1987), who had found that the correlations between "positive" attitudes and behaviour did not exceed a Pearson's r of 0.35.Kirmani and Kahn (2016), in a review paperpointed towards positive relationships of pro-environmental behaviours with several relevant attitudinal constructs but they did not report any evidence as to the strength of these relationships. However, it has been previously suggested that the examination of "negative" attitudes may be very efficient in capturing more sincere beliefsthat express indifference, disinterest, and recklessness about environmental issues (Tilikidou and Delistavrou, 2005; 2014).

**Environmental Knowledge**

The absence of knowledge in most of the relevant research efforts so far has left some issues pending, such as how much consumers actually know (objective knowledge) versus how much they think they know (subjective knowledge) about environmental problems and how this knowledge reflects on their behaviour (Laroche et al., 2001; Pagiaslis and Krystallis, 2014). Despite arguments about the difficulty of capturing a statistically significant relationship between knowledge and behaviour, there are scholars, who proclaim that low consumer compliance with ecological behaviours results from lack of knowledge (Schultz, 2002) as knowledge plays a key role to both formation of pro-environmental attitudes and related behaviour (Mostafa, 2006; Bamberg and Möser, 2007; Suki, 2013).

Maniatis (2016) examined several types of subjective knowledge and commented that there is a complex interaction of consciousness, knowledge, and commitment in the minds of consumers. Subjective knowledge had also been examined by Schlegelmilch et al. (1996) and Diamantopoulos et al. (2003), among others, who postulated that measuring self-perceived knowledge might not provide an accurate indication of "true" environmental knowledge. Hence, it has been suggested that the explanatory power of objective knowledge could be higher. Objective knowledge has been examined by Maloney and Ward (1973), Arbuthnot and Lingg (1975), Synodinos (1990), Tilikidou (2001 and 2007) and Michail et al. (2007). Laroche et al. (1996) developed the Eco-literacy Scale to measure the respondents' ability to identify or define a small but crucial number of ecologically related symbols, concepts or behaviours. Eco-literacy was found to correlate significantly with pro-environmental attitudes and behaviours (Laroche et al., 2001; Cheah and Phau,2011;Eze and Ndubisi, 2013).At any case, Peattie (2010) insisted that the inconsistency in findings about the importance of knowledge has yet to be fully explored or explained by further research.

# METHODOLOGY

## Sampling

A survey was conducted among the households of the Municipality of Thessaloniki, Greece, during November 2016. Respondents were approached through personal interviews conducted by senior marketing students, coordinated and supervised by their professor. The sampling method was a combination of one-stage area sampling and systematic sampling methods (Zikmund, 1991, p. 471; Tull and Hawkins, 1993, p. 544). A structured questionnaire was administered to one adult person of each of 360 households and provided 349 usable questionnaires.

## Variables measurement

The main dependent behavioural construct of this survey was Pro-environmental Purchase (PP) which was adopted by (Tilikidou and Delistavrou, 2014). PP is multi-dimensional, operationalized through a battery of 22 items measured on a five-point scale with end-points1= "never"and5= "always".

With regards to attitudes, it was decided to corroborate previously made suggestions that negative attitudes maybe a stronger predictor of behaviour; thus, the Environmental Unconcern scale (EU; Tilikidou and Delistavrou, 2005) was adopted. The scale contains 18 items and was measured on a 5-point Likert scale with end-points 1= "Absolutely Disagree" and 5= "Absolutely Agree". EU includes negatively phrased attitudes that express consumers' underestimation of environmental problems and environmental protection.

With regards to environmental knowledge, it was decided to adopt the Eco-literacy scale (EL; Laroche, 1996; 2001) that consists of 7 binary items (0= "Wrong", 1= "Right").

The exact phrasing of the items used in the questionnaire per scale can be seen in the Tables supplementing the following sections.

Lastly,socio-demographics were measured using the H.S.A. scales.

# RESULTS and ANALYSIS

With regards to demographics $\chi^2$ did not indicate any statistically significant differences between the sample characteristics and the population parameters.

PP scores ranged between 22 and 110 (Mean score 44.15),indicating that consumers got engaged in pro-environmental purchases "a few times".EU scores ranged between 18 and 90 (Mean score 48.23), indicating that consumers generally "disagree" with environmental unconcern, which can be considered as a tendency to positive attitudes. Both PP and EU provided exemplary levels of reliability (Cronbach's alpha values 0.943 and 0.858 respectively). EL showed a Mean score of 3.88, indicating a moderate-to-high level of environmental knowledge.

One–way ANOVAs indicated statistically significant relationships between PP and age, education, income and occupation. Higher Means were obtained by consumers of 35-54 years of age, holding a post-graduate degree, earning more than 30,000€ and being self-employed. Pearson's parametric correlation indicated a moderately negative relationship ($r=-0.524$, $p<0.001$)between PP and EU. In addition, bi-variate Spearman's non-parametric correlation indicated a moderately positive ($r=0.361$, $p<0.001$) relationship between PP and ELand a rather weak, negative relationship between EU and EL ($r=-0.251$, $p<0.001$). Multiple regression indicated that the interaction between Environmental Unconcern and Eco-literacy can explain 30% (adjusted $R^2=0.300$) of the variance in Pro-environmental Purchase. The resulting equation is:

PP = 77.323 – 0.462 Environmental Unconcern + 0.183 Eco-literacy.

## Clustering Pro-environmental Purchase

In an effort to obtain more detailed information with reference to the pro-environmental purchasers' segmentation in the Greek market, the K-Means cluster analysis (Ward and Euclidean distance) was utilized; this technique classifies cases into relatively homogeneous groups, indicating distinct for each group degree of involvement in the behaviour under examination (Malhotra, 1999, p. 610).The most interpretable scenario indicated the existence of 3 clusters. This approach enabled us to identify one small segment of consumers (Cluster 2, 11% of the sample), who got engaged in various types of pro-environmental purchasing behaviour more frequently on average compared to the rest of the sample. On the contrary, an additional large segment (Cluster 3, 56% of the sample) emerged comprising consumers exhibiting (very) low engagement (see cluster centres); lastly, the rest of the sample (Cluster 1, 33%) showed an average engagement in the pro-environmental behaviours under study".

**DISCUSSION**

Results indicate that the size of Cluster 2 (engaged purchasers) in this study (11%) is certainly lower than in previous measurements in the same geographical area (Tilikidou and Delistavrou, 2005; 2014),that indicated 24% and 18% respectively. Also, the size (56%) of Cluster 3 (consumers who almost never act pro-environmentally) is definitely larger than the relevant segment reported in the past (34% and 41% respectively,Tilikidou and Delistavrou, 2005 and 2014).

Cluster centres (Table 1) indicate that the less frequently adopted behaviours are those that concern purchases of environmentally friendly detergents (PP07), clothing (PP15) and toiletry (PP16). On the other hand, choices, in which consumers got engaged many times are those that concern recyclable packaging (PP17) purchasing of environmentally friendly electric equipment (PP26), energy saving bulbs (PP24), reusable containers (PP18) and choice of the environmentally friendly alternative of a product, if there is no significant price difference (PP01).

**Table 1:** K-Means Cluster Analysis

| | | Cluster centres | | |
|---|---|---|---|---|
| | | **Cluster 1** 115 cases (32.95%) Average | **Cluster 2** 40 cases (11.46%) Higher | **Cluster 3** 194 cases (55.59%) Low |
| PP01 | I choose the environmentally friendly alternative of a product. if there is no significant price difference | 3.17 | 4.30 | 1.61 |
| PP02 | I choose the environmentally friendly alternative of a product. if there is one. regardless of price | 1.97 | 3.70 | 1.19 |
| PP03 | I am interested in asking about the environmental consequences of a product before buying it | 2.83 | 3.78 | 1.57 |
| PP04 | I try to find eco-label products | 2.43 | 3.98 | 1.48 |
| PP05 | I prefer to buy organic fruits and vegetables | 2.58 | 3.65 | 1.72 |
| PP06 | I prefer environmentally friendly detergents. even if they are more expensive | 1.66 | 3.03 | 1.09 |
| PP07 | I prefer to buy environmentally friendly detergents. even if they are not equally effective | 1.34 | 2.30 | 1.07 |
| PP08 | I would change my usual detergent brand for another. if I knew for sure that it is more friendly to the environment | 2.04 | 3.65 | 1.23 |
| PP09 | I prefer to buy recycled paper stationary | 2.24 | 4.03 | 1.26 |
| PP10 | I prefer recycled toilet paper. tissues | 2.06 | 3.65 | 1.11 |
| PP11 | I choose the recycled paper products. although they are not as white | 2.16 | 3.75 | 1.20 |
| PP12 | I prefer the recycled paper products. even if they are more expensive | 1.63 | 3.50 | 1.05 |
| PP13 | I prefer organic wine | 2.05 | 3.75 | 1.24 |
| PP14 | I prefer organic pasta | 2.02 | 3.38 | 1.23 |
| PP15 | I prefer organic clothing | 1.81 | 2.70 | 1.06 |
| PP16 | I buy ecological toiletry | 2.30 | 2.85 | 1.39 |
| PP17 | I buy products in recyclable packages | 3.63 | 4.43 | 1.70 |
| PP18 | I buy products in reusable containers | 3.51 | 4.33 | 1.78 |
| PP21 | I carry my own bags so that I don't get plastic bags from the supermarket | 1.92 | 2.50 | 1.38 |
| PP24 | I prefer energy saving bulbs (halogen. fluorine) | 3.90 | 4.35 | 3.12 |
| PP26 | In case I am about to buy electric equipment I am interested in ascertaining it is environmental friendly | 3.19 | 4.40 | 1.63 |
| PP27 | I avoid using disposable products | 2.84 | 3.18 | 1.42 |

These results indicate that Greek consumers are more frequently engaged in rather conservative behaviours, which are most probably driven by financial motives, too. They are more likely to make an environmentally friendly choice when they do not have to pay for it. These results, in a sense, verify previous arguments that even during economic proliferation, even in affluent societies, consumers strongly and constantly prioritise direct, self-relevant benefits in an environmentally friendly choice (Schlegelmilch et al., 1996; Tilikidou, 2001; Thørgersen, 2011; Maniatis, 2016). This conclusion is reflected on both the downturn inthe size of the frequent pro-environmental consumer segment, as well as in specific consumer preferences.

With regards to the antecedents of pro-environmental consumption, the choice to examine negative attitudes towards environmental issues appeared plausible, as it intensified the correlation between attitudes and behaviour to an impressive r>0.50 than the usual 0.35(see: Hines et al.,1987; Bamberg and Möser, 2007).What was added to our knowledge is a set of attitudes that actually inhibit pro-environmental choices (Table 2),such as those regarding the high prices of eco-products (EU15) or the low rank of environmental protection among the common, everyday issues in the consumers' mind (i.e. EU01, EU02, EU6, EU10).

Results referring to the Eco-literacy Scale indicated a moderate effect on pro-environmental purchase,in line with previous results by Cheah and Phau (2011) in Australia, and Eze and Ndubisi (2013) in Malasia, Tilikidou and Delistavrou (2006) in Greece. It is to be noted that Greeks were found fully aware of the recycling symbol and bins (EL01, EL02). On the other hand, they hold a rather low level of knowledge with regards to the percentage of waste material in a household that can be recycled (EL06) and the strongest atmosphere pollutant (EL03).

## CONCLUSIONS and IMPLICATIONS

This study indicates that Greek consumers do not get frequently engaged in pro-environmental purchase, in general. The segment of engaged pro-environmental purchasers was found to be substantially reduced since the pre-economic crisis years, while the most frequently adopted modes of pro-environmental purchase are more probably influenced by financial than "genuine" environmental motives.

Correlations indicated that negative attitudes towards the physical protection, namely Environmental Unconcern, inhibit somehow strongly PPB while objective consumers' knowledge, namely Eco-literacy, is able to affect positively and moderately the engagement in PPB. Multiple Regression indicated that the interaction between Environmental Unconcern Eco-literacy can explain 30% of the variance in Pro-environmental Purchase. Consumers of 35-54 years of age, holding a post-graduate degree, earning more than 30,000€ and being self-employed are those, who enhance PPB.

**Table 2:** Environmental Unconcern

| | | Mean | Std. Deviation |
|---|---|---|---|
| EU01 | To be honest I don't feel that environmental problems affect my personal, everyday life | 2.95 | 1.192 |
| EU02 | There are other problems that bother me more than environmental destruction does | 3.31 | 1.130 |
| EU03 | Personally, I am not ready to pay from my pocket to protect the environment | 3.00 | 1.037 |
| EU04 | My personal responsibility is to leave to my children belongings, not a clean environment | 2.05 | 0.902 |
| EU05 | Governments and international organisations, not me, should take the necessary measures to protect the environment | 2.38 | 1.053 |
| EU06 | I have never been seriously concerned about issues such as ground water and sea pollution | 2.74 | 1.128 |
| EU07 | I don't believe that the environment would be protected if we used less water, electricity and oil | 2.11 | 0.899 |
| EU08 | I don't think that I have anything to do with the destruction of animals or plants | 2.45 | 0.995 |
| EU09 | The environmental policies of the main political parties is not the main issue I consider when deciding how to vote | 3.58 | 1.044 |
| EU10 | I do not think we should sacrifice economic development just to protect the environment | 2.93 | 1.125 |
| EU11 | More money to the environmental protection means less money for jobs | 2.51 | 0.829 |
| EU12 | It is not consumption to be blamed for the environmental destruction | 2.21 | 0.846 |
| EU13 | The benefits of modern consumer products are more important than the pollution which results from their production and use | 2.62 | 0.974 |
| EU14 | It is hard to find ecological products | 2.57 | 0.952 |
| EU15 | I believe ecological products are more expensive | 3.62 | 0.868 |

| | | | |
|---|---|---|---|
| EU16 | Most ecological products are less beautiful | 2.81 | 1.018 |
| EU17 | Most ecological products are of lower quality | 2.12 | 0.859 |
| EU18 | I think that the so called ecological products is another advertisement trick | 2.26 | 0.864 |

**Table 3:** Eco-literacy

| | | Right Answers | % |
|---|---|---|---|
| EL01 | Can you please tell us what this symbol means to you?  | 341 | 97.7 |
| EL02 | Can you explain what the blue bin is for? | 253 | 72.5 |
| EL03 | To the best of your knowledge, what is the single most important source of air pollution on this planet?<br>1= Cigarette smoke 2= Automobiles 3= Heavy industry 4= Power Stations 5= Don't know | 104 | 29.8 |
| EL04 | What does the term "greenhouse effect" mean to you? | 210 | 60.2 |
| EL05 | One sometimes hears or reads about "greenhouse gases". Please name a "greenhouse gas". | 152 | 43.6 |
| EL06 | Taking all things that can be thought of as garbage in a household, what percentage of that garbage would you say can be recycled or composted? (Circle one answer only)<br>*1=10% 2=30% 3=50% 4=70% 5=90% 6=Don't know* | 87 | 24.9 |
| EL07 | Under most recycling programs, which of these items cannot be recycled? (Circle one answer only)<br>1= Metal food cans 2= All plastic containers 3= Light bulbs<br>4= Magazines, catalogues, and books 5= Newspapers | 208 | 59.6 |

Business marketers should realize that, over time, fewer consumers will buy ecological products if these are not comparable enough to the conventional products in terms of price and efficacy. With regard to public policy, it has to be noted that millions are spent every year on environmental education programmes funded by national and European authorities. In high school environmental protection courses, educators in charge in collaboration with public policy makers should focus mostly on what inhibits pro-environmental change than just on what is theoretically supposed to motivate it. In pro-environmental messages emphasis should be placed upon what is the right thing to do or avoid in our every-day consumption activities not just for the benefit of a somehow unclear-unknown environmental deterioration but for the sake of our own and our children's lives.

## LIMITATIONS and FURTHER RESEARCH SUGGESTIONS

Generalization of results to the whole Greek population is risky as this study has been conducted in the limited area of Thessaloniki. Also, a social desirability effect must always be taken into account in self-reported surveys, especially in topics related to social welfare.

Future research is needed in order to expand our knowledge with regards to evolutions in the other types of the ecologically conscious consumer behaviour (ECCB) during the years of the economic crisis. Pro-environmental post-purchasing or non-purchasing behaviours should be accordingly examined. There are many other, potentially influential, individual characteristics that might be added to the investigation, while demographics of pro-environmental purchasers need to be further revealed. More importantly, integrated consumer behaviour models should be put under investigation if we aim to understand in more depth the factors that are able to drive pro-environmental behavioural changes.

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# The impact of green agricultural product packaging features on consumers' reactions and buying behaviors: An eye-tracking exploratory study

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**Abstract**
Consumers of green products have emerged as a crucial market in the sense that many consumers are willing to pay more for a green product compared to a conventional one. Packaging can be considered as an advantageous feature of a product that may convince consumers to proceed to a purchase. The purpose of the present study is to investigate how packaging features (eco-labels, image, shape, color) of organic agricultural products affect consumers' eye reactions and as a result impact on consumers' attitudes and buying behaviors.

**Introduction**
Green marketing is an important field of academic research for at least three decades (Peattie, 1995; Polonsky and Mintu-Wimsatt, 1995;Schlegelmilch et al., 1996; Fuller, 1999; Kalafatis et al., 2005;Devi Juwaheer et al., 2012). Welford (2000) describes green marketing as the administrative process that recognizes, anticipates and satisfies the needs and desires of consumers in a profitable and environmentally sustainable way. A significant number of researchers study environmental issues that are part of the diverse stages of the production process (Mintel, 2006). In this vein, green marketing involves various processes such as product modification, product packaging, or advertising campaigns (Polonsky, 2008).
Consumers of green products have become a crucial market for the business sector given that ethical consumers constitute a new global economy (Papadopoulos et al., 2010). Many consumers are willing to pay for a green product at a higher price compared to a similar conventional one (Veisten, 2007). The Grand View Research (2018) estimates that the global green packaging market size is going to reach USD 237.8 billion by 2022. Therefore, businesses should continually seek new solutions to the environmental challenges that arise through marketing strategies with ultimate purposeto develop environmentally friendly products, recyclable and biodegradable packaging, and ways to reduce pollution caused by their operational processes (Kotler and Armstrong, 1995).
Packaging is one of the main features that givescompetitive advantage to a product, and it is argued that a small investment to change packaging can lead to significant product profits compared to an advertising campaign or promotional strategy (Barber, 2010). The color of packaging is the most widely discussed feature that has been studied intensively by the marketing researchers (Imram, 1999) while the size and the shape of the package (Silayoi and Speece, 2007) as well as the images displayed on a package (Tan et al., 2006) are equally of importance. In this vein, one of the features that can be displayed in the packaging of green products is eco-labels. The eco-labels indicate the overall environmental approach and strategy followed by the companies (Giridhar, 1998).
The purpose of the present study is to investigate how packaging features (eco-labels, image, shape, color) of organic agricultural products affect consumers' eye reactions and as a result impact on consumers' attitudes and buying behaviors. Initially an eye tracking experiment has been conducted where 70 participants took part. After that, a secondary qualitative study took place with the form of semi-structured interviews, in order to deeply understand consumers' reactions, and buying behaviors. As a result, the current conference paper contributes to the ongoing discussion about packaging features on green marketing.

**Literature Review on Eco-Labels**

Product packaging enables businesses to communicate with consumers at retailingstores (Rettie and Brewer, 2000, Silayoi and Speece, 2007; Simms and Trott, 2010) as well as during product use and consumption (Underwood, 2003).

There are several categories of eco-labels, including mandatory and voluntary ones. An example of mandatory ecolabelling is the European energy eco-label demonstrating the energy consumption of electrical appliances with a scale from A to F where A means minimum energy consumption and F maximum (Rubik and Frankl, 2005). Voluntary eco-labels are categorized according to ISO certification into 3 types, Type I, Type II, and Type III. Type I is the one to which the eco-labeltermis mostly referred to and involves the product evaluation by third party environmental organization. Type II refers to self-declaration informationby the company itself, about the environmentally-friendly product characteristics (e.g. simple reference that the packaging is biodegradable). Finally, Type III refers to voluntary programs in which the company participates and provides quantified environmental product data (Global Ecolabelling Network, 2017). The present study deals with voluntary eco-labels.

Eco-labels can impact consumer purchasing decisions (Thorgersen 2002, Rashid, 2009). In particular, eco-labels can be used ideally to communicate the specific features and benefits of the green products (D'Souza et al., 2006).

However, a thread of research in marketing supports that consumers often feel confused about the various "green" terms used in eco-labels (Robertson and Marshall, 1987; Muller, 1985; West, 1995;Casewell and Modjuszka1996;Wessells et al., 1999;Thorgersen 2000). For this reason, green products must be communicated in a simple and easy to understand manner, so as consumer can comprehend all the benefits of using this type of products (Pickett-Baker and Ozaki, 2008). Otherwise, green products will hardly be commercially successful (Pickett et al., 1995; Cherian and Jacob, 2012).

**Research Hypotheses and Questions**

*Eco Labels*

A thread of research in green marketing contends that there are specific groups of consumers that are willing to pay a higher price for green productscompared to conventional ones (Wustenhagen, 1998, Vlosky et al., 1999, Veisten, 2007). Eco-labels are an important factor that influences consumer purchasing decisions (Thorgersen 2002; Rashid, 2009). Whitson and Henry (1996) examined the impact of eco-labels on consumers purchase decisions by conducting a market segmentation and they found that there is a group of people sensitive to the price of the product. On the other hand, Whitson, Ozkaya and Roxas (2014) concluded that some consumers are willing to pay at a higher price an eco-labeled product compared to a conventional one. Likewise, there would be at least a portion of consumers who are willing to buy products with ecological features at a higher price (Ozzane and Vlosky, 1997). However, Sedjo and Swallow (1999) support that the existence of an eco-label in a product, does not guarantee that consumers are willing to pay for it on a higher price.

Considering the characteristics of consumers who are willing to buy eco-labeled green products, demographic factors are of crucial significance (Moon et al., 2002). In particular, the intention to buy such a product differs according to age, where younger consumers are willing to pay more for green eco-labeled products, as opposed to older ages. Similarly, women and university graduates have positive attitude towards eco-labeled products (Grankvist, Dahlstrand and Biel, 2004). Considering all of the above, we set the following research questions:

**RQ1:** *Do eco labels draw consumers' attention on packages of organic agricultural products?*

**RQ2:***Do consumers take into consideration eco-labels in their buying decisions?*

**RQ3:** *Are consumers aware of eco-labels on product packages?*

**RQ4:** *Are consumerswilling to buy an eco-labeled product in a higher price compared to a conventional one?*

*Product Image*

Considering the effectiveness of image on product packaging,Piqueras-Fiszman et al. (2013) conducted eye-tracking experiments and concluded to the results that the images in jam jars,illustrating the type of product,drew more attention compared to textual information.Packaging traits that are more attractive to consumers' eyes, remain in consumers' minds and ultimately are considered as these features that are identified with the product itself (Guerrero et al., 2000). Moreover, nature-related images raise positive feelings for consumers (Frumkin, 2003), while at the same time lead to favorable attitude towards the product (Park et al., 1986). In this vein, product images appeared in packages, influence positively consumers to test the product as well as impact on a positive manner on consumers' purchase intention (Simmons, Martin, and Barsalou, 2005). Taking into consideration all the above, we formulate the following hypothesis:

**H1:***Product images on packages of organic agricultural productswill draw more attention compared to textual information.*

*Packaging Color*

Packaging color is considered as one of the most significant features that affect product's sales (Singh, 2006). In the marketing literature, packaging is the most widely discussed characteristic of packaging studies (Imram, 1999).

Blue is the color that stimulates to a greater extent the sympathetic nervous system of humans compared to the red color while at the same time blue color is related to calmness and relaxation(Kido, 2000). In the same vein, research supports that blue is considered as a happy color while red as a sad one (Cimbalo et al., 1978).

Furthermore, color is related to culture. Wiegersma and Van der Elst (1988) conducted a cross-cultural study and they found that blue is the most preferable color collectively across different cultures. Greece is a country that is identified with the blue color, because of the endless sea and clear sky. Moreover, considering that organic farming products can be associated with a simple and calm lifestyle where the factor of harmony with the natural environment plays a decisive role, we come to the following hypothesis:

**H2:***Packages of organic agricultural products which are characterized by blue color will be more preferred by consumers compared tored color packages.*

*Packaging shape*

Considering the shape of packaging, there is a general tendency for preference to rounded objects (Bar and Neta, 2006, 2007; Leder, Tinio and Bar, 2011). A study about consumer preferences between rounded or angled car interior design concluded that consumers prefer rounded shapes (Leder and Carbon, 2005). In the same vein, rounded design is the most preferred pattern for exterior car design, too (Carbon, 2010).

As regards to the food and beverage industry, studies contend that rounded packaging shape is preferred more in chocolate packs and water bottles (Westerman et al., 2012). Finally, a preference for rounded motifs in water and vodka packaging is highlighted by the study ofWesterman et al. (2013). In particular, these motifs show higher market chances, are more attractive, more enjoyable and less disturbing to consumers. Considering the above we assume that:

**H3a:***Roundedpackages of organic agricultural products will be more preferred by consumers compared to angled packages.*

**H3b:***Rounded packages of organic agricultural products influence more positively the intention to purchase the product compared to angled packages.*

## Materials and Methods

### Eye tracking

Eye tracking is a human-computer interaction mechanism to analyze subjects' eye movement when looking at an advertisement (Duchowski, 2007). Although this method is widely used in research laboratories, some universities also employ it to analyse human visual and attention processes regarding texts, images and general content (i.e. online games) (Duchowski, 2007).

A very recent study by Horsley *et al.* (2014) agitates the basis of eye tracking research and research methodologies becoming progressively more widespread in many disciplines.

Eye tracking helps advertisers and marketers understand the consumers' internal processes and then tailor the information to change some aspects of the advertisement in order to be effective (Duchowski, 2007).

In this study we will concentrate on the Area of Interest (AOI) analysis which is the most common investigation in social and marketing applications (Horsley *et al.,* 2014). AOI analysis involves the use of eye-tracking software to discover fixation time, frequency and return among the diverse items or parts. AOI analyses are ever more used to examine the differences between ranges of groups (Horsley *et al.,* 2014). Our study intends to address whether there are significant differences between diverse attributes of package design, such as shape, color, the existence of eco-labels, the existence of images on the package, and text related to bio attributes.

### Methodology

Marketing researchers widely employ either quantitative (i.e. surveys), or qualitative (i.e. interviews) research methods to analyze consumer behaviour. It has been identified that experimental research, more precisely lab experiment, has only recently gained researchers' attention in the field of marketing. In this study a mix-match of methodologies has been employed to ensure the results' validity and reliability: a lab experiment with an eye tracker combined with interviews.

**Participants**

Seventy Greek participants (31 male and 39 female) with ages ranging from 18 to 57 years volunteered to take part in this study. No incentive for participation was provided. All the participants reported no color-blindness and one participant was excluded from the experiment as he reported suffering from attention distraction. Thus, the number of participants is sixty-nine. The participants were recruited via an emailing recruiting list provided by Aristotle University of Thessaloniki. To ensure variety of age between participants, the students were asked to bring together their parents or acquaintances of older age. To take part in the experiment participants had to be regular consumers of feta cheese and olive oil. The lab experiment took place within two weeks and we managed to utilise around ten participants per working day. Given the aforementioned literature, we consider the sample size for this research both adequate and sufficient.

**Apparatus**

Eye movements were recorder by Tobii Pro Studio version 3.4.5 which was used to test package design. Viewing was not binocular; instead Tobii Pro screen-based eye tracker (Figure 1) 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 in spite of head motion. Eye positions were sampled at 120 Hz which means that 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 16:9 Aspect Ratio.

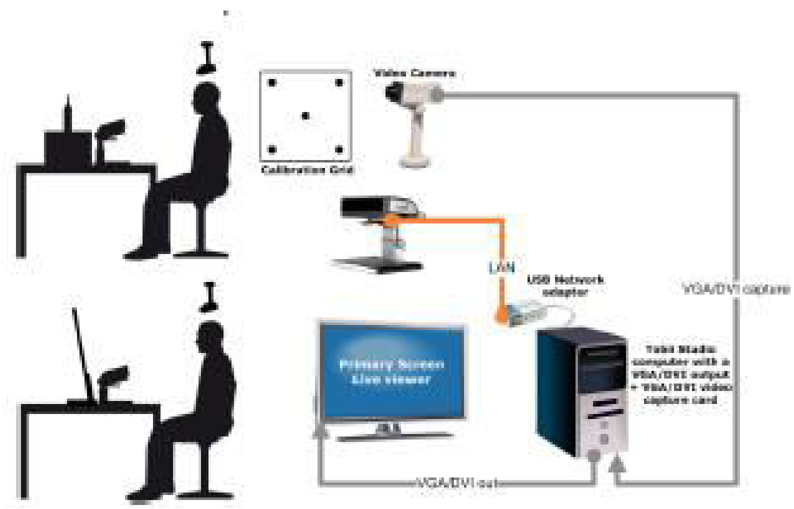


Figure 1: Tobii Pro Computer

**Stimuli**

As stimuli, various images of feta cheese packages were created by Christos Papathanasiou, a Graphic Designer at MMS Advertising Agency based in Thessaloniki, Greece. The aim of the different packages is to convey sensory information by means of five design attributes: 1) information concerning the text, 2) the package's shape (rounded vs. square), 3) the package's color (blue vs. red), 4) the existence or absence of an image on the package, 5) the existence or absence of an eco-label on the package. The 16 possible fully crossed combinations (2 x 2 x 2 x 2) were created. All the images (860 x 600 pixels) were presented against a black background for individual presentation. The images (Figure 2) were randomly presented to the participants following an experimental shuffle.

Figure 2: Th 16 feta cheese packages shown to participants

**Procedure**

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, the general instructions for the task were verbally communicated to each participant to ensure they fully understood what was asked. The images were presented individually for 2.5sec each since this is the average amount of time spent by consumers when looking at a package (Spence and Piqueras-Fiszman, 2013). In total there were 16 images with different feta cheese packaging. Between each image there was a multiple-choice question and participants were asked to use the mouse and select the answer they believed was correct. The questionnaire was used as a distractor. The whole task lasted for approximately 12 minutes.

**Data analysis**

To analyse fixations and compare them across the 16 feta cheese packages, various areas of interest (AOIs) were defined. The number of AOIs is not equal among all 16 packages because there are some attributes present in one package but absent in another one. For example, eco-labels appear on some packages but are absent from others. The AOIs are defined as: 1) the information area with a photo of the feta cheese – "AOI_image"; 2) the border of the package –"AOI_shape"; 3) the shape of the package –"AOI_shape"; 4) the main text including the area of origin for the feta cheese –"AOI_POP"; 5) the existence of an eco-label –"AOI_logo"; 6) the text were the word bio is mentioned –"AOI_bio"; 7) the word feta –"AOI_feta" (see Figure 3 as an example of a package's AOIs). The measure that was considered in the analyses was the sum of the duration (ms) of all fixations, which was calculated for each AOI of each package.


Figure 3: Areas of Interest (AOIs) defined: 1) Feta, 2) color, 3) shape, 4) bio, 5) POP, 6) logo

**Results**

*Study 1: Eye tracking data 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.

After checking the data, the regularity of data between groups (histograms and Kolmogorov test p>.05) and homogeneity of variations between groups (Levene's test p> .05) was verified.

Analysis of variance were performed with independent variables being the pictures representing various packaging styles and characteristics (g_bio, color, g_Feta, g_image, g_POP, g_shape,g_Logo) and dependent variable being the fixation time that was recorded through the eye tracker. 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 1.

| Item | | SS | df | MS | F | Sig |
|---|---|---|---|---|---|---|
| **Picture 1** | *Model* | 30606,840 | 5 | 6121,368 | 21,535 | 0,000* |
| | *Error* | 98068,660 | 414 | 284,257 | | |
| **Picture 2** | *Model* | 3528,011 | 4 | 882,003 | 5,358 | 0,000* |
| | *Error* | 45435,589 | 415 | 164,622 | | |
| **Picture 3** | *Model* | 2920,040 | 4 | 730,010 | 5,416 | 0,000* |
| | *Error* | 37198,760 | 415 | 134,778 | | |
| **Picture 4** | *Model* | 5275,248 | 5 | 1055,050 | 4,654 | 0,000* |
| | *Error* | 78209,752 | 414 | 226,695 | | |
| **Picture 5** | *Model* | 6357,571 | 5 | 1271,514 | 3,802 | 0,002* |
| | *Error* | 115377,429 | 414 | 334,427 | | |
| **Picture 6** | *Model* | 7388,082 | 6 | 1231,347 | 5,430 | 0,000* |
| | *Error* | 93889,918 | 413 | 226,787 | | |
| **Picture 7** | *Model* | 8437,821 | 5 | 1687,564 | 5,412 | 0,000* |
| | *Error* | 107575,679 | 414 | 311,814 | | |
| **Picture 8** | *Model* | 8973,393 | 5 | 1794,679 | 6,447 | 0,000* |
| | *Error* | 96042,440 | 414 | 278,384 | | |
| **Picture 9** | *Model* | 11358,392 | 6 | 1893,065 | 6,863 | 0,000* |
| | *Error* | 114201,322 | 413 | 275,849 | | |
| **Picture 10** | *Model* | 4171,793 | 5 | 834,359 | 2,578 | 0,026* |
| | *Error* | 111650,707 | 414 | 323,625 | | |
| **Picture 11** | *Model* | 11998,739 | 6 | 1999,790 | 6,791 | 0,000* |
| | *Error* | 121911,261 | 413 | 294,472 | | |
| **Picture 12** | *Model* | 10192,396 | 6 | 1698,733 | 3,876 | 0,001* |

| | | | | | | |
|---|---|---|---|---|---|---|
| | *Error* | 181451,604 | 413 | 438,289 | | |
| **Picture 13** | *Model* | 8641,276 | 5 | 1728,255 | 4,196 | 0,001* |
| | *Error* | 142115,390 | 414 | 411,929 | | |
| **Picture 14** | *Model* | 9525,417 | 4 | 2381,354 | 10,386 | 0,000* |
| | *Error* | 63282,583 | 415 | 229,285 | | |
| **Picture 15** | *Model* | 23474,196 | 6 | 3912,366 | 9,123 | 0,000* |
| | *Error* | 177551,518 | 413 | 428,868 | | |
| **Picture 16** | *Model* | 13025,098 | 5 | 2605,020 | 7,651 | 0,000* |
| | *Error* | 117466,402 | 414 | 340,482 | | |

*Source: calculations on SPSS, *p<.001*

Table 1: ANOVA results for all 16 pictures

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.

Picture 1

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_bio - g_color (t(69)= 3.505, p<.008), g_bio -g_shape (t(69)= 3.820 , p<.008), g_color - g_Feta (t(69)= -6.291, p<.008), g_Feta - g_shape (t(69)= 6.260 , p<.008), g_color - g_POP (t(69)= -5.390 , p<.008), g_POP - g_shape (t(69)= 5.498 , p<.008).The post hoc test shows that the most significant features for the first package are the word bio in the text, the word Feta, and the place of origin (POP) compared to the color (red) and the shape (square shape).

Picture 2

According to the post hoc test (corrected criterion Bonferroni a=.01), statistically significant differences were found within the groups g_color - g_POP (t(69)= -2.842, p<.01), g_color - g_Feta (t(69)= -3.329, p<.01), g_POP - g_shape (t(69)= 2.806, p<.01), g_Feta - g_shape (t(69)= 3.372 , p<.01), g_bio - g_Feta (t(69)= -3.144 , p<.01). Hence, the post hoc test indicates that fixation duration is significant for the place of origin (POP) and the word Feta for the second picture, compared to the word bio, the color (blue) and the shape (square).

Picture 3

According to the post hoc test (corrected criterion Bonferroni a=.01), statistically significant differences were found within the groups. g_color - g_POP (t(69)= -3.691, p<.01), g_color - g_Feta (t(69)= -3.237, p<.01), g_POP - g_shape (t(69)= 3.737, p<.01). The post hoc test shows that there is significance for the place of origin (POP) and the word Feta for the third picture, compared to the color (red) and the shape (square).

Picture 4

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_bio - g_POP (t(69)= -2.949, p<.008), g_Feta - g_logo (t(69)= 2.897, p<.008), g_bio - g_Feta (t(69)= -3.365, p<.008), g_color - g_Feta (t(69)= -3.309, p<.008), g_Feta - g_shape (t(69)= 2.907, p<.008). The post hoc test illustrates that fixation duration is significant for the place of origin (POP) and the word Feta for the fourth picture, compared to the word bio, the eco-label, the color (blue) and the shape (square).

Picture 5

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_logo - g_POP (t(69)= -3.443, p<.008), g_Feta - g_logo (t(69)= 3.040, p<.008). Like the previous pictures, the place of origin (POP) and the word Feta are significant compared to the eco-label for the fifth picture.

Picture 6

According to the post hoc test (corrected criterion Bonferroni a=.007), statistically significant differences were found within the groups. g_color - g_Feta (t(69)= -4.105, p<.007), g_Feta- g_shape (t(69)= 2.973, p<.007), g_image - g_Feta (t(69) = 4.957, p < .007), g_bio - g_Feta (t(69) = -3.865, p < .007). In picture 6, the word Feta and the image of feta cheese are significant compared to the word bio and the shape (square).

Picture 7

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_image - g_POP (t(69)= -4.387, p<.008), g_image -g_shape (t(69)= -2.871, p<.008), g_Feta - g_image (t(69)= 3.753, p<.008). The post hoc test shows that the place of origin (POP), the shape (square) and the word Feta are significant compared to the image of feta cheese for the seventh picture.

Picture 8

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups.g_color - g_image ($t(69)= 2.961$, $p<.008$), g_image- g_POP ($t(69)= -4.867$, $p<.008$), g_image - g_shape ($t(69)= -4.447$, $p<.008$), g_Feta - g_image ($t(69)= 5.517$, $p<.008$), g_bio -g_image ($t(69)= 3.163$, $p<.008$). In picture 8, the post hoc tests shows that the color (blue), the place of origin (POP), the shape (square), the word bio and the word Feta are significant compared to the image of feta cheese.

Picture 9

According to the post hoc test (corrected criterion Bonferroni a=.007), statistically significant differences were found within the groups. g_color - g_image ($t(69)= 3.385$, $p<.007$), g_Feta- g_image ($t(69)= 4.475$, $p<.007$), g_logo - g_Feta ($t(69) = 3.349$, $p < .007$), g_image - g_POP ($t(69)= -4.560$, $p<.007$), g_image - g_shape ($t(69) = -4.695$, $p < .007$), g_bio - g_image ($t(69) = 3.346$, $p < .007$). In picture 9, the color (red), the word Feta, the eco-label, the place of origin (POP), the word bio and the and shape (rounded) are significant compared to the image of the feta cheese.

Picture 10

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups.g_color - g_Feta ($t(69)= -4.325$ , $p<.008$), g_color - g_POP ($t(69)= -3.601$ , $p<.008$). The post hoc test for the tenth picture shows that the word Feta and the place of origin (POP) report significant fixation durations compared to the color (red).

Picture 11

According to the post hoc test (corrected criterion Bonferroni a=.007), statistically significant differences were found within the groups. g_color - g_Feta ($t(69)= -4.332$, $p<.007$), g_Feta - g_shape ($t(69)= 5.414$, $p<.007$), g_logo - g_Feta ($t(69) = 4.999$, $p < .007$), g_logo - g_POP ($t(69)= -2.992$, $p<.007$), g_POP - g_shape ($t(69) = 3.359$, $p < .007$), g_bio - g_Feta ($t(69) = -3.472$, $p < .007$). In picture 11, the word Feta is significant compared to the shape (rounded), the word bio and the color (red), but the eco-label is significant compared to the place of origin (POP).

Picture 12

According to the post hoc test (corrected criterion Bonferroni a=.007), statistically significant differences were found within the groups.g_color - g_Feta ($t(69)= -5.103$, $p<.007$), g_Feta - g_shape ($t(69)= 4.995$, $p<.007$) , g_logo - g_Feta ($t(69) = - 4.105$, $p < .007$), g_color - g_POP ($t(69)= -3.046$ , $p<.007$). The post hoc test shows that the word Feta, the shape (rounded) and the place of origin (POP) are significant compared to the eco-label and the color (red) for the twelfth picture.

Picture 13

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_color - g_Feta ($t(69)= 2.662$, $p<.008$), g_Feta - g_shape ($t(69)= 4.773$, $p<.008$), g_logo - g_Feta ($t(69) = - 2.967$, $p <.008$). For picture 13, the post hoc test shows that the color (blue) and the word Feta is significant compared to the eco-label. In picture 13, the word Feta is significant compared to the color (blue), the shape (rounded) and the eco-label.

Picture 14

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_color - g_POP ($t(69) = - 3.934$, $p < .008$), g_color-g_Feta ($t(69)= - 4.488$, $p<.008$), g_Feta - g_shape ($t(69)= 5.005$, $p<.008$), g_bio - g_Feta ($t(69) = - 2.667$, $p < .008$), g_POP - g_shape ($t(69) = 2.646$, $p < .008$). In picture 14, the place of origin (POP), the word Feta are significant compared to the shape (rounded) and the color (blue), but the word bio is significant when compared to the word Feta.

Picture 15

According to the post hoc test (corrected criterion Bonferroni a=.007), statistically significant differences were found within the groups. g_color - g_POP ($t(69) = - 3.417$, $p < .007$), g_color-g_Feta ($t(69)= - 4.315$, $p<.007$), g_Feta - g_shape ($t(69)= 5.639$, $p<.007$), g_logo - g_shape ($t(69)= 4.973$, $p<.007$) and g_POP - g_shape ($t(69)=4.595$ , $p<.007$), g_Feta - g_logo ($t(69)= 3.37$, $p<.007$), g_bio - g_POP ($t(69)= -3.23$ , $p<.007$), g_bio - g_logo ($t(69)= -2.976$, $p<.007$), g_bio - g_Feta ($t(69)= -4.323$, $p<.007$), g_color - g_logo ($t(69)= -3.272$ , $p<.007$). In picture 15, the place of origin (POP), the eco-label and the word Feta are significant compared to the color (blue), the word bio and the shape (rounded).

Picture 16

According to the post hoc test (corrected criterion Bonferroni a=.008), statistically significant differences were found within the groups. g_color - g_POP ($t(69) = - 4.688$, $p < .008$), g_color -g_Feta ($t(69)= -6.243$, $p<.008$), g_Feta - g_shape ($t(69)= 8.312$, $p<.008$), g_image - g_shape ($t(69)= 2.724$, $p<.008$) and g_POP - g_shape ($t(69)=6.078$ , $p<.008$). In picture 16, the place of origin (POP), the word Feta and the image of feta cheese are significant compared to the shape (rounded) and he color (blue).


Figure 4: Heatmap showing the attention paid to specific feature on one of the package designs


Figure 5: Gaze plot showing a representative eye movement from one participant on one of the package designs

*Study 2: Semi-structured interviews*

After the eye-tracking experiment, 12 respondents were asked supplementary questions in the form of semi-structured interviews. Seven of them were female and five were male, with age ranging from 24 to 52 years old.

During the interview, personal heatmaps (example shown in Figure 4) and gaze-plots (example shown in Figure 5) for each respondent were presented to justify their eye-movement. The use of two methods was implemented because qualitative research techniques (such as semi-structured interviews) in combination with projective techniques gain a better understanding of respondents' perceptions (Donoghue, 2000). Hence, semi-structured interviews were used to gather detailed information (Bermingham and Wilkinson, 2003) about participants' perceptions of ecological agricultural product packaging. Semi-structured interviews are considered useful in the sense that helped collect answers like "why consumers prefer one type of packaging feature overanother?" (De

Ruyter and Scholl, 1998). An interview guide was used to help researchers collect a comparative dataset by asking all participants the same questions. Each interview lasted between 12 to 17 minutes.

*Eco Labels*

Considering the impact of eco-labels on product packaging, 10 out of 12 interviewed participants noticed the eco label. From the remaining two, the first mentioned that:

*“I did not look at it at all, I was impressed by the color and the packaging only”.*

(Man, 28 years old, biologist)

While the other highlighted that the reason she didn’t notice was that she was not wearing her eye-glasses. In particular she said that:

*“I did not see the eco-label because I did not wear my glasses. People over 40 typically suffer from presbyopia. That's why companies should change the fonts and size of Eco labels. I do not go shopping with my eye-glasses”.*

(Woman, 44 years old, unemployed)

Collectively, 10 out of 12 participants are aware of the existence of eco-labels in product packaging while at the same time they can recognize them during shopping time. However, one participant mentioned that it is important to be written in the package that a product is biological. She said:

*“I recognize the eco-labels. However, I believe it is necessary to have both the text BIO and the eco-label on the package”.*

(Woman, 44 years old, unemployed)

In the same vein, one of the two participants that does not recognize eco-labels on packaging products highlighted the importance of a text that displays the word “bio”.

*“No, I do not recognize them (eco-labels). That's why I want the information to be in text (on the package)”.*

(Woman, 51 years old, civil servant)

Regarding whether consumers take into consideration eco labels on their buying decisions, 9 out of 12 participants agreed that they consider eco-labels when they go shopping. However, all the nine respondents are a bit hesitant towards eco-labels as to whether the information they provide is true or not.

*“Yes (I consider eco-labels on my buying decision), but as far as I know the controls for product certification are not so strict”.*

(Woman, 27 years old, medical doctor)

*“Yes, of course I would buy an eco-labeled product. But if it does not have the same effect as the conventional one, I will return to the conventional (e.g. Detergent)”.*

(Woman, 44 years old, unemployed)

From the remaining three participants, two of them stated that the only reason for not considering eco-labels on their buying decisions is the higher price. Finally, the last one declared that he seldom considers eco-labels when go shopping. They said:

*“No, because I have no financial means to buy eco-friendly products”.*

(Man, 32 years old, private employee)

*“No, I do not consider buyingthese products at all, because they are more expensive”.*

(Man, 28 years old, biologist)

Considering their intention to buy an eco-labeled product in a higher price (given that they can financially afford it) compared to a conventional one, all respondents stated that they are willing to make such a purchase. However, 9 out of 12 support that it depends on the range of the price difference in the sense that the difference must be justifiable.

*“I would buy an eco-product at a higher price, depending of course on the difference of the price. However, I understand that eco-products require higher quality production process”.*

(Man, 27 years old, pharmacist)

*“I would buy an eco-product at a higher price, depending on the range of the price difference. I think eco-labels say the truth about product’s quality”.*

(Woman, 30 years old, archaeologist)

On the other hand, 3 out of 12 participants mention that they do not care about the range of the price difference if the quality of the eco-product is high.

*“If I'm sure about the origin and the quality of the eco-product, I would buy it regardless of the higher price”.*

(Man, 32 years old, agronomist)

*“I want the products that I buy to be ecological/organic. This reflects the quality and I do not care at all about the price difference.”*

(Woman, 34 years old, academic professor)

*"If the eco-product is effective and high in quality, I don't care about the price".*

(Woman, 44 years old, unemployed)

*Product Image*

Considering the impact of image vs text on the product packaging, only 4 out of 12 noticed the image on the package. From the eight participants that did not notice the image, four of them justify this behavior on the fact that they read the text and that was enough to understand the kind of the product. The feature "text" is used as substitute for "image".

On the other hand, 11 out of 12 participants read the text. They stated that reading the textual information on product packaging is a common action.

*"I read the text. I read the PDO of Mytilene, I am interested in this information".*

(Woman, 26 years old, medical doctor)

*"I worked on it (the text). I always read the text".*

(Man, 32 years old, agronomist)

*"I wanted to check the origin (Mytilini) and if it is a PDO product".*

(Woman, 52 years old, nursing home)

*Packaging Color*

Regarding the packaging color, 11 out of 12 prefer the blue package. From them, 10 out of 11 consider that red color is deterring. Finally, one of them supports that blue package fits well with Greece and Greek products.

*"I starkly prefer the blue package. The red threatened me".*

(Woman, 24 years old, agronomist)

*"I prefer the blue because the red bothers me, blue is a calm color".*

(Man, 27 years old, pharmacist)"

*"I prefer the blue. It refers to Greece and the sea".*

(Man, 35 years old, medical doctor)

*Packaging shape*

Considering the shape of the package, 11 out of 12 respondents agreed that they would choose the angled package. There are mainly two reasons for this preference. The first one lies in their habitual use. They are used in buying such a product (Feta) in angled packages. Furthermore, they declared that the rounded package often reminds other products like yoghurt or ice-cream.

*"I prefer the angled package. I'm used to it. Squared is the shape of feta cheese, angled should be the shape of the package".*

(Man, 32 years old, agronomist)

*"I like the angled package more, because I am used to it. The other package relates to yogurt".*

(Woman, 51 years old, civil servant)

The second reason why they prefer the angled package design lies in terms of usability. In particular, 6 out of 11 consider this angled design to be more usable. The square shape refers to the shape of the slice of the product, so it can be cut more easily for servicing.

*"I prefer the angled design. It is easier to use it, because it helps cut the slice rectangular to serve".*

(Man, 35 years old, medical doctor)

Regarding the research questions and the hypotheses, Table 2 shows an overview of the main findings.

| RQ/Hypothesis | Result | Explanation |
|---|---|---|
| **RQ1:** *Do eco-labels draw consumers' attention on packages of organic agricultural products?* | Yes | Eco-labels grabbed participants' attention compared to other package features. |
| **RQ2:** *Do consumers take into consideration eco-labels in their buying decisions?* | Yes | Most of them do but many reported that they would like to see the eco attributes of the product explained in text. |
| **RQ3:** *Are consumers aware of eco-labels on product packages?* | Yes | Most of them are; even though there is a misunderstanding due to variety of different eco-labels. |
| **RQ4:** *Are consumers willing to buy an eco-labeled product in a higher price compared to a conventional one?* | No | Some of them are, many of them are not but they insisted that it depends on both the degree of the higher price and the effectiveness of the product. |
| **H1:***Product images on packages of* | Not supported | The image of the feta cheese gathered considerably less |

| | | |
|---|---|---|
| *organic agricultural products will draw more attention compared to textual information.* | | attention compared to the text. |
| **H2:***Packages of organic agricultural products which are characterized by blue color will be more preferred by consumers compared to red color packages.* | Supported | Most respondents mentioned that the red color frightened them for this specific product. |
| **H3a:***Roundedpackages of organic agricultural products will be more preferred by consumers compared to angled packages.* | Not supported | Eye tracking data show that participants did not pay attention to the shape of the package; whereas interviews reveal that the angled shape is preferable compared to the rounded. |
| **H3b:***Rounded packages of organic agricultural products influence more positively the intention to purchase the product compared to angled packages.* | Not supported | Although the qualitative data provide no connection between package shape and intention to purchase, it is safe to assume that rounded shape has no relation to purchase behavior as it is not preferred by participants when compared to the angled shape. |

Table 2: RQs and Hypotheses overview

**Conclusions**

In this study we chose not to use an existing feta cheese brand name to avoid false associations, nor to create a new one. Thus, we used the word Feta as the product's name and even placed it in the middle of the package in bold and big font size (as seen in Figure 2). The statistical analysis show that the word Feta grabbed the participant's attention compared to all the other features of the package. Similarly, the place of origin (in Greek the initials POP are used to indicate the Protected Place of Origin) reported significant results when compared to all the other features. Even through the interviews it is identified that participants do care about the place of origin when buying feta; some of them even said that they care about it more than they care about eco-labels.

Interestingly, the word bio in the text ("product of bio agriculture") and the eco-label, when present, grabbed the participants' attention compared to many of the other features. The image of the feta cheese is significant when compared to some features (i.e. shape and color), but not significant when compared to other (i.e. place of origin, the word Feta). Indeed, the interviews reveal that participants will read the text and avoid looking at the image because the text provides all the information that they need to this specific product.

Surprisingly, the data shows that neither the shape nor the color of the package are significant compared to the rest of the features in nearly all sixteen packages. On the other hand, most of the interviewees said that they prefer the blue color and the angled shape when it comes to feta cheese packaging.

The findings indicate that people are more interested in the brand name as well as the place of origin when buying feta cheese but seem not to care about the shape nor the color of the package. From a managerial point of view, there is evidence that the information that is better attended to is expected to drive consumer decision-making. Hence, managers should emphasize more on highlighting the brand name and the place of origin as it seems to add value on the package along with any bio features, rather than investing in changing the package shape or color. The appearance or absence of the feta cheese image seems to play little importance when it comes to packaging, thus managers can choose to opt in or out of this one.

Lastly, there is evidence to support that buyers pay attention to the presentation of eco-labels, but they also want the bio features to be highlighted in the form of text. Thus, managers should make sure that the one does not substitute the other, rather they complete each other.

As a final remark, bigger font size is more preferable among consumers, especially for agricultural products.

**Limitations**

Although our findings shed some light into the packaging of bio feta cheese, we acknowledge some limits. For example, the laboratory setting, the forced exposure to the packages, and the immediate response measures limit the generalizability of this study.

Another limitation is that we were unable to use real packages, rather we created pictures of different package designs. If we had the opportunity to use a portable eye-tracker we would be able to test real packages instead of computer representations. For example, shape and texture cannot be fully appreciated through a flat image on screens. In fact, this is a very interesting recommendation for future research to compare differences between the data obtained from real packages compared to package designs as representations. In a real life experiment it is likely that the effects of touch-inviting elements of the package would be significant.

Also, a limitation is the amount of time exposed to the pictures (2.5 seconds for each picture) which affects the average fixation duration on the pictures. For example, for billboard advertisements studies have found that the size of the advertisement influences participants' looking times (Rayner *et al.,* 2001). Similarly, the size of the package might influence participants' fixation duration.

It is possible that the most important limitation lies in the fact that this study focused only on one specific product; even though product type has been identified as an important factor in green and social advertising research (Royne*et al.,* 2012).

Lastly, the presentation of price on the package was intentionally avoided for this study. However, participants were asked about price during the interview. It would be beneficial to examine whether consumers pay more attention to the price rather than the rest of the package features and whether their attitude changes when different prices are shown.

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# Excellent Product…But Too Early to Say: Consumer Reactions to Tentative Product Reviews

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## Abstract

Consumers often form their attitudes towards products based on external information such as online reviews. To do so, they rely on a variety of cues (Kardes, Posavac, &Cronley, 2004) among which are content and style elements of online reviews (King et al., 2014; Ludwig et al 2013). Table 1 reveals characteristics of individual online reviews which previous studies have shown to influence consumer's attitudes and behaviour. In this study, we introduce and investigate the notion of tentativeness as a content-related driver of consumer reactions. We define a tentative review as one which, through the use of hedging phrases (Forbes-Riley&Litman, 2011) such as "it's early days", "too early to say" "we have to wait" etc. suggests that a consumer'sevaluations ofa product may change or "become obsolete when more reliable findings occur" (Flemming et al., 2015: 2). The key question of interest, as far as tentative reviews are concerned, is whethersuch reviews influence customers' product-related attitudes, perceptions and decisions.If they do, under what conditions do they have stronger or weaker impacts and how should firms react to or manage such reviews?

In this study, we draw on salience theory (Taylor and Thompson, 1982) as well as studies on attitude certainty (Rucker et al., 2008, 2014), to contend that the inclusion of a tentative review to a set of positive reviews should result in lower levels of product-related attitude certainty compared to the inclusion of a non-tentative positive review, a negative review or no additional review. We propose and theoretically address confidence in information completeness as the intermediate cognitive mechanism to explain how and why review tentativeness results in lower levels of attitude certainty about products. Furthermore, in line with suggestions that the effect of online reviews on consumers is moderated by product, reviewer and customer characteristics (Zhu and Zhang, 2010; Ho-Dac et al, 2013; Casaló et al, 2015), we investigate the moderating effects of reviewer expertise and consumer product experience.

Our work contributes to the literature by investigating for the first time the effect on consumers of an online review characteristic (tentativeness) which despite its occurrence in product reviews has received no attention in the literature.We show that tentativeness affects consumers' judgements and attitudes and consequently we can provide some clear practical implications for firms. Most critically, we suggest that by understanding how tentative reviews impact consumers, firms can formulate appropriate responses to them and thereby shape the effect of such reviews on consumers. For instance, they can change when they request customers to provide reviews or ask for follow up reviews when customers provide tentative reviews.

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# Cyber consumer decision-making styles: a qualitative approach

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**Abstract:**
Research into consumer decision-making styles (CDMS) is limited by the neglected online applications and the over-reliance of product-neutral studies. This paper attempts to advance the knowledge in the field by identifying cyber CDMS using qualitative approach for the first timeto develop three frameworks that represent high-, medium-, and low-involvement products. The insights gleaned from the 28 in-depth interviews revealed refined sets of dimensions that are mutually exclusive, with four novel dimensions (fulfilment, inertia, safety, and web security) identified in the domain of CDMS. The three frameworks that capture five, eight and seven dimensions for high-, medium-, and low-involvement products respectively can be served as a useful basis for future research. The frameworks are further improved by incorporating a taxonomy of information search (deliberative, directed, habitual, hedonic, and knowledge-building) to better account for how online purchase decisions are made. Insightful implications are provided for retailers to devise effective segmentation strategies.

*Keywords: Consumer decision-making styles, consumer style inventory, product involvement, situational involvement, online retailing*

**Introduction:**
Research has seen a growing interest in Consumer Decision-Making Styles (CDMS), a mental orientation characterising consumer purchase decision-making. Sproles and Kendall (1986) suggest that consumers' decision-making is based on a combination of eight fundamental characteristics, which is measured by Consumer Style Inventory (CSI). The eight CDMS include *perfectionism*, *brand consciousness*, *novelty-fashion consciousness*, *recreational/hedonistic shopping consciousness*, *price consciousness*, *impulsiveness*, *confusion by overchoice*, and *habitual/brand loyalty*.A growing body of literature has emphasised the importance of the dimensionality of the CDMS (e.g., Lysonski et al., 1996; Tarnanidis et al., 2015; Zhou et al., 2010). Attempts have also been made to examine the relationships between CDMS and various variables such as product involvement (Bauer et al., 2006), culture and tourism (Correia et al., 2011), gender (Bakewell and Mitchell, 2006), and perceptions of retailers' marketing practices (Rezaei, 2015). Other researchers have examined the scale purification of CSI (Hiu et al., 2001), and the longitudinal evolution of consumers' mindsets from 1994 to 2009 (Lysonski and Durvasula, 2013).The knowledge advancement of CDMS is crucial for retailers to gain a deeper understanding of consumers to bettertailortheirmarketing communications and offerings to meet the specific need of the identified segments.

Despite the growing interest in the CDMS research (Bakewell and Mitchell, 2006; Bauer et al., 2006; Correia et al., 2011; Lysonski et al., 1996; Rezaei, 2015; Tarnanidis et al., 2015; Zhou et al., 2010),most of the CDMS studies have replicated the original CSI and taken it as absolute. Giventhat CSI wasconducted in the offline setting, replications of CSI demonstrates less capability in capturing meaningful insights in the online context. Consequently, future research might follow the wrong conceptualisation of the original study or misapplication to fit a new context. Moreover, the CDMS research is limited by the neglected online applications, leading to the absence of an 'established theoretical framework' of CDMS in the online shopping context (Rezaei, 2015).Given thatCDMS is product-dependent and governed by product-involvement (Bauer et al., 2006), scholars have called forfurther research to investigate CDMS in various product categories (Bauer et al., 2006; Hiu et al., 2001; Isaacson et al., 2018).To this end, this study aims to explore the CDMS in the online shopping setting. Specifically, this study attempts to identify cyber CDMS using an exploratory qualitative approach to develop three frameworks that represent high-, medium-, and low-involvement products.

**Critical awareness of the extant literature:**
The first CDMS study in the online context was conducted by Cowart and Goldsmith (2007) to investigate the motives for online apparel purchases for American consumers. The study revealed positive correlations between CDMS and online apparel shopping.Seo and Moon (2016) identified three consumer segments (*innovative brand-preferring consumers*, *realistic consumers*, and *passive consumers*) based on the Korean CDMS in the social commerce setting, providing restaurant managers useful insights to develop strategies tailored to specific types of consumers. Khare (2016) examined the CDMS of Indian consumers in the e-shopping environment and discovered five dimensions: *quality-conscious shopper*, *fashion-conscious shopper*, *uninterested shopper*, *impulsive shopper*, and *brand-conscious shopper*. In his study to explore the influence of CDMS on adolescents' online buying behaviour, Niu (2013) concluded that Taiwanese adolescents tend to engage with rational decision-making (*brand*, *price value*, and *high quality*), further strengthened by peer influence. Considering both online and offline channel in his study, Rezaei (2015) assessed six CDMS based on the perception of four marketing practices across channels. The study contributes to retail management by providing meaningful insights into effective retail segmentation and cross-channel strategy. The CDMS research is limited by the neglected online applications.

A frequent criticism of CSI research concerns the generalizability issue. The use of student samples limits the external validity and generalizability of the research findings because they are not representative of the general consumer population (Bauer et al., 2006). In this regard, samples formed by general consumers are desirable in CDMS research.Another prominent gap in the CDMS literature is the over-reliance of product-neutral studies. Even the key researchers of CDMS (Sproles and Kendall, 1986) are aware of the issues inherent in their model that consumers approach products with different characteristics. This led to the appeal for research that further examines CDMS in various product categories.The lack of a comprehensive set of criteria for the selection of CDMS is another critical issue in the literature. The selection criteria from studies to-date remain diverse, inconsistent, and disjointed, reflecting researcher subjectivity. The diversity of CDMS ranges from internal influences to a potpourri of internal and external influences. This obviously presented a barrier to knowledge advancement in CDMS.Finally, a myriad of dimensions emerged from the CDMS literature has resulted in a reverse effect that serves to confuse rather than to enhance understanding. This prompted various categorisations capturing CDMS in an organised manner. The variations of categorisations are admirable in many respects; although they are less impressive in accounting for how purchase decisions are made in terms of information processing.

**Preliminary study:**
Prior to conducting the personal interviews, a preliminary study was carried out to identify to represent high-, medium-, and low-involvement products.A widely recognised consumer product classification scheme (i.e., convenience product, shopping product, and speciality product) was served as the theoretical framework. Ten products (*books*, *packageholidays, takeaway food*, *tickets for events*, *stationery*, *high street clothes*, *luxury watch*, *music downloads*, *furniture*, *toys*) were pre-selected from extensive literature analysis. Sixty participants were selected randomly on the high street ofMiddlesbroughto complete a questionnaire adapting from the Revised Purchase Involvement Inventory (RPII). RPII was chosen because it has been tested in many studies and exhibited high levels of reliability and validity (Mittal, 1995).The mean value for each product was then compared.The products with central tendency from 25 to 34.99 were classified as high-involvement, 15 to 24.99 as medium-involvement, and 5 to 14.99 as low-involvement. The resultsrevealed threeproducts (*packageholidays M=31.42, luxury watch M=29.43, furniture M=28.63*) under high-involvement category, five products(*books M=21.03, tickets for events M=22.42, high street clothes M=23.08, music downloads M=18, toys M=16.17*) under medium-involvement category and two products (*stationery M=15.75, takeaway food M=14.93*) under low-involvementcategory. '*Package holidays*'and'*takeaway food*'were chosen torepresent high- and low-involvement products due to the highest and lowest mean values in their respective categories. For medium-involvement category, '*high street clothes*' was chosen because clothing remains the most popular product purchased online, indicating a profitable niche in e-retailing (Office for National Statistics, 2018).

**Methodology:**
This study adopted a qualitative approach to accomplish the objective of this study. Personal interviews were used for data collection to avoid timid situations and group-biased data prevalent in focus groups.Non-random convenience sampling method was used to collect the qualitative data given the sampling frame of online consumers is unknown.Specifically, a quota sampling was adopted with the sample's demographic profiles mirror the population's demographic profiles. An interview guide that contained three sets of questions were generated: (1)

demographics of the participants, (2) keyopen-ended questions asking whatfactors influence the participants' decisions in buying '*package holidays*', '*high street clothes*', and '*takeaway food*' in the online context, (3) questions covering the predominant dimensions established in the CDMS literature but not mentioned in the previous set of questions. A senior marketing academic specialising in consumer behaviour was invited to review the interview guide and provide feedback.

The participants were selected based on a number of criteria. First, the participants have to be aged between18 and 54 because this group of people are the most active online buyers (Office for National Statistics, 2018) and thus being the study group for this research. Second, the participants have to be British. Third, participants with or without buying experience of the three product categories are eligible to participate because the cyber CDMS reflect both positive and negative decision-making.Prior to the interviews, written consent was taken from the participants at the beginning of the interviews. The first five participants were served as a pilot study to ensure the smooth running of the interviews and to see whether the interview questions provided suitable responses for the study. Some amendments were made to improve the clarity and sequence of the interview questions.Twenty-eight participants were intercepted from the high streets in Middlesbrough. Of the 28 participants, 15 were male, and 143 were female. Four age groups that range from 18 to 24, 25 to 34, 35 to 44, and 45 to 54 had 7, 10, 7, and 4 participants, respectively. In terms of education level, 2, 4, 8, and 14 participants were recruited for the categories of no qualifications, basic qualifications, further education, and higher education, respectively.

Content analysis was chosen to analyse the interview data because this approach revealsnot only the meaning underlying the data; it also informs the degree to which the dimensions identified are important.The principal researcher of this study and two marketing academicscoded the data independently to increase comprehensibility and support intersubjectivity (King and Horrocks, 2010). A codebook was developed and supplied to the coders to guide the coding. Training was also provided to ensure each coder view the content the same way without collaboration.A pilot coding of a small data was also conducted to inform the overall viability of the coding scheme.Intercoder reliability was used to quantify the amount of agreement among the coders. Four intercoder reliability indices (i.e., Percent Agreement, Cohen's Kappa, Krippendorff'sAlpha, and Gwet's AC1) were assessed for each dimension rather than providing an overall coefficient for the entire data that might hide variables with unacceptably low agreement (Lombard et al., 2002).

**Analysis and findings:**
The intercoder reliability assessments provided inconsistent results among the indices. The results showed that good Percent Agreement was accompanied by undesirable Cohen's Kappa and Krippendorff'sAlpha. Based on the benchmark of Landis and Koch(1977), the results of Percent Agreement and Gwet's AC1 presented substantially good reliability across coders, ranging from .78 to 1 (Percent Agreement) and .73 to .96 (Gwet's AC1). This finding is consistent with what was reported in the extant statistic literature that kappa is affected by skewed distributions of categories and the bias issue triggered by the degree of disagreement among the coders (Feinstein and Cicchetti, 1990, Gwet, 2008). Given the uneven marginals that produced a high agreement by chance, the Percent Agreement and Gwet's AC1 seem to have gauged the reliabilityaccurately in this study.

Given a great variety of dimensions that emerged in the data, the dimensions presented in this study are among the frequently mentioned in this study.Ten key themes emerged from the data (see Table 1), with three themes (*perfectionism*, *brand consciousness*, *web security*) found stable across three product categories, four themes (*price consciousness*, *impulsiveness*, *fulfillment*, *inertia*) common to two product categories, and three themes (*fashion consciousness*, *health consciousness*, *safety*) unique to a particular product category. Table 1 below provides the descriptions and excerptsof the themes that emerged from the data.

**Table 1:**Descriptions and excerptsof the themes emerged from the data

| | Themes | Descriptions | Excerpts | |
|---|---|---|---|---|
| Themes stable across product categories | Perfectionism | Consumers' search for the best quality of products or services. | PH[a] | "*It has to be the right place. It has to have everything that I want, the right destination, the right hotel.*" [#7] |
| | | | | "*...I want quality accommodation, elegant surrounding. I want it to be warm. I want cultural activities. I want good transport*." [#14] |
| | | | HSC[b] | "*...good quality, last well, durable, then I'm more inclined to buy it*." [#8] |
| | | | | "*Quality is a big thing for me*." [#28] |
| | | | TF[c] | "*...I'm not sure if I'm not going to get hygienic, well-cooked,* |

| | | | | |
|---|---|---|---|---|
| | | | | *goodproduced...*"[#14] |
| | | | | "*...as long as the food is okay and it's warm and nice...*" [#25] |
| | Brand consciousness | Consumers' orientation toward buying expensive and well-known brands. | PH[a] | "*...but it also says how reputable the companies are.*" [#6] |
| | | | | "*I only book holidays from well-known companies…*"[#22] |
| | | | HSC[b] | "*I only buy names that I know*." [#11] |
| | | | | "*I use Amazon. It's a big company*." [#27] |
| | | | TF[c] | "*I only order from firms that I know*." [#14] |
| | | | | "*...they have to be registered with those companies like 'Just Eat' or something...*" [#23] |
| | Web security | Consumers' concern about credit card payments and privacy of information. | PH[a] | "*I would worry about my financial details being used...*"[#21] |
| | | | | "*I don't trust the public websites… the public access*." [#24] |
| | | | HSC[b] | "*...you probably worry… you're paying somebody else money along the way*." [#6] |
| | | | | "*If I'm buying stuff, I'll make sure it's https*." [#26] |
| | | | TF[c] | "*I don't like bank details that people can use. The systems are not secure enough*." [#20] |
| | | | | "*I never feel confident to order takeaway food online anyway...*" [#21] |
| Themes common to two product categories | Price consciousness | Consumers make purchases based on the lowest priced products or services. | PH[a] | "*The best deals...*" [#3] |
| | | | | "*…and I think it's probably cheaper online anyway*." [#5] |
| | | | HSC[b] | "*...because there are deals online. You find stuff cheaper online*." [#10] |
| | | | | "*…I'll buy something from the previous season because they're cheaper*." [#15] |
| | Impulsiveness | Consumers are prone to purchase on the spur of the moment. | HSC[b] | "*Impulsive behaviour is obvious on clothes. It just happened naturally…*" [#1] |
| | | | | "*It's hard to control yourself if you found something you really like…*" [#10] |
| | | | TF[c] | "*impulsive behaviour is inevitable… I'll browse through the menu and choose one*." [#4] |
| | | | | "*...I would just order some food from 'Just Eat' depending on what appeals to me at that moment*." [#12] |
| | Fulfilment | Timeliness and accuracy of products and service dealing with delivery. | HSC[b] | "*If it doesn't look like the photo and it is bad material...*" [#2] |
| | | | | "*The delivery guy will come, if something is not right, he will come and collect as well*." [#16] |
| | | | TF[c] | "*Long delivery. That drives me nuts.*" [#7] |
| | | | | "*They don't deliver to my house.*"[#18] |
| | Inertia | Consumers develop habits in buying from a brand or retailer repetitively. | HSC[b] | "*I only buy online if I'm buying repeat goods*." [#14] |
| | | | | "*I buy them from the same websites or brands*." [#19] |
| | | | TF[c] | "*I usually eat the same food…*"[#17] |
| | | | | "*I quite set into routine when ordering home delivery*." [#26] |
| Themes unique to a product category | Fashion consciousness | Consumers get excitement from seeking out new and fashionable things. | HSC[b] | "*I always buy new clothes and new fashion*." [#2] |
| | | | | "*...I like to have different fashions in my wardrobe...*" [#20] |
| | Health consciousness | Consumers' emphasis on health behaviour. | TF[c] | "*I try not to order rubbish. I try to stay healthy*." [#9] |
| | | | | "*…I think it's harmful to my health*." [#18] |
| | Safety | Consumers' perceived risk associated with aviation and travel destination. | PH[a] | "*...I just don't feel safe travelling to those countries...*" [#11] |
| | | | | "*There are a couple of airlines that I will never choose... a passenger was violently removed from the flight...*" [#13] |

[a] PH – Package Holidays (high-involvement product)
[b] HSC – High Street Clothes (medium-involvement product)
[c] TF – Takeaway Food (low-involvement product)

Source: the authors

The interview data were coded into nominal themes to enable frequencies of responses to be counted. The prevalence of themes is shown in Table 2 below.The dimension that captured the highest frequency count was fulfilment for 'high street clothes' category with 24 out of 28 participants expressed the concern of the online delivery-related service. *Web security* was the only dimension with above 20 participants addressed the purchase transaction issues across the product categories, indicating its significance in the online purchase decision-making.

**Table 2.** Prevalence of themes

| Themes | Package Holidays (n=28) | | High Street Clothes (n=28) | | Takeaway Food(n=28) | |
|---|---|---|---|---|---|---|
| | Count | Percent | Count | Percent | Count | Percent |
| Perfectionism | 14 | 50% | 20 | 71% | 16 | 57% |
| Brand Consciousness | 18 | 64% | 18 | 64% | 13 | 46% |
| Web Security | 22 | 79% | 22 | 79% | 20 | 71% |
| Price Consciousness | 19 | 68% | 20 | 71% | - | - |
| Impulsiveness | - | - | 21 | 75% | 18 | 64% |
| Fulfilment | 19 | 68% | 24 | 86% | 18 | 64% |
| Inertia | - | - | 12 | 43% | 14 | 50% |
| Fashion Consciousness | - | - | 10 | 36% | - | - |
| Health Consciousness | - | - | - | - | 13 | 46% |
| Safety | 10 | 36% | - | - | - | - |

Source: from the authors

**Discussion:**

Based on the themes identified in the data, three conceptual frameworks that represent high- (*package holidays*), medium- (*high street clothes*), and low-involvementproduct (*takeaway food*), were developed (see Figure 1, 2 and 3). The variations in the three levels of product categories reflected those of Bauer et al. (2006), who contended that CDMS is product-dependent and governed by productinvolvement. The findings of this study confirmed six out of eight of the original CDMS, which is broadly consistent with most of the studies in the CDMS literature (Sproles and Kendall, 1986; Shim and Ghert, 1996; Tarnanidis et al., 2015).Building on the classical information search theory (Howard and Sheth, 1969) and the online search pattern (Moe, 2003), five categories (*deliberative*, *directed*, *habitual*, *hedonic*, and *knowledge-building*) were conceptually developed and incorporated into the frameworks to illuminate how purchase decisions are made.

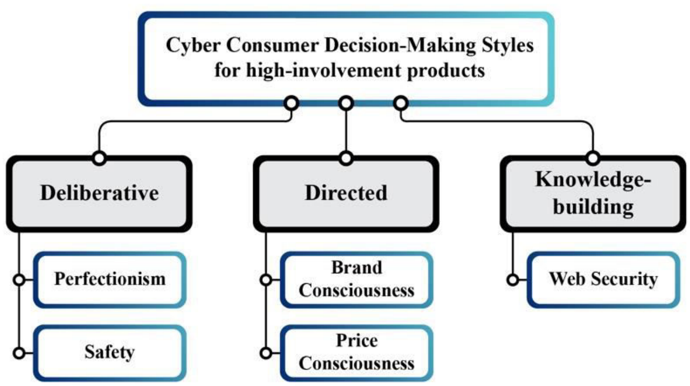


**Figure 1:**Cyber CDMS forhigh-involvement products
Source: the authors

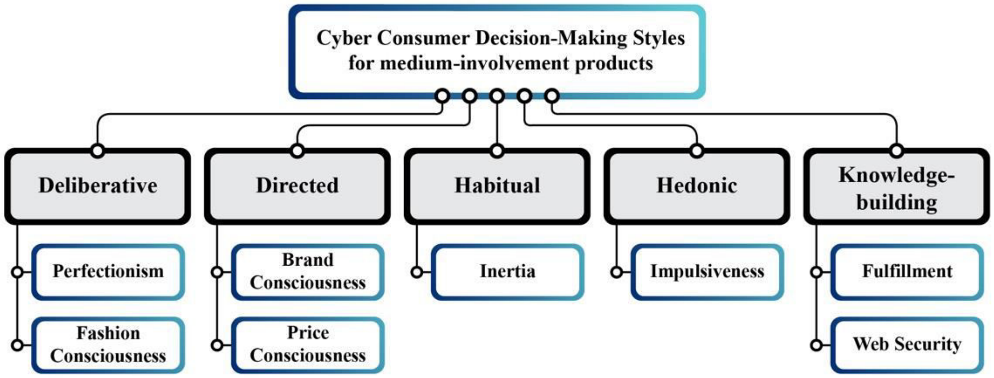


**Figure 2:** Cyber CDMS for medium-involvement products
Source: the authors

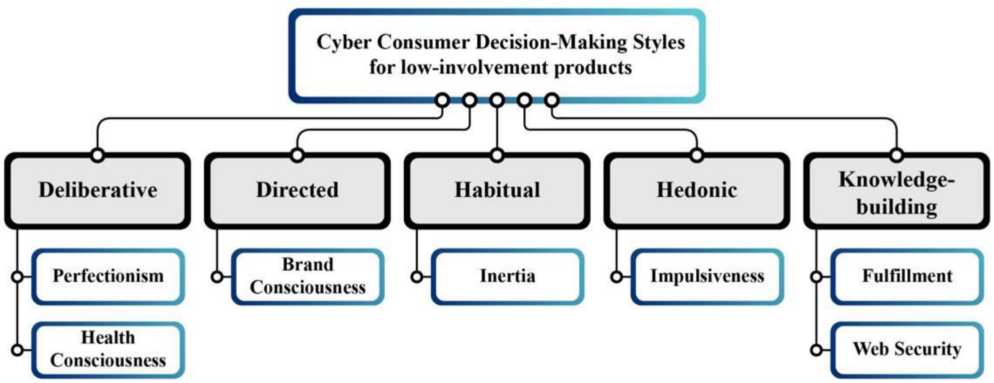


**Figure 3:** Cyber CDMS forlow-involvement products
Source: the authors

A number of dimensions prevalent in the literature were eliminated in this study. First, the dimension of *confused by overchoice* was not confirmed in this study. This is consistent with earlier studies which reported the absence of this dimension (Bauer et al., 2006; Rezaei, 2015). Bauer et al. (2006) contended that *confused by overchoice*is simply a state of information overload that confuses consumers, and it should not be considered as a CDMS because it does not relate to the principles of product selection.*Recreational shopping consciousness* is another dimension excluded in this study because this dimension does not reflect a concrete purchase-relevant decision-making style but a general attitude of shopping (Bauer et al., 2006).As such, *impulsiveness* seems to be better represent the decision-making style because impulsive behaviour can be perceived as a consequence of recreational shopping behaviour that might lead to resentment. Moreover, *recreational shopping consciousness* is claimed to be irrelevant in the online shopping format because online consumers are mostly task-oriented rather than experiential (Rohm and Swaminathan, 2004; Wolfinbarger and Gilly, 2003). The dimension of *convenience* is also eliminated in this study because this dimension is predominantly dealing with decision-making associated with retail shopping format rather than product attributes. This argument is consistent with Farquhar and Rowley (2009), who argued that online *convenience* is a proxy of resources rather than an inherent characteristic of a product.

**Conclusion:**

This study advances the knowledge of CDMS by offering three frameworks of cyber CDMS, with five, eight and seven dimensions that are mutually exclusive for the product categories of '*package holidays*', '*high street clothes*', and '*takeaway food*', respectively. Four novel dimensions are identified, namely, *fulfilment*, *inertia*, *safety*, and *web security*. The refined sets of dimensions can be served as a basis for various product categories based on the product-involvement level in the online context. A taxonomy of information search in the online shopping setting (*deliberative*, *directed*, *habitual*, *hedonic*, and *knowledge-building*) are incorporated in the frameworks to better account for how online purchase decisions are made.The issue of kappa paradoxencountered in the intercoder reliability assessment and an alternativeindex ofGwet's AC1 provides a better understanding for future research in this area.On practical grounds, this article offers marketers a fresh perspective in understanding consumers' decision-making and provides new opportunities for segmentation to adequately position their brand and effectively communicate with consumers.For example, a sizeable segment motivated by price consciousness might draw attention to logistics and packaging that create perceptions of value. Retailers could minimise transaction costs, so passing cost savings onto consumers. Deals, lower prices, and coupons could be used to encourage purchase decisions.For brand-conscious and fashion-conscious consumers, retailers should focus on the content of the advertisement message rather than on repetition. The cyber CDMS can be used either precede or follow the conventional segmentation criteria to increase its effectiveness.

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# Proximity Mobile Payment Acceptance: A Hybrid SEM-Neural Network Analytical Approach

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**Abstract**
This is among the first studies aiming to investigate the adoption mechanism of proximity mobile payment services (pmps) by using a well-establish theoretical framework to represent potential customers' decision making process and considering both the linear and non-linear nature of the associations between customers' responses and their drivers. Using a hybrid analytic approach consisting of two stages, the proposed model is assessed with data collected via a survey from a sample of 820 participants. In the first-stage, Partial Least Squares Path Methodology (PLSPM) is used to confirm the nomological validity of the proposed theoretical framework in the pmps context. In the second-stage, artificial neural networks (ANN) models are used to rank the relative influence of pmps adoption drivers obtained in the previous step. The PLSPM results indicated that DTPB provides a solid theoretical framework to study the pmps adoption process, where attitude towards pmps' utility, easiness and compatibility, social norms, expressing the influences of the interpersonal and the social context, and perceived behavioral control, expressing resources and opportunities for using the pmps, found to be adoption facilitators while perceived risk appears to be adoption inhibitor. On the other hand, the results of the ANN analysis confirmed the majority of the PLSPM results, although there are some remarkable contradictions. Theoretical and managerial implications, limitations and suggestions for further research are provided at the end of the study.

***Keywords***: *Mobile payment, NFC, DTPB, Perceived risk, Consumer behavior*

# Values and Consumer Attitudes: An Empirical Investigation Across a Selected Sample of Sub-Saharan African Countries

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**Abstract**

The African economy and more specifically the African consumer have recently attracted the attention of leading consulting companies and academics. Africa is described as a diverse continent with a growing number of consumers with an expected spending level of $1 trillion by 2020. However, little research exists on the African consumer. This paper examines four questions: (1) What are the most distinguishing values and to what extent are they shared among Africans? (2) Are there African values and culture that are common to all Africans regardless of country or does each country have its own specific culture and values? (3) If there are no national values, can we identify potentially different individual classes? (4) Can we use the differences in values to explain variations in consumer attitudes of Africans? Our cross-national study in four countries reveals that African values can be structured into eleven dimensions. These values are differently expressed across four individual classes. There is also cultural overlap between countries, implying that African countries are not culturally homogeneous. These values influence consumer brand sensitivity

**Keywords**: Values, culture, brand sensitivity, attitudes, sub-Saharan Africa

# The role of culture in sport celebrities' endorsement efficiency and consumer behavior

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**Abstract**

The cultural differences can influence consumer behavior in sport or any other industry. Consumer behavior refers to the selection, purchase and consumption of goods and services for the satisfaction of needs and wants. Sport consumer behavior is also a consumer behavior related to the products and services offered in the particular sport and it is deeply influenced by cultural differences (1). Culture, as one of the most complex concepts in human life, has a special role in sports marketing. The consumer's social class plays a significant positive role in the behavior of consumers of sports products. It was the most important factor affecting sports consumer behavior.

Among the elements of the marketing mix, endorsement has a special role in marketing being effective in which sport celebrities take part in promotional activities to introduce and promote different sportor non-sport products.The constant demand on sport athletes to be able to perform and interact with the fans, often driven by the sponsors and media has led to the creation of strong social image in the society for the athlete (2). These sporting celebrities are seen as role models in the society and corporate sponsors are prepared to pay good amount of money to associate their brand image with the athlete's social image and tap into their strong pool of fans(3,4). Further research in athlete endorsements has outlined, that in order for a sponsor to effectively maximize their relationship with a sport athlete, they must carefully choose the celebrities with the right social image who create a better fit with their brand image(5). When selecting a sport athlete, a sponsor generally considers two things: whether the celebrity has a positive social image perceived by the target market; and whether they are trustworthy thereby lending credibility to the brand (6,8).

Social image of celebrities can be depended on the cultural characteristics.This research conducted to study Iranian consumer's reaction and behavior while they watch foreign and domestic sport celebrities' endorsement activities. This research wasasurvey. The statistical population of the study (N = 20000)was including students of AllamehTabataba'i University as a part of Iranian sport consumers. Morgan sample size table showed that 384 of Graduates from AllamehTabataba'i University could be a suitable sample size for the society which all of them were selected randomly using cluster sampling method. The research tool wasa questionnaire made by researchers which after the process of validity and reliability approval, distributed among research population members.

Kolmogorov-Smirnov test was used to examine the distribution of data; Independent T- test and Chi-square testwere used to compare variables intwo groups of students, those who preferred foreign sport celebrities' and those who chose domestic sport celebrities' endorsements. The results showed that differences of the variable means: product attraction, positive productcreation, advertisingadmissibility, desire to buy the product, sense of consumer surprise and sense of acceptance of advertisementswere significant in twogroups. It means that Iranian students accepted and were impressed by those advertisements in which foreign sport celebrities were shown but they didn't like Iranian

sport heroes participate in advertisements and marketing efforts.Culturally based differences of celebrities werethe reason why the first type of advertisements could be more acceptable, attractive, and admissible and could persuade them to decide to buy the products. They believed that their sport heroes should stand in a different platform, far from Marketing targets and efforts.They believed that Iranian sport celebrities should stand on a social role model platform so that youth can see and follow them in their life careers.

**Keywords:** sport, endorsement, celebrity, culture

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# Buy green? No, thanks!

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**Abstract**

Presents the mediating role of negative attitudes (environmental unconcern) on the impact of values on pro-environmental purchasing behaviour. A survey was conducted through personal interviews on a sample of 360 residents in Thessaloniki, Greece. The sampling method was the one-stage area sampling. The hypothesized hierarchical impact of values on behaviour through the formulation of the relevant attitudes was verified. It can be concluded that people who feel respect towards other people's rights and nature (high universalism values) are more likely to be less environmentally unconcerned and engage in certain pro-environmental purchasing behaviours more frequently than their counterparts.

**Keywords**
*Pro-environmental Purchasing Behaviour, Environmental Unconcern, Universalism, Mediation*

## Introduction

Pro-environmental Purchasing Behaviour was defined as a type of purchasing behaviour that incorporates -at least partly- various environmental considerations; it can be reflected on several choices including purchasing "environmentally friendly" products and/or avoiding "environmentally harmful" products (Peattie, 1995, 2010). Research on pro-environmental attitudes and behaviours has long ago moved beyond the broad question of "whether or not" people are concerned, and has concentrated on the question "why" they care? (Schultz & Zelezny, 2003). Attempts to answer such questions provided some models, which were developed to explore, describe and explain consumers' pro-environmental decision making (Jackson, 2005) incorporating personal values and/or attitudes as determinants of pro-environmental behaviour(s).

More specifically, several researchers postulated that values are crucial in understanding pro-environmental attitudes and behaviour (Schwartz, 1992; De Ferran & Grunert, 2007). However, the predictive power of values on ecological consumer behaviour has been often found to be low (e.g. Thøgerson & Grunert-Beckmann, 1997; Thøgersen & Ölander, 2002; Tilikidou, 2013). The so-called "value-action gap" does not, nonetheless, invalidate the use of value theory for understanding behavioural motivations (Verplanken & Holland, 2002).The cognitive path from values to behaviours has been claimed to include several factors such as general beliefs, specific attitudes, personal and social norms, behavioural commitments, intentions action plans (Fulton et al., 1996; Milfont, Duckitt & Wagner, 2010; Perrea et al., 2014; Jacobs et al., 2018). It is obvious that this path seems long and allows space for many mediators. Moreover, this cognitive path may differ across cultures and contexts (Milfont et al., 2010). One of the most commonly used models in ecological research is Schwartz's (1992) model of human values. Research studies on Schwartz's values have provided evidence on the importance of values for pro-environmental behaviour research, through their impact on beliefs, attitudes and norms (e.g. Nordlund & Garvill, 2002, 2003; Dietz, Fitzgerald & Shwom, 2005; Milfont et al., 2010; Collins, Steg & Koning, 2007; Lee et al., 2014; Jacobs et al. 2018). However, the causal path from values to behaviours through the interference of attitudes (Collins et al., 2007; Lee et al., 2014) has never been examined in the Greek context, to the best of our knowledge.

Further, it is noted that the large majority of previous research studies that investigated attitudes towards the environment have usually employed measures of positive attitudes or environmental concern (Bamberg, 2003; Kim and Choi, 2005; Kilbourne and Picket, 2008; Akehurst et al., 2012). Against this conventional direction, Tilikidou and Delistavrou (2005a) suggested a rather "reverse" rationale by the examination of negative attitudes or consumers' "unconcern" towards environmental issues. In this study, this specific suggestion was adopted in order to understand better what inhibits the behaviour under examination. To focus on those negative attitudes that interfere in the relationship of universalist values and confine pro-environmental purchasing behaviour. To reveal whether people, who share universalist values are more likely to formulate less indifference, more concern, towards environmental issues and they are more likely to enhance pro-environmental buying. Further elaboration on our rationale behind the employment of environmental "unconcern" is provided in the next section.

Therefore, this paper aims to fill in a part of the "values-action" gap with regards to pro-environmental purchasing behaviour focusing - for the first time in the literature - on the mediating role of negative attitudes, namely environmental "unconcern" (see Figure 1).

**Theoretical Perspective**

Values have been long ago considered to be a more abstract concept than attitudes, to guide attitude formation and, through attitudes, to influence behaviour (Katz, 1960; Rokeach, 1968). The hierarchical system of values-attitudes-behaviour has inspired various research efforts over time (Homer & Kahle, 1988; Grob, 1995; McCarty & Shrum, 2001; Milfont et al., 2010; Lu, Chang & Chang, 2015; Jacobs et al., 2018). Recently Schwartz (2017) argued that in most instances, attitudes mediate the relationship between values and behaviour and, consequently, correlations between values and specific behaviours are rarely very strong. Mediation, on the other hand, requires (Kenny, 2018) three variables to be casually related, i.e. in the pro-environmental context: i) values should be related directly to behaviour, ii) values should be related to attitudes and iii) attitudes should be related to behaviour.

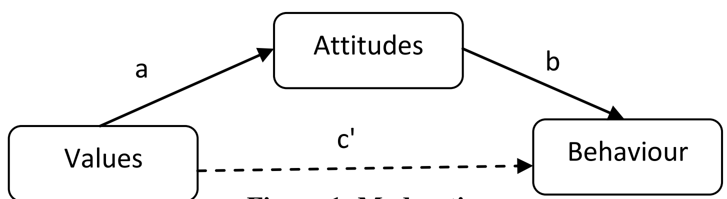

**Figure 1: Moderation**

*Values and pro-environmental behaviour*

There have been over the years various efforts (Feather, 1995; Allen et al., 2000; Pepper, Jackson & Uzzell, 2009) to justify and explain the impact of values on consumer behaviour (Roccas & Sagiv, 2010).

Schwartz's (1992) theory of human values defined basic values as trans-situational goals that vary in importance, serving as guiding principles in one's life, suggesting that each value has unique associations with other variables, e.g. attitudes and behaviour. Schwartz (1992) found that values can be grouped into 10 value domains that describe individual differences in value priorities. Schwartz's value typology has been tested and validated in many countries and cultures around the world (e.g., Schwartz, 1992; Schwartz & Sagiv, 1995; Bardi et al., 2009; Skimina & Cieciuch, 2018). The majority of applications demonstrated high cross-cultural consistency of values' meaning (Schwartz & Sagiv, 1995), i.e. the structure of values was found to be the same in different cultures and countries.

The conceptual and operational definitions of the Schwartz's value types has led to the suggestion that self-transcendence values (universalism and benevolence) are most closely related to environmental concerns and action (Thøgersen and Grunert-Beckmann, 1997; Thøgersen, 2009; Krystallis, Vassallo & Chryssochoidis, 2012). Universalism was found to affect environmentalism (Schultz and Zelezny, 1999) in the USA and environment-friendly behaviours in Denmark (Thørgesen and Ölander 2002). In Greece, Schwartz's Universalism has indicated direct, positive relationships with pro-environmental purchases (see: Krystallis et al., 2008; Tilikidou, 2013; Tilikidou and Delistavrou, 2014) and positive ethical consumption (Delistavrou and Tilikidou, 2012). Hence, in this study it was hypothesized that:

$H_1$: Universalism is significantly and positively related with pro-environmental purchasing Behaviour

*Attitudes and pro-environmental behaviours*

Attitudes towards the environment have been theoretically modelled and empirically found to predict pro-environmental buying behaviour (Fraj and Martinez, 2006; Abdul-Muhmin, 2007; Suki, 2016; Collins et al., 2007; Lee et al, 2014; Muralidharan, Rejón-Guardia & Xue, 2016). The moderate correlation between attitudes and pro-environmental behaviour has been indicated many times and the attitudes-behaviour gap has been commended by many research studies (Papaoikonomou, Ryan & Valverde, 2011; Krystallis et al., 2012).

The research effort to develop constructs of attitudes towards environmental protection has been concentrated on measures of positive beliefs and attitudes (e.g. Bamberg, 2003; Kilbourne & Picket, 2008; Akehurst et al., 2012). The effort to fill the aforementioned gap between attitudes and pro-environmental behaviours has inspired the development of a construct of negative attitudes, beliefs, and feelings towards environmental protection, namely the Environmental Unconcern scale (Tilikidou & Delistavrou, 2005a; 2014). Those endeavours aimed to capture consumers' true, closer to their real feelings, attitudes towards physical environment and environmental protection. It was argued that people are more likely to express themselves more honestly when they are asked if they are not that much concerned about environmental issues among other important issues of their everyday life. On the contrary, it is an open secret in the consumer behaviour research that the social desirability effect is able to inflate the respondents' answers in positive sentences.

Indeed, the Environmental Unconcern scale provided higher negative correlation coefficients with pro-environmental behaviours in Greece (Tilikidou and Delistavrou, 2005a, 2014; Tilikidou, 2007; 2013), than positive attitudes did in earlier studies in the same cultural context (Tilikidou, 2001; Tilikidou and Delistavrou, 2005b). Consequently, it is argued that fruitful outcomes are to be expected by the utilization of Environmental Unconcern in this study. Hence the following hypothesis was set:
$H_2$: Environmental Unconcern is significantly and negatively related with Pro-environmental Purchasing Behaviour

*Values and environmental attitudes*

Values are considered to be "desirable goals, varying in importance, that serve as guiding principles in people's lives" (Schwartz, 1992). It has been postulated that values are able to guide a person's attention to information that is relevant to these values. Subsequently, values affect the way beliefs and attitudes are built (Nordlund & Garvill, 2002; 2003; Stern et al., 1995; Steg et al. 2014). Self-transcendent values, i.e. universalism and benevolence (Schwartz, 1992) or biospheric-altruistic (Stern et al., 1995) values were found to be associated with environmental attitudes (Stern et al., 1995; Schultz & Zelezny, 1999; Stern et al., 1999; Collins et al., 2007; Perrea et al. 2014; Lee et al, 2014).

People particularly consider aspects that have important implications on their behaviour according to their most important values, while they are often tempted to over-evaluate any advantage and to under-evaluate any disadvantage of their perceived behavioural options in accordance to their important values (Steg et al., 2014). For example, in the case of pro-environmental behaviour, people with strong universal values may see strong benefits in complying with pro-environmental behavioural norms. As a consequence, people are more likely to have positive (or less negative) attitudes towards the behaviour that is dictated by the values they strongly endorse, or choose options that match with their principles (De Groot, Steg & Poortinga, 2013; Perlaviciute & Steg, 2014; Verplanken and Holland, 2002). Accordingly, it is expected people, who value equality, tolerance and unity with nature (universalism) to be less unconcerned about the environment. Hence, in this study it was hypothesized that:
$H_3$: Universalism is significantly and negatively related with Environmental Unconcern

*The mediating role of attitudes*

In sum, the literature review indicates that values affect consumers' perceived importance as well as the perceived likelihood of the relevant consequences of phenomena, issues and situations in general and/or in particular towards the physical environment. This process of attitudes formation affects in turn consumers' preferences and behavioural choices (e.g. Verplanken & Holland, 2002; De Groot et al., 2013; Steg et al., 2014).

The hierarchical causal system of values-attitudes-behaviour has been previously addressed and various studies have indicated that Schwartz's (1992) values mostly influence behaviour indirectly via beliefs, attitudes, and norms (e.g. Follows and Jobber, 2000; Nordlund and Garvill, 2002, 2003; Honkanen and Verplanken, 2004; Collins et al., 2007; Lee et al. 2014). For example, Lee et al. (2014) found that altruistic values (universalism and benevolence items) were related to environmental concern and perceived consumer effectiveness, while environmental concern and perceived consumer effectiveness were significant predictors of green purchase behaviour, suggesting that the effects of values on green purchase behaviour is fully mediated by attitudes. Based on the above theoretical perspective in this study, it was hypothesized that:

$H_4$: Environmental Unconcern mediates the relationship between Universalism and Pro-environmental Purchasing Behaviour

## Methodology

A survey was conducted with structured questionnaires administered through personal interviews. The probability sampling method was the one-stage area sampling (Churchill, 1995; Zigmund, 1991) and the sampling unit was an adult member of each household residing in the Municipality of Thessaloniki, Greece. The sample size was set to 375 and the sampling procedure resulted in 360 useable questionnaires.

Pro-environmental Purchasing Behaviour (PPB) was adopted from Tilikidou and Delistavrou (2014). The initial scale contained 22 items and after a dimensionality test (Hair et al., 2010) 11 items remained in the analysis. All PPB items were measured on a 5-point frequency scale with end-points 1=Never and 5=All the time.

Environmental Unconcern (EU) was adopted from Tilikidou and Delistavrou (2014). The initial scale comprised of 18 items and after a dimensionality test (Hair et al., 2010) 8 items remained in the analysis. All EU items were measured on a 5-point Likert scale with end-points 1= Absolutely Disagree and 5=Absolutely Agree.

It is to be noted that in the development of PPB and EU Tilikidou and Delistavrou (2005a; 2014) have followed the methodological implications of Churchill (1979), Spector (1992) and Robinson et al. (1991). For the first time in this study the scales were tested by means of structural equation modelling (SEM) using AMOS v20.

Universalism (U) was adopted from Schwartz's (1992) list of values. The variable includes 6 items and it was measured on a 5-point scale with end-points 1=Not at all like me and 5=Very much like me. The exact phrasing of the items used in the questionnaire per scale can be seen in Table 1.

## Results

### *Measurement model*

The measurement model validity was assessed with acceptable values in Goodness of Fit (GOF) measures and evidence of construct validity. The GOF values obtained ($\chi^2$=470.841, p<0.001, df=223, $\chi^2$/df=2.111, TLI=0.936, CFI=0.944, RMSEA=0.056) indicated that the measurement model fits the data very well.

Convergence validity was assessed by the examination of a) the factor loadings, b) the Average Variance Extracted (AVE) and c) the construct reliability (Hair et al., 2010). All factor loadings were higher or very close to 0.60 (Table 1). The AVE values calculated for each construct were all >0.50, which indicates adequate convergence (Fornell and Larcker, 1981; Hair et al., 2010). Construct reliability was calculated for each construct (Table 1) and all values were >0.70 indicating that all constructs demonstrate good reliability (Bagozzi and Yi, 1988; Hair et al., 2010). Discriminant validity was assessed by the comparison of the AVE values for any 2 constructs with the squared correlation between those 2 constructs (Table 1).

**Table 1: Measurement Model**

| | | *Universalism* | *Environmental Unconcern* | *Pro-environmental Purchasing Behav.* |
|---|---|---|---|---|
| | | **Factor Loadings** | | |
| U1 | He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life | 0.604 | | |
| U2 | It is important to him to listen to people who are different from him. Even when he disagrees with them he still wants to understand them | 0.730 | | |
| U3 | He strongly believes that people should care for nature. Looking after the environment is important to him | 0.885 | | |

| | | | | |
|---|---|---|---|---|
| U4 | He believes all the world's people should live in harmony. Promoting peace among all groups in the world is important to him | 0.685 | | |
| U5 | He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society | 0.724 | | |
| U6 | It is important to him to adapt to nature and to fit into it. He believes that people should not change nature | 0.726 | | |
| EU1 | To be honest I don't feel that environmental problems affect my personal, every day life | | 0.786 | |
| EU2 | I have never been seriously concerned about issues such as ground water and sea pollution | | 0.850 | |
| EU3 | I don't think that I have anything to do with the destruction of animals or plants | | 0.609 | |
| EU4 | The environmental policies of the main political parties is not the main issue I consider when deciding how to vote | | 0.593 | |
| EU5 | I do not think we should sacrifice economic development just to protect the environment | | 0.813 | |
| EU6 | More money to the environmental protection means less money for jobs | | 0.595 | |
| PPB1 | I choose the environmentally friendly alternative of a product, if there is no significant price difference | | | 0.778 |
| PPB2 | I choose the environmentally friendly alternative of a product, if there is one, regardless of price | | | 0.762 |
| PPB3 | I try to find eco-label products | | | 0.743 |
| PPB4 | I would change my usual detergent brand for another, if I knew for sure that it is friendlier to the environment | | | 0.696 |
| PPB5 | I prefer to buy recycled paper stationary | | | 0.705 |
| PPB6 | I prefer the recycled paper products, even if they are more expensive | | | 0.719 |
| PPB7 | I prefer organic pasta | | | 0.637 |
| PPB8 | I prefer organic clothing | | | 0.602 |
| PPB9 | I buy products in reusable containers | | | 0.748 |
| PPB10 | I try to avoid products containing genetically modified organisms (mutants) | | | 0.694 |
| PPB11 | In case I am about to buy electric equipment, I am interested in ascertaining it is environmentally friendly | | | 0.710 |
| **Average Variance Extracted (AVE)** | | 0.534 | 0.513 | 0.505 |
| **Construct Reliability (CR)** | | 0.923 | 0.861 | 0.925 |
| **Correlations (squared correlations)** | | | | |
| ***Universalism*** | | | -0.592 (0.351) | 0.546 (0.298) |
| ***Environmental Unconcern*** | | | | 0.646 (0.417) |

The AVE values of all two-construct combinations were greater than the respective squared correlations of each combination, indicating discriminant validity of all latent constructs (Hair et al., 2010). Finally, nomological validity was tested by the examination of the correlations among the constructs. Statistically significant correlations in the hypothesized direction were found for all pairs of constructs (Table 1). In conclusion, the measurement model was judged to be valid, so examination of the structural model followed.

*Structural Model*

In order to test the mediating role of EU, the relationship between U and PPB should be firstly established by conducting simple regression. Indeed, the analysis indicated a statistically significant causal relationship. The resulting equation is: PPB= -9.68 +0.477*U. U was found able to explain 22.5% ($R^2$=0.225) of the variance in PPB. This result led to the acceptance of $H_1$.

The other two prerequisites of mediation, i.e. the direct effects of U to EU and of EU to PPB were tested with the structural model of SEM. The structural model was run and the GOF values ($\chi^2$=470.841, p<0.001, df=223, $\chi^2$/df=2.111, TLI=0.936, CFI=0.944, RMSEA=0.056) indicated that the structural model fits the data very well. Statistically significant dependence relationships (p<0.001) were found between U and EU (β= -0.592); between EU and PPB (β= -0.497); and between U and PPB (β=0.252). These results led to the acceptance of $H_2$ and $H_3$. The squared multiple correlation ($R^2$=0.458) found indicated that 45.8% of the variance in PPB is explained by the interactive effect of EU and U.

The main hypothesis in the mediation analysis of this study is to see whether the effect of the independent variable (U) on the outcome variable (PPB) can be mediated by the mediating variable (EU). The significance of the indirect effect of U on PPB was tested with the Sobel test and the bootstrap method. The Sobel test was found to be significant (z=5.553, p<0.001). The bootstrap method indicated the confidence intervals (0.496-0.923) at p<0.001, which did not include zero coefficient. These results indicate that the indirect effect of U on PPB through EU is non-zero and statistically significant. Hence the conditions of mediation were met so $H_4$ can be accepted (Table 2).

**Table 2: Mediation analysis results**

| | U→EU | EU→PPB | U→PPB | Bootstrapping | | |
|---|---|---|---|---|---|---|
| | | | | Lower | Upper | Sig. |
| Unstandardized Direct effects | -1.157 | -0.593 | 0.589 | | | |
| Standardized Direct Effects | -0.592 | -0.497 | 0.252 | | | |
| Unstandardized Indirect effects | | | 0.687 | 0.496 | 0.923 | p<0.001 |
| Standardized Indirect effects | | | 0.294 | | | |
| Unstandardized Total effects | | | 1.276 | | | |
| Standardized Total effects | | | 0.546 | | | |
| $R^2$ | 0.458 | | | | | |

**Discussion**

The mediating role of attitudes, namely Environmental Unconcern in the impact of values, namely Universalism on Pro-environmental Purchasing Behaviour was revealed. Partial mediation was indicated as the direct effect between values and behaviour remains statistically significant after the mediation of attitudes. The prerequisites of mediation, namely the casual relationships between values and behaviour, values and attitudes and attitudes and behaviour were met as the indicated direct effects were all significant. The direct, positive, effect of universalist values on pro-environmental buying choices is in line with previous, similar results in Denmark (Thørgesen & Ölander 2002) and in Greece (Delistavrou & Tilikidou, 2012; Tilikidou, 2013; Tilikidou & Delistavrou, 2014). The direct, negative effect of Environmental Unconcern on Pro-environmental Purchasing Behaviour is in line with previous results in Greece (Tilikidou & Delistavrou, 2005; 2014).

Consistent with Schwartz's (2017) suggestions, the hypothesized hierarchical impact of values on behaviour through the formulation of the relevant attitudes was verified. The results of this study are in line with previous studies in this respect (e.g. Nordlund & Garvill, 2002; Honkanen & Verplanken, 2004; Collins et al., 2007; Lee et al. 2014). The mediation of Environmental Unconcern in the impact of Universalism on Pro-environmental Purchasing Behaviour increased the explained variance of the dependent variable by 23.3% (45.8% vs. 22.5%). The impressive increase of variance explained in behaviour verified the assumption that negative attitudes are able to guide us to a considerable depth of the truth that is hidden in consumers' minds. It is postulated that more fruitful outcomes can be revealed if we examine what inhibits ecologically friendly behaviours instead of just trying to find out consumers' motivation. This path seems promising with regards to the desired minimization of the usual consumers' tendency to provide socially desirable replies in a self-report survey.

**Conclusions and Implications**

It can be concluded that people, who show respect towards other people's rights and towards nature (high universalism values) are more likely to formulate weaker negative attitudes towards the environmental protection or stronger positive attitudes and consequently act upon their values-attitudes link. In other words, they are more likely to be less environmentally unconcerned and engage in certain pro-environmental purchasing behaviours more frequently than their counterparts.

Companies delivering ecological offerings should target consumers, who hold high universalism values, while their efforts to promote ecological buying should primarily aim to decrease unconcern towards environmental protection. Their communication strategies should aim at building a brand image based on values of equality, tolerance and unity with nature, which may hopefully diminish people's indifference towards environmental problems and motivate friendlier to the environmental protection buying choices.

## Limitations and Future Research Suggestions

Although this research study was conducted in a random sample, this sample was selected from the population of just one city of Greece; accordingly, generalization of results may be an issue. Larger, more country-representative samples should be pursued in future research. The main variables of this study, namely Pro-environmental Purchasing Behaviour and Environmental Unconcern were developed and examined solely in Greece. Thus, generalization of their conceptualization and operationalization is quite unsafe until they are tested in other areas, too. The values-attitudes-behaviour link was verified by the results of this study with the utilization of Schwartz's (1992) Universalism. Other constructs of values, e.g. Ingleheart's (1977) post-materialism or materialism, could be incorporated in future studies in order to examine any potential contribution in better understanding of the links between values-attitudes-behaviour.

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# Smartphone users' preferences: What is the role of personalization and shareability as mobile application attributes?

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The rapid growth of smartphones and mobile applications usage worldwide torched a new marketing era, where companies strive to reach their consumers through mobile technology. This trend has opened new possibilities and at the same time has created several challenges for companies to reach consumers and build relationships with them, via customized communication. It's critical for every company nowadays to adopt its general marketing strategy to this technology revolution and furthermore to develop unique mobile applications that every costumer will use (Rowles 2014).

Mobile is considered as the new desktop for consumers (Walter 2014). According to Hoelzel (2014), the time spend by mobile users in applications this year was 50% higher than 2013 and social media applications dominated the app category. IBM is about to launch mobile applications which provide contextual responses that attend to variables like weather, age, sex and location (itbusinessedge 2014). According to wearesocial.sg (2014), social penetration (how much of the population is using a social network on a monthly basis) is around 40% across the globe and growing. By exploiting user data and algorithms, mobile application developers have made it possible to foresee individual user needs and tailor mobile ads and app content accordingly. Functionality of smartphones has been dramatically increased by the personalized services that app developers' offer. These services make it easier to automate tasks across mobile applications (Danova 2014). All recent developments demonstrate the integral role of networking (share-ability) and personalization characteristics.

**Share-ability and personalization as features of mobile applications**

Share-ability and personalization as designing features of apps can be pivotal to untangle consumers' application related preferences. Share-ability is the attribute of mobile applications which allows users to create and exchange user-generated content (Kaplan 2012). Personalization in mobile applications refers to design characteristics which enable users to individualize the application and adapt it in their preferences and interests (Gaetano et al. 2007). Applications fit users' needs and actually "behave" like users want them to do. This users' need covers not only personalized content but also control over data stored, shared or used for further actions. The option of turning localization on or off is true personalization and it's widely used nowadays from mobile application developers. On the other hand an individual background or personal categories are just convenience for users.

A research design was created and implemented in order to explore the association of the two aforementioned factors with the consumers' application preferences.Share-ability and personalization can be sometimes considered as complementary attributes of mobile applications. Most of the new applications capitalize on the user's intention to share personal information with the application, in order for it to be more useful to the user. Moreover, most of the applications enable users to share content deriving from users' personal information. This is possible either by using well known social media as Facebook or by creating application related virtual communitieswhere users can communicate with other users and share content. One way or another, smartphone users are overwhelmed by millions of applications and the list of the most downloaded applications proves that users choose applications which enable personalization and share-ability. Facebook application, Twitter application, WhatsApp messenger are applications which are based on the networking ability. But these largely downloaded applications also require users to share personal information in order to improve their using experience. Other successful applications like Shazam or Run keeper (application for jogging), or diet related applications (i.e MyFitnessPal) and various other applications, are based on users' willingness to share personal information. They also give them the option to share related content to social media. Candy Crash Saga and Fruit Ninja, two of the most famous games in smartphones, are actually based on the ability of users to share content with each other and communicate in order to proceed in the game. Actually, most of the games in smartphones are designed to be shareable and sometimes even personalized. It is clear that the most downloaded applications worldwide are based on the attributes that this study examines.Moreover the market is cluttered with millions of applications. According to Danova (2014), mobile device owners pick the applications they use based primly on the application's ease of use, convenience and efficiency.Personalization and share-ability as designing attributes can improve these aspects which customers seem to value highly. A personalized application can make things simpler for the user and surely more effective as the application runs based on user related information. Networking ability also helps in that direction. So, besides other design characteristics, personalization and share-ability seem to play an integral role in the mindset of mobile consumers.

On the other hand, the synergy of share-ability and personalization is filtered by the privacy concerns of users, creating a paradox which makes this study highly interesting. Users may choose applications which are more personalized and tailored into their needs, applications which also give them the option to network. But to what extend are they afraid about the information they share and how do these factors influence their attitude towards the application? Smartphone users may identify great values in using customized mobile applications and share related content with others, while on the other hand users'privacy concerns about disclosing personal information in exchange for promotional messages may turn them away. This personalization and share-ability versus privacy predicament mirrors a contradiction where consumers offer their private information with subjective expectations that the application will notindiscriminately share their personal information. This subjectivity can be crucial to user's preferences and that is the reason why the privacy variable is considered in this study the most interesting and relevant moderating variable. Other possible moderating variables such as price, can be manipulated by marketers by applying different pricing policies, but the subjectivity of the privacy variable in that case and the aforementioned paradox, is highly intriguing and needs to be examined. In the same way technical characteristics such as battery usage of the application may have moderating effects, but again IT problems can be encountered by improving technology.

The focus of this research is to create insights concerning smart-phone users' preferences. Specifically, this study examines the effects that personalization and share-ability –as mobile application features- have on smart-phone users' preferences. Both attributes are broadly used today by application developers and marketers. In this research the effects of personalization and share-ability are investigated both separately and in conjunction. Moreover, the moderating effects of users' privacy concerns are examined, as previous studies (Xu et al. 2011, Sutanto et al. 2013) emphasize the existence of a paradox between personalization and privacy concerns. Specifically, this study's research questions are: How personalization and share-ability influence mobile user's liking of the application? Do these factors also influence users' eagerness to recommend the application to other users and share their experience into related communities? Do personalization and share-ability have an impact on users' intention to make in-app purchases? And finally do privacy issues have a moderating effect and to what extend? Liking of the application, eagerness to recommend and intention to make in-app purchases were the constructs used in this study in order to measure smartphone users 'preferences.

## Literature Review

### Mobile commerce

During the last decade the mobile commerce is rapidly growing, making companies adjust their marketing strategy. The rapid growth of mobiles forced marketers to implement mobile marketing tactics. Kaplan (2012) defines mobiles as: "a mobile device is any tool that allows access to a ubiquitous network beyond one specific access gate. The most common example of a mobile device is a mobile phone, but a netbook also counts if it can access different types of wireless networks. According to Benou and Bitos (2008), "Mobile commerce or m-commerce is defined as any activity related to a commercial transaction (or a potential one)—a transaction that includes a monetary value—and is conducted via wireless and mobile communication networks and uses wireless and mobile devices as user interface". Shankar and Balasubramanian (2009) define mobile marketing as "the two-way or multi-way communication and promotion of an offer between a firm and its customers using a mobile medium, device or technology".

Nowadays, mobile devices are a constant companion to the consumer. Consumers regard their mobile personal and not shareable. It can also be used by them as a gateway to establish an intimate relationship with retailers.For

Shankar et al. (2010) Millennials, Road Warriors and Concerned Parents are the key mobile user segments. Shankar et al. (2010) also note that the portable function of mobiles makes them a supplementary channel for virtual e-tailing as well as physical retailing. The mobile channel offers the opportunity to retailers to push sales promotions and access consumers instantly. Marketers can capitalize on that opportunity by exploiting mobile applications.

Mobile applications are being used worldwide to perform a variety of tasks such as access social networks, play games, listen to music etc. Applications can be offered either for free or for a price. Some consumers are willing to pay more for additional features in higher quality apps, whereas some consumers only download free versions of apps with limited features. Rowles (2014) suggest that there are four types of mobile applications: applications resident on mobile devices, mobile client-server applications, mobile applications operating in browsers, and PC browser applications. Gupta (2013) points out the emergency of the applications' design in branding perspectives. He argues that the large amount of time that smartphone users spend with applications (for around 15 and only few of them are applications of branded products), raises questions about the success of the marketing real estate on users' mobile screens. Gupta also states that in order to engage these consumers, marketers should create apps that add value to consumers' lives and enhance long-term engagement with their brands.Benou and Vassilakis (2010) produced a conceptual framework for context in mobile commerce. Context exploitation is very important in marketing terms. Their framework may be useful in general for the development of innovative services with added commercial value and higher usability, but focuses on context-related parameters, such as sensing services, derivation methods and representation structures. Their study though refers the personalization attribute (adaptive user interfaces) and the importance of context which revolves around the user and his preferences and points out the influence of personalization concerning content adaptation, through information filtering and exploiting recommender systems.

To our knowledge only few of previous studies focus on the factors influencing mobile users' behavior. Han et al. (2014) quantify the preference and satiation levels of different application categories using individual-level mobile app time-use data. Nohlen et. al. (2010) investigate the acceptance and success factors of mobile applications related to health care by means of empirical studies involving customers and companies and introduce a prototype of mobile processes for initiation efforts.

Ghose's and Han's (2014) research concerning the preferences of mobile users is very interesting as they explore users' preferences in mobile applications and not in mobiles in general. They suggest that "demand increases with the app description length, number of screenshots, in-app purchase option, app age, version age, number of apps by the same developer, number of previous versions, cross-chart listing, cross-platform listing, and volume and valence of user reviews. On the contrary, app demand decreases with file size and in-app advertisement option".They also investigate the effects of price reduction strategy and propose large discount as a means for application developers to increase their revenues. The econometric model they use is highly interesting but doesn't measure the effects of personalization and share-ability as mobile application features

Shankar et al (2010) report various attributes as adoption enablers, by constructing a conceptual framework of mobile marketing. Networking, utility/range of applications (including location-based benefits), price, ease-of-use, and trust/privacy/security are the most important enablers in their study. The study concludes that relevance of content, ease of use, and personalization are key drivers of adopting innovative applications and that mobile marketing directly impacts all the five stages of customer decision-making. Nevertheless, this study is limited as it only reports some key attributes but doesn't examine extensively the influence of these attributes on consumers' preferences.

In general, the studies of Shankar and Balasubramanian (2009), Wang and Li (2011) and Shankar et al. (2010) reveal that the attributes which influence mobile users' attitudes can be categorized into technical characteristics related to the mobile's performance and capabilities and intomore broad characteristics not related to the technical aspects of the application. Technical characteristics that impact users' preferences can be battery usage, ability to be used into crowded and noisy spaces, single- or two-handed operation, platform used, connectivity (always logged in into a mobile network?), CPU usage, loading time, freezing point etc. On the other hand, fundamental factors which can be implemented as designing characteristics and therefore form mobile users' attitudes are:perceived ease to use, effectiveness, convenience, price, networking ability, ad free experience, security, personalization, localization, enjoyment, perceived utility, inertia, distrust of marketing, limited knowledge of users, content relevance, social and economic factors. All these studies refer to mobile devices and services and don't examine mobile applications specifically. Consequently, future studies focusing on mobile application drivers of preferencesare needed. This study provides useful findings concerning share-ability, personalization and security as designing characteristics of applications. Technical characteristics are not addressed, as these characteristics are not strictly connected with marketing decisions but are mainly associated to IT decisions and capabilities.

**Personalization**

Gaetano et al. (2007) state that customers are highly heterogeneous in willingness and ability to interact with firms in personalization processes. This makes consumers confused and leads companies to invest high amounts without results. Their study introduces a general conceptual framework of e-customer profiling and online personalization which focuses on four key drivers: value, knowledge, orientation and relationship. This conceptual framework may have implications on the mobile applications personalized design. Moreover, an intriguing-personalization related- fact is that while some customers enjoy added value from interaction with firms and product co-creation (Prahalad and Ramaswamy 2004), others may become frustrated because of low expertise and involvement of firms (Bendapudi and Leone 2003).

Bellman et al (2011) highlight in their study that the high level of user engagement that mobile applications create, especially when the generated content is relevant to users and the positive impact, they have on brand attitude and brand purchase intention. The results of their study show indeed a positive impact and a shift in purchasing intentions, because informational/user-centered applications can establish personal connections with the brand. Consequently, personalization as a designing attribute is implied by this study.

Kaplan (2012) examines the issue of personalization regarding the different types of mobile applications and challenges that personalization may not be suitable for each case of the four dimensions of his conceptual framework which is based on the degree of consumer's knowledge and the trigger of communication. He proposes the use of personalization attribute only for the designing of applications which are used by the so named "patrons" (high knowledge/pull). This suggestion covers situations where customers actively give permission to be contacted and provide personal information about themselves. Kaplan (2012) also links personalization with share-ability in his study. He states that mobile social media users are a specific form of patrons in the mobile marketing classification and proposes four types of social media applications users: quick timers, slow timers, space timers and space locators. According to Kaplan (2012) "mobile social media are a group of mobile marketing applications that allow the creation and exchange of user-generated content". Companies engaging in mobile social media will get context related to their customers' profile (i.e. current geographical position in time or space). Additionally, these users agree to receive information from the company, for example by 'checking-in' at certain locations.

**Share-ability**

Tsai et al. (2009) define mobile networking as "a form of social networking where individuals of similar interests or commonalities converse and connect with one another using the mobile phone. Similar to Web-based social networking, mobile social networking occurs in virtual communities". The share-ability attribute of mobile applications can be very important as social media have been shown to be particularly powerful in generating viral marketing phenomena (Kaplan and Haenlein 2011) and supporting new product launches (Kaplan and Haenlein 2012). As a result, social media applications have become an integral part of companies' communication strategy. Kaplan (2012) suggests the use of 4 I's in social media application (individualize, involve, initiate, integrate), but doesn't actually measure the effect of the networking ability on users' attitude.

Phang et al. (2014) also report the emergence of social media applications and highlight that the number of mobile social media users will grow to 1.3 billion by 2016. They examine the commercial viability of social media applications using three types of share-ability features (profile-based, spatial-based and temporal-based) and propose a conceptual framework of viability based on the rate of message response, the quality of message response and the spread of a message. Their study gives important technological design considerations to fulfill the needs and interests of the smartphone users but doesn't examine whether mobile users' attitude is influenced by the existence of share-ability as an attribute of their mobile applications or not. Similarly, Milluzo et al. (2008) focus on the technical design aspects of a social networking mobile application (named CenceMe), but still don't examine the share-ability attribute as a pivotal factor of mobile application preferences.

**Privacy issues**

Concerning the privacy variable, a survey conducted by the PunchTab marketing firm illustrates that privacy has a significant role in mobile marketing. Specifically, more than 50 percent of survey participants were concerned about privacy issues related to mobile tracking while 27 percent would likely allow mobile tracking if given incentives (Barris 2014). The findings reveal that consumers want to be marketed to on their own terms, they want relevant and time specific messages and they want to be rewarded with offers and exclusive, targeted alerts which implicates personalization designing in applications (Barris 2014).

Heyman et al (2014) categorize privacy related issues in two types: The first type, “privacy as subject” is summarized as the management of information about one’s identity. The latter type of privacy is mentioned social privacy. Pierson and Heyman (2011) indicate the conflict between networking and privacy. They illustrate the (dis)empowering characteristics of social media in relation to privacy, by examining the case of cookies and the kind of dataveillance practices these corporate profiling techniques enable. The research concludes that by underlying the benefits of social media and networking, marketers can make users overlook their disempowerment.

**Personalization and privacy**

Sutanto et al. (2013) examine thoroughly in their survey the relationship between personalized design and privacy related issues. Personalization is strongly associated with the user’s personal information to deliver individualized services, which in turn raises the user’s privacy concerns. The study also introduces an IT solution which delivers a personalized service but doesn’t share users’ personal information with third parties. Sutanto et al. (2013)conclude that personalization leads to higher process gratifications, but not content gratifications and that users of personalized, privacy-safe application not only engage in higher application usage behavior, but also save adverts more frequently. This study gives great insights of the personalization – privacy paradox but doesn’t include the share-ability attribute and thus the interaction effect of these three factors on consumer’s preferences.

Sheng et al. (2008) indicate that privacy concerns have a negative impact on online users’ intention to adopt personalized services, but no impact regarding non personalized services. Their study’s results are related to the e-commerce in general though and depict that personalization triggers privacy concerns, which can, in turn, influence users’ intention to adopt u-commerce applications.

Xu et al. (2011), approach the personalization-privacy paradox on a location-aware marketing prism. This study is very interesting because users’ decision to enable mobile applications use their location, is a fundamental aspect of the personalization attribute and therefore involves important implications for marketers. Xu et al. (2011) use different personalization approaches (covert versus overt), to different individuals, in an understudied LAM environment. Their conceptual model includes personalization, privacy and covert/overt personalization approach as factors influencing the participants’ willingness to have personal information used in location aware marketing, which is a restricting context. This study’s results show that personalization can override privacy concerns for both covert-based and overt-based location-aware marketing, when personal characteristics are interfering. In general, consumers accept the usefulness of location-aware marketing only when advertising messages are perceived to be relevant and customized to their context. This implicates the importance of personalization and individualistic approach, in mobile applications’ designing.

**Share-ability and privacy**

Sadeh et al. (2009) explore the privacy and share-ability relationship by reporting their results about PEOPLEFINDER, an application that enables cell phone and laptop users to selectively share their locations with others (e.g. friends, family, and colleagues). Adapting a whitelist approach in their study, the results reveal that as people gain a better understanding of the capabilities and limitations of the application, they get more eager to let other see their location, and realize that other people are not asking for their location as often or as intrusively as the users initially feared. The results are interesting but are limited to the location perspective of both attributes.

Juste et. al (2010) approach the issue by exploring the opportunities that VPN (Virtual Private Networks) offer. They propose a specific architecture where social connections established through user friendly Web-based infrastructures, can effectively lead to override the conflict between social networking and privacy.

Heyman et. al. (2014) categorize privacy in two types (object and subject as an epitome of the commodification of users. They investigate which form of privacy is most prominent in privacy settings of online social networks and attempt todiscern what kind of privacy is more controllable for users. They conclude that their model allows the free flow of information but is not appropriate for the less aware and literate social media users. Their research also indicates that users are granted more options in controlling their interpersonal information flow towards other users than third parties or service providers.

Last but not least, Anderson and Stajanto (2013), address the conflict between social networking and privacy. They state that online social networks (OSN) and application developers might have commercial relationships that contractually forbid developers from using private user data in certain ways. If developers violate these contacts the firms' reputation is at stake as users get highly dissatisfied by the violation of their privacy. The paradox is that this doesn't seem to decrease user counts or real value. Anderson and Stajanto (2013) also reveal that in 2010, developers of some of the most popular and most trusted OSN applications overridden users' privacy data and provided sensitive personal information directly to advertising and internet tracking companies. Oddly enough though,the revelation of this action hasn't dissuaded millions of users from playing Farmville and the damage to Zynga's reputation (owner of the game) was minimal. Anderson and Stajanto (2013) suggest that running applications primarily with OSN-controlled resources would change such incentives from the part of developers. Finally, Anderson and Stajanto (2013) examine the conflict between social networking and privacy under the prism of advertising choices, paying for privacy and performance. They propose an architecture and an open source prototype of a semi-centralized OSN and application platform called Footlights. This application, as they contend, allows users not to trust any third party with their private data: "users might rely on third parties to perform a task or even verify that it's been performed correctly, but they need not expose themselves to risk of harm from said third parties".

**Research design**

Based on the research of previous studies, four research questions will be investigated in this study. The variables explored in this studyare: personalization as a mobile application attribute, share-ability as a mobile application attribute, privacy issues and concerns of smartphone users as a possible moderator, mobile application users' liking of the applications, mobile users' eagerness to recommend the application to other users and finally mobile users' intention to make in-app purchases.A total of 132 people participated in our survey. All of the participants were students of the Erasmus University of Rotterdam, as this specific sample was our target sample. Participants were shown different interfaces of a mobile application that the Erasmus University of Rotterdam is ready to launch for its students, named EURapp. So participants were randomly exposed to mobile application interfaces which incorporate or not share-ability attributes and to mobile application interfaces which incorporate or not personalization attributes.

To empirically assess the influence of personalization and share-ability on smartphone users' preferences, the possible moderation effect of privacy issues and in order to investigate the existence of causality in the aforementioned relationships,four different interfaces were used: The "personalized interface", the "share-able interface", the "personalized and share-able interface" and the "regular interface". Participants' random assignment to different conditions helped control for extraneous variables and minimize the validity threats.

Concerning the "personalized interface", previous studies reveal that marketers should focus on consumers' personal information instead of their indicated product preferences. Consumers lack of realistic insights into their own product preferences, as these preferences seem to be undeveloped and unstable (Avery et. al. 2010). Hence,wedecided to incorporatepersonalization in the "personalized interface"based on the personal information elicited from consumers. At first, the "personalized interface" asks for user's private information, such as their email, their student ID etc. It also gives them the opportunity to choose whether the location services are enabled when using the application or not and whether the notifications are enabled or not. The "personalized interface" is designed in a way that users can add a profilepicture of them and a wallpaper. The interface informs them for their average grade and the courses they have completed. Finally, this interface provides them access to Sin online, but they are also able to skip that choice as they can access relevant announcements, their subscriptions, their schedule, their personal channel and the Erasmus e-shop using this interface. Figure B reveals the "personalized interface". For the "share-able interface" a hypothetical new online community was introduced. EURcommunity, appears in the designing of this interface. At first, users choose to sign in the application either by using their LinkedIn account or their EURcommunity account. This community is acquainted to the participants, as new interactive community of the university, in which students can exchange valuable information and interact. This community capitalizes on the opportunities which social media offer to marketers and gives participants the sense that the interface enables them to create and curate related content (Hootsuite 2015).After the user signs in with either of the two ways, he can interact with his fellow students using the EURcommunity platform. The interface depicts some recent issues discussed between the members of the community. Finally, the "normal interface" was designed to seem simple and familiar to SIN online (the Erasmus University intranet). In that way users will perceive the normal interface to be the same with the Erasmus university SIN-online page.After their random allocation to the different conditions, participants were asked to fill in a questionnaire which included share-ability related items, personalization related items and privacy related items. The study employed a structured questionnaire and the scales were Likert scales and semantical differential scales. (Malhotra and Birks 2007).

**Main findings**

As described before, this study's goal was to unveil smartphone users' preferences concerning two specific mobile applications' designing attributes. The main findings of the study are revealed and discussed below. The studies of Gaetano et al. (2007), Brusilovsky and Tasso (2004), Xu et al. (2011) and Sutanto et al. (2013), suggest that personalization (as a designing attribute of mobile applications or websites etc.) can have a positive influence on users' receptiveness and general attitude. All scholars agree that if personalization is implemented in an appropriate way, then it can have a positive impact on users' opinions and on their behavior. The resultsshow that personalization has significant direct effects on the dependent variables and seems to make a mobile application more preferable. When a mobile interface is tailored into users' needs and the mobile application is individualized, then smartphone users like the application more. They are also more willing to talk about the application and suggest it to others. Last but not least, it is most probable that a personalized application will lead its users to buy something in the future via the application. A possible explanation for these results, is that when the mobile application is cut into the user's needs and offers user the ability to have personalized experiences, then the user gets motivated and engaged to use the mobile application. The application itself may be perceived more useful as it becomes relevant and more functional.

On the other hand, even though there are no previous studies concerning share-ability and mobile applications in specific, Phang et al. (2014) and Milluzo et al. (2008) suggest that under certain technical designing choices, share-ability can impact message response in general. Kaplan (2012) also highlights the importance of share-ability into creating a communication channel between brands and consumers. As consumers get more engaged when they are given the opportunity to converse with the brand and to generate related content, this study'sfindings imply a positive influence of share-ability onourdependent variables. Again, the results clearly propose that share-ability have significant direct effects on the dependent variables, and it can increase smartphone users'liking of the application, their eagerness to recommend the application and the probability of them making in-app purchases in the future. A possible explanation is that smart-phone users prefer to be constantly connected with the online communities. The humanneed of belonging, as proposed by Maslow's pyramid, is also translated and incorporated into that perspective and smart-phone users want their mobile applications enable them to share their thoughts/achievements/reviews etc. with their social circles.

Concerning the conjunction of personalization and share-ability, the study of Kaplan (2012) states that mobile social media users are a specific form of patrons and suggests that these two attributes can have positive effects based his classification of social media users. Furthermore, based on the findings of Sadeh et al. (2007),we expected that a personalized mobile application which also enables users to share content with others, will be perceived as more beneficial and will positively shape users' preferences. However, the results ofourstudy suggest that when both two attributes are present to a mobile application, then users' liking of it, eagerness to recommend it and intention to make in-app purchases is decreased compared to when only one attribute is present and not both of them. A possible interpretation of this result is the existence of a ceiling effect. Even so, the effect of the two attributes synergy on the dependent variables is still positive and it appears that smart-phone users prefer a mobile application which enables the two features to an application which doesn't enable any of them.

Finally, no moderating effect of smart-phone users' privacy concerns was found. This means that regardless if a user is highly concerned or not concerned at all about keeping intact his privacy status, the effects of both personalization and share-ability on users' preferences are the same.There were no significant moderating effects of privacy concerns inouranalyses. This result contradicts the previous studies of Sutanto et al. (2013) and Xu et al. (2011), which both point out the existence of a paradox between personalization and privacy concerns and offer some IT solutions in order to address it. In addition, ourresults are also not in line with the research results of Anderson and Stajanto (2013), Besmer et al. (2009) Juste et al. (2010). Each one of them reveal the existence of a moderating effect from users' privacy concern. A possible interpretation for this result might be the fact that students may not believe that a university can trespass their privacy and take advantage of a student related mobile application.Another possible explanation of the specific result, can be the fact that none of the previous studies examined the synergy of personalization and share-ability. Furthermore, none of them focuses on mobile applications. As a result, it might be possible that smart-phone users' privacy concerns don't contradict with personalization and share-ability features, as they do when these features are applied in websites' designing or in social media platforms' designing.

## Managerial implications

Nowadays, companies are getting a huge amount of data and it is critical to them not only to provide users an appealing and relevant mobile application, but also to secure away to obtain valuable information for them without violating their privacy. Smartphone users are connected to their mobile devices and it is important to them to feel that they are not being tracked. Therefore, marketers cannot afford for consumers to have sense of lack of control for a device that is so personal.

In light of the empirical findings of this study concerning the preferences of smartphone users about mobile applications, various stakeholders can be alerted: marketers (advertising companies and merchants), mobile application developers and mobile phone providers.

For marketers engaged in mobile marketing,ourstudy recommends they should focus on the designing of mobile applications and not onthe paradox between privacy and personalization and share-ability. The results of this study provide marketers insights about the way smartphone users evaluate the existing applications. It is clear that users prefer applications which incorporate either personalization or share-ability as designing features. It is a challenge for marketers to differentiate these design characteristics from their competitors and optimize them. If this differentiation and optimization is successful, then a competitive advantage can be acquired. Personalization as a designingattribute offers marketers the opportunity to access valuable personal information about their customers and transfer this knowledge to other marketing functions. Consequently, marketers should invest more on marketing analytics in order to analyze information effectively and incorporate this valuable feedback into the general marketing strategy of the company. Personalized mobile applications seem to be preferred by users, as users are motivated to achieve self-oriented functions. A mobile application which serves users' needs, can shape their behavior and turn them into loyal customers of a company. It is also interesting the fact that mobile users' are not concerned about the presence of the localization feature in the personalized interface. It seems that when it comes to mobile applications, consumers are more willing to disclose their exact location in order to get individualized services. Marketers can capitalize on this fact, and get useful insights from users' location.In addition, share-ability can establish a solid communication channel with customers. In that way many opportunities are raised in marketing communication perspectives. Mobile applications which successfully incorporate share-ability, can be turn into a low cost medium of exposing users to company related messages. This exposure can be subliminal and creative. On the other hand, the conjunction of personalization and share-ability doesn't seem to have a stronger influence on smartphone users' preferences. This means that marketers may have to choose which of the two attributes is more important and suitable for a mobile application. Lastly, the absence of a moderating effect from the privacy concerns of the users, implies that marketers are facing a big opportunity. As the effects of personalization and share-ability are not moderated by the privacy concerns of users, then marketers can built on this fact and improve furthermore the aforementioned features without being afraid that user might feel that their personal lives are being violated. The paradox that this study wanted to examine, is proven to be not important for marketers to address, when it comes to personalized and share-able mobile applications.

Likewise, for mobile application developers the results suggest that they should focus even more on the improvement of these two specific application features. Developers face mounting pressure to address information privacy issues, butourstudy states the need of optimizing personalization and share-ability as features and disproves the urgency of addressing the privacy concerns of users.

Finally, mobile phone providers spend time and energy into accusing each other of violating users' privacy in order to win more buyers for their handsets.ourstudy suggests providers should focus on developing sophisticated personalized and share-able services by enhancing their handsets' platforms and operating system architectures in terms of these features.

## Future Research

Since personalization and share-ability are two broad designing attributes, future research can focus more deeply on the various aspects of these two attributes. For example, different interfaces which incorporate the same attributes- but in a different designing way- can be examined, regarding their effects on mobile users' preferences.It is interesting how personalization and share-ability can be implemented in different ways and which way is the optimal one in order to form mobile application users' preferences.

Furthermore, the generalizability of the findings of this study could be explored by testing similar hypotheses under different circumstances that overcome the existing limitations. Therefore different sample could be used for the same experiment. It would be also interesting to explore how the effects of this study's variables differentiate based on the demographic characteristics of the users (i.e. based on their income).

Finally, a lot of research can be conducted concerning the effects of personalization and share-ability and the moderating effects of privacy issues on users' intention to download the application and especially on their usage behavior. As smartphone users use only few of the applications they download (Gupta 2013, it is challenging to examine how the aforementioned factors can lead to a frequent usage of a mobile application.

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# Customer Satisfaction & Brand Loyalty

# The influence of reputation, prestige and attitude on Generation Y students' brand loyalty towards their university

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**Abstract**

*Over recent years universities or higher education institutions have undergone drastic changes since the late 20th Century. As demand for tertiary education has increased significantly, universities have had to implement unique marketing strategies in order to stand out for prospective students i.e. Generation Y individuals. Amongst those strategies is building a commendable reputation and a sense of higher prestige by attending a specific university. In addition, the number of tertiary education institutions has increased creating a competitive environment in which each university is attempting to gain a competitive advantage to attract the student market. This may be attributed to ever changing needs and demands of a growing modern society. As such, the purpose of this study was twofold. First, it aimed to determine the impact reputational quotient measures and external prestige had on Generation Y students' supportive attitudes. Second, it considered the impact supportive attitudes had towards Generation Y students' brand loyalty towards their current university. 600 self-administered questionnaires were distributed to students registered across three higher education campuses in the Gauteng province of South Africa, of which 480 were viable for data analysis.The data were analysed using various statistical techniques which included internal-consistency reliability and validity measures, descriptive statistics and structural equation modelling.The study's results found Generation Y students' reputation quotient measures and their external prestige perceptions have a direct positive significant influence towards their supportive attitudes of the university they are attending. Furthermore, supportive attitudes have a direct positive influence on Generation Y students' brand loyalty of their universities.The results of this study indicate that universities should take note ofstudent's opinions regarding their universities reputation and prestigiousness. Additionally, universities must take students attitudes into consideration as this affects student brand loyalty and ultimately student retention for the institution.*

***Keywords**:Reputation, prestige, attitudes, brand loyalty, Generation Y students, South Africa.*

## INTRODUCTION

Over recent years universities or higher education institutions (HEIs) have undergone drastic changes. As demand for tertiary education has increased significantly, universities have been forcedinto implementing unique marketing strategies in order to stand out for prospective students. Amongst those strategies is to build a commendable reputation and a sense of higher prestige when attending a specific university. In addition, the number of tertiary education institutions in the education market has increased significantly. This has created a competitive environment amongst universities, where each university has to gain a competitive advantage to both attract prospective students and retain current ones. This may be attributed to ever changing needs and demands of modern society (El-Kassar*et al*., 2019; Erogmusa&Errgunb, 2016; Giner&Rillo 2016;Alves &Raposo, 2010;Petruzzellis&Romanazzi, 2010; Sung & Yang 2008). In adapting to globalisation, universities have recognised that the education sector closely represents a business industry and as a result, they have begun to focus on students' (their clients) needs(Giner&Rillo 2016; Hanssen &Solvoll, 2015).As such, universities must go beyond their conventional academic service provisions and seek to integrate and build socially responsible individuals who consider the environment and wellbeing of the community at large (El-Kassar*et al*., 2019).

## LITERATURE REVIEW

A university, defined as “an institution of higher learning providing facilities for teaching and research and authorized to grant academic degrees” (Merriam-Webster, 2019), functions not only as an institution of knowledge but also serves to fulfil societies social, humanistic and scientificneeds by educating individuals of society(Rengel*et al*, 2017).These individuals, clients of the university, are becoming more selective about where they would like to conduct their studies (Petruzzellis&Romanazzi, 2010).Owing to the increased availability of tertiary institutions, universities have seen the need to install a good image to attract students (Sung & Yang 2008).University prestige is a vital factor for a student and has possible ramifications when it comes to employment opportunities. According to Araki *et al*. (2016) graduates’ employability is often based on the university that the graduate attended. The authors further elaborate that the prestige of a university can also determine the graduate’s capabilities and therefore influence if the graduate is employed or not. Consequently,many universities have increased budgets to strengthen their image of ‘‘prestige’’ or ‘‘quality’’ to attract exemplary students (Alves &Raposo, 2010; Sung & Yang 2008).Being closely related constructs, university prestige and university reputation has often been used interchangeably, so much so that it hasbeen seen as one as the same on many occasions (Ali *et al*., 2016).
Reputation can be defined as an organisation’s overall character or quality as seen and judged by consumers in general (Hanssen &Solvoll, 2015). Thus, a university’s reputation is the culmination of students’ characteristic and quality assessment of that university. Reputation is important as it is the perceived image that influences the decisions made by a potential student over a particular university (Alves &Raposo, 2010).Petruzzellis andRomanazzi(2010)add that reputation serves as a provider of customer loyalty andunderstanding reputation allows for better communication strategies and eventually enhances the university’s position (Sung & Yang 2008).Alves andRaposo(2010) further denote that student retention and loyalty are strongly affected by an institution’s reputation.
A student’s attitude, which is a short-term form of student satisfaction, is the evaluation of a student’s educational experience from a tertiary institution (Ali *et al*., 2016; Hanssen &Solvoll, 2015; Petruzzellis&Romanazzi, 2010).As satisfaction is commonly known as an antecedent of student loyalty, students may display positive intentions to be brand loyal towards their current university (Petruzzellis&Romanazzi, 2010).The relationship between attitude and loyalty (i.e. intention and behaviour) is a well-known phenomenon explained in both the theory of reasoned action and theory of planned behaviour (Ajzen, 1991; Ajzen&Fishbein, 1977; Fishbein&Ajzen, 1975). This literature postulates that attitudes successfully predict intentions and behaviour (loyalty). Thus, a positive student attitude may result in positive student loyalty towards their university (Erdogmusa& Ergun, 2016).
Once graduated, a student has several opportunities to offer continued support to their tertiary institution. This can take form in positive word-of-mouth to prospective and current students, assisting financiallyor any type of cooperation or community engagement through university channels (Ali *et al*., 2016;Hanssen &Solvoll, 2015;Alves &Raposo, 2010). At its base, loyalty is the combination of both retention of current customers and the acquisition of new or potential customers through recommendations (Rengel*et al*., 2017). Giner and Rillo (2016) concur and add that student retention is just as vital as attracting them.As loyalty is not a short-term effect, loyal students are key components to advocating or recommending their universityinstitution to others (Ali *et al*., 2016). This loyalty may even have the potential to stay in a family for generations, as parents are highly likely to send their offspring to the same institution that they have graduated from.
The Generation Y cohort, born between 1986 and 2005, are tech savvy individuals that have been born into the computer generation (Markert, 2004; Noble*et al*., 2009). Understanding the university Generation Y student is imperative as these particular individuals have the capability to manifest into trendsetters amongst their peers (Bevan-dye &Surujlal, 2011), thus echoing the importance of attracting and retaining brand loyal university students.With the multitude of academic institutions available to students today, research that explains the factors that can not only attract but also retain university students is highly required. As such, the purpose of this study is to identify these underlying factors and determine the effect they have on student brand loyalty.

## RESEARCH METHODOLOGY

### Sampling and data collection

This study made use of a descriptive research design. A single cross-sectional sampling approach was the chosen research methodology. Generation Y students currently registered at a South African public HEI, age range between 18 and 24 years, were the target population for this study. The sampling frame was narrowed down to three HEI campuses from the 26 publicly available HEIs in South Africa. The three chosen HEI campuses comprised one university of technology, one comprehensive university and one traditional universityrepresenting the three types of public HEIs within the country. Using a non-probability convenience sample and mall-intercept method, 600 questionnaires were distributed amongst the three HEIs (200 per campus) to full-time Generation Y students, in the Gauteng province.A cover letter was included in the questionnaire which detailed the purpose of the study and informed participants that participation of the study was strictly voluntary.

### Research instrument

A structured self-administered questionnaire was used to collect the required data. The questionnaire contained two sections, namely; Section A which collected demographic data and Section B that contained scaled-response items from prior published studies.The scales included reputation quotient measures (five items), external prestige (four items) and student supportive attitudes (four items) which were adapted and developed by Sung and Yang (2008). Students' brand loyalty (three items) was measured using a scale developed by Helgesen and Nesset (2007).All responses were captured using a six-point Likert-type scale that ranged from strongly disagree (1) to strongly agree (6).

### Data analysis

Versions 25 of IBM's Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) were the statistical programs chosen to capture and analyse the gathered data.Various analysis were conducted on the data set including frequencies, descriptive statistics, convergent and discriminant validity analysis,internal-consistency and composite reliability analysis and structural equation modelling (SEM).

The nomological validity of the data set was assessed utilising a Pearson's Product-Moment correlation coefficient matrix. In addition,multi-collinearity diagnostics was performed to screen for any high correlation coefficients between latent factors by calculating both tolerance values and variance inflation factors (VIF).Pallant (2010) cautions any tolerance values lower than 0.10 and VIF values above 10 are indicative of multi-collinearity. The internal-consistency reliability was determined by means of the Cronbach alpha statistic, wherein a Cronbach alpha value of $\geq 0.70$ indicates good to excellent internal-consistency reliability of the scales (Zikmund&Babin, 2013; Malhotra, 2010).To answer the main research objective of the study SEM analysis was undertaken in which a measurement and structural model were specified. The measurement model's reliability and convergent validity was asserted by means of computing composite reliability (CR), average variance extracted (AVE) and assessing the standardised loading estimates. Composite reliability is achieved when CR values equate to$\geq 0.70$. Convergent validity can be presumed when the measurement model's standardised loading estimates and AVE values exceed $\geq 0.50$, while discriminant validity is obtained when the square root value of the AVE exceeds the correlation coefficients (Hair *et al*., 2014). Known to be sensitive to large sample sizes, a significant chi-square statistic indicates poor model fit. As such, other model fit indices were used in this study (Hair *et al*., 2014; Byrne, 2010 Malhotra, 2010). This study made use of the following model fit indices: the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the normed fit index (NFI), the incremental-fit index (IFI), the Tucker-Lewis index (TLI), andthe comparative fit index (CFI), values of $\geq 0.90$ advocate good model fit (Hair *et al*., 2010; Malhotra, 2010). A RMSEA value of below 0.80 is considered suitable and a SRMR value of $\leq 0.05$ indicates acceptable model fit (Byrne, 2010:77; Malhotra, 2010). The practical level of significance was set at $p \leq 0.01$

throughout the study.

## RESULTS

From the 600 distributed questionnaires, 492 were returned, yielding an 82 percent response rate. Once the questionnaires had been cleaned, 480 viable questionnaires remained translating into an 80 percent true response rate.The demographics of the sample consisted of 46 percent males and 54 percent females. In terms of age, majority of the participants (70%) ranged between 20 and 22 years.The sample included participants from every province of South Africa andall 11 official languages.

The data set'sinternal-consistencyreliability was measured using the Cronbach alpha statistic. The results of the Cronbach alpha analysis are reported in Table 1 below.

**Table 1**: Summary of reliability test results

| Constructs | Number of items | Cronbach alpha |
|---|---|---|
| Reputation | 5 | 0.877 |
| External prestige | 4 | 0.857 |
| Supportive attitudes | 4 | 0.902 |
| Brand loyalty | 3 | 0.821 |

As is evident from Table 1, each construct exceeded the cut off level of 0.70. Supportive attitudes obtained the highest value of 0.902, closely followed by reputation quotient measures (0.877). The lowest recording was that of brand loyalty with a value of 0.821. However, this is still regarded as excellent reliability (Zikmund&Babin, 2013; Malhotra, 2010). As such, the measurement instrument scales can be said to have acceptable internal-consistency reliability.

Once internal consistency reliability had been established, descriptive statistics were computed for all measured items. This was done utilizing measures of shape, location and variability. In addition, a one sample t-test was run to assess the significance of the means. Since the questionnaire used a six point Likert type scale to gather the responses, the expected mean threshold was set at a value of 3.50. The significance level was set at $a = 0.05$.Table 2 delineates the means, standard deviations, p-values, skewness and kurtosis values.

**Table 2**: Descriptive statistics

| Constructs | N | Means | Standard deviations | t-value | p-value | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Reputation | 480 | 4.328 | 1.066 | 88.976 | 0.000 | -0.879 | 0.468 |
| External prestige | 480 | 4.191 | 1.050 | 87.426 | 0.000 | -0.762 | 0.282 |
| Supportive attitudes | 480 | 4.345 | 1.162 | 81.917 | 0.000 | -0.841 | 0.194 |
| Brand loyalty | 480 | 4.324 | 1.289 | 73.496 | 0.000 | -0.791 | 0.046 |

Table 2 above shows that all the constructs achieved means higher than the 3.50 threshold. Furthermore, each construct's mean was statistically significant at the $p \leq 0.05$ level. The high means indicate that Generation Y students regard their HEI as having a good reputation and they believe their HEI to be prestigious. Additionally, these individuals boast positive attitudes and display a sense of brand loyalty towards their HEI. Regarding the normality of the data, there were no concerns as the skewness values fell in the range of -2 and +2, moreover, kurtosis values displayed no irregularities (Berndt &Petzer, 2011).

The Pearson's product-moment coefficient correlation was computed to determine the nomological validity for the proposed model. In addition, collinearity diagnostics were computed to check for any multicollinearity issues between the latent factors. Table 3 below presents the correlation matrix.

**Table 3**: Correlation analysis

| Constructs | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Reputation | 1 | | | |
| External prestige | 0.700** | 1 | | |
| Supportive attitudes | 0.713** | 0.694** | 1 | |
| Brand loyalty | 0.569** | 0.581** | 0.706** | 1 |

**Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows that each pair of latent factors signifies a positive statistically significant ($p \leq 0.01$) association with one another. This provides evidence of nomological validity of the proposed model.In terms of correlation strength, the strongest associated latent factors was that of reputation and supportive attitudes ($r = 0.713$), closely followed by reputation and external prestige ($r = 0.700$). The lowest, yet statistically significant($p \leq 0.01$) positive relationship, was between reputation and brand loyalty ($r = 0.569$). Regarding collinearity diagnostics, the tolerance values of the independent variablesequalled to 0.511 and obtained an average VIF of 1.959.As such, the data set displayed no multi-collinearity concerns (Pallant, 2010). Therefore, with the presence of nomological validity and no multi-collinearity concerns it was presumed safe to conduct SEM.

Next confirmatory factor analysis was undertaken using the maximum likelihood approach in the measurement model. The first loading of each factor was fixed at the standard 1.0, the model computed 136 sample moments and 38 parameters to be estimated. This left 98 degrees of freedom and a significant chi-square of 262.314 (p= 0.000) based on an over-identified model. There were no problematic estimates as all standardised estimates were not above 1.0 or below -1.0, nor was there any evidence of Heywood cases (Hair *et al*., 2010). Table 4 below reports on the standardised loading estimates, error variance estimates, the CR values, the AVE values, the square root of the AVE values (√AVE) and the correlation coefficients.

**Table 4**: Measurement Model Estimates

| Latent factors | Standardised loading estimates | Error variance estimates | CR | AVE | √AVE |
|---|---|---|---|---|---|
| Reputation (F1) | 0.659 | 0.520 | 0.865 | 0.746 | 0.863 |
| | 0.831 | 0.642 | | | |
| | 0.839 | 0.705 | | | |
| | 0.801 | 0.690 | | | |
| | 0.721 | 0.435 | | | |
| External prestige (F2) | 0.749 | 0.584 | 0.858 | 0.602 | 0.776 |
| | 0.759 | 0.686 | | | |
| | 0.829 | 0.576 | | | |
| | 0.764 | 0.561 | | | |
| Supportive attitudes (F3) | 0.880 | 0.589 | 0.905 | 0.705 | 0.840 |
| | 0.811 | 0.799 | | | |
| | 0.894 | 0.658 | | | |
| | 0.768 | 0.775 | | | |
| Brand loyalty (F4) | 0.806 | 0.650 | 0.825 | 0.612 | 0.782 |
| | 0.776 | 0.602 | | | |
| | 0.764 | 0.583 | | | |
| **Correlations** | F1↔F2: 0.797 | F2↔F3: 0.786 | | | |
| | F1↔F3: 0.777 | F2↔F4: 0.699 | | | |
| | F1↔F4: 0.674 | F3↔F4: 0.821 | | | |

As can be seen in Table 4, all CR values exceeded the recommended threshold of 0.70, asserting composite reliability. Furthermore, all AVE values exceeded 0.50 which indicates convergent validity. Discriminant validity is evident for the independent variables as the square root of the AVE exceeded the correlations betweenF1↔F2 (0.863 > 0.797) (Hair *et al*., 2014).Sensitive to sample size, a significant chi-square was computed for the measurement model (Hair *et al*., 2010; Malhotra, 2010). As such, other model fit indices were evaluated to assume good model fit, which included: GFI = 0.938, AGFI = 0.914, NFI = 0.950, IFI = 0.968, TLI = 0.960, CFI = 0.968, SRMR = 0.0340 and a RMSEA of 0.058.

Once good model fit was asserted for the measurement model, a structural model was then specified to determine if the independent variables of reputation (F1) and external prestige (F2) positively influenced supportive attitudes (F3). Furthermore, the model aimed to determine if supportive attitudes (F3) had a direct significant positive effect towards university brand loyalty (F4) of Generation Y students. Table 5 below presents the results of the standardised regression coefficients, standard error estimates and p-values as estimated for the structural model by AMOS.

**Table 5**: Standardised regression estimates and p-values

| Relationship | Estimates | p-value | Results |
|---|---|---|---|
| Reputation → Supportive attitudes | 0.418 | 0.000** | Significant |
| External prestige→Supportive attitudes | 0.493 | 0.000** | Significant |
| Supportive attitudes→Brand loyalty | 0.880 | 0.000** | Significant |
| ****Significant at the p < 0.01 level** | | | |

According to Table 5 above, all tested paths were positively statistically significant ($p \leq 0.01$). Reputation quotient measures ($\beta = 0.418$, $p < 0.01$) and external prestige ($\beta = 0.493$, $p < 0.01$) are statistically significant predictors of Generation Y students' supportive attitudes. In addition, supportive attitudes ($\beta = 0.880$, $p < 0.01$) has a significant positive impact towards brand loyalty of Generation Y students.Regarding the squared multiple correlation coefficients, reputation and external prestige explained 69 percent of the variance in Generation Y students' supportive attitudes towards their universities, which, in turn, explained 69 percent of the variance towards their brand loyalty intentions of their universities. A significant chi-square was once again returned for the structural model, however, the other fit indices suggest good structural model fit with a GFI of 0.937, a AGFI of 0.915, a NFI of 0.949, a IFI of 0.968, a TLI of 0.961, a CFI of 0.967, a SRMR of 0.0355 and a RMSEA of 0.058. The structural model is presented in figure 1 below:

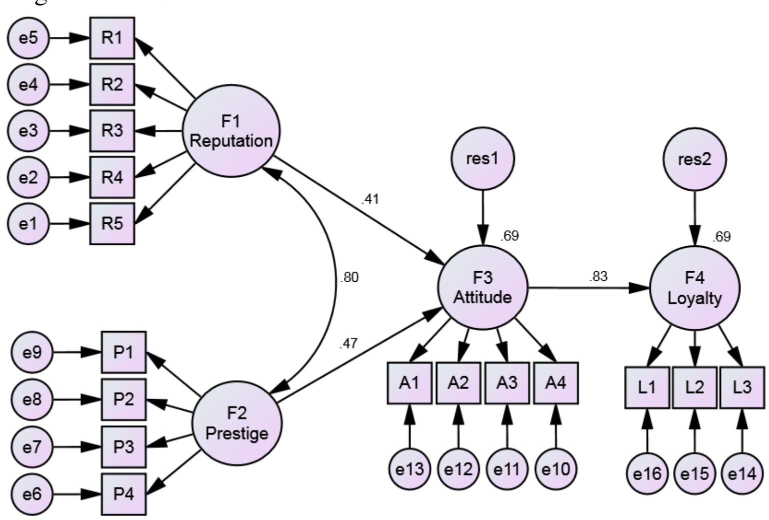


**Figure 1:** Structural model of university students' brand loyalty

The findings of this structural model is in line with prior research conducted by scholars such asEl-Kassar*et al*.(2019), Erdogmusa and Ergun (2016), Hanssen and Solvoll (2015) andSung and Yang (2008).

## CONCLUSIONS

Changing at a drastic pace, the responsibilities of universities are ever present. Student loyalty has become particularly important as the increase in tertiary institutions has created fierce competition in the higher education market (Giner&Rillo, 2016).This study sought to determine the influence of reputation, external prestige and supportive attitudes towards university brand loyalty of Generation Y students.According to the results of this study, Generation Y students perceive the current image of universities as being more important than the university's reputation when selecting where to study. These results harboured significantly positive attitudes in Generation Y students. Since,attitudes are apredicting factor of loyalty (Petruzzellis&Romanazzi, 2010), the results are not uncommon. This study found that Generation Ystudents' attitudes had alargely significant positive effect on brand loyalty towards their university. Therefore, universities' efforts to entice prospective students are not unfounded and should be increased if possible. Furthermore, the study found that Generation Y students are brand loyal to their universities, this is important as loyal alumni can become great advocates for their prior institutions (Ali *et al*., 2016).The findings from this study will aid practitioners, researchers and universities to better understand the need for retaining students by making use of reputation measures and installing a sense of higher prestige in one's university. Moreover, forming a positive attitude represents a direct link to positive brand loyalty,which may lead to positive word-of-mouth and funding from alumni for the institution.

## LIMITATIONS AND FUTURE RESEARCH

Each study is prone to limitations, as is this study. A non-probability convenience sampling method was used to collect the data for this study. Caution should be taken when generalising this study's results to the population even though pre-cautionary measures were taken in the form of demographic screening questions. Additionally, this study lacks the robustness of a longitudinal study as a cross-sectional design was utilised in the Gauteng province only.
Further research can be implemented in terms of narrowing the scope to departments of universities or investigate different universities and perform comparative studies amongst them. Other variables such as satisfaction, imagery, university feelings or university brand personality could be added to the research model to increase its validity of brand loyalty. Finally, the brand loyalty relationship could be explored in other tertiary institutions such as colleges and further education and training (FET) institutions.

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# An examination of the adoption of e-banking channels and customer satisfaction in Greece

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**Abstract**
The growing use of the web and mobile networks and improvements in transaction security have had a positive effect on e-banking services in Greece, particularly in the last decade. The landscape has significantly changed since mid-2015, that is, since the enforcement of capital controls when households and enterprises inescapably turned to e-payments.

The present research aims, firstly, to identify the Greek consumers' preferences for banking delivery channels and their frequency of use, and secondly, to investigate whether the specific preferences have been differentiated during the crisis. The main objective is to explore the factors affecting customer satisfaction for the quality of online banking services and, by developing a parsimonious set of items, to demonstrate the differentiation of overall customer satisfaction from banking services over two periods of time. The first period involves the early years of the crisis, whereas the second one six years after the crisis had started; more specifically, the research investigates data for 2012 and 2018. To survey preferences for banking delivery channels and test the hypothesis that the use of service channels has been differentiated during the period of crisis, a chi-square test was employed, whereas the factors involved in overall customer satisfaction were analyzed via Factor Analysis. In addition, the differentiation of overall satisfaction was statistically tested using Structural Equation Models (SEM). The analysis demonstrated that the number of bank transactions via APS, ATM, e-banking, Mobile banking and Phone banking has increased, and that overall satisfaction displayed positive scores in the last six years.
*Keywords: E-Banking, e-channels, Service quality, Customer satisfaction*

## Introduction

Over the last few decades, information and communication technologies (ICT) have significantly affected and changed the socio-economic fabric. Banks and other financial service providers have entered a new era, which challenges changes in banking operation and way of thinking. Using various product/service promotion channels, which enable meeting the needs of various customer segments, they implement marketing plans to balance between minimizing costs and maximizing customer satisfaction (Frazier, 1999; Moriarty and Moran, 1990).

By applying digitalization and electronic commerce, banks and bank customers are becoming more and more IT driven entities. Thus, relying on the fast growing technological innovations, banks focus on e-channels to meet customers' changing needs and preferences and optimize costs of channel distribution, which encompasses not only internet banking (IB)/online banking (OB), but also Telephone Banking, ATM, WAP-banking and other electronic payment systems that are not operated through the Internet (Cheng *et al.*, 2006).

The emergence of the Internet as one of the main distribution channels for banking product / service delivery is considered a digital breakthrough in the global banking industry having radically transformed banking transactions. Internet banking, defined as accessing online account information or making electronic transactions, such as bank payments or transfers (European Commission, 2018), enhances customer satisfaction by providing financial services at better prices, convenience, ease, security, privacy, and without any restrictions to regular bank branch operating hours (Al-Somali *et al.*, 2009; Guerrero *et al.*, 2007; Pikkarainen *et al.*, 200; Polatoglu *et al.*, 2001). Overall, technological innovations and digital technologies, apart from providing much deeper levels of personalization and enhanced customer experience, enable banks, by offering IB services, to benefit from the reduction of operational costs, as online services require less staff and fewer physical branches.

Online banking or, interchangeably, Internet banking is becoming one of the most popular trading methods in Europe. According to Eurostat (2018), about half (51%) of adult Europeans use Internet banking, which "is particularly popular among 25 to 34 year olds, with 68% using this facility. The use of internet banking tends to increase in line with the education level of the user. While only 24% of those of low education use e-banking, 77% of those with high education use this service". In Greece, only 25% of those between the ages of 16 and 74 use Internet banking. Despite the advantages of online banking both for banks and customers, there is still a large percentage of customers in Greece who are very skeptical and resist against such services (Maditinos et al., 2013).

Online banking could play a major role during the current global financial crisis, especially in highly competitive environments such as banks, and mainly in Greece, where the landscape of banking has altered significantly. Notably, from December 2007 to December 2016 the number of Greek banks were reduced from 64 to 39, with the four systemic banks and Attica Bank to account for more than 95% of the total number of Greek banking institutions (in terms of assets) compared with 67.7 % at the end of 2007. Thus, according to the Hellenic Bank Association documentation data (2017), since the onset of the crisis, when the banking landscape in Greece changed, the number of branches and the number of ATMs declined by 1,736 (-42.5%) and 2,350 (-26%), respectively.

In addition, since the implementation of capital control measures (2015), businesses and consumers in Greece have been faced with restrictions on cash withdrawals and capital transfers and have largely adapted to the conduct of non-cash payment. Thus, this has prompted the use of alternative bank customer service channels (Internet, mobile banking, phone banking, ATM, APS) over bank branches. Notably, for 2015-2016, on an annual basis, there was a significant increase in a) the number and value of Internet banking transactions, which increased by 40% and 29% respectively, and b) the number and value of mobile banking transactions, with a respective increase of 142% and 82%.

Given the above considerations, the present empirical study, based on the philosophy of technology acceptance model (TAM) (Davis, 1989), investigates how customers perceived and adopted e-banking in Greece at two different time periods, which involve the initial and final periods of the crisis, i.e. 2012 and 2018 respectively. The research focuses on customer satisfaction with online service quality and, more specifically, on users' perceptions of ease of use and usefulness of e-banking as well as of fulfillment and security of using the specific new technologies to meet banking needs.

The paper is structured as follows: the next section discusses the conceptual / research framework of the study, and after proposing the research framework, it describes the methods employed. The next section includes the research results and analysis as well as a discussion, and the final section the conclusions, the research limitations and recommendations for further research and managerial implications.

## The conceptual framework of the study

E-service quality, according to Santos (2003), can be defined as "the consumers' overall evaluation and judgment of the excellence and quality of e-service offerings in the virtual marketplace".

Several e-service quality and website quality measurement tools have been based on user/customer satisfaction, among which E-SERVQUAL, the most widely used tool in the extant literature (Zeithaml, et al., 2002), SITEQUAL (Yoo & Donthu, 2001), and WEBQUAL (Loiacono, et al., 2007). In addition, Parasuraman *et al.* (2005) empirically examined E-SQUAL, a multiple item scale with core service quality aspects and four dimensions: efficiency, privacy, fulfillment and availability. The conceptual framework of the present research includes the E-SERVQUAL core dimensions, and, based on Cheng et al. (2006), focuses on exploring the determinants of e-banking acceptance over time, namely Perceived Usefulness, Perceived Ease of Use, Perceived Web Security and Fulfillment. More specifically, the research, firstly, investigates the numerous uses of the various distribution channels (bank branch, ATM, APS, e-banking, mobile banking, phone banking) over time, and, in addition, examines e-banking users' overall satisfaction and behavioral intentions in 2018. Finally, it explores time differentiation (2012 and 2018) of the users' overall satisfaction and behavioral intentions.

Based on prior research, the research formulates six hypotheses on the interrelationships between service quality, overall customer satisfaction, and behavioral intentions.

### *Proposed model and hypothesis development*

The theoretical model, which is graphically presented below (Fig.1) was based on issues discussed in the extant literature as well as on the exploratory Factor Analysis (EFA) applied on the data for 2012.

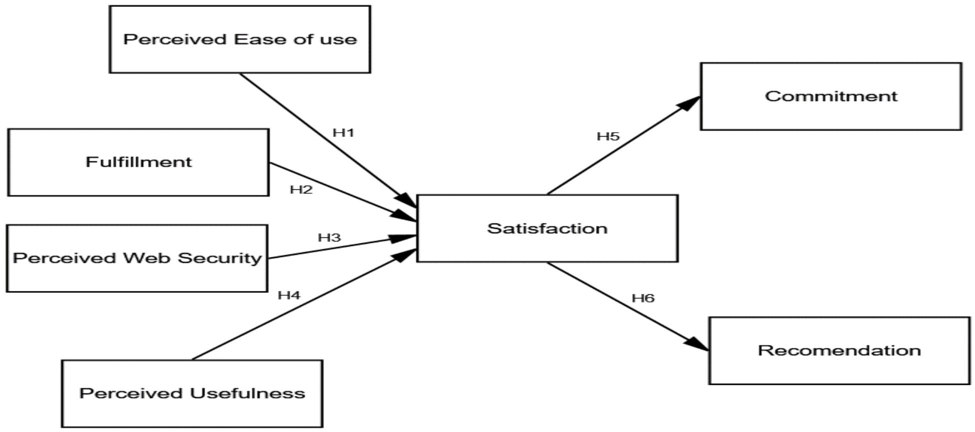


*Fig.1. Research model*

Figure 1 summarizes all the hypotheses, thus, presenting the proposed conceptual framework of the study. Based on the theoretical model, the following research hypotheses are formulated:

**H1.** Perceived Ease of Use has a direct positive relationship with customers' satisfaction.
**H2**. Perceived Fulfillment has a direct positive relationship with customers' satisfaction.
**H3**. Perceived Web Security has a direct positive relationship with customers' satisfaction.
**H4**. Perceived Usefulness has a direct positive relationship with customers' satisfaction.
**H5**. Customers' satisfaction has a positive effect on Commitment.
**H6.** Customers' satisfaction has a positive effect on Recommendation.

- *Perceived usefulness*. According to Davis *et al.* (1989; p. 985) perceived usefulness (PU), which is the user's "subjective probability that using a specific application system will increase his or her job performance", has a positive effect on the adoption of information technology. Perceived usefulness seems to be one of the most popular factors in the extant Internet banking literature (Guriting *et al.*, 2006; Gounaris *et al.*, 2008).
- *Perceived Ease of Use*. According to Davis *et al.*, (1989; p. 985) perceived ease of use (PEU), is "the degree to which the user expects the target system to be free of efforts". Jun and Cai (2001) state that there is a direct connection of the ease of use to the real essence of the Internet, as compatible software, speed of response and easy navigation of online systems are considered vital by online banking customers.
- *Perceived Web Security*. Salisbury *et al.* (2001) define perceived Web Security as "the extent to which one believes that the World Wide Web is secure for transmitting sensitive information".
- *Perceived Fulfilment*. The specific dimension refers the extent to which the company's promises about the product or service delivery and availability are fulfilled and incorporates accuracy of service promises (Zeithaml *et al.*, 2002).
- *Customer satisfaction*. Satisfaction is defined as an end-state resulting from a consumer's purchasing experience, which can either emerge as a cognitive reward or an emotional response to an experience. Research has identified customer- and situational-specific determinants that affect overall satisfaction (Zeithaml and Binter, 2000). Giese and Cote (2000) argue that "consumer satisfaction is a summary affective response of varying intensity; with a time-specific point of determination and limited duration and directed towards focal aspects of product acquisition and/or consumption". As customer satisfaction with banking services has been directly associated with service quality (Avkiran, 1994; LeBlanc and Nguyen, 1988; Blanchard and Galloway, 1994), the level of e-satisfaction is also determined by the quality of e-services, the price level and e-purchasing processes (Wang, 2003). By focusing on e – banking services, the relevant research has demonstrated the relationship between customer satisfaction and e-banking service quality (Bei and Chiao, 2006; Zhou, 2004; Ranaweera and Neely, 2003).

A number of researchers have associated customers' evaluation of service quality with their behavioral and attitudinal responses, such as commitment and recommendation (e.g. Reichheld and Sasser, 1990; Cronin and Taylor, 1992; Parasuraman *et al.*, 1994; Athanassopoulos et al., 2000), whereas others, such as Boulding *et al.*

(1993), focused on purchase intentions and willingness to suggest that service quality perceptions positively affect intentional behaviors. Zeithaml *et al.* (1996), investigating the relationship between service quality and behavioral intentions, inferred that service quality is positively associated with communicational behavioral intentions. Finally, according to Azam *et al.* (2012), e-satisfaction has been investigated as an antecedent to the continuous intention of e-commerce services in technology acceptance with behavioral consequences on online purchase intention.

**Research methodology**

*Sample and data collection*

The survey sample was drawn from various geographical areas (prefectures) in Greece. Personal interviews, based on a questionnaire, were taken by trained students to enhance response validity and reliability and, thus, demonstrate the differentiation of overall customer satisfaction from banking services over two periods of time. The first period involves the early period of the Greek debt crisis, whereas the second one six years after the crisis had started. More specifically, the first survey was carried out from 20th October to 20th December 2012, and the second one from 20th October to 20th December 2018. The corpus of data is comprised of 332 valid questionnaires for 2012 and 286 for 2018.

As regards the participants' profiles for 2012, of the 332 respondents, 50% were female. 32.2% were under the age of 24, 25.6% were in the 25–34 age group, 19.3% were from 35 to 44 years old, and 14.5% from 45 to 54, whereas only a few were over 55. In addition, the majority of subjects (66.3%) were Higher Education graduates and 33.7% Secondary Education graduates. 24.1% of the respondents were private employees, 14.2% self-employed and 15.1% civil servants, whereas 27.7% students, and 18.9% pensioners, unemployed and special scientists. Finally, in terms of income, 82.5% of the respondents stated their annual income was up to €30,000.

For 2018, of the 286 respondents, 47.9% were female. Age groups included subjects under the age of 24 (26.9%), from 25 to 34 years old (17.5%), from 35 to 44 (22.0%), from 45 to 54 years old (21.7%) whereas only a few were over 55. In terms of educational status, the participants in 2018 were Secondary Education graduates (28.7%) and the rest (71.3%) Higher Education graduates. In addition, 24.5% were private employees, 17.8% self-employed, 14.3% civil servants, 24.1% students, whereas the remaining 19.1% were pensioners, unemployed and special scientists. Finally, 91.6% of the respondents had an annual income of up to €30,000.

*Research instruments*

The measurement of the 4 study variables included 20 items (questions):
Perceived usefulness (six items), Cheng *et al.* (2006)
Perceived ease of use (six items), Jun and Cai (2001), Cheng *et al.* (2006)
Perceived Web Security (four items), Davis (1989), Salisbury *et al.* (2001)
Fulfillment (four items), Zeithaml et al. (2002) Parasuraman *et al.* (2005)
A seven-item battery was developed to measure e-banking users' perceptions about e-banking quality issues (*1 absolutely disagree* – 7 *absolutely agree*). Overall satisfaction was measured on the basis of a 7-point Likert-type scale (*1 completely dissatisfied* – 7 *completely satisfied*), similarly to commitment and recommendation (*1 very unlikely* – 7 *very likely*).

**Data analysis and results**

The research is structured as follows: First, Chi-square tests tested the temporal differentiation (2012 and 2018) of the use of various distribution channels (bank branch, ATM, APS, e- Banking, Mobile Banking, Phone Banking). Second, an Exploratory Factor Analysis (EFA) was carried out to determine the 4 study variables which included 20 items (questions); the modified model for the data of 2018 was produced by means of Confirmatory Factor Analysis (CFA). Finally, the time differentiation of the users' overall satisfaction and behavioral intentions (recommendation, fulfillment) was investigated by means of Structural Equation Model Analysis (SEM).

***Chi-square tests***

The scope of the specific research is to investigate how bank customers use various distribution channels for banking transactions and the potential differentiation between the research periods, 2012 and 2018. The survey sample for the use of service channels (SCs) for 2012 and 2018 are described in Table 1 (2nd-4th column, 5th-7th column, respectively). The first column shows the various service channels and the "no", "yes" items, depending on which item the respondents choose. Observed frequency and expected frequency are described under the “Observed” and “Expected” columns, whereas observed frequency rates are described in the column “Percent”. Notably, Table 1 demonstrates a decline in the subjects’ preference of bank branches in 2018 compared with 2012. Preference of ATM services does not appear to change, in contrast to other service channels (APS, e-Banking, Mobile Banking, Phone Banking), the use of which is on the increase in 2018.

**Table 1**: Use of service channels in 2012 and 2018

| | | 2012 | | | 2018 | | |
|---|---|---|---|---|---|---|---|
| | | Observed | Expected | Percent | Observed | Expected | Percent |
| Bank Branch | no | 73 | 94.6 | 41.5 | 103 | 81.4 | 58.5 |
| | yes | 259 | 237.4 | 58.6 | 183 | 204.6 | 41.4 |
| ATM | no | 77 | 72.5 | 57.0 | 58 | 62.5 | 43.0 |
| | yes | 255 | 259.5 | 52.8 | 228 | 223.5 | 47.2 |
| APS | no | 278 | 261.6 | 57.1 | 209 | 225.4 | 42.9 |
| | yes | 54 | 70.4 | 41.2 | 77 | 60.6 | 58.8 |
| e-Banking | no | 277 | 236.4 | 63.0 | 163 | 203.6 | 37.0 |
| | yes | 55 | 95.6 | 30.9 | 123 | 82.4 | 69.1 |
| Mobile Banking | no | 332 | 307.3 | 56.3 | 250 | 264.7 | 43.7 |
| | yes | 10 | 24.7 | 21.7 | 36 | 21.3 | 78.3 |
| Phone Banking | no | 325 | 308.9 | 56.5 | 250 | 266.1 | 43.5 |
| | yes | 7 | 23.1 | 16.3 | 36 | 19.9 | 83.7 |

The above mentioned hypotheses are statistically tested using Chi-square tests (Table 2). Subsequently, the following cases are consecutively tested:

- H0i: There is no differentiation in the use of SCi between 2012 and 2018, i = 1,2, ... 6, where $SC_1$ = bank branch, $SC_2$ = ATM, $SC_3$ = APS, $SC_4$ = e-Banking, $SC_5$ = Mobile Banking and $SC_6$ = Phone Banking.

Table 2 demonstrates that the above zero hypotheses (H0i, i = 1, 2, ...6) are rejected except for the hypothesis for ATM services, which is accepted. In detail, there is a decline in using bank branches in 2018 compared with 2012. Using ATM services does not change, whereas the use of other service channels (APS, e- Banking, Mobile Banking, Phone Banking) is increased in 2018.

**Table 2**: Chi-square tests. Use of service channels in 2012 and 2018

| | Chi-square | p-value | Decision |
|---|---|---|---|
| Bank Branch | 14.840 | <0.05 | Reject the $H_0$ |
| ATM | 0.764 | >0.05 | Accept the $H_0$ |
| APS | 10.448 | <0.05 | Reject the $H_0$ |
| e-Banking | 52.380 | <0.05 | Reject the $H_0$ |
| Mobile Banking | 20.448 | <0.05 | Reject the $H_0$ |
| Phone Banking | 26.061 | <0.05 | Reject the $H_0$ |

ATM services are perceived as a distribution channel associating the two research periods (bank branches with new APS, e-Banking, Mobile Banking, Phone Banking). In addition, it signifies a new self-service era in bank services.

The above result is not differentiated for both female and male subjects and also customers aged up to 44 and those over 44 (all $\chi^2$ tests are statistically not significant ($p > 0.05$)). However, the analysis demonstrated a differentiation in terms of educational status. More specifically, there is no decline in using bank branch services in 2018 compared with 2012 for Secondary Education graduates ($p > 0.05$), in contrast to Higher Education ones ($p < 0.05$). In addition, in terms of ATM services, there is no differentiation as far as Higher Education customers ($p > 0.05$) are concerned, whereas there is an increase in the case of Secondary Education ones ($p<0.05$). As regards the use of other service channels, this remains stable.

***Model 2018***

*1. Exploratory Factor Analysis (EFA 2018)*

An exploratory factor analysis using SPSS was conducted on the survey data. The rotated factor matrix, resulting from a Varimax rotated principal axis factor extraction of the independent variables is shown in Table 3, which indicates that four factors emerged and reports their factor loadings. The data were tested using the SPSS Exploratory Factor Analysis (EFA) to evaluate the Cronbach's alpha, ranging from 0.640 to 0.849. Each item was evaluated individually to ensure convergent validity and item reliability. All factor loadings were larger than 0.5, representing an acceptable significant level of internal validity. Factor loadings ranged from 0.550 to 0.846 for Perceived Ease of use (PEOU) 0.746 to 0.767 for Fulfillment (FUL), 0.741 to 0.802 for Perceived Web Security (PWS) and 0.689 to 0.736 for Perceived Usefulness (PU). Since all factor loadings were of an acceptable significant level, all 14 questionnaire items were retained for further analysis (6 items-questions were deleted as factor loading <0.4).

**Table 3**: Factor Loadings (2018)

| | Factor loading | Cronbach alpha | Variance explained (%) |
|---|---|---|---|
| **Perceived Ease of use (PEOU)** | | 0.849 | 21.900 |
| B1: Using the bank website (BW) services is easy for me | 0.832 | | |
| B2: I find my interaction with BW services clear and understandable. | 0.846 | | |
| B3: Overall, I find the use of BW services easy | 0.737 | | |
| B5: It is easy for me to remember how to perform tasks using BW | 0.657 | | |
| B8: I find it easy to get BW to do what I want to do. | 0.550 | | |
| **Fulfillment (FUL)** | | | 11.742 |
| B6: Banks keep their promises | 0.746 | 0.640 | |
| B7: My online bank transactions are always accurate | 0.767 | | |
| **Perceived Web Security (PWS)** | | 0.798 | 15.695 |
| B12: I would feel secure sending sensitive information across the BW | 0.741 | | |
| B13: BW is a secure means to send sensitive information | 0.802 | | |
| B14: Overall, BW is a safe place to transmit sensitive information | 0.766 | | |
| **Perceived Usefulness (PU)** | | 0.792 | 18.030 |
| B17: Using BW would enable me to accomplish tasks faster | 0.709 | | |
| B18: Using BW is time saving | 0.736 | | |
| B19: Using BW makes it easier to do my job. | 0.735 | | |
| B20: Overall, I find BW useful | 0.689 | | |
| | Total cumulative (%) | | 67.367 |

*2. Confirmatory Factor Analysis*

To test model fitness, the hypothesized model (Fig. 1) was applied by performing a Confirmatory Factor Analysis (CFA) on the data. The results demonstrate that the hypothesized model is recursive, i.e. uni-directional (Table 4). There were 153 distinct sample moments (i.e., pieces of information), on the basis of which the estimates of the default model were computed and 41 distinct parameters estimated, leaving 112 degrees of freedom. The minimum iteration was achieved, thereby providing an assurance that the estimation process yielded an acceptable solution, eliminating any concerns about multicollinearity effects. The results also provide a quick overview of the model fit, which includes the $\chi^2$ value (193.08), in line with its degrees of freedom (112) and probability value (<0.0005) (Table 4).

As shown in Figure 2 and Table 5, two of the originally hypothesized paths are insignificant (direct positive impact of FUL and PWS on SATISFACTION), and five new paths have been added to the model, based on the modification index function of AMOS. Thus, the modified structural model fitted to the data well. More specifically, Chi-Square/df is 1.724; as suggested in the relevant literature (Kline, 2015), indices less than 3 indicate acceptable fit values as they are less than 5. CFI and GFI fit values exceed threshold 0.9 (CFI = 0.952, GFI = 0.903). In addition, RMSEA is 0.06 and PCLOSE is 0.118, which are acceptable values in the specific statistical model. NFI estimate is 0.895, thus, equals threshold 0.9, which is the lower limit indicating acceptable model fit (see Table 4).

Thus, as all important indicators (Hoyle, 1995) are above the accepted values, according to the goodness-of-fit test results, this model is considered acceptable.

**Table 4**: Fit statistics

| Model fit | Suggested | Obtained |
|---|---|---|
| Chi-Square | | 193.08 |
| df | | 112 |
| Chi-Square Significance | P<0.05 | <0.0005 |
| Chi-Square/df | <5.0 | 1.724 |
| GFI | >0.90 | 0.903 |
| NFI | >0.90 | 0.895 |
| CFI | >0.90 | 0.952 |
| RMSEA | <0.08 | 0.06 |
| PCLOSE | >0.5 | 0.118 |

In terms of hypothesis testing (H1-H6), four of the initially formulated hypotheses (H1, H4, H5 and H6) are acceptable, whereas two (H2, H3) are rejected. More specifically, PEOU has a statistically significant positive impact on SATISFACTION (0.46) with e-banking. In addition, FUL does not directly affect SATISFACTION, as originally assumed. However, it directly affects PU (0.41), which in turn has a statistically significant positive impact on SATISFACTION (0.42). PWS has a similar behavior to FUL, i.e., it does not have a direct statistically significant positive impact on SATISFACTION, but a direct statistically significant impact on PU (0.46), which was previously demonstrated to have a statistically significant positive impact on SATISFACTION. In addition, PEOU has a statistically significant positive impact on COMMITMENT (0.57), which significantly affects RECOMMENDATION (0.48). Finally, SATISFACTION has a statistically significant positive impact on both COMMITMENT (0.21) and RECOMMENDATION (0.42). Remarkably, although the initial hypotheses are not directly accepted (H2, H3), in part, can be considered acceptable, as a result of their causal relationship with PU.

**Table 5**: Parameter estimates

| Regression Weights | | | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| PEOU | <--- | FUL | .978 | .145 | 6.756 | 0 |
| PU | <--- | FUL | .488 | .131 | 3.735 | 0 |
| PU | <--- | PWS | .504 | .110 | 4.584 | 0 |
| B21 | <--- | PEOU | .437 | .075 | 5.849 | 0 |
| B21 | <--- | PU | .395 | .074 | 5.350 | 0 |
| B22 | <--- | B21 | .255 | .098 | 2.594 | .009 |
| B22 | <--- | PEOU | .666 | .112 | 5.949 | 0 |
| B1 | <--- | PEOU | .993 | .080 | 12.464 | 0 |
| B2 | <--- | PEOU | 1.000 | | | |
| B3 | <--- | PEOU | .844 | .093 | 9.100 | 0 |
| B5 | <--- | PEOU | .831 | .095 | 8.768 | 0 |
| B8 | <--- | PEOU | .788 | .089 | 8.821 | 0 |
| B14 | <--- | PWS | 1.000 | | | |
| B13 | <--- | PWS | 1.301 | .091 | 14.240 | 0 |
| B12 | <--- | PWS | .918 | .105 | 8.701 | 0 |
| B7 | <--- | FUL | .949 | .129 | 7.359 | 0 |
| B6 | <--- | FUL | 1.000 | | | |
| B20 | <--- | PU | .891 | .116 | 7.715 | 0 |
| B19 | <--- | PU | 1.000 | | | |
| B18 | <--- | PU | .956 | .102 | 9.356 | 0 |
| B17 | <--- | PU | .829 | .101 | 8.215 | 0 |
| B23 | <--- | B21 | .513 | .066 | 7.810 | 0 |
| B23 | <--- | B22 | .481 | .054 | 8.987 | 0 |

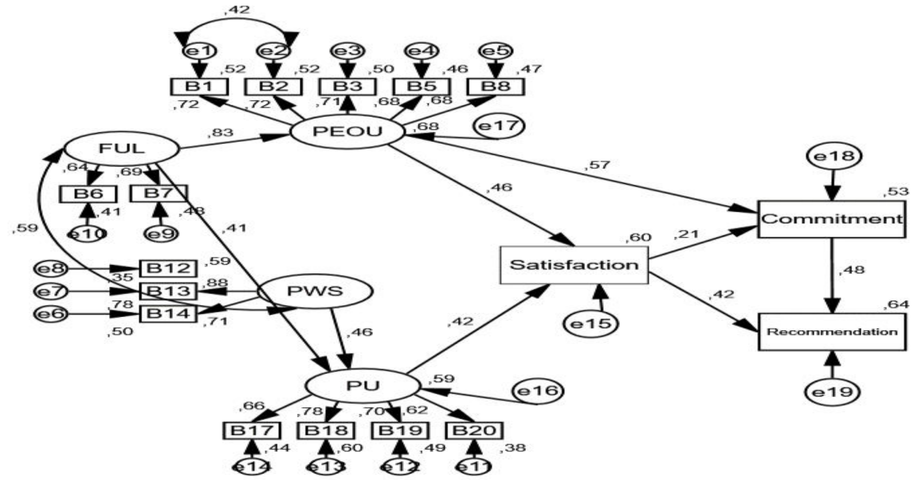


*Fig. 2: The modified model (2018)*

### Comparing Model 2018 and Model 2012

Analysis of 2012 data resulted in a modified structural model which fits the data well (see Fig. 3). In detail, Chi-Square/df is 2.015, CFI, GFI and NFI fit indices exceed limit 0.9 (CFI = 0.954, GFI = 0.922 and NFI = 0.914). In addition, RMSEA is 0.058 and PCLOSE 0.108, acceptable in the statistics literature. Thus, this model is considered acceptable.

With regard to covariance between the two models (2012 and 2018), the analysis demonstrated the following results:

- PEOU has a direct statistically significant positive impact on SATISFACTION both in 2012 (0.23) and 2018 (0.46).
- FUL does not directly affect SATISFACTION in 2018, whereas in 2012 it has a direct statistically significant positive impact on SATISFACTION (0.22) in 2012.
- PWS does not directly affect SATISFACTION in 2018, whereas in 2012 it has a direct statistically significant positive impact on SATISFACTION (0.13) in 2012.
- PU has a statistically significant positive impact on SATISFACTION both in 2012 (0.27) and 2018 (0.42).
- There is no substantial differentiation of user intentions between 2012 and 2018.

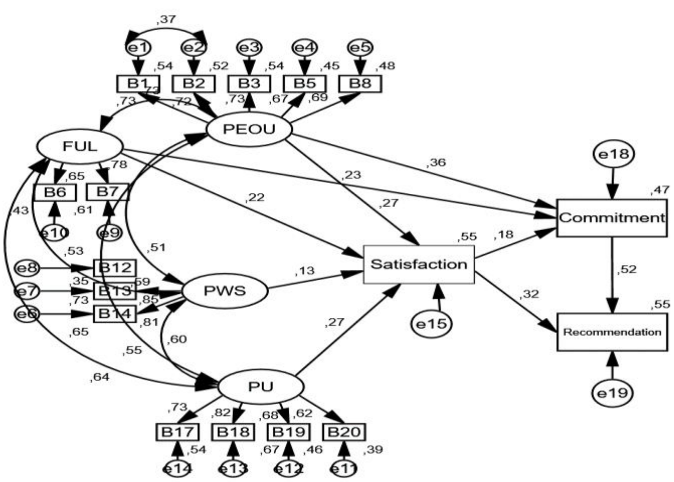


*Fig. 3: The modified model (2012)*

## Conclusions and implications

Modern and new age technology has gradually transformed interactions among business units and customers (Mayer, 2009), and formed a new background for the design, development and delivery of services. The highly competitive environment of global banking forces financial institutions to be agile and respond quickly to the changing market dynamics, and, thus, benefit from technological advances. In this context, for the banks which have adopted new technologies and Internet or other e-channel transactions, the views and preferences of on-line customers/users are essential to strategy forming and product promotion.

The benefits derived by customers from e-banking are vital, as e-banking enables saving time and avoiding problems, such as traffic or queues (Gurau, 2002; Chavan, 2013). In Greece, given that Capital Controls had restricted cash flow, e-banking services, by enabling customers to pay debts or carry out various transactions easily, affected customer attitudes to e-banking.

The present research demonstrates that the popularity of typical bank branch services declined in 2018 compared with 2012, in contrast to ATM service popularity which remained unchanged; use of other service channels (APS, e-Banking, Mobile Banking, Phone Banking) saw an increase in 2018. In addition, ATM services as a distribution channel is the link between the two surveyed periods. Remarkably, educational status seems to have a significant impact on bank branch and ATM service popularity.

The research results demonstrate that in 2018 e-banking users were more focused on “easy” and “fast” (PEOU, PU) rather than “safe” and “appropriate” use, which, in part, can be explained by the ever-increasing mandatory use of digital services (capital controls) and the customers’ familiarization with digital technologies in combination with the gradual enhancement of customers’ awareness and e-skills. On the contrary, factors such as PWS and FUL, which are associated more with users in 2012, are conducive to overall satisfaction with online banking. The users’ behavioral intentions in 2012 and 2018 appear to be substantially unchanged.

It is crucial that banks, based on the research findings, and in view of the educational status of their customers, should accommodate a different focused policy of access and promotion of digital service delivery. In the new global financial context, which has been increasingly digitalized, and in which e-payments serve as a catalyst, banking institutions should enhance their digital growth potential by focusing on customer rather than product experience. By emphasizing the easy use of new digital distribution channels and the benefits of speeding up banking transactions, banks should focus on continuous digital transformation and, consequently, efficiency, by adopting technological innovations with a view to enhancing customer experience and substantially strengthening their “digital share” in their customers’ hearts and minds.

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# Understanding Trust Factors between Potential and Repeat Customers

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**Abstract:**

Identifying and recommending potential new customers for local businesses are crucial to the survival and success of local businesses. A key component to identifying the right customers is to understand the decision-making process of choosing a business over the others. However, modeling this process is an extremely challenging task as a decision is influenced by multiple factors. With the increase in Internet users, the number of clicks on the Web sites of Internet vendors has risen considerably. Because of the physical and temporal distance between buyers and sellers, Internet shopping creates uncertainty and increases risk through the delay between purchase and delivery, and the information asymmetry between the two parties. In the presence of such risk and uncertainty, lack of trust has been identified as one of the greatest barriers inhibiting Internet transactions. In this paper, we model this information in a unified framework, which considers the personal preferences of different customers, as well as the reputation of local businesses in the customer recommendation task.

*Keywords*: *Information systems, Online customers, Trust*

# Patient satisfaction from a public hospital: The case of the General Hospital of Kavala, Greece

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**Abstract**

*Greece is ongoing its 10th year of cutoffs after signing the 1st Memorandum of Understanding (MOU) in May 2010. In the public domain, extreme cutoffs were taken as measures to decrease the public sector's cost. One of the sectors that experienced the consequences of these cutoffs was the health sector, experiencing tremendous brain drain of medical staff and supply shortage. Additionally, efforts were made by state structures in order to function under turbulence conditions and lack of State aid. Under these conditions and taking to account that public hospitals even though funded by the government, seek to satisfy their clients, this study presents the outcome of a patient satisfaction survey from a public hospital in Greece and concerns the General Hospital of Kavala. A sample of 448 hospital patients was recruited to answer the survey questionnaire. Data analysis included descriptive statistics, factor and reliability analysis, and K-means Cluster analysis. Results reveal directions for achieving future patient satisfaction in the health care system and specifically from public hospitals.*

*Keywords: Patient satisfaction, health care, hospital service, consumer behaviour, service marketing*

## INTRODUCTION

Due to the fiscal crisis that Greece is experiencing since 2010, extreme cutoffs in the public sector have been implemented in order to reduce functioning costs and make the public sector more competitive. As requested by the International Monetary Fund major reforms took place, among which in the National Health Care System (IMF, 2010). The National Health Care System was one of the sectors that dramatically reduced expenditures (Mitropoulos et al. 2018), and was greatly affected from the sign of the 1st MOU (memorandum of understanding) facing its consequences, such as extreme brain drain, and medical supplies shortages (Sidiropoulos et al., 2017; Ifanti et al., 2014; Rachiotis et al., 2014) leading to reduction in the productivity and efficiency of the public hospitals (Mitropoulos et al., 2018). Thus, on one hand, the situation in the hospitals cannot be described as the best and on the other hand, salary cutoffs and degradation of citizens' income, forced many people to rely on public health care structures. In order to improve hospital services for taxpayers' favor, it is a perquisite to measure hospital healthcare quality, which incorporates a complexity of services delivered, making it a multidimensional concept (Priporas et al., 2008).

Taken into account that patient satisfaction is crucial from every health care structure in order to be improved and account for taxpayers money, this paper addresses the issue of patient satisfaction from a public hospital, the General Hospital of Kavala, which is a public hospital, and covers the entire prefecture of Kavala (54027 citizens, census 2011). Additionally, it segments respondents based on their satisfaction from the services provided by the General Hospital of Kavala.

## LITERATURE REVIEW

There are a tremendous number of academic articles that refer to patient satisfaction from different point of views or focusing on one issue. Referring to hospital service satisfaction, one issue that has received a noticeable attention is doctor/nurse/staff- patient satisfaction (e.g. Jalil et al., 2017; Randall et al., 2017; Williams et al., 1998; Korsch et al., 1968), while another issue refers to patient satisfaction from a specific clinic or health care department (e.g.

Baule et al., 2017; Ríos-Risquez & García-Izquierdo, 2016; Hill, 1997; Thompson et al., 1996; Cintron et al., 1983). Some authors use the SERVQUAL model to examine patient satisfaction from hospital services (e.g. Al-Borie & Sheikh Damanhouri, 2013; Chaniotakis & Lymperopoulos, 2009; Pakdil & Harwood, 2005; Andaleeb, 2001; Cheng Lim & Tang, 2000; Babakus & Mangold, 1992), others employ the SERVPERF (Le & Fitzgerald, 2014; Zamil et al., 2012; Yoo, 2005), and other researchers use modified models of SERVQUAL or SERVPERF. Another theme studied regarding hospital service patient satisfaction is that derived from private hospitals (Fatima et al., 2018; Anbori et al., 2010; Mortazavi et al., 2009; Fallon et al., 2008); public hospitals (Kaur et al., 2019; Ferreira et al., 2018; Mitropoulos et al., 2018; Gok & Sezen, 2013), and comparison of patient satisfaction from private vs. public hospital services (Owusu-Frimpong et al., 2010; Taner & Antony, 2006; Tengilimoglu et al., 1999; Camilleri & O'Callaghan, 1998). As regards the topic of this study, there is a number of studies focusing on patient satisfaction and Greece (Manolitzas et al., 2014; Chandrinou et al., 2013; Fotiadis & Vassiliadis, 2013; Matziou et al., 2011; Matis et al., 2009; Priporas et al., 2008; Christoglou et al., 2006; Raftopoulos, 2005; Gnardellis & Niakas, 2005; Niakas et al., 2004). Though, regarding patient satisfaction from public hospitals, these are relatively few (e.g. Chandrinou et al., 2013; Matis et al., 2009; Priporas et al., 2008; Aletras et al., 2007, 2006; Gnardellis & Niakas, 2005), and only one was found that focuses on the General Hospital of Kavala (Georgiadou & Maditinos, 2017).

Mitropoulos et al. (2018) examined inpatient public hospital satisfaction via a nationwide HCAHPS research undertaken in Greece after the health system reform was implemented. They found that the communication with nurses and doctors are the most salient predictor of overall patients' satisfaction. Xesfingi et al. (2017) studied inpatient (N=745) and outpatient (N=420) satisfaction as revealed by patients' assessment in the Konstantopouleio General Hospital of Athens and found that attention to patients by medical and nursery staff along with the hospital's environment and administration positively correlate with patient satisfaction in both groups. Georgiadou & Maditinos (2017) examined patient satisfaction from the General Hospital of Kavala, employing eight quality dimensions of the service performance measurement model (SERVPERF). They found that five quality dimensions measure patient satisfaction in the hospital, i.e., *"clinical care, social responsibility, staff quality, infrastructure and Hospital reliability"*. Matis et al. (2009) explored Greek inpatients (N=200) satisfaction of the university public hospital in Alexandroupolis, Greece, and found four dimensions of satisfaction (medical, hotel facilities/organizational, nursing, and global). They found that satisfaction was higher for the medical and nursing services, while it was relatively limited as regards the general organization. Aletras et al. (2006) measured outpatient satisfaction (N=258 +100 in a second round) from two general public hospitals in Macedonia, Greece. Via factor analysis, four scales derived concerning the outpatient component of the patients' visits, i.e., "medical examination, hospital environment, comfort and appointment time". Gnardellis and Niakas (2005) investigated the factors that influence inpatient satisfaction (N= 4209) in the Greek public hospital context. They measured the satisfaction of medical, nursing, accommodation and administrative services. Five clusters typology of inpatients was obtained according to the level of satisfaction expressed by participants. Priporas et al. (2008) assessed inpatient satisfaction (N=225) from the service quality of seven public – non-profit hospitals concerning the four dimensions of tangibles, reliability/assurance, interpersonal communication, and responsiveness. They found that the overall satisfaction during the hospital stay is rated very low (52.4 percent), thus, they pointed out that Greek hospitals perform just over the average and therefore their inpatient services are inappropriate according to patients 'perceptions. Geitona et al. (2008) explored patient satisfaction of Greek households (N=1000) the specific aspects of medication use and their correlates (e,g. Physician's consultation and response to adverse events, consultation and advice by pharmacists, symptoms' resolution, route of drug administration, drug tolerability and cost), and found high satisfaction in all except cost. Ilia et al. (2007) studied patient satisfaction (N=164) from a public hospital in Greece, focusing on patients' admission, accommodation aspects, external environment and the care provided by doctors, nurses and assistant personnel. They found that visiting hours, doctor's consistency, type of insurance, days of hospitalization, the type of clinic and hygiene's observance have a positive impact on patients' satisfaction. Dissatisfaction was obtained if it is not quiet, if it is difficult to locate doctors, and if problems occur with parking and the admission process. Furthermore, lack of patient-nurse communication, doctors' impoliteness, orderly improper behavior, and health deterioration after patients' hospitalization lead to dissatisfaction. Aletras et al. (2007), measured hospital outpatient satisfaction (N=100) from the ophthalmology clinic at the University Hospital of Larissa, and found that overall satisfaction's mean score was quite high (MS= 4.54/5.00) with highest being for the medical staff (MS=4.85), nursing staff (MS=4.70), and appointment time (MS=3.83).

## METHODOLOGY

A questionnaire was developed based on an in-depth literature review referring to the international and domestic realm. Additionally, a small-scale qualitative research regarding issues of patient satisfaction decreased the items of the question to 28. The question referring to patient satisfaction had 28 statements and was measured on a five-point satisfaction scale, whereas, 1= totally dissatisfied, 2= dissatisfied, 3= neither satisfied nor dissatisfied, 4= satisfied and 5= totally satisfied. Data was collected in the hospital with personal interviews following a special permit by the Hospital Administrator and via this method a sample of 448 hospital patients was collected for data analysis.

## RESULTS –DISCUSSION

### Demographic profile

From the 448 participants, 46,4% were males and 52,9% females, with mean age 39.81 (StD=16.080), being married: 48.9%, single: 40.2% and widowed or divorced: 10.9%. Regarding their health insurance status and specifically their insurance provider, 12.4% had OGA (federal insurance for farmers), 53.7% had EOPPY (federal insurance in the public and private sector), 7.6% had no insurance at all, 5.2% had private insurance company, and 21.1% other type of government insurance (such as for businessmen, sailors, for taxicab drivers, etc). Concerning their education, 8.3% had no education or primary education, 39.5% had secondary, 10.3% had post-secondary, and 41.9% had at least a bachelor's degree. As concerns their occupation, 49.6% were people with a monthly salary (civil servants, private sector employees, and on a pension), 15.9% were businessman and farmers, and 32.9% were dependent from others (housekeepers, university students, unemployed). Lastly, as to family net monthly income, 25.7% fell in the low-income category (up to 600€), 21.9% from 600.01-1000.0€, 34.1% fell in the 1000.01-2000.00€ category, and 18.3% had a net family monthly income more than 2000.00 €.

### Patient satisfaction

Twenty-eight items were rated on a five-point satisfaction scale. From the 28 statements no statement received a mean score (MS) greater than 4.00, indicating that participants are not satisfied by the hospital's services. Even more, one statement had MS<3.00, Additionally, twelve had 3.00 ≤MS≤ 3.50, and fifteen had 3.51 ≤MS≤ 4.00, indicating extreme room for service improvement. Moreover, the three-top rated in satisfaction statements were *Personalization of administration of medications depending on the patient and the condition* (MS=3.82), *Accessibility to the hospital* (MS=3.80), and *Modern hospital facilities* (MS=3.72). On the other hand, the lowest rated services/ statements were *Examination waiting time* (MS=2.92), *Hospital's provision with temporary accommodation for the relatives of the patients hospitalized* (MS=3.05), and *Hospital's interest for the patients' accompanying relatives and visitors* (MS=3.20).

### Factor analysis

Factor analysis with Principle Component Analysis with Varismax Rotation (KMO=0.962; BTS=8631.9036; df=378; sig=0.000) revealed three dimensions of patient's satisfaction accounting for 61.6% of total variance (T.V.). Table 1 presents the three dimensions derived from factor analysis, as well as the factor loadings, and mean factor scores (MFS). Reliability of total scale was calculated (α=0.964), while Cronbach α of each dimension was α=0.953; α=0.901; α=0.850 for the first, second and third dimension respectively.

Table 1: Dimensions extracted from factor analysis of the satisfaction items

| Hospital service variables | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 1st factor: Hospital's reliability, assurance and staff's capability and behaviour. Accounts for 28.4% of total variance; MFS= 3.42 (StD=0.86) | | | |

| | | | |
|---|---|---|---|
| Courtesy and kindness shown by doctors, nurses and other staff | .793 | | |
| Staff 's sincere interest in solving the patient's problem | .786 | | |
| The trust that the staff inspires to the patients regarding their behavior and capability | .751 | | |
| Hospital's interest for the patients' accompanying relatives and visitors | .747 | | |
| Nurses, doctors and other staffs' responsiveness to the patient's needs | .735 | | |
| The doctors, nurses and other staff's effort in satisfying patients' needs | .728 | | |
| Reliability of the hospital | .726 | | |
| Services provided at the time they are scheduled | .667 | | |
| Hospital's services are done as staff has informed | .663 | | |
| Competences and skills of medical care staff | .621 | | |
| Examination waiting time | .615 | | |
| The appropriate explanations about patients' condition and treatment by the staff | .614 | | |
| The security that the hospital makes me feel | .588 | | |
| Staff's professional appearance | .572 | | |
| 2nd factor: Patient-related hospital core services. Accounts for 20.1% of total variance; MFS= 3.60 (StD=0.75) | | | |
| The patients' rooms | | .708 | |
| Personalized meals and food according to the patient and the health condition | | .701 | |
| The adequacy and number of beds per clinic-department | | .680 | |
| Cleanliness and quietness in the hospital | | .666 | |
| Quality of provided meals | | .631 | |
| Modern hospital facilities | | .605 | |
| Personalization of administration of medications depending on the patient and the condition | | .597 | |
| Hospital's equipment is of latest technology (state-of-the-art). | | .561 | |
| Check in and check out time and procedures from the hospital | | .504 | |
| 3rd factor: Amenities and interest for the accompanying. Accounts for 13.1% of total variance; MFS=3.41 (StD=0.82) | | | |
| Parking facilities | | | .804 |
| Hospital's provision with temporary accommodation for the relatives of the patients hospitalized. | | | .679 |
| Accessibility to the hospital | | | .662 |
| Third-party auxiliary areas (e.g., ramps for people with disabilities, large waiting areas) | | | .638 |
| Patient status information availability | | | .501 |

**Cluster analysis -Segmentation**

The dimensions emerged from factor analysis were used for segmentation analysis employing k-means Cluster analysis, while ANOVA statistics revealed that the three segments are statistically different for all dimensions. Table

2 provides with the three segments of patient satisfaction from hospital services, its final cluster center (FCC) per dimension and segment, and ANOVA results for each dimension.

Table 2: Segmentation based on derived on dimensions of patient satisfaction

| Dimensions | Cluster 1 N=197 | Cluster 2 N=116 | Cluster 3 N=134 | ANOVA | |
|---|---|---|---|---|---|
| | | | | F | Sig. |
| Hospital's reliability, assurance and staff's capability and behaviour | 3.38 | 2.43 | 4.34 | 478.266 | .000 |
| Patient-related hospital core services | 3.61 | 2.73 | 4.32 | 383.764 | .000 |
| Amenities and interest for the accompanying | 3.41 | 2.46 | 4.25 | 427.066 | .000 |

Cluster I: The first cluster (44.1% of the total sample) is the indifferent cluster since all FCC are <4.00 and >3.00. This cluster consists of the neutral patients, the neither satisfied nor dissatisfied. They are most satisfied with the Patient-related hospital core services (FCC=3.61), and most dissatisfied with the Hospital's reliability, assurance and staff's capability and behavior (FCC=3.38) dimension. As their answers reveal there is room for hospital service improvement.

Cluster II: This cluster is the dissatisfied cluster (26.0%). No FCC is >3.00. the highest satisfaction comes from the Patient-related hospital core services (FCC=2.73) while the first and third dimension have about the same rate FCC=2.43 and FCC=2.46 for the first and third dimension respectively. Their answers reveal great improvement margins.

Cluster III: This cluster represents the 29.9% of the sample and is the satisfied patients. They have in all cases FCC>4.00, while no FCC is >4.50. compared to the other segments they are the satisfied ones, even though, leaving room for some improvements.

In general, 70.1% of the sample is not satisfied with the three hospital service satisfaction dimensions, leaving a large room for improvements.

**Limitations- Directions for future research**

This research has some unavoidable limitations due to the research design as well as economic and time constrains. Thus, it was limited to one hospital- public, and of one area, Kavala. A new research implementing a nationwide research could validate the results of this one. Additionally, a public vs. private hospital patient satisfaction survey would certainly be of interest. It is a without doubt factor that many other variables that impact on patient satisfaction from a hospital's service and that need to be incorporated and tested in a new survey. Lastly a larger sample would unquestionably help to validate the outcomes of this research.

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# The influence of quality of academics and university infrastructure on Generation Y students' attitudes and loyalty

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**Abstract**

*Customer loyalty is the ultimate goal for any organisation. Likewise, student loyalty is a major goal for universities. Loyal students engage in positive word of mouth marketing and would consider returning to the university in the case of furthering their studies. This study aimed to determine how Generation Y students perceive the quality of their universities' academics as well as the quality of the institutions' infrastructure. Furthermore, the study sought to understand the impact that these perceptions on quality have on supportive attitudes and brand loyalty towards their respective universities. This study made use of 480 self-administered questionnaires that were distributed across three higher education institutions in the Gauteng province of South Africa. Various statistical techniques were used to analyse the captures data including internal-consistency reliability and validity measures, descriptive statistics and structural equation modeling. Generation Y students' measures regarding the quality of academics and university infrastructure have a direct positive significant influence towards their supportive attitudes of the university they are attending. Furthermore, supportive attitudes have a direct positive influence on Generation Y students' brand loyalty of their universities.The quality of both academics and university infrastructure is of the utmost importance when attempting to create positive student attitudes of a university. It is vital for university institutions to implement stringent measures that ensure students perceive these aspects in a positive manner to aid in student brand loyalty. Moreover, positive student attitudes will aid in generating both student retention and positive word of mouth for the institution.*

***Keywords***:*Quality of academics, quality of university infrastructure, attitudes, brand loyalty, Generation Y students, South Africa.*

## INTRODUCTION

South Africa has 26 public Higher education institutions (HEIs) and government spent R37 billion per annum funding these HEIs through subsidies (National Treasury, 2019).Furthermore, South Africa has 106 registered private HEIs (DHET, 2018a). Government provides funding of R32 billion to a large number of students through the National Student Financial Aid Scheme (Fengu, 2019). In 2017, South Africa made global headlines when government announced its intention to provide free post-school education to the middle and low-income brackets (Masuabi, 2018). Economists predict that this would more than double the cost of post-school education and training by 2022 to R172.2 billion per year (Bloomberg, 2019).This is clearly a highly competitive industry as public HEIs receive their subsidy based on student enrolments (Check, 2016). HEIs need to find a way to attract their share of the 1.1 million students (in 2016) enrolled at public and private HEIs (DHET, 2018b).The vast majority of students attending HEIs in South Africa currently form part of the Generation Y cohort. Technoloy savvy, the Generation Y cohort is defined as individuals who are born between 1986 and 2005 (Markert, 2004). This study focusses on full-time registered students aged between 18 and 24 years.

## LITERATURE REVIEW

Brand loyalty can be defined as the willingness or preference of a consumer to purchase the same brand recurrently (Lamb *et al*., 2013;Jooste*et al.,* 2012). Funk and Levis (2009) note that consumer satisfaction is a prerequisite for loyalty. Brand loyalty creation depends on meeting or even surpassing consumer expectations (Keller, 2013). A consumer whose expectations are met will be willing to come back to the organisation time and again. Consequently, if the organisation can continuously meet expectations, the consumer will become a brand loyal consumer (Schiffman*et al*. 2010). Often, a gap exists between the consumer's expectations and the organisation's perceptions of what those expectations entail (Wilson *et al.*, 2012). Organisations need to strive to close this gap to ensure consumer satisfaction. Likewise, HEIs need to strive to meet students' expectations to ensure satisfaction, supportive attitudes and loyalty.

Student loyalty is one of the key objectives of educational institutions (Thomas, 2011) and provides institutions with some competitive advantage (Aritonang&Lerbin, 2014). Espinoza *et al*. (2017) argue that the reputation of an HEI is influenced by students' perceptions of the quality of education received. There are several factors that could influence student satisfaction including the quality of: academics, admin services, student social life, university infrastructure and support services (Helgesen&Nesset, 2007). Douglas *et al*. (2006) suggest that HEIs need to be attentive of their student customers' opinions and focus on recruitment and retention. Satisfied students will show commitment towards the HEI through supportive attitudes Sung & Yang (2008).Consequently, student satisfaction will lead to student loyalty (Aritonang&Lerbin, 2014;Petruzzellis&Romanazzi, 2010). Loyal students will not only return to their HEI for future studies but will also share positive word of mouth for the institution (Helgesen&Nesset, 2007).

## RESEARCH METHODOLOGY

### Sampling and data collection

A descriptive research design, following a single cross-section sampling method, was the implemented research methodology for this study. The target population for this study comprised students that are enrolled at a South African public HEI, belong to the Generation Y cohort and are individuals that are aged between 18 and 24 years. The sampling frame was restricted to three HEI campuses out of the 26 available HEIs located in South Africa. To ensure full representativeness of all higher education institutions found within the country, the sample comprised one traditional university, one comprehensive university and one university of technology. A non-probability convenience sampling and mall-intercept method wereused to gather the required data. 600 questionnaires were handed out (200 per campus) to the full-time Generation Y students at the three chosen HEIs. The purpose of the study was included on the cover letter of the questionnaire, furthermore, the cover letter explained that participation in the study was of a complete voluntary nature and that the participant may abandon the questionnaire at any time.

### Research instrument

The data required for the study was collected using a self-administered questionnaire. Fieldworkers debriefed participants about the nature of the study and ensured voluntary compliance from participants.The questionnaire consisted of two sections, the first section (Section A) collected the demographic data of the study whilst the second section (Section B) pertained to the scaled-response items from prior published studies. The scales used in this study includedquality of satisfaction ofacademics (three items), quality of satisfaction of university infrastructure (three items) which were adapted and developed by Helgesen&Nesset (2007). Supportive attitudes (four items) was captured using a scale by Sung and Yang (2008). Finally, students' brand loyalty was measured using the scale developed by Helgesen&Nesset (2007). All itemised responses were captured using a six-point Likert-type scale which ranged from strongly disagree (1) to strongly agree (6).

**Data analysis**

The captured data was analysed using IBM's Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), versions 25. In order to achieve the objectives set out for the study, various statistical techniques were carried out. These statistical techniques included frequencies, descriptive statistics, convergent and discriminant validity analysis, internal-consistency and composite reliability analysis and structural equation modeling (SEM).

The Cronbach alpha statistic determined the datasets internal-consistency reliability, where a Cronbach alpha value of above ≥ 0.60 indicates acceptable internal-consistency reliability and a value of ≥ 0.70 indicates good to excellent internal-consistency reliability (Silver *et al*., 2013; Zikmund&Babin, 2013; Malhotra, 2010). The data sets nomological validity was assertedby making use of a Pearson's Product-Moment correlation coefficient matrix.Furthermore, multi-collinearity diagnostics was undertaken for the purpose of identifying any high correlation coefficients between latent factors, this was achieved by estimating both variance inflation factors (VIF) and tolerance values. Multi-collinearity is present when tolerance values lower than 0.10 and VIF values above 10 are present in the data set (Pallant, 2010). Path analysis using SEM was undertaken to answer the studies research objectives this was accomplished by specifying both a measurement and structural model. To ascertain the measurement models reliability and convergent validity, the standardised estimates were assessed as well as computing the composite reliability (CR) and average variance extracted (AVE) statistics. In order to achieve adequate composite reliability, the measurement model must produce CR values of ≥ 0.70 (Hair *et al*., 2014). Similarly, convergent validity of the measurement model is achieved when the standardised loading estimates and AVE values exceed≥ 0.50, whilst discriminant validity is attained when the square root value of the AVE exceeds the Pearson's correlation coefficients (Hair *et al*., 2014; Byrne, 2010 Malhotra, 2010). As a significant chi-square statistic indicates poor model fit due to sensitivity from large sample sizes, other model fit indices were utilised to assert adequate model fit for the measurement and structural model (Hair *et al*., 2014; Pallant, 2010; Byrne, 2010 Malhotra, 2010).The following model fit indices were used in this study to assess model fit: the goodness-of-fit index (GFI), the normed fit index (NFI), the incremental-fit index (IFI), the Tucker-Lewis index (TLI), and the comparative fit index (CFI). Hair *et al*. (2010) and Malhotra (2010), denote that model fit indices need to achieve values of ≥ 0.90 to advocate a good model fit. In terms of the RMSEA and SRMR indices values of below 0.80 and ≤0.05 respectively, indicates acceptable model fit (Byrne, 2010; Malhotra, 2010). In terms of practical significance,the threshold was set at $p \leq 0.01$ throughout the study.

**RESULTS**

The studies 600 questionnaires were evenly distributed amongst the three HEI's, were 492 questionnaires were returned completed. Any questionnaires that fell outside the scope of the studies target population parameters were excluded, once this cleaning was completed 480 useable questionnaires remained, indicating an 80 response rate.Demographically speaking the sample consisted of more females (54 percent) than males (46 percent) andmajority of respondents (70 percent) were aged between 20 and 22 years. Geographically, the sample represented participants from each of the countries province and included all 11 official languages found in South Africa.

In terms of measuring the data sets internal-consistency reliability, the Cronbach alpha statistic waschosen as the statistical measure. These results are presented in Table 1.

**Table 1**: Summary of reliability test results

| Constructs | Number of items | Cronbach alpha |
|---|---|---|
| Quality of academics | 3 | 0.671 |
| Quality of university infrastructure | 3 | 0.683 |
| Supportive attitudes | 4 | 0.902 |
| Brand loyalty | 3 | 0.821 |

Table 1 depicts that each proposed construct exceeds the acceptable cut off level of 0.60 (Silver *et al*., 2013; Zikmund&Babin, 2013; Malhotra, 2010). Quality of academics and quality of university structure obtained Cronbach alpha values approaching the good range whilst, supportive attitudes (0.902)and reputation quotient measures (0.877) achieved excellent Cronbach alpha values. Therefore, it may be inferred that the measuring instruments scales possess acceptable internal-consistency reliability.

Next descriptive statistics for the data set were computed to assess the normality of the data. Measures of location, shape and variability were chosen to achieve this. Additionally, one sample t-tests were computed on each of the constructs means in order to test their significance. As the questionnaire made use of a six point-Likert scale on the measured items, the expected mean threshold was set 3.50. Furthermore, the significance level was set at a = 0.05. Table 2 below shows the means, standard deviations, p-values, skewness and kurtosis values.

**Table 2**: Descriptive statistics

| Constructs | N | Means | Standard deviation | t-value | p-value | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Quality of academics | 480 | 4.759 | 0.813 | 128.240 | 0.000 | -1.030 | 1.863 |
| Quality of university infrastructure | 480 | 4.826 | 0.953 | 110.920 | 0.000 | -0.975 | 0.967 |
| Supportive attitudes | 480 | 4.345 | 1.162 | 81.917 | 0.000 | -0.841 | 0.194 |
| Brand loyalty | 480 | 4.324 | 1.289 | 73.496 | 0.000 | -0.791 | 0.046 |

Means above 3.50 were attained by each of the constructs and each of the means were statistically significant at thep ≤ 0.05 level. The salient means are indicative of Generation Y students' positive opinions of their institutions academics and believe their universities infrastructure is of high quality. Furthermore, Generation Y students possess positive attitudes and portray some sense of brand loyalty towards their university institution. The normality of the data was analysed using the skewness and kurtosis statistics. As can be seen in Table 2, there is no cause for concern regarding the normality of the data as all skewness values within the acceptable range of -2 and +2, additionally, kurtosis values displayed no irregularities (Bernt&Petzer, 2011; Malhotra, 2010; Shukla, 2008).

In terms of the nomological validity of the proposed model, the Pearson's product-moment coefficient was calculated and tabulated.To ensure no multicollinearity issues were present within the latent factors, collinearity diagnostics were performed on the data set. The correlation matrix is presented in Table 3 below.

**Table 3**: Correlation analysis

| Constructs | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Quality of academics | 1 | | | |
| Quality of university infrastructure | 0.417** | 1 | | |
| Supportive attitudes | 0.548** | 0.430** | 1 | |
| Brand loyalty | 0.508** | 0.426** | 0.706** | 1 |
| **Correlation is significant at the 0.01 level (2-tailed). | | | | |

Depicted in Table 3, each pair of latent factors represents a statistically positive significant relationship with one another at the p ≤ 0.01 level. As such, it can be asserted that the proposed models show evidence of nomological validity. The correlation strengths varied with the majority of the correlations being strongly associated with one another. Supportive attitudes and brand loyalty attained the highest correlation (r = 0.706), followed by quality of academics and supportive attitudes (r = 0548). The lowest but still medium strength associated variables were that of quality of academics and quality of university infrastructure (r = 0.417).

Tolerance values of the collinearity diagnostics ranged from 0.442 to 0.750. Furthermore, no VIF values above 10 were recored, with anaverage value of 1.822 was computed. This asserts that the data set did not display any multi-collinearity concerns. In addition to the absence of multicollinearity and the presence of nomological validityit was presumed safe to undertake SEM analysis.

Following the affirmation of the validity analysis, confirmatory factor analysiswas then implemented in the form of the measurement model utilising the maximum likelihood approach to analyse the factors. The first loading of each factor was fixed at the standard 1.0, the model computed 91 sample moments and 32 parameters to be estimated. This left 59 degrees of freedom and a significant chi-square of 112.873 (p= 0.000) based on an over-identified model. The identification of Heywood cases and problematic estimates are imperative to achieve a good working model (Hair*et al*., 2010). As there were no standardised estimates above 1.0 or below -1.0 and zero evidence of any Heywood cases in the data set, the proposed measurement model was deemed to be of sound nature. The standardised loading estimates error variance estimates, CR values, AVE values, square root of the AVE values (√AVE) and the correlation coefficients can be found in Table 4 below:

**Table 4**: Measurement Model Estimates

| Latent factors | Standardised loading estimates | Error variance estimates | CR | AVE | √AVE |
|---|---|---|---|---|---|
| Quality of academics (F1) | 0.628 | 0.394 | 0.75 | 0.50 | 0.71 |
| | 0.747 | 0.558 | | | |
| | 0.575 | 0.331 | | | |
| Quality of university infrastructure (F2) | 0.697 | 0.486 | 0.75 | 0.50 | 0.71 |
| | 0.635 | 0.403 | | | |
| | 0.611 | 0.373 | | | |
| Supportive attitudes (F3) | 0.764 | 0.584 | 0.79 | 0.50 | 0.71 |
| | 0.901 | 0.812 | | | |
| | 0.798 | 0.637 | | | |
| | 0.884 | 0.782 | | | |
| Brand loyalty (F4) | 0.809 | 0.665 | 0.75 | 0.50 | 0.71 |
| | 0.775 | 0.601 | | | |
| | 0.761 | 0.579 | | | |
| **Correlations** | F1↔F2: 0.602 | F2↔F3: 0.539 | | | |
| | F1↔F3: 0.666 | F2↔F4: 0.578 | | | |
| | F1↔F4: 0.648 | F3↔F4: 0.821 | | | |

The measurement models estimates in Table 4 above indicate that adequate composite reliability as all CR values exceeded the recommended threshold of 0.70. In addition, the model displaysconvergentvalidity as all AVE values are equal or greater than 0.50.Discriminant validity is asserted for the most part of the model as all square root AVE values exceed their respective correlations with the exception of F3↔F4 (0.821 > 0.71). As attitudes and brand loyalty are closely related constructs some degree of similarity can be expected as is found in the literature (Erdogmusa& Ergun, 2016; Hair *et al*., 2014;Petruzzellis&Romanazzi, 2010). Being sensitive to sample size, a significant chi-square was computed for the model which indicated poor model fit (Hair *et al*., 2010). To alleviate this, other model fit indices were assessed to effectively analyse model fit (Hair *et al*., 2010; Malhotra, 2010). The indices used to assume good model fit included: GFI = 0.966, AGFI = 0.948, NFI = 0.963, RFI = 0.950, IFI = 0.982, TLI = 0.976, CFI = 0.982, SRMR = 0.0340 and a RMSEA of 0.044.

After adequate model fit was achieved for the measurement model the structural model could then be specified. The structural model sought to determine the effects the independent variables of quality of academics (F1) and quality of university infrastructure (F2) displayed on supportive attitudes (F3). Moreover, the model explored if supportive attitudes (F3) had any direct positive effect towardsGeneration Y students' university brand loyalty (F4). The results of the standardised regression coefficients, standard error estimates and p-values as estimated for the structural model by AMOS are represented in Table 5 below.

**Table 5**: Standardised regression estimates and p-values

| Relationship | Estimates | p-value | Results |
|---|---|---|---|
| Quality of academics→Supportive attitudes | 0.532 | 0.000** | Significant |
| Quality of university infrastructure→Supportive attitudes | 0.237 | 0.000** | Significant |
| Supportive attitudes→Brand loyalty | 0.832 | 0.000** | Significant |
| ****Significant at the p < 0.01 level** | | | |

As can be seen in Table 5 above, all hypothesised paths were positive and statistically significant at $p \leq 0.01$. Quality of academics ($\beta = 0.532$, $p < 0.01$) and quality of university infrastructure ($\beta = 0.237$, $p < 0.01$) are statistically significant predictors of Generation Y students' supportive attitudes. Furthermore, supportive attitudes ($\beta = 0.832$, $p < 0.01$) displayed a significant positive impact on Generation Y students' brand loyalty. In terms of the squared multiple correlation coefficient, quality of academics and infrastructure explain 49 percent of the variance in Generation Y students' supportive attitudes towards their universities, which, in turn, explained 69 percent of the variance towards their brand loyalty intentions of their universities. A significant chi-square (129.568) was once again returned for the structural model, however, the other fit indices suggest good structural model fit with a GFI of 0.962, a AGFI of 0.944, a NFI of 0.957, a RFI of 0.945, a IFI of 0.977, a TLI of 0.970, a CFI of 0.977, a SRMR of 0.0421 and a RMSEA of 0.048. The structural model is presented in figure 1 below:

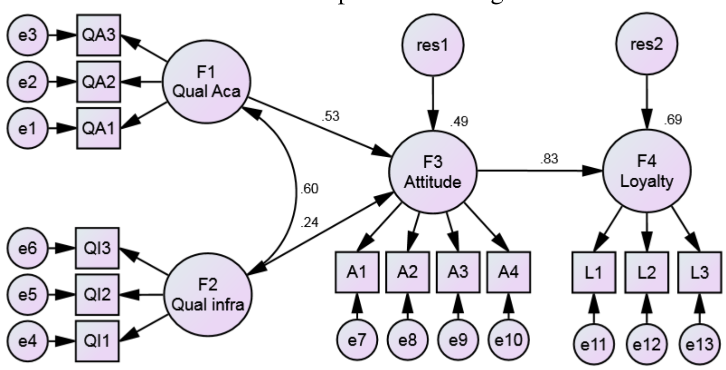


**Figure 1:** Structural model of university students' brand loyalty

The findings of this structural model is in line with prior research conducted by scholars such as El-Kassar*et al*. (2019), Erdogmusa and Ergun (2016), Hanssen and Solvoll (2015), Sung and Yang (2008) and Hennig-Thurau (2001).

## CONCLUSIONS

A university students' loyalty has become the epicentre of many university's marketing campaigns. This is a direct result from an increase in tertiary institutions available to the student of today (Giner&Rilo, 2016). This study aimed to understand the influence of quality ofacedemics,quality of university infrastructure and supportive attitudes have on Generation Y students' brand loyalty toward their teriary institution. This study found that Generation Y students' perception of quality of both academics and the HEI's infrastructure are of utmost importance when attempting to create supportive attitudes towards theirHEI. Furthermore, positive perceptions of the academics and infrastructure will also aid in student brand loyalty. Moreover, positive student attitudes will aid in generating both student retention and positive word of mouth for the institution.As such, HEIs should implement stringent measures that ensure the quality of academics and the upkeep of infrastructure to facilitate supportive attitudes and student loyalty. This study also found that brand loyalty exists amongst the Generation Y student cohort, this is imperative as loyal student may becomea loyal alumniwhom could translate into great advocates for their university (Ali *et al*., 2016). Finally, the results of this study will aid researchers, practitioners and university institutions better comprehend the antecedents that may contribute to a students university loyalty.

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Zikmund, G.W. &Babin, J.B. (2013). Essentials of marketing research. 5th ed. South-Western, Cengage Learning.

# Patients' satisfaction with public healthcare services: the case of three Municipal Health Clinics in Thessaloniki area

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**Abstract**
Nearly all European countries have been affected by the economic crisis, but the consequences have been among the worst in Greece . In a time of economic turmoil, rising health care needs and increasing demand for public services collide with austerity and privatization policies, exposing Greece's population health to further risks.
However, despite early efforts by the government and other parties, the healthcare system in Greece remained one of the least developed amongst OECD countries with many gaps in the delivery, organisation and funding of healthcare. The system has been characterised by lack of infrastructure or adequate funding, with great inequalities in access to healthcare.
Due to the current economic crisis and the austerity policies that are applied, several municipalities are provided with primary medical care and primary health care services through their primary clinics, mainly to the vulnerable groups of their population.
Evaluation studies on the satisfaction of health unit users are a basic tool for the assessment of health quality services. Recording the opinions of both visitors/patients and staff members of Municipal Clinics, using structured questionnaires, helps to detect the malfunctions and omissions which lead to improved health quality services and to the smooth operation of primary healthcare units.

**Objective:**
The aim of this study is to find out the level of patient satisfaction in the healthcare sector relating to the three Municipal Health Clinics in the Municipality of Neapoli – Sykees, in Thessaloniki, Greece. Moreover, emphasis is given to the patients' opinion on matters associated with the quality of services. Recommendations for further improvements of the units' operation as well as the health services are provided.

**Material - Method:**
To measure satisfaction we used two structured questionnaires which were filled out by 240 visitors/patients and 55 staff members of the Municipal Clinics of Neapolis - Sykees. The study was conducted between the 1st of July and the 15th of August 2018 in the three clinics of the Municipality. The participants were informed about the objective of the study, while their participation was optional and anonymous. To analyze the data we used the statistics program called GNU PSPP. The reliability of the questionnaires was ensured using Gronbach's Alpha method, the descriptive statistics were analyzed and several statistical functions were used in order to find consistent relations between the variables taken into account.

**Results:**
The total satisfaction of the participating visitors/patients of the Municipal Clinics is clearly high. The majority stated that felt high to complete satisfaction from the overall care and quality of the healthcare services provided. All the staff members, regardless of their specialization, characterized their satisfaction, both concerning their job and the clinic's infrastructure, as high or very high. The human resources department mentioned some problems concerning the shortage of staff members, the mediocre logistical infrastructure and the computerization. The staff members' opinions on the sufficiency of funding are controversial. However, all the patients and staff members support the existence of Municipal Clinics and want them to be funded and connected to the Ministry of Health and to the healthcare system.
The findings are more than encouraging, as the Local Authorities - being the closest institution to the citizens- have been assessed as competent and having great prospects in providing healthcare services, as well as in implementing prevention and health improvement policies for the public.

**Key- Words:** Patients Satisfaction, Municipal Clinics, Primary Health Care, Social Politics, Welfare State, Economic Crisis, Local Authority Organizations.

# Digital Marketing

# Travel website characteristics and their impact on consumers' intention to make purchases

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**ABSTRACT**

This research aims to examine the effect of usefulness (amount of information), aesthetics and ease of use on intention to purchase and intention to recommend a tourism related webpage. Two famous tourism websites were assessed by the respondents in order to make comparisons and identify the factors that have an impact on purchase intention. For that reason, a primary research with the use of a questionnaire was conducted and 112 customers of those two websites participate on the research. The results among others show that there is a strong positive relationship between usefulness (amount of information) on the website, positive aesthetic elements, ease of use of the web site and intention to recommend the website to others and the intention to make a purchase. Furthermore, the findings from the primary research show that there is a positive relationship between referral intention, repeat purchases and usefulness, aesthetics and ease of use. Those findings have various implications and they can be used by tourism companies that offer their products online in order to improve their profits and effectiveness.

**Keywords:** tourism websites, digital marketing, tourism consumer behavior, e-promotion

# The Stroop Effect as a Visual Game using Unity Technology via Evocative Power of Words and Images in Marketing

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**Abstract**

The Stroop testis a neuropsychological test that is internationally considered as reliable and sensitive for the control of frontal activity and executive function.
In this research work, the Stroop test was carried out by using the Unity machine in a virtual test with exactly the same application methodology and measurement of the results. The new visual "ustroop" test was administered to a sufficient number of individuals in order to weigh the score relative to the initial test. Subsequently, additional games scenario in the form of a play script were added using well-known large company logos to observe the player's reaction to color, brand name and words.
Then the collected data are analyzed and transformed to assume suitable form for the execution of the respective machine-learning algorithms, provided by the software package Weka, in order to evaluate the brand name and its relation to the color in the context of Marketing.
In conclusion, visual gaming can be promoted and evaluated by neuropsychological assessment tools and the findings of the present project can be possibly further expanded.

***Keywords:*** *Stroop, Digital Marketing, Unity, Data Analysis, Brand Marketing, Color Psychology*

# Blockchain Technology and Smart Contracts in Marketing

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**Abstract**

Technological progress is the key to entrepreneurship's long-term sustainability. The Fourth Industrial Revolution is essentially a digital revolution, and a revolution of technological breakthroughs, such as Robotic Process Automation, Artificial Intelligence, Blockchain and the Internet of Things. The impact of Blockchain technology [1] will be far-reaching, as it will disrupt almost every industry in every country, emerging or developed. Smart Contracts are as "a computerized transaction protocol that executes the terms of a contract" [2] are based on Blockchain technology and can be considered as scripts stored on the blockchain.
The purpose of the specific paper is to introduce a concept of Smart Contract policy in marketing based on high-end technological blockchain solutions. Through this research work a system framework will be defined aiming to combine technological trends with smart contacts in marketing.

*Keywords*: *Blockchain Technology, Smart Contracts in Marketing*

## Introduction

Technological progress is the foundation to establish a continuous evolvement of key entrepreneurial activities. Typical example is the Fourth Industrial Revolution, which constitutes the modern digital revolution facilitating technological breakthroughs in the different fields. Towards this direction, science has identified several sectors of technology, named as Key Enabling Technologies such as Artificial Intelligence, Robotics, 3D Printing, Internet of Things, etc [3]. Based on this technological revolution blockchain technology resolves the issue of trustless networks [4], because the parties can transact even though they do not trust each other.

The specific technology provides the solution to develop automated mechanisms as self – executing scripts in the kernel of the blockchain solution. This means that the parties interested to perform a transaction do not require the presence of a third trusted party and are able to perform transactions between them very fast and without the obstacle of non-trust.

A Marketing contract is typically an official agreement between two parties. In most cases,the parties are a legal entity or person that delivers marketing services and a legal entity or person that receives these services. Within the terms of the contract are the typical descriptions of the services and the payment, clarifications regarding ownership rights, proprietary information, publicity rules, warranties, terms for termination, etc. The contract is the main document that binds legally both parties for the proper execution of the terms of contracts.

## Blockchain technology and Smart contracts mechanism

A blockchain is a distributed data structure that is replicated and shared among the members of a network and can be described as a distributed database of records between these members. It can also be described as public trusted ledger of digital events and transactions between members.
The core aspect of this technology was primarily used to support bitcoin [1] enabling a multibillion-dollar global market of anonymous transactions without any governmental control. Based on this the specific contribution envisages a network with members allocated anywhere in the world and a system that will facilitate two or more members to negotiate the terms a smart marketing contract.

The basic idea is to populate the distributed data structure of the blockchain with typical terms that can be found within a marketing contract. When two parties are interested to develop a smart marketing contract between them the system will give them access to a negotiation tool aiming to initiate the terms negotiation between the two parties. At the end of the negotiation both parties will agree to a complete set of the terms located on a single smart marketing contract between them.
The system resolves two important issues:

- The non-existence of a third trusted party, which will validate the trust between the parties and
- The realization of the terms of the smart contract with blockchain technology resulting to an automated mechanism, which will trigger events based on the terms of the contract in an undisputed way.

**Conclusions**

New technologies and new perspectives exist in the modern world. Marketing is a field, which is affected by the technological progress, and contemporary mechanisms that facilitate the proper management of marketing procedures must follow the guidelines of new industrial 4.0 era. The integration of smart contracts in the marketing field is inevitable and new frameworks with new systems, must be presented in order to facilitate this technological enhancement.

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# The effect of digital technology on specific cognitive abilities

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**Abstract**

This work deals with the effect of digital technologies, digital media, devices, etc., what we generally call 'digital environment', on selected cognitive abilities, for which there are strong indications in the literature that they are different in the digital and the physical (tangible) environment. Over the past century, there was a rise in the average IQ in developed countries (around 3 IQ points per decade), based on comparisons of IQ test scores of successive generations. This implies that people in our era are getting smarter (Gottfredson, 2011). This intelligence rise might be affected by the population mixing due to globalization and by great changes of the environment in which people grow up and live (another reason could be the physiological changes of humans that would have led to mental changes, but the time period is too short for that). One of the greatest changes is apparently the emergence and growth of the digital environment. Nowadays, the digital environment is everywhere, at home, workplaces, public areas, etc. The ways that the digital environment interacts with the physical environment, as well as the basic sub-environments that have emerged due to their interaction, are depicted in Figure 1.

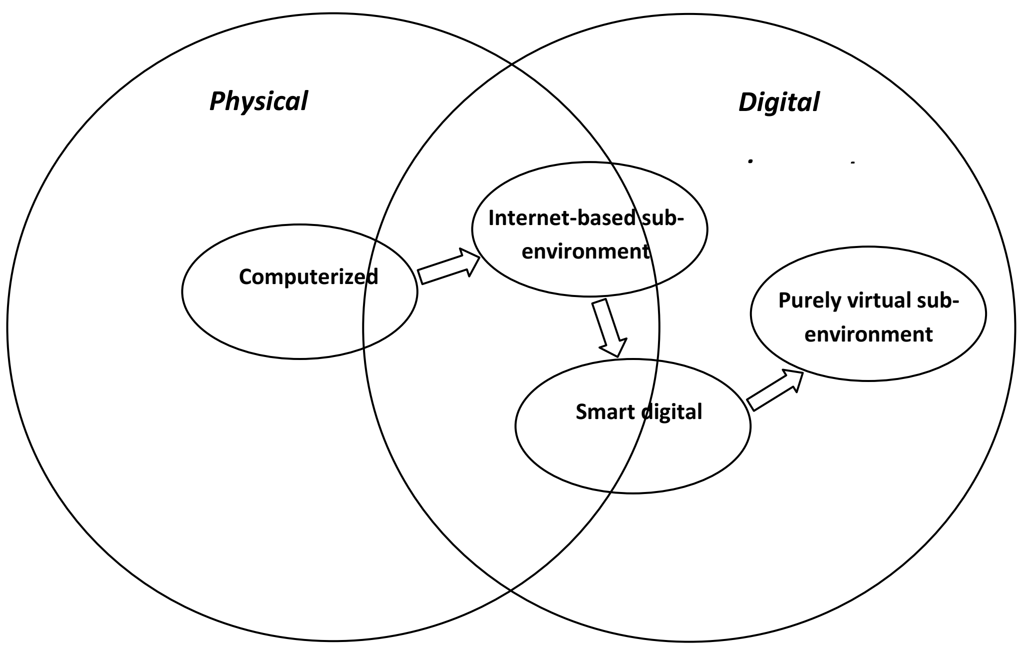


**Figure 1:** Interaction between the digital and the physical environment

As it can be seen in Figure 1, the physical environment nowadays is not independent from the digital environment; the two environments have a common space which is gradually expanding. For example, a server has a tangible aspect but at the same time includes a huge number of data, which indicates its digital aspect. Based on this common space, some discrete sub-environments, which are also characterized by a chronological order of appearance, could be identified. In the past, the common space was mainly occupied by the *computerized sub-environment*, meaning the coexistence of hardware and software but with the lack of the Internet. Then, the *Internet-based sub-environment* emerged having a greater part inside the digital environment than the computerized sub-environment, with the need for physical equipment to become less and less with the passage of time. Following that, the Internet began to evolve to a ubiquitous network connecting the physical objects, since more and more devices were getting computerized, interconnected, and smart; the *smart digital sub-environment* was the next step towards the proliferation of the digital environment. There is also the *purely virtual sub-environment*, in which the participant 'lives' in the digital environment and has no influence from the physical environment. The purely virtual sub-environment is not just for playing, but could be an identical environment for many things in the digital era, as for example, training in complex collaborative tasks (Bertram et al., 2015).

There are strong indications in the literature that many cognitive abilities differ a lot between the digital and the physical environment. Liu (2005) contended that people's reading behavior is different in the digital environment. One-time reading of electronic documents, as well as selective reading, has prevailed. However, less time is devoted on in-depth reading and sustained attention has decreased; one of the reasons for that is the number of hyperlinks in a text which distract people from continuous and concentrated reading. According to Kress (2003), multimodality of electronic documents (image, audio, video, text) changes the way that readers perceive and understand these documents. For instance, users of a site first perceive it as a large mass of shape and colour (usually search for specific structures with which they are used to), then select information from images and video, and finally begin to read specific words and phrases. Mangen and Velay (2010) reported that the process of text production is radically different in a print writing environment compared to a digital environment. Writing by hand is slower and more laborious process than typewriting. The shift from handwriting to typing has an impact on the cerebral representation of letters and thus on letter memorization.

Information seeking is performed differently in the digital environment due to random and not serial access to information and because it is a continuous process on the Internet usually occurring in groups. One of the most examined abilities in the digital environment is multitasking. Greenfield (2009) mentioned that video games promote multitasking; however, it is not clear whether each of the multiple tasks could be performed better if done as a separate task. What Greenfield also pointed out is that video games develop to a significant extent the visual skills, but at the expense of other skills, such as critical thinking and imagination. She argued that video games and the Internet are producing learners with a new profile of cognitive skills. Regarding video games, Homer et al. (2018) claimed that they improve high school students' executive functions, i.e. the skills required to plan, monitor, and control cognitive processes. According to Bowman et al. (2010), communication differs in the digital environment since the users of digital media have the time to compose and revise their responses and this gives them more control over their communication. Moreover, it is very important that the advanced users of digital media develop an algorithmic way of thinking (Williamson Shaffer and Clinton, 2006), as well as that new ways of learning to do things are established in the digital environment making the traditional means obsolete (Prensky, 2001; Tapscott, 2008); such a way is through computer simulations, which can also be used for intelligence assessment (Kröner et al., 2005). Based on the above, the following research hypotheses are formulated:

*H1: Reading in the digital environment is performed differently from the physical environment.*

*H2: Playing a game in the digital environment is performed differently from the physical environment.*

*H3: Information seeking in the digital environment is performed differently from the physical environment.*

*H4: Communication in the digital environment is performed differently from the physical environment.*

*H5: Learning to do things in the digital environment is performed differently from the physical environment.*

*H6: Multitasking in the digital environment is performed differently from the physical environment.*

In order to test the aforementioned hypotheses, an online survey was conducted in the period October-December 2018, by using a questionnaire that was created via Google Forms. The target group of that survey included the under- and post- graduate students of the Aristotle University of Thessaloniki, the University of Macedonia, and the Alexander Technological Educational Institute of Thessaloniki. The sample size was 2,345 individuals (at a response rate of 16.3%). The respondents were classified into the following five categories with regards to their usage of digital devices: (i) beginners, (ii) developing users, (iii) average users, (iv) advanced users, and (v) experts. Three classification rules were used: a) the digital devices that the respondents use, b) the frequency of use, and c) the reasons of use. More specifically, they had to answer to what extent (not at all, little, moderately, quite, and very much) they were using the following digital devices: desktop PC, laptop, tablet, smartphone, MP3/MP4 player, smart TV, digital camera/drone, digital audio system, smart watch, video game console, and virtual reality device. For the purposes of our study, these digital devices constitute three clusters: 1) desktop and laptop, which are used for the same objectives (their difference is about mobility), 2) tablet and smartphone, which are mainly used for daily activities on the basis of connectivity, and 3) all the other devices, which are used for specific tasks and usually have less usefulness than the previous four devices. The respondents had also to select the main reasons for which they were using digital devices: primarily in work or studies (one cluster), supportively in work or studies (another cluster), information, entertainment, and communication (the last cluster regarding the reasons). The results of the classification process are depicted in Figure 2. It should be pointed out that 356 respondents were not classified into the five suggested categories since they were not using most of the digital devices and/or their questionnaires were not filled in according to the instructions.

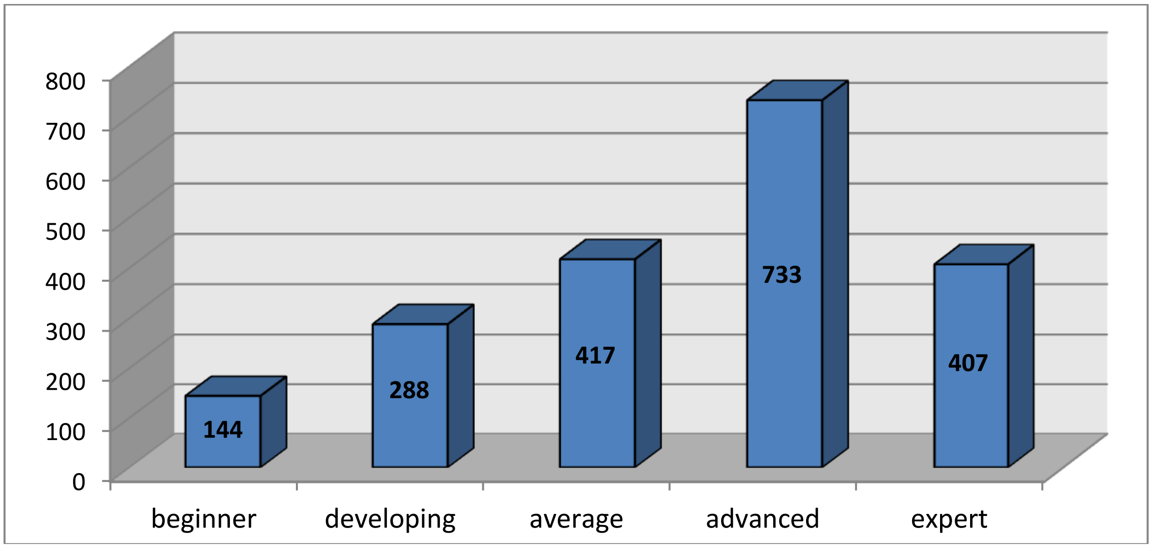


**Figure 2:** Classification of the respondents into five categories of users of digital devices

The aim of the previously described survey was to investigate whether the six cognitive abilities, as mentioned in the research hypotheses, are different in the physical and the digital environment, according to the perceptions of the participants in the survey. Thus, the respondents were asked whether they perceive each of those abilities to be 'much better in the digital environment', 'better in the digital environment', 'the same in the digital environment and the physical environment', 'better in the physical environment', and 'much better in the physical environment'. Correspondence analysis, a non-parametric exploratory statistical technique, was used to graphically indicate the relationship between the 'user category' (getting the values of 'beginner', 'developing user', 'average user', 'advanced user', and 'expert') and the 'digital vs. physical environment', getting the values mentioned above. The diagrams from the correspondence analysis for two of the cognitive abilities examined (reading and playing a game) are shown in Figure 3.

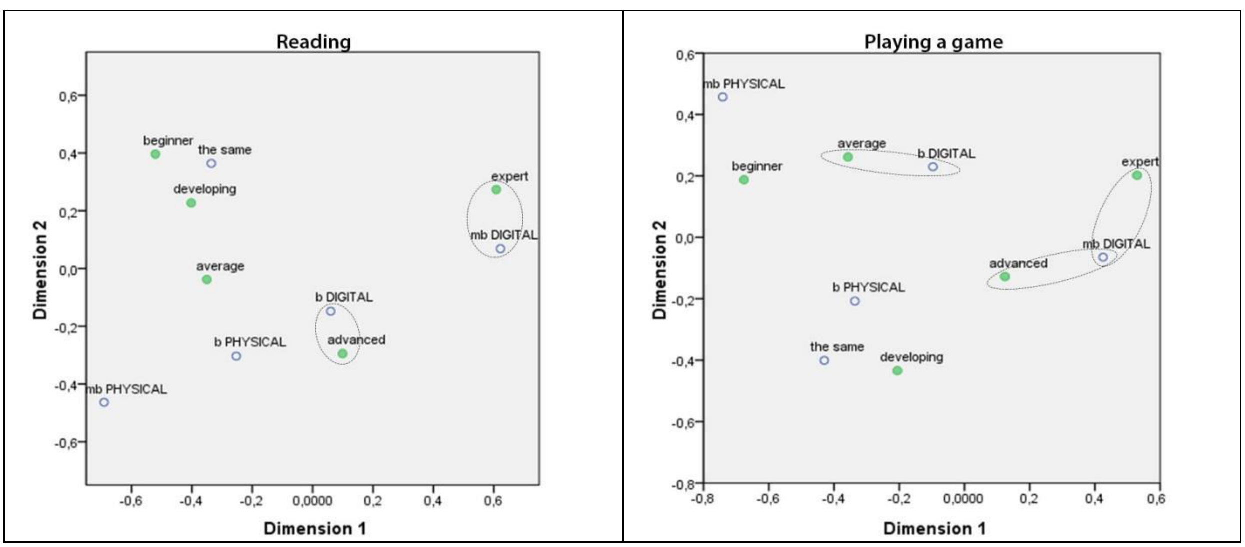


**Figure 3:** Diagrams of correspondence analysis

Not only in the above diagrams, but in all the diagrams of correspondence analysis (for all the cognitive abilities examined), experts have a close relationship with the perception of 'much better in the digital environment' (symbolized by 'mb DIGITAL' in the diagrams). Moreover, advanced users correspond to the perception of 'better in the digital environment' (symbolized by 'b DIGITAL' in the diagrams); especially for playing a game, advanced users correspond to 'much better in the digital environment'. Beginners and developing users are neither related with perceptions of much better/better in the digital environment nor related with these perceptions in the physical environment; this finding makes sense because beginners and developing users cannot perceive their cognitive abilities differently in the two environments since they do not adequately use digital devices.

Since correspondence analysis is a descriptive technique and does not allow testing statistical hypotheses, chi-square testing was also used. All the chi-square tests (for all the cognitive abilities examined) were statistically significant leading to the conclusion that there is relationship between the user category and the perception about the difference of the cognitive abilities between the digital and the physical environment. Due to the fact that chi-square tests cannot indicate the strength of that relationship, Cramér's V coefficient was used. The values of Cramér's V, for all the cognitive abilities examined, revealed a weak to moderate relationship (0.172 the lowest and 0.195 the highest value); the greatest part of each relationship is due to the association of user categories, such as experts and advanced users, to perceptions of the cognitive abilities as much better and better in the digital environment. Therefore, it can be concluded that the digital environment has an impact on the cognitive abilities examined.

*Keywords: digital intelligence, digital technologies, digital environment, digital skills, cognitive abilities*

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# Evaluation of Web Technologies and Social Networks of Hotel Websites in Greece using Big DataAlgorithms

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**Abstract**

The internet is a global medium of communication with more and more users in recent years. People of all ages, from every educational, social and economic level, "surf" the web to learn, entertain, communicate with other people, converse, or even act. For this reason, it has been a major concern for the advertising industries, with more and more companies wanting to acquire their own online site.
In this research paper, official websites of Hotel Units located in Greece are recorded, studied and evaluated using specialized internet-platform platforms. More specifically, factors such as, webpage optimization, domain trust flow, cross-domain citation flow, related online web sites, linked social networking, organic online keywords, estimated monthly seo clicks, and others were analyzed, reviewed and evaluated. The analysis and evaluation of data-factors collected was performed using BigData Mining Algorithms. The purpose of this evaluation is to provide answers to questions about the situation in which tourism industry websites are currently being displayed, the modern technologies used for their better internet presence, but should also be optimized in such a way that they have a better engagementto attract more customers.

***Keywords:*** *DigitalMarketing, Hotel Marketing, Website Evaluation, SEO, Big Data Analysis*

# Fashion brands, influencers and followers – who are really influencing us? An analysis of social media influencers in the fashion marketing

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**Abstract**

As the age of the digital well and truly submerses modern culture under the influence of the online, we find ourselves in a global community that is entirely reluctant to put down our digital devices. The world has become a place where social media serves as our digital blueprint of identity, which we willingly add and update with every new experience or life change. Interconnectivity has become the cornerstone of the decade as technology surges culture into a world with every terabyte of data and information at our fingerprints. The digital age has brought about a movement of 'Connectivism' that can be explained as a learning theory *"driven by the understanding that decisions are based on rapidly altering foundations"* as *"new information is continually being acquired"* (Siemens, 2005). The digital age has brought about a world full of information with the greatest challenge found in sorting the relevant from irrelevant. This shift into a new way of learning and dealing with high volumes of stimuli, dramatically changes the way in which we communicate and function daily online.

What came from this digital revolution was the age of the influencer, with social media serving to catapult individuals onto an international platform to establish loyal fanbases and cult followings that lead to these 'social media-stars' reaching celebrity-like status, such as the rise of YouTuber Liza Koshy who has amassed a following on Instagram and YouTube well over a million. But how can we define an influencer? Influencer marketing expert Brittany Hennessy defines an influencer as an individual who utilizes word of mouth marketing - who has a strong online presence on their digital platforms- otherwise known as 'social currency' (Hennessy, 2018), thus allowing them to become extremely influential to their global audience. This in turn identifies influencer marketing as a profitable source of marketing for brands, in terms of reach and return on investment.

The purpose of this research is to delve into a discourse of Influencer Marketing from a three- dimensional perspective - *the influencer, the follower* and *the brand*. The key question being the exploration of who is really being influenced - ultimately uncovering where the power of social media marketing really lieswithin the fashion text. Who is pulling the strings and influencing our buying habits on platforms such as Instagram? The ever-shifting paradigm of power online will be a centre point of discussion in this topic. Demographics and social groups, digital environments and future challenges such as new technology will all be explored to predict the longevity of influencer marketing in a rapidly developing world. Definitions and models of influence marketing will be based on Kotler' model 'Marketing 4.0' (Kotler, 2017) andEasey's Fashion Social Media framework (Easey, 2009) through key audience theorists in relation to the study of media such as the Two Step Flow Model by Katz et al (2005).

***Keywords****: Fashion Marketing, Influencer Marketing, Fashion Social Media, Digital Marketing, Social Media*

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# E-Commerce & E-Marketing

# Online shopping behaviour and satisfaction: Empirical evidence from consumers in Crete

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**Abstract**

Although European B2C e-commerce expected to reach almost €600 billion in 2018, e-commerce growth is steady with small fluctuations over the last 5 years (Ecommerce Foundation, 2018). This fact is an opportunity for researchers to continue explore the reasons that lead both supply (retailers) and demand side (consumers) to act online. Concerning consumers, many studies in the literature intended to determine online shoppers behaviour through theoretical or empirical analysis (e.g. Monsuwé et. al., 2004;Huseynov and Yıldırım, 2016).
The purpose of this paper is to capture the basic online shopping behaviour of consumers in Crete. The main research objectives are the detection of online consumers' shopping preferences and the estimation of their satisfaction level from previous online purchases. This study contributes to the relative literature since it gives important empirical evidence from online consumers living in an "electronically" developing country like Greece, which has at the same time high B2C growth rates and low(general) electronic readiness in contrast to other EU countries.
Methodologically, a quantitative research was undertaken through the distribution of survey questionnaires, using Heraklion Crete, one of the largest cities in Greece as the case study area. Face-to-face (in-person) interviews selected as data collection methodand the final sample size consists of 552 consumers, including people of different social economic profile. Descriptive analyses were performed on all online shopping behaviour's variables.
The results reveal that one third of the respondents purchased online more than 6 times within the last 12 months, while the most frequenttype of goods and services purchased online was clothes, electronics and travel and holiday accommodation. Major motivations for online purchasing are lower product prices, broader range of products and convenience of shopping anytime anywhere.Many findings show that security and trust issues seems to be extremely important for e-shoppers. Indicatively, almost two out of five consumers prefer to purchase online only from Greek e-shops, while the top two criteria for the selection of an e-shop are the safe payment methods and the existence of clear terms of use. More than 70% of the respondentsexpress high level of satisfaction from their online purchases in overall, although lower satisfaction is detected in products' delivery time and the provided services during ordering or after-sales (e.g. returningwrong or damaged goods). Online shopping behaviour varies according to their demographic profile. Although some significant differences were detected among different gender, age and income groups, consumers' educationis the demographic variable that mostly differentiates consumers' online behaviour.
The managerial implications of this research are significant for e-retailers and e-marketers, since the findings allow them to design more effective marketing campaigns and communication with their current or potential customers.

***Keywords**: B2C e-commerce, online shopping, consumer behaviour, Greece*

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# Online grocery brick and mortar retailers. State of the art in Italy, but is it a profitable strategy?

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**Abstract**

In contemporary entrepreneurial environment based on customer retention, the growth of the internet has pushed the most dynamic businesses to compete in the electronic market. The recent evolvement of the Internet as a new major distribution channel has obtained much attention, as the online channel calls the viability of traditional stationary retailing into question. Today, since innovation is a key factor in the Digital Age, the presence in the digital marketplace is essential for retailers, also in the food retailing. The paper aims to analyze the online commerce for food groceries and compare the evolution from 2017 to 2019. The sample represents the 99% of Italian brands of brick and mortar supermarkets and hypermarket. The first study was conducted in 2017, after two years the paper has analyzed the same sample and reported how many groceries retailers have adopted the online selling. Through the visit of every Internet site and some interviews to managers, this paper proposes the reasons why only a limited number of grocery brands sell food over Internet. Moreover this paper calculates the cost (in Italy) to prepare the expense and satisfy the order of a customer. Characteristics of goods (freshness, perishability, cold chain warranty, etc.), expensive operations needed to prepare the delivery, the cost of delivery, and difficult reverse logistics are the main causes of low adoption of e-commerce. Online groceries retailers are concentrated around big cities in particular in the north Italy (Milan, Turin, Genoa, etc.). Expense is prepared inside the retail by the employees. Some shops use the drive-in model and only a limited number of cases deliver to home. The few cases of food e-commerce offer the delivery only in a limited area of big cities. At the end, this paper demonstrates the logistics cost (picking, packing and transport) in Italy is higher than the price of the service and this strategy isn't profitable for companies.

***Keywords:*** *-ecommerce, grocery, food*

# Study of the Peer to Peer Money Transfers Using FinTech Platforms

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**Abstract:**
The technological development of mobile devices and e-commerce enabled the use of mobile devices for financial transactions purposes. Mobile financing that includes both mobile banking and mobile payment can be a natural evolution of e-commerce. Particularly, mobile finance solutions allow customers to make various financial transactions while on the move. Mobile finance in micro-transactions can fully replace PC-based financial transactions in the near future by offering applications that incorporate mobile solutions and mobile telephony. The continuous growth of mobile finance depends not only on the user-friendliness of the services but also on the legal framework for mobile financing. To some extent, the traditional legal framework for financial transactions could also apply to mobile financing. However, the particular features of mobile financing, especially the fact that mobile financing is executed without automated and direct contact, requires the creation of a new legal environment that meets the needs of the participants.
In the first part of the paper, a theoretical approach was made on the basis of existing literature. Analyzed concepts and attributes such as Cryptocurrency, Peer-to-Peer Payments, Chatbot, Fintech, Disposable Virtual Cards. The second part concerns the empirical research conducted about familiarity, use, frequency, reliability, even the non-use of such applications and the reasons why they are avoided.

***Keywords***: *Peer to Peer transactions, Fintech*

## INTRODUCTION

E-banking or other known as online banking are among the most convenient ways of online banking, which differentiate bank transactions and provide its customers with virtual banking facilities continuously.
Simply, electronic banking is an electronic payment system that allows the bank account holder to execute the monetary transaction such as bill payments, funds transfer, payments, balance questions, etc. at anytime and anywhere using the website of the bank. Electronic banking is part of the central banking system managed by the bank. Many e-banking sites offer complex tools such as account aggregation, stocks, interest rate warnings, and portfolio management programs to help manage all assets more efficiently. E-banking enables you to immediately access your transaction history and track any activity on your account. Even larger banks periodically upgrade their online programs by adding new features. In some cases, account information may need to be regained. However, security is of crucial importance and malware can steal passwords and other sensitive information.
Research objectives

- Investigate the attitude of the sample generally towards mobile applications
- Record the reasons for use
- Record the frequency of transactions
- Assess the effectiveness of applications in relation to user needs
- Investigate which alternative features we could meet in the future.

In the next section of the abstract, a review of the literature is made. Next, the methodology to collect data is presented. Then, results are discussed. Finally, conclusions, managerial implications, limitations and suggestions for future research are made.

## LITERATURE REVIEW

P2P transactions are executed between providers (also referred to as face-to-face transactions, P2P transactions or P2P payments) and are e-money transfers made from one individual to another via an intermediary, typically referred to as a P2P payment request. P2P payments can be sent and received via a mobile device or any home PC with Internet access, offering a convenient alternative to traditional payment methods. Through the P2P payment application, each person's account is linked to one or more bank accounts of the user. When a transaction is executed, the account balance in the application records the transaction and sends money directly to the user's bank account or stores it in the user's account within the application. Since this idea has been initiated, many businesses have developed P2P trading capabilities, increasing competition in this area. The proliferation of mobile devices has also forced the customization of P2P payment applications to become more convenient for users. From a technical point of view, each transaction is a peer-to-peer (P2P) transfer. Whether you use cash, credit cards or ACH payments, there is a buyer/sender on the one hand and a seller/receiver on the other. In many ways, these new P2P options are very much like cash or exchanges, except that all transfers can happen in huge distance without ever meeting the two "peers." However, P2P transfers are nothing like cash or exchanges. Cash is affected by inflation and supply constraints, as most currencies are directly or indirectly controlled by a central bank. During the exchange, there are limitations on inventory items that are often difficult to separate. Most P2P options mimic the fluent currencies belonging to a series of easily divisive denominations.

**Advantages of P2P Transfers**

The most attractive benefit of P2P transfers is the cost. All transactions are made electronically, with the system automatically matching buyers and sellers without requiring intermediaries. As a result, Bitcoin and similarly designed P2P systems have extremely low transaction fees ranging from 0-1 percent. Many users also enjoy the transparent pricing offered by P2P networks. Currency conversions are listed on the stock market and the exact percentage is determined solely by supply and demand - not by governments or banks. P2P networks are also safer in many ways. With Bitcoin, for example, there is a real-time list that can be viewed for everyone. This makes it impossible for illegal activity to occur. Very few personally identifiable information is associated with each transaction, thus, users do not have to worry about data breaches. P2P networks also offer anonymity, making coins like Bitcoin a favorite among those who do not want to be monitored by regulators.

**Disadvantages of P2P Transfers**

Returns do not exist (or are very difficult to get started). Without intermediaries involved, it is difficult to challenge charges after the event. Eventually, the trader decides whether to issue a refund or not. Unpredictability is another drawback. Coins such as Bitcoin can easily be converted back into dollars, euros or yen, but there is no guarantee that you will recover the initial value of any transaction you started with the P2P currency. Undoubtedly the biggest disadvantage, however, is speculation. Bubbles can happen. Bitcoin's value is driven solely by supply, demand and perception.

**FINTECH**

Financial technology, now known as "fintech," describes a company that aims to provide financial services using software and modern technology. The term "fintech" is defined as: "Computer programs and other technologies used to support or facilitate banking and financial services. Today, fintech companies are directly competing with banks in most areas of the financial sector to sell financial services and solutions to customers. Mainly due to regulatory reasons and internal structural disturbances, banks are still struggling to keep pace with new fintech companies in terms of speed of innovation. Fintechs has realized early that financial services of all kinds - including money transfer, lending, investment, payments, have to be immersed in the lives of modern technologies and modern customers to stay relevant in a world where businesses and privacy is becoming more and more digitized.

In particular, millenials and next generations prefer fast and easy banking services without visiting a branch office, meetings with bank counselors, and long-term account creation or pooling operations, hundreds of examples where mobile and digital banking services allow for a frictionless and stress-free process.

Companies in the FinTech industry can be divided into four key sectors according to their distinctive business models. By analogy with the traditional added-value areas of a global bank, FinTechs can distinguish, based on their participation in finance, asset management and payments, and other FinTechs, a loose variety of companies performing other functions. The figure illustrates this categorization and provides a detailed representation of the subsectors of the industry.

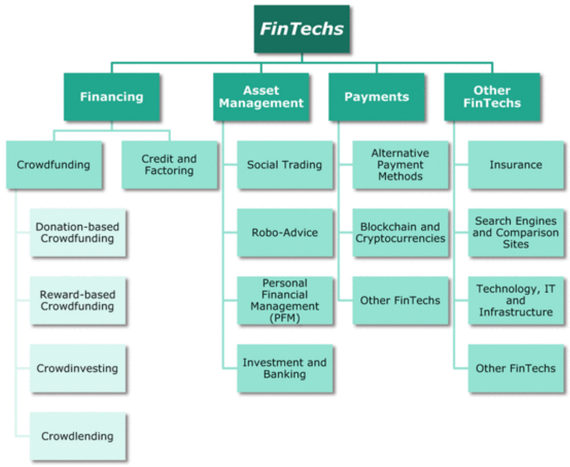


Figure 1. FinTech divisions

**RESEARCH METHODOLOGY**

A sampling unit consisted of the residents of Greece. The research team chose the method of random sampling A total of more than 300 questionnaires were sent online via the Google Drive platform. At the end of the process, a total of 209 valid questionnaires were collected. The responses were then recorded with the help of the SPSS program for the evaluation of the results. In the first part of the questionnaire questions are asked to investigate the intention of consumers to use FinTech. Also by using a questionnaire to respond to concerns about familiarity, use, frequency, reliability, even the non-use of such applications and the reasons why they are avoided.

**RESULTS**

The survey shows that variables such as gender, age, and level of education affect both usage patterns and features that users choose. Also, concerns were raised about familiarity, use, frequency, reliability, even the non-use of such applications and the reasons why they are avoided. The most common reason why electronic banking is not selected is that it is not considered safe method while being informed about bank e-banking applications. The sample also uses e-banking applications in daily transactions and the majority of respondents to the question about the most important reason for using e-banking applications responded to time savings.
We also investigated the attitude of the sample in general to mobile applications, the usage ratios and the frequency of transactions. Finally, the effectiveness of the applications in relation to the user's needs was evaluated.

**CONCLUSIONS, LIMITATIONS, IMPLICATIONS AND FUTURE STUDY**

In a future study, the research team could add other factors of analysis and give more weight to services, as well as study the e-market side. In addition, it would be important to investigate and compare the potential customers' attitudes between 2 geographically different areas. For example, the inhabitants of Thessaloniki with those of Attica, which are the largest urban areas in Greece.

In conclusion, there is room for the integration and implementation of mobile banking, as well as the respective applications of the banks, as well as the alternative versions that offer additional features.
Alternative applications are highly competitive and in many cases are the main banking application that users use. Several of the features they offer are innovative and their availability depends on the application and upgrades that the user will make to acquire them.

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# E –Marketing of Electrical products in Nepal

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**Abstract**

E-marketing is a process of planning and executing the conception, distribution, promotion, and pricing of products and services in a computerized, networked environment, such as the Internet and the World Wide Web to facilitate exchanges and satisfy customer demands. It has two distinct advantages over traditional marketing. E-marketing provides customers with more convenience and more competitive prices, and it enables businesses to reduce operational costs.
Internet Marketing of electrical products in Nepal is rapidly increasing day by day since the government allocated tremendous amount of investment on Technical Education. Besides there are many private and public companies who have tried their best to promote technology in Nepal. Perhaps there are hundreds of companies providing their services through internet. And this number is still trending.
This paper analyzes existing status of E-marketing of electrical products in Nepal. This is a descriptive study using primary and secondary data. Key informant interviews were conducted for the purpose of primary data collection whereas available records and reports were reviewed for secondary data collection. Following online Marketing types are using in Nepal

Search engine optimization (SEO)
Search engine marketing (SEM)
Pay-per-click advertising (PPC)
Content marketing.
Social Media Marketing (SMM)
Affiliate marketing.

# General

# Investigating the adoption of Insurance distribution channels: An empirical study in Greece

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**Abstract**
In the insurance industry, global distribution trends vary by product and region. As the insurance market is closely linked to the economy and considering the prolonged economic recession in Greece, the technological changes and the vast expansion of the Internet, the present paper aims at an empirical investigation of the Insurance distribution channels adopted by Greek consumers. In detail, the research examines the attitudes of customers or potential purchasers towards the promotion of insurance products via insurance intermediaries, banking institutions and the Internet, and, in addition, identifies the determining factors affecting decision-making processes.
The research demonstrates that customers, despite the growing use of alternative channels for insurance products, tend to appreciate the advice of insurance intermediaries. It also highlights that for products requiring less advisory support, such as car and home insurance, online purchases may be more preferable. However, as the Banking industry has created a range of insurance products focused on simplicity of terms and conditions as well as coverage to facilitate customers' understanding, and, thus, accelerate insurance sales at banks, bankassurance has become an alternative for a number of consumers.
With regard to decision-making on distribution channels, the results emphasize that high-income customers appear to be more positive towards insurance policies via banking channels. In addition, and as regards those who opt for online insurance policies on the basis of the service delivery-cost relationship, the research demonstrates a correlation with their demographic profiles, and more specifically, with age and occupational status. It is also worth noting that the investigation of the respondents' perception of insurance awareness in Greece reveals no statistically significant relation between the participants' demographic profiles and insurance awareness scores.
*Keywords: Private Insurance, Bankassurance, Direct Insurance, Distribution Channels*

## Introduction

The global financial crisis and the great number of technological innovations and demographic developments have had a far-reaching impact on many aspects of life worldwide. In addition, the technological advances and the vast expansion of the Internet in the last few decades influenced consumer purchasing practices and focused business interest on multiple channel integration (Sawhney, 2001).
Consumers' shift to a hybrid behavior in the modern digital age has led companies to new interaction methods with customers through multichannel offerings (Leimeister *et al.*, 2014). By refocusing on customer experience, the business industry is required to adopt multichannel customer management, which Neslin *et al.* (2006) defined as "the design, deployment, and evaluation of channels to enhance customer value through effective customer acquisition, retention, and development". In addition to the great expansion of the Internet, e-communication channels and social media platforms have contributed to creating a new framework of communication between distribution channels and customers (Rapp *et al.*, 2013).
Digitization and e-commerce have also brought a number of changes to global trends in insurance distribution, which, however, appear to be varying as well as product- and region-specific. Insurance companies and intermediaries, following economy progress and changes in technology and demographics, have accommodated to economic and societal demands by means of adopting a number of changes under domestic and European supervision.
In this context, and in view of critical issues such as aging population, economic developments and shrinking incomes, the increased price competition, which will force direct distribution channels to reduce costs, the technological progress, which enables sales of insurance products on the Internet (Cattani *et al.*, 2004) and, in

addition, the growing customers' needs for counseling (Trigo Gamarra, 2007) in order to maintain or increase market share, insurance companies should follow a different communication and distribution strategy.
The present paper is organized as follows: part 2 provides a brief overview of insurance in Europe and Greece and part 3 is focused on the established insurance distribution channels in Greece. The next parts, 4 and 5, include a discussion of the research objectives and methodology followed by the analysis and results, and, finally, part 6 discusses the conclusions drawn from data analysis.

**Insurance in Europe**

Insurance is defined as a common fund, to which the insured or policyholders contribute in order to hedge the potential risk of serious financial losses which they would not be able to afford (IAC, 2008). Typically, insurance in the EU falls into three categories: a) public pension schemes, which in most cases are pay as you go - PAYG, i.e. redistributive; b) occupational pension schemes, which involve an employee - employer relationship and are money purchase schemes, and c) private insurance plans (Plamondon *et al.*, 2002). The first category mainly involves most parts of continental Europe, particularly countries such as France, Italy and Spain, where it covers over 75% of the pensioners' income. In countries such as Britain, Ireland and the Netherlands, there is a greater balance among the three categories, whereas the first category accounts for 30% - 40% of insurance products. In the specific countries, public pension schemes, the so-called "minimal coverage" system, mostly cover basic income needs to prevent poverty. In addition, in Denmark, Norway, Sweden, a central role is also given to private personal insurance plans (Stasinos, 2016).
The private insurance market is distinguished in: (a) consumer personal insurance, typically including life, property, car, household equipment insurance, etc. and (b) business insurance, which includes insurance against fire, flood, machinery damage, loss of profits, professional civil liability (Kouskouna *et al.*, 2007).
In Greece, private insurance growth rates, remaining rather stationary in the last few years as a result of the financial crisis and the policyholders' lack of confidence in insurance institutions, differ from those of other European countries.
In addition, despite the gradual decline in the number of insurance companies in the last few years, mostly as a result of mergers - acquisitions, revocations and bankruptcies from 2008 (85 companies) to 2017 (55 companies), the contribution of private insurance companies to the Greek Economy has remained relatively stable at about 2.2% of GDP. Premium rates in Greece during the crisis have been fairly similar to the country's GDP rates. It is also worth noting that in 2008 - 2017 the country's GDP fell by -26.55%, similarly to premiums (-27.39%), whereas premium contribution to GDP remained at 2.13%, compared to the EU, which is approximately 8% (ICAP, 2019; Botsaridis, 2018).
On an institutional basis, Greek insurance companies operate as Sociétés Anonymes or mutual cooperatives, and their exclusive objective is insurance service delivery. Of the 55 active enterprises in 2017, 34 traded Property insurance, 7 only life Insurance and 14 Life and Property insurance. In terms of start-up and operation, the Greek insurance industry is comprised of 35 Société Anonyme companies, 17 foreign insurance subsidiaries and 3 Pan-Hellenic mutual insurance cooperatives (EAEE, 2017). In 2018 contrary to 2017, Life Insurance products were reduced by 0.5%, whereas Property Insurance recorded an increase of 4%; overall, in 2018, premiums increased by 1.8% compared with 2017 (EAEE, 2018).

**Insurance distribution channels in Greece**

Personal insurance includes life and health as well as property and liability insurance products. Based on consumer needs, insurance companies and insurance and reinsurance distributors have employed a combination of distribution channels and make either direct sales or sell products through a variety of other distribution channels, the most familiar of which are brokers, agents and bancassurance.
In compliance with Greek Legislation (4583/2018), insurance distribution is defined as " the activities of advising on, proposing, or carrying out other work preparatory to the conclusion of contracts of insurance, of concluding such contracts, or of assisting in the administration and performance of such contracts, in particular in the event of a claim, including the provision of information concerning one or more insurance contracts in accordance with criteria selected by customers through a website or other media and the compilation of an insurance product ranking list,

including price and product comparison, or a discount on the price of an insurance contract, when the customer is able to directly or indirectly conclude an insurance contract using a website or other media ".

Previous research has demonstrated that cross-buying customers would be inclined to purchase across multiple channels (Kumar *et al.*, 2005). Thus, insurance policies in Greece, similarly to other countries worldwide, have now been available via different distribution channels, such as Internet-led, company-led, bank-led, and agent-led channels, which display unique special characteristics and are, thus, addressed to specific types of customers.

*Insurance intermediaries*, the oldest distribution channel, act as mediators between potential customers and insurance companies, always pursuing full and high quality coverage of insurance customer needs for products offered by insurance companies (Law 4583 / 2018). According to the draft IDD Law (Directive 2016/97 / EU - IDD), the registered categories of intermediaries are insurance agents, coordinators of insurance agents, insurance brokers and ancillary intermediaries. In addition, European and national legislative frameworks provide for fair competition in all insurance distribution channels.

*Bancassurance* is described as a special market, a simple channel of attracting business, coexisting with other insurance markets and distribution channels. It is defined as sales of life and pension insurance products via banking distribution channels, and has taken a central part in the Banking-Insurance-Financial system. In accordance with other distribution channels, bancassurance products must be simply formulated to allow easy understanding to both insurance intermediaries and customers; in addition, they must be low-priced and reliable in terms of benefits and utility. Remarkably, the comparative advantage of bancassurance is bank credibility and prestige, employed as additional assets during customers' decision-making processes.

*Online Insurance*

Easy access to the web and social media platforms have facilitated abolishing geographical constraints and enabled consumers, by means of a variety of digital devices, to obtain easy information on insurance products and services. Thus, it has created a trend, which is bound to witness further growth in the near future (Bonvicini, 2017; Delafrooz *et al.*, 2017). Needless to say, even insurance agents require that insurance companies focus on digital transformation and leverage digital and cloud technologies to enhance quick and easy-to use customer insurance services (Capgemini, 2017). Online aggregators operate various or electronic channels and provide information, in an organized manner, on several competing insurance products of various underwriters (Rokas, 2019).

Overall, online insurance companies are distinguished in two main categories (Insurance Compare, 2019): i) direct insurance companies and ii) online insurance intermediaries.

In Europe, the direct (private) insurance market has had a spectacular development covering a large part of people's insurance needs in countries, such as the United Kingdom (63%), the Netherlands (over 50%) and Germany (26%). In Greece, despite a delay in comparison with most European countries, promotion of online insurance products has taken a special place in the domestic market, with auto insurance ranking first, and health insurance following behind.

## Research objectives and methodology

Previous literature has demonstrated that, insurance agents and brokers are mostly preferred for property and health insurance, whereas, for life insurance, people tend to favor insurance intermediaries in North America, and bancassurance in Europe and Asia, where it has become a leading trend (Binter *et al*., 2017).

As the factors influencing customer service expectations - in both online and offline environments- are determined by customer perceptions (Mentez-Aparicio *et al.,* 2017), to maximize performance, insurance companies have to be aware of current or potential customers' perceptions about insurance distribution channels and identify the fundamental selection criteria for each channel.

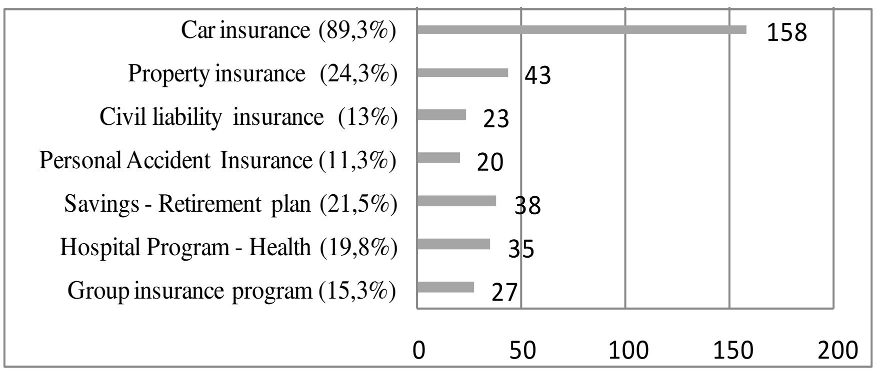
To investigate the adoption of insurance distribution channels in Greece, the present research examines the attitudes of customers or potential purchasers towards insurance product promotion via insurance intermediaries, bancassurance and the web and, in addition, identifies the determining factors affecting decision-making processes. In addition, it investigates whether the subjects' demographic profiles have a more significant impact on insurance product/service decision-making than the rest of the researched factors and on the targeted reference to value for money and insurance awareness in Greece.

From this perspective, an empirical field research was carried out from November 2018 to January 2019, on the basis of a structured Google-form questionnaire addressed to customers or potential purchasers of insurance products nationwide, using convenience sampling. The questionnaires were sent via: a) Facebook and Instagram, by posting on the researchers and online friends' personal pages, as well as on the websites of various research interest groups, and b) e-mail. Participants under 18 years old were not accepted, as they cannot be insurance policy beneficiaries. Totally, 250 questionnaires were completed and analyzed. Statistical analysis was based on IBM SPSS 23.0; Kruskall-Wallis and Mann-Whitney test and Spearman's correlation and backward stepwise linear regression were also employed.

**Analysis and discussion**

The research sample includes 250 participants; of those 36% are male and 64% female. Age groups include subjects from 18 to 25 (9.2%), 26 to 35 (54.4%), 36 to 45 (27.6%), 46 to 55 (6.8%), and over 55 (2%). In terms of educational status, the sample includes Junior High School and Senior High School graduates (1.6% and 14% respectively), post-secondary or Vocational School graduates (2.8%), Higher Education graduates (49.6%), and Master's and PhD degree holders (30.4% and 1.6% respectively). In addition, 50.4% of the subjects are single, 38% married with children, 7.2% married without children, whereas 11% stated "other". In terms of occupational status, 42% are private company employees, 26.4% self-employed, 16.8% civil servants, 7.2% unemployed, 5.6% students, 1.2% pensioners, and 0.8% housewives. As regards incomes, these range from up to €500 (17.2%), €501-1,000 (36.8%), €1,001-2.000 (31.6%) and €2,001 or over (14.4%). Finally, the analysis demonstrated that 70.8% of the subjects had made an insurance policy, in contrast to 29.2% who had not.

**Table 1:** *Type of insurance policy*




An overwhelming majority of the participants (Table 1) had signed up for car insurance (89.3%), whereas 24.3% for property insurance (housing or business). In addition, 13% were policyholders of a personal / professional liability insurance and 11.3% of a personal accident insurance policy (death). Finally, 21.5% of the respondents had opted for a savings-retirement plan, 19.8% a hospital and health program and 15.3% a group insurance program.

As regards insurance distribution channels, 79.7% opted for an insurance intermediary, 23.2% a banking institution (Bancassurance) and 8.5% online insurance products.

Table 2 below demonstrates that, in terms of distribution channels, insurance intermediaries are a dominant option for the majority of the survey participants in relation to: easier access (72.2% good/excellent), and better service quality (86.3% good/excellent). In addition, a great majority state that insurance intermediaries provide faster service (79.4% good/excellent), whereas an even greater number of participants (81.7% good/excellent) hold that, in terms of highly trained human resources, insurance intermediaries are most preferable. Finally, a large number of respondents (74.9% good/excellent) answered that insurance intermediaries provide more flexible and suitable insurance products to meet customer needs; they also feel more confidence in insurance intermediaries in case of service delivery against loss (84.1% good/excellent).

**Table 2**: *Participants' attitudes towards insurance distribution channels*

| Regardless of how you signed up for an insurance policy, state your views about each insurance distribution channel: | *Absolutely no* | *Poor* | *Fair* | *Good* | *Excellent* |
|---|---|---|---|---|---|
| **Easier access** | | | | | |
| Insurance Intermediary | 2.3% | 9.1% | 16.5% | 34.1% | 38.1% |
| Bancassurance | 11.3% | 17.6% | 43.4% | 17.6% | 10.1% |
| Online | 6.4% | 12.7% | 26.1% | 24.2% | 30.6% |
| **Better service quality** | | | | | |
| Insurance Intermediary | - | 4.0% | 19.7% | 36.6% | 49.7% |
| Bancassurance | 7.0% | 12.7% | 41.1% | 29.1% | 10.1% |
| Online | 10.3% | 17.4% | 31.6% | 22.6% | 18.1% |
| **Faster service** | | | | | |
| Insurance Intermediary | 10.6% | 5.1% | 14.9% | 39.4% | 40.0% |
| Bancassurance | 7.6% | 13.9% | 45.6% | 28.5% | 4.4% |
| Online | 5.1% | 11.5% | 21.8% | 35.3% | 26.3% |
| **Highly trained human resources** | | | | | |
| Insurance Intermediary | 0.6% | 4.0% | 13.7% | 40.6% | 41.1% |
| Bancassurance | 3.8% | 13.2% | 36.5% | 37.1% | 9.4% |
| Online | 8.4% | 16.9% | 31.8% | 29.9% | 13.0% |
| **Flexibility and suitability of insurance products** | | | | | |
| Insurance Intermediary | 1.1% | 4.6% | 19.4% | 40.0% | 34.9% |
| Bancassurance | 6.2% | 19.3% | 46.0% | 23.6% | 5.0% |
| Online | 3.8% | 17.1% | 32.9% | 26.6% | 19.6% |
| **More confidence in case of service delivery against loss** | | | | | |
| Insurance Intermediary | 0.6% | 5.1% | 10.2% | 28.4% | 55.7% |
| Bancassurance | 11.9% | 25.6% | 29.4% | 28.1% | 5.0% |
| Online | 25.8% | 22.6% | 40.6% | 7.7% | 3.2% |

The majority of respondents (71.2%), who had signed up for an insurance policy, considered that online cost (Table 3) is lower. Similarly, a vast majority (74.6%) stated that, in case of insurance intermediary processes, the service delivery-cost relationship is satisfactory or very satisfactory, 20.8% fairly satisfactory and 4.7% unsatisfactory or poor.

**Table 3**: *Respondents' views on the cost of the distribution channel and the value-for-money relationship*

| **Cost is lower** | | | | | |
|---|---|---|---|---|---|
| Insurance Intermediary | 23.7% | | | | |
| Bancassurance | 5.1% | | | | |
| Online | 71.2% | | | | |
| **Service delivery- cost relationship** | ***Poor*** | ***Unsatisfactory*** | ***Fairly satisfactory*** | ***Satisfactory*** | ***Very satisfactory*** |
| Insurance Intermediary | 1.2% | 3.5% | 20.8% | 40.5% | 34.1% |
| Bancassurance | 5.6% | 13.8% | 41.3% | 29.4% | 10.0% |
| Online | 2.5% | 8.9% | 36.9% | 32.5% | 19.1% |

In addition, 39.4% of the respondents answered that, as regards bancassurance policies, the service delivery / cost relationship is satisfactory or very satisfactory, 41.3% fairly satisfactory and 19.4% unsatisfactory or poor. Finally, almost half of the subjects (51.6%) hold that the service delivery-cost relationship of online sales is satisfactory or very satisfactory, 36.9% fairly satisfactory and 11.4% unsatisfactory or poor. A key determinant of distribution channel selection (Table 4) for the survey participants is financial reasons (37.2%), followed by after-loss service delivery (29.6%), fast service delivery (14.4%), personal contact (9.6%) and training of staff (6.4%), whereas a small number of subjects answered ‘I don’t know’ (2.8%).

**Table 4**: *Respondents’ purchase intention and major criteria for distribution channel selection*

| Component | N (%) |
|---|---|
| ***Purchase intention*** | |
| Car insurance | 19,6 |
| Property insurance (i.e. house/business) | 14,8 |
| Civil liability insurance (personal/business) | 15.2 |
| Personal accident insurance (death) | 16.0 |
| Savings – Retirement plan | **38.4** |
| Hospital program - health | **40.4** |
| Group insurance program | 4.4 |
| None | 9.2 |
| I don’t know | 6.8 |
| ***Major criteria for distribution channel selection*** | |
| Financial reasons | **37.2** |
| Personal contact | 9.6 |
| Fast service delivery | 14.4 |
| Staff training | 6.4 |
| After-loss service delivery | **29.6** |
| I don’t know | 2.8 |

*values in n = 250 (%).*

As regards car insurance, a vast majority (74%) stated that they preferred an insurance intermediary and only 19.2% online services, whereas for property insurance (home or business) 68.4% answered an insurance intermediary is more preferable. With regard to civil liability insurance (personal and business), 76.8% answered an insurance intermediary, similar to accident and death insurance (80.4%). In addition, more than half of the survey subjects (54%) preferred insurance intermediaries for a pension or savings plan, similar to a hospital / health program (72.4%). Finally, for group insurance programs, the majority (66.8%) answered insurance intermediaries, whereas 20.4% preferred bancassurance and 12.8% online services.

To determine the relationship between demographic information and scores of the impact on the customers’ decision-making per distribution channel, the non-parametric $^{\alpha}$ Mann-Whitney and $^{\beta}$ Kruskall-Wallis tests were employed. No statistically significant relationship at 0.05 ($p < 0.05$) was found between the demographic profiles of those who opt for an insurance intermediary and scores of the impact of the service delivery-cost relationship on decision-making.

As far as Bankassurance is concerned, the results demonstrated that only the relationship between the customers’ annual income and scores of the impact of the service delivery-cost relationship on decision-making was significant. In particular, there is a relationship between higher monthly incomes and higher scores of the impact on decision-making. Higher-income participants (> €1,001) were more affected by the service delivery– cost relationship when taking a decision to sign up for an insurance policy via Bankassurance than lower-income subjects (up to € 1,000).

With regard to online insurance, a statistically significant relationship at 0.05 ($p < 0.05$) was found between scores of the impact of the service delivery-cost relationship, age and occupational status on the customers’ decision-making processes involving online insurance policies.

According to the above results, the multivariate linear regression analysis yielded the following results (Table 5):

There was a relationship between older age and lower scores of the impact on decision-making about online policies. In particular, older customers (over 36 years old) were less affected by the service delivery-cost relationship for online policies than younger ones (18-35 years old).

**Table 5**: *Multivariate linear regression for the scores of the impact of the service delivery-cost relationship on customers' decision-making about online policies (dependent variable)*

| | **Unstandardized coefficient b** | **95% confidence interval for b** | **p-value** |
|---|---|---|---|
| **Age** | -0.317 | -0.626 to -0.009 | 0.044 |
| **Occupational status** | -0.161 | -0.303 to -0.019 | 0.026 |

In addition, the results demonstrated a relationship between the respondents' occupational status and higher scores of the impact on decision-making. In detail, private and state employees were more affected by the service delivery-cost relationship for online insurance policies than the self-employed, pensioners, the unemployed and other categories. The specific variables interpret 5.9% of score variability of the impact of predictors, such as occupational obligations, on decision-making processes.
As a statistically significant relationship at 0.05 ($p < 0.05$) was found between the scores of the impact of the total set of predictors per distribution channel on decision-making and the scores of monthly income and insurance awareness, a linear regression was applied (Table 6).

**Table 6**: L*inear regression for scores of the impact of the total set of predictors per distribution channel (dependent variable)*

| | **Unstandardized coefficient b** | **95% confidence level for b** | **p-value** |
|---|---|---|---|
| **monthly income** | 6.875 | 2.225 to 11.495 | 0.004 |

According to the results of linear regression we conclude:
There is a relationship between higher monthly incomes and higher scores of the impact of the total set of predictors per distribution channel on insurance decision-making. More specifically, higher-income subjects (> €1,001) were more affected by the total set of predictors than lower-income ones (up to € 1,000). The specific variables account for 4.7% of the score variability of the overall impact on customers' decision-making.
Finally, no statistically significant relationship at 0.05 ($p < 0.05$) was found between the participants' demographic profiles and scores of insurance awareness.

## Conclusion

Changes in consumer behavior and the impact of the financial crisis on insurance company revenues have forced the insurance market to transform and, consequently, develop. Responding to digital transformation needs as well as the relevant terms of strict EU directives, contemporary insurance companies have been turning to innovative products and alternative distribution channels to reestablish their status in relation to consumers' insurance awareness and lives.
In the new financial and social context in Greece, focus is likely to move from "public" to "private". The financial crisis has had an impact on public health financing and pension system, causing great insecurity to citizens. However, the emerging gradual recovery of the Greek economy may enable insurance companies to grow by applying customer-led marketing strategies and upgrading sale channels of insurance products. In their attempt to fully respond to the growing demands of customers, they are required to define the insured-consumers' profiles, and particularly, the profiles of the new "digital" consumers. The investigation of insurance attitudes and needs both of individuals and businesses can be the vehicle for implementing most appropriate strategies to improve market reliability and, in particular, confidence in insurance policy channels (insurance intermediaries, bancassurance, direct sales).
Data analysis demonstrated that, despite the growing use of alternative insurance channels, customers tend to appreciate the advice of insurance intermediaries. It also highlighted that for products requiring less advisory support, such as car and home insurance, online sales may be more preferable. However, as the Banking industry has created a range of insurance products focused on simplicity of terms and conditions and coverage to facilitate customers' understanding, and, thus, accelerate insurance sales at banks, bancassurance has become an alternative for a number of consumers.

With regard to decision-making on distribution channels, the results emphasize that high-income customers appear to be more positive towards insurance policies via banking networks. In addition, and as regards those who opt for online insurance policies on the basis of the service delivery-cost relationship, the research demonstrates a correlation with their demographic profiles, and more specifically, with age and occupational status. It is also worth noting that the investigation of the respondents' perceptions of insurance awareness in Greece reveals no statistically significant relationship between the participants' demographic profiles and insurance awareness scores. Based on the findings of the research, both banking and insurance companies and insurance intermediaries should redefine their strategies by focusing on new segmentation models of digital consumers and on the impact of business digital transformation on the delivery methods for their products / services. The growth of online banking, which does not require the natural presence of customers for advisory support, is likely to lead to a sales decline of insurance products. Thus, banking organizations, insurance companies and insurance and reinsurance distributors, who are estimated to be plenty and quite often very different from each other, should leverage any potential losses by restructuring and redesigning distribution channels or entering into strategic alliances in line with the European and national legal frameworks.

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# Modelling Market Shares in the Telecommunication Sector

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**Abstract:**
In this article a mathematical model is proposed, in an attempt to analyze the telecommunication sector in Greece. The model is based on the Lotka-Volterra equations and describes the market shares for the companies in the country's Telecommunication sector. Based on a data row for the market share of a specific time period, we define a model that well fits to the data set.

*Keywords*: *Mathematical modelling, Numerical Algorithms*

## Introduction

Mathematical modelling is used in many scientific areas such as natural and social sciences. One of the most well-known models in biological systems is the famous predator-prey model which is described by the Lotka-Volterra equations. An important advantage of this model is that can describe basic economic phenomena, such as competitive effects (Kalogiratou et al., 2012; Kloppers, 2013; Lee et. al., 2009).
Under investigation is the market development of telecommunication companies in Greece, based on the total number of access lines. The goal is to define a model that well fits to the data set for the period 2007 – 2017. The proposed approach based on the Lotka-Volterra equations and the system is solved by a classical numerical method (Butcher, 2008).

## The LV model

Lotka-Volterra equations are often used to describe the dynamics of biological systems where two species (the system can be expanded for more species) interact. In the case of two competitors the model is given by the following system of ordinary differential equations.

$$\begin{aligned} \frac{dx}{dt} &= (a_0 + a_1 x + a_2 y)x \\ \frac{dy}{dt} &= (b_0 + b_1 x + b_2 y)y \end{aligned} \tag{1}$$

Where the derivatives in the left hand represent the rate of change in the population size of x and y specie respectively. The coefficients $\alpha_0$ and $b_0$ denotes the intrinsic population growth, while the coefficients $\alpha_j$ *and* $b_j$ *for* $j > 0$, describe the density of interaction between the species.
To estimate the parameters $\alpha_j$ *and* $b_j$ *for* $j > 0$, we start off by the Log Integral method proposed by Kloppers et al. (2013). By adjusting the Log Integral methodology in each equation of the two competitor's system, we are led to a typical non-intercept multiple regression problem.
For each equation of system 1 the following system is derived:

$$\begin{bmatrix} L_{1,0} \\ L_{2,1} \\ \vdots \\ L_{n,n-1} \end{bmatrix} = \begin{bmatrix} 1 & \dot{x}_{1,0} & \dot{y}_{1,0} \\ 1 & \dot{x}_{2,1} & \dot{y}_{2,1} \\ \vdots & \vdots & \vdots \\ 1 & \dot{x}_{n,n-1} & \dot{y}_{n,n-1} \end{bmatrix} \cdot \begin{bmatrix} c_0 \\ c_1 \\ c_3 \end{bmatrix} \; or\; L = XC \tag{2}$$

where

$$L_{i,i-1} = lnZ(t_i) - lnZ(t_{i-1}), Z\ denotes\ the\ variables\ x\ and\ y$$
$$\dot{x}_{i,i-1} = \frac{\dot{x}(t_i) + \dot{x}(t_{i-1})}{2}$$

$$\grave{y}_{i,i-1} = \frac{\grave{y}(t_i) + \grave{y}(t_{i-1})}{2}$$
$$i = 1(1)n$$

C express the unknown parameters αj and bj for first and second equation respectively.
For each equation of system (1) the parameters are estimated from the relation

$$C = (X'X)^{-1}X'L \tag{3}$$

**Application in telecommunication sector**
In the present section, the proposed model is applied in the telecommunication sector in Greece. More specifically we investigate the market shares between the leading company and the alternatives providers in terms of the total number of access lines.Data retrieved from the last annual review in Greek electronic communications and postal services markets of the Hellenic Telecommunications and Post Commission. The time period interval is [2007, 2017].
At 2007 leading company held the 99.6% of access lines while at 2017 this percentage declined to 55.5%. Although the reduction rate is getting thinner by the years. Specifically, at years 2007 – 2011 the reduction rate it was between 5.5% and 7.8%, while the last two years the rate is below 0.7%.
The first step in our computations is to estimate the parameters $\alpha_j$ *and* $b_j$ *for* $j \geq 0$, according to the methodology described in section 2. By solving Eq. (3) for each competitor we obtain the parameters of our model.

$$\alpha_0 = 0.277312123373657070 \quad \alpha_1 = -.376108988653269084 \quad \alpha_2 = -.213878737783451206$$
$$b_0 = 1.943499730212935540 \quad b_1 = -.980266542803531316 \quad b_2 = -3.16731836121111998$$

For the numerical solution of system (1) we use the classical Runge-Kutta method of fourth algebraic order (Butcher, 2008). For the evaluated coefficients $\alpha_j$ *and* $b_j$ *for* $j \geq 0$, we obtain the numerical results as they are demonstrated in the diagrams below.

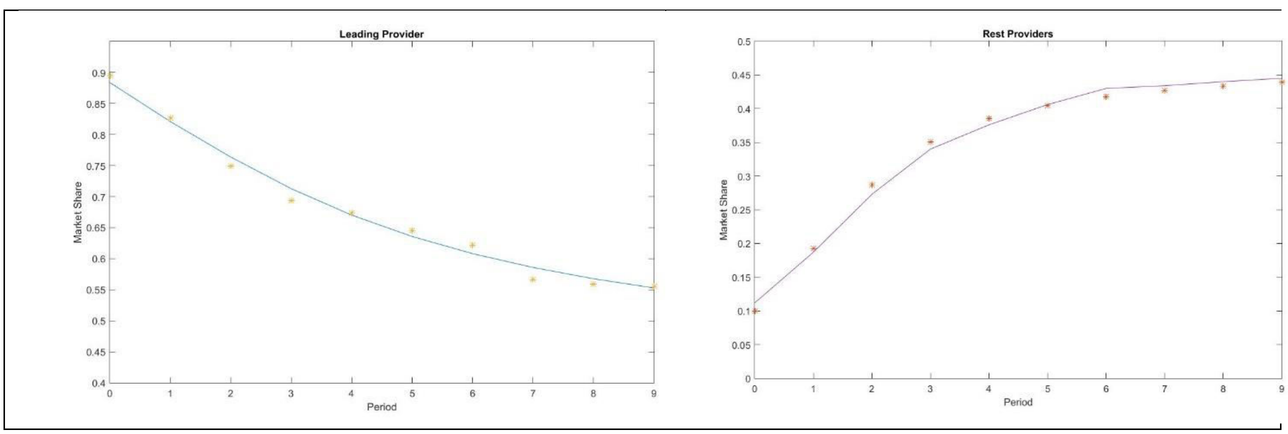


**Figure 1: The fit of the numerical solution to the statistical data**

As observed in both diagrams, the proposed model fits very well to the data, though we can use it to extract valuable conclusions for the tendency in the marketplace.

**Conclusions**
In this paper a specific model of competing entities is proposed, in order to investigate the market shares in telecommunication sector in Greece based on the total number of access lines. The model suggests that in the following years the two under - reviewed entities will have small variations between their market shares, although there is a tendency of reduction in market shares for the leading provider.

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# A NoSQL Approach for Recommendation of Highly Rated Products

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**Abstract:**

Nowadays there is a growing need for collecting and processing data from different sources in heterogeneous and semi-structured formats. Developing an intelligent recommendation system is a good way to overcome the problem of overloaded products information provided by the e-commerce enterprises. As there are a great number of products on the Internet, it is impossible to recommend all kinds of products in one system. We believe that the personalized recommendation system should be built up according to the special features of a certain sort of product, and forming professional recommendation systems for different products. In this paper, based on the consumer's current needs obtained from the system-user interactions, we present a NoSQL database approach for modeling consumer electronics to retrieve optimal products. We built a robust analytics framework by integrating Apache Spark with Apache Cassandra and in following utilize data mining techniques for presenting a model capable of recommending highly rated products.

***Keywords*: *Apache Spark, Big Data, NoSQL Databases, Personalization service, Recommendation system***

# A model for comparing government expenditure on civil servants-Gross wages and salaries in the EU24

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## Abstract

Following government responses to the economic crisis, aimed at restabilising financial markets, maintaining employment and mitigating the effects of unemployment, public budgets have come increasingly under strain. The debt crisis that struck some EU members and is far from having been surmounted, has prompted governments to embark on a policy of strict budgetary austerity. Recent developments in the European Union reflects the reformation needs of most EU governments, in form of wage and employment moderation and, in some cases, even cuts in public sector wages and employment. All over Europethe public sectors have been the main target of governments' reformation policies. Public sector employers have bypassed established collective bargaining procedures and wages and jobs have been cut or frozen, most frequently by unilateral state decision. Against the background of governments' reformation strategies, this study compare and estimate the most accurate association model of the Categorical Data Analysis (CDAS) forgovernment expenditure on civil servants– gross wages and salaries in 24 countries of the European Union from 2002 - 2011. The analysis of association (ANOAS) table is given in order to ascertain the percentage of the data which is covered by each model. We estimate the association model to find the model that hasthe best fit, but none proved accepted. Consequently, we proceeded to the multivariate model to find the model with the best fit and in conclusion we find out that the multivariate Row-Column Effects Association Model (RC) of the (M = 9) has the best fit because it covers 100% of the data - giving it the best fit among all.

***JEL: RCM9***
***Keywords:*** Association models, Log-linear and non-linear models, government expenditure, gross wages and salaries, civil servants in EU24

# Blockchain Applications in Marketing

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**Abstract**

Blockchain is one of the most promising and debated technologies of the 21st century that has the potential to disrupt business models in a wide array of industries, like finance, supply chain management, commerce, health care, real estate etc. Based on the Distributed Ledger Technology (DLT), blockchain applications provides innovative solutions to a number of business problems, offering security, immutability of record keeping, efficiency, and disintermediation, shifting the balance of power within the value chain. Notwithstanding the potential of the new technology the majority of the literature concerning blockchain deals with its use in the finance industry and cryptocurrencies. There is however, a growing interest in the ways that blockchain could be applied in other industries and management processes as well, but not specifically for marketing. In this paper, we are going to present some of the applications of blockchain in marketing and marketing management, and the ways it could disrupt the marketing mix and processes. We identify potential uses of blockchain in marketing and outline the benefits, and the challenges that will result from the adoption of this disruptive technology. Finally, we point out some direction for future research on the topic.

***Keywords**: Blockchain, DLT, Smart Contracts Marketing Loyalty programs, Advertisement, Personal data.*

# Smart Cities and Content Green Marketing

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**Abstract**

Smart cities meet the requirements of their citizens through Information and Communication Technology. Content marketing is all about using content to attract and retain visitors, and eventually turn them into customers. Green Content Marketing relies on anticipating and meeting customer needs based on sustainable developmentand this means that Green marketing deals with products, materials and services that are presumed to be environmentally preferable to others. On the other hand cities are responsible for approximately 30% of global GHG emissions and 70% of energy consumption in major cities are attributable to buildings. According to these measurements buildings are playing an important role in helping to achieve smart city goals. The already collected data generated by smart building technologies can lead to the reduction of energy consumption for climate and sustainability goals and help improve public health and safety. Additionally smart building technology contributes to them to remain competitive in the face of new business models and emerging technologies. Also the IoT movement supports cities to become truly smart. Finally the integration of green content marketing to smart building approaches supports the practice of increasing the efficiency with which buildings and their sites use energy, water, and materials, and of reducing impacts on human health and the environment for the entire life-cycle of a building

Large volumes of high quality data will be in the hands of city leaders and decision makers. This data can be shared directly with the public, empowering city inhabitants with real-time information about their surroundings. According to Navigant Research, the global smart buildings for smart cities market is expected to grow from $3.6 billion in 2017 to $10.2 billion by 2026.

This paper deals with the approach of how Thessaloniki's buildings can be smart and the positive consequences of this approach to Thessaloniki's citizens health and environment.

***Keywords****: Green Marketing, Green Smart Cities, Smart Cities, Content Marketing*

# Sport Sponsorship Evaluation: Exploring the Determinants Factors of Purchase Intentions

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**Abstract**

*The present research concentrated on examining sport sponsorship's effectiveness.In more detail, the purpose of the study was to provide clarifications regarding the relationships among supporters' beliefs about sponsorship, their satisfaction form the sport event as well as their degree of sport involvement, the usage of website and social media, awareness of and attitude toward real sponsoring firms and their actual and future purchase intentions concerning sponsors' goods and services.A quantitative method was used for the purpose of the current research and a total of 3,434 questionnaires were successfully completed and analyzed by means of STATA. The findings could contribute to sport sponsorship evaluation andforeseeing of their efficiency- a result of great importance for the sports marketers.*

*Keywords: sponsorship, awareness, purchase intentions, mega events*

## Introduction

The sponsorship of appealing sport competitions as well as events may be regarded as being an efficient marketing means for businesses which want to raise awareness and enhance their public image. Thus, a greater number of businesses are seeking ways to take part in the sponsorship of athletic events (Nufer&Bühler, 2010). Consequently, fees regarding sponsorship have gone up significantly over the past few decades. Companies all over the globe are expected to invest $65.8 billion in sponsorship contracts in 2018 the greater part of this money will go towards sports, based on data provided by the World Advertising Research Center (Handley, 2018). Considering the aforementioned fees for sponsorship, it is significant to recognize whether it is beneficial for businesses to put money into the sponsorship of sporting events. Hence, the present paper investigates whether sponsoring international sporting event is, in effect, an efficient means for marketing. The context for this study is the FIFA World Cup, considered the most thrilling sport event relation to its global appeal as well as its growing television audience (Nufer&Bühler, 2010).

## Literature Review

The sponsorship of a sports club, sports team or athlete may be considered a risk owing to possible threats, particularly damage with regard to the public image of the property being sponsored. The use of performance-enhancing substances in sport scandals regarding the private life of those sponsored may pose a threat to the sponsor's image. Alternatively, an increasing number of firms make the decision to sponsor appealing sporting events since, in this case, the risk of unfavorable transfer of company image is restricted. Sponsoring sporting events is seen as an exceptional type of sponsorship. Businesses have the capacity to impact their target audience in an appealing sports environment in that they attempt to transfer the favorable image of the sporting activity onto the brand they represent. International sporting events, namely, the Olympics or the FIFA World Cup captivate individuals all over the world. Thousands of spectators attend the event from within the sports venue, while even more people watched the event on television. As a result, a wide range of global audiences are easy to reach. Other means of communication like newspapers, magazines or the Internet act as multipliers as well. Therefore, firms reap the benefits of a reasonably high value for money (Nufer&Bühler, 2010). These change in emphasis enhances the significance of comprehending buyer response to the sponsor in addition to exploring the way in which a sponsorship impacts buyers. Very few studies have been carried out to examine not only attitudinal but also behavioral responses of buyers. The greater amount of previous research gauges the influence of the attempts made by sponsors of the recall as well as recognition of sponsoring organizations of sports events, thus providing empirical outcomes which are inconclusive (Biscaia et al., 2017). Consequently, the purpose of the study is to offer a framework of integrated concepts such as to shed light on the determinants which affect fan's awareness as well as their attitude toward sponsoring organizations, in addition to their influence on ensuing buying aims.

A supporter's sport involvement is regarded as being a key element in establishing sponsoring company recognition, attitude toward the sponsoring company and sponsoring company support. As stated by Lardinoit and Derbaix (2001), the greater the degree of supporter sport involvement, the better the reaction to a sponsoring organization. Supporting involvement is significant in the comprehension of the workings of sponsorship since it constitutes an indirect means of persuasion which may influence a buyer's impression of the brand/product for which correlation with an entity or an event. Very little research has examined the impact of supporters' sport involvement on their attitudes toward sponsoring organizations and their buying aims (Lobo, Meyer & Chester, 2014)

This research further attempted to investigate the impact of the frequency in which a supporter visits the website of a sports event or social media accounts (i.e. Facebook), a consideration which was not previously explored in the study of sponsorship. Of the few studies which have dealt with the role of the Internet and social media in sports, this role has been recognized as being an invaluable relationship marketing means which is capable of creating significant relationships by means of offering communication opportunities as well as opportunities for interaction, and finally, value. What is more, from the perspective of a supporter of sport, it is implied that interacting with social media sites may also enhance a supporter's degree of identification with the sports club (Eagleman, & Krohn, 2012) and, as a result enhance sponsorship efficiency.

Beliefs correlate with buyers' assessments of the aims of sponsorship. According to article theory, Madrigal (2001) claimed that supporters form favorable or unfavorable beliefs with regard to the advantages of sponsorship for the sports club. People may value the advantages of sponsorship, namely, assisting the sports club, making a sporting event possible, promoting a sporting event, assisting the local community, etc. Other individuals, on the other hand, may see sponsorship as being a determinant which changes the nature of sport in order to promote commercial gains. For this reason, they may have the tendency to form unfavorable beliefs regarding sponsorship.

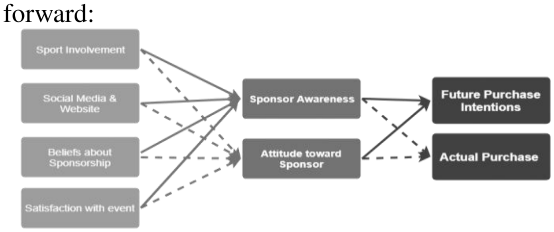
Buyer satisfaction relates to a gratifying fulfillment reaction to a product, service, benefit or reward. Buyer satisfaction has consistently been illustrated as being a synopsis of both cognitive as well as emotional responses in relation to service encounters. General satisfaction in sporting event environments more often than not relates to the supporters' experience as the outcome of their attending the sporting event (Biscaia et al., 2017). In the framework of sport and leisure, a substantial amount of literature exists which emphasizes that satisfied supporters have a greater tendency to remain devoted to their sports clubs (McDonald and Shaw, 2005) In addition to increasing favorable aims toward the club and the club's sponsors.

Sponsorship awareness may be described as the buyer's capacity to recognize the brand in various circumstances, comprising brand recall and recognition capacity (Keller, 2003). Brand recall is the buyer's capacity to recall the name of the brand when brand category or alternative brands have not been referred to, whereas brand recognition is the capacity to recall previous exposure to a brand in the event that a list of brands is provided as a prompt. In view of this, sponsorship awareness in sports at the professional level may be described as supporters' knowledge of the sports club's sponsoring organization, which is conveyed by means of accurate recall as well as recognition. It was suggested by Madrigal (2001) that awareness is the first phase of the continuance of supporters' reactions which may result in their purchase intentions as well as actual purchase. In the same way, Biscaia et al. (2017) observed that sponsorship awareness indirectly plays a role in buying intentions (of the sponsoring firm's brand) through enhanced favorable attitudes toward the sponsoring firm.

An attitude may be described as a physiological inclination which is conveyed by means of assessing the specific property with a certain extent of positivity or negativity (Eagly and Chaiken, 2007). In the area of sport sponsorship, Madrigal (2001) observed that a physiological inclination constitutes a form of prejudice which makes the buyer more liable to assess the sponsoring company in either a favorable or unfavorable manner. Thus, an attitude toward a sponsoring firm constitutes the buyer's general assessment of the brand which the sports club or sporting event is being sponsored by (Keller, 2003). Very often it is implied that the creation of a favorable attitude toward the sponsoring company is of great significance in order to enhance sponsorship efficiency since the formation of attitudes may profoundly influence buyer behavior (Alexandris et al., 2012).

As observed by Crompton (2004), the aim to buy is possibly the most beneficial measure of the influence of sponsorship on potential sales. Although buying intention is in no way similar to an actual buying behavior, buyers' aims are key to directing the way they behave (Cheng et al, 2012). In the sponsorship of sport, Dees et al. (2008) implied that the a buying aim constitutes a measure of a supporter's motive to buy the sponsoring company's brands and Madrigal (2001) maintains that actual buying behavior may be accurately anticipated via the aims of an individual.

From the perspective of a sponsoring firm, the influence of sales because of the sponsorship is considered by far the most preferable indicator in order to comprehend the efficiency of sponsorship (Crompton, 2004). Firms seek several advantages when they participate in making sponsorship agreements, however, their utmost objective is to steer buyers into buying sponsoring companies' brands (Alexandris et al., 2012). Therefore, actual buying behavior constitutes the last measure of the present framework seeing that it is widely accepted as being of the utmost objective when it comes to the assessment of the profits gained from the investment which is made by businesses taking part in sponsorship agreements (Crompton, 2004). In accordance with the literature, the following model and hypotheses are put forward:




$H_1$: Sport involvement (centrality and attraction) are expected to influence attitude toward sponsor and sponsor awareness
$H_2$: Usage of events' website and social media is expected to influence awareness of and attitude toward sponsors
$H_3$: Beliefs about sponsorship are expected to influence awareness of and attitude toward sponsors
$H_4$: Satisfaction with sport event is expected to influence awareness of and attitude toward sponsors
$H_5$: Sponsors awareness is expected to affect actual and future purchase intentions
$H_6$: Attitude toward sponsors is expected to actual and future purchase intentions

**Methodology**

A quantitative method was used for the objectives of the study and questionnaires were collected from Greek spectators of the 2018 World Cup in Russia. Spectators were required to complete a web-based survey with the assistance of a well-known sports website which encourages those who viewed the World Cup to take part in the survey. 3.434 questionnaires in total were completed with success event analyzed via SPSS.

**Results**

Table 1 presents the 2SLS regression results having the actual and future purchase intentions as the dependent variables. As we can see, sponsorship awareness impacts positively and statistically significant in both actual and intended purchase. Attitude produced insignificant coefficients in both dependent variables. Our evidence corroborate previous findings byMadrigal (2001) and Biscaia et al (2017) who suggested that awareness is the initial stage of a continuum of fans' responses that can lead to their purchase intentions and actual purchase. This result has significant implications for managers wishing to improve their future revenues by investing in sponsorship deals, since the recall and recognition (which both constitute the awareness) are important features that managers must control in order to affect their customers purchasing decisions.

**Table 1**: 2SLS regression results

| **Variables** | **Coefficient** | **Z-test** | **P-value** |
|---|---|---|---|
| **DEPENDENT VARIABE: ACTUAL PURCHASE** | | | |
| Constant | -3.400*** | 3.89 | 0.001 |
| AWARENESS | 0.895*** | 3.90 | 0.001 |
| ATTITUDE | -0.181 | -0.79 | 0.432 |
| $\mathbf{R^2}$ | 0.1895 | | |
| **Wald $X^2$** | 76.93*** | | |
| **Observations** | 3434 | | |

| DEPENDENT VARIABE: FUTURE PURCHASE INTENTION | | | |
|---|---|---|---|
| | **Coefficient** | **Z-stat** | **P-value** |
| Constant | -2.616*** | -3.79 | 0.001 |
| AWARENESS | 0.688*** | 3.80 | 0.001 |
| ATTITUDE | 0.076 | 0.42 | 0.674 |
| **$R^2$** | 0.1744 | | |
| **Wald $X^2$** | 133.92*** | | |
| **Observations** | 3434 | | |

## Discussion

Although thatsponsorship has proven to be a significantmarketing tool, the research regarding this topic is still scarce and ambiguous. In more detail, the high-end sponsorship results (i.e. actual and future purchase intentions) have not been properly examined. In light of this limitation, a contemporary–sponsorship evaluation frameworkand research hypotheses are proposed. The proposedframework can be utilized as a guide for future research by academics as well as practitioners interested in validatingsponsorship's effects.

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# Hospitality Marketing & Management

# Web Data Analytics in GDPR Compliance in Greek Hotel Industry and the Impact on Marketing

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**Abstract**

The reality of data privacy has changed for well. One of the most crucial cultural change business is confronting with, is the need of systematic inclusion of privacy and data protection in every business process through technical and organizational measures.Every business in EU should ensure that clients' personal data are always handled in a GDPR compliant manner. General Data Protection Regulation enables business to develop a competitive advantage, given the unique opportunity to reinforce its privacy compliance posture and preserve the trust of its clients, while preserving their most valuable assets and reducing its exposure to risk.Today, any hotel with a website or social media presence already has access to amazing quantities of personal data. According to the Regulation, processing of personal data is legal if, inter alia, the data subject has consented to the processing of his or her personal data for one or more specific purposes. It is obvious that application of the GDPR obligationsis expected to affect drastically the marketing strategy in hotel industry. Already with the visit to the website of the hotel is known the IP address of the visitor, which is also personal data, since only we can identify it. Hotels should review their digital marketing plan, according to the principles Regulation sets out and re-design their marketing policies. In the context of this research paper, a large proportion of hotel business websites in Greece were collected in order to analyze compliance with GDPR. Subsequently, the data set were collected, preprocessed and analyzed based on Data Mining techniques evaluating the results. GDPR is a real competitive business opportunity, in a way that it may inspirehotels to incorporateinformation governance in their core strategy and motivate them to adopt it in every business process, fact which may be the key to success in the digital era.

***Keywords:****GDPR, Digital Marketing, Hotel Industry, Web Data Analytics, Data Mining*

# Use and misuse of CRM systems in the hotel industry: An exploratory study in the Athens area

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## Abstract

In today's demanding and ever-changing environment, timely and innovative management of information becomes a pivotal factor of competitive advantage (Kotler & Keller, 2012). In the hospitality sector, in particular, where customer loyalty remains the one most important determinant of profitability (Sigala 2003), systems of Customer Relationship Management (CRM) assume a central role in connecting customer needs to company activities (Sigala, 2018). Assimilating, processing, storing and disseminating of information is the main aim of CRM systems in their effort to assist the formation of personalized relationship with customers and unique service experiences (Torres & Kline, 2013).

The purpose of this study is to examine hotel practices regarding the use of CRM systems in the Athens area. The aim is twofold, firstly to describe the existing status of CRM use in top hotels and secondly to unveil the CRM readiness of hotel personnel, i.e. their level of adoption on an individual level.

For the aims of the study, a survey has been conducted among four and five star hotels in the Athens area. The results confirm the widespread use of CRM practices by these hotelsas expected. A closer look though on the relevant practices reveal that hotel management employ CRM techniques and software, but fail to educate staff on the proper use of these practices as well as on the appropriate methods of data collection and analysis. CRM use thus is more of a mechanistic nature rather than a fully adopted approach to customer satisfaction. Is a "must have" on the hotels' arsenal but not a mean to developing a sustainable competitive advantage. In hospitality services, the front end personnel, their training and life-long education are of paramount importance for the creation of inimitable marketing practices.

On a more practical perspective, Excel is the most often reported CRM software used, which indicates a lack of investment. This finding is further corroborated from the fact that most hotels choose not to subcontract CRM activities to an outside expert but opt for the use of internal staff, without the provision of formal training. Whereas CRM systems are integrated with existing social media platforms, their use is simplistic and covers mostly the basic elements of CRM, i.e. accessing online reviews, assisting in client profiling, provide information on offers or new services. To the same end, clients are mostly unidimensionaly segmented either along visiting frequency and repeat visiting or according to the amount spent on their last visit. Lastly, all respondents reported a need for more sophisticated analysis of the data collected, in order to address the growing need for more accurate targeting of potential customers and the development of more effective loyalty programs.

The findings indicate that hotels need to incorporate CRM systems more systematically in their day-to-day operations as well as in their strategic plans. Only through constant training of employees and their subsequent empowerment, can hotels swift the focus and the image of CRM systems from time-consuming and dull tasks of data entry to highly effective and precious tools of strategic decision-making.

**Keywords**: *CRM, tourism, hotel, social media*.

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# The experiential value of luxury hotels

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**Extended Abstract**

Luxury services, such as luxury hotels, have become an important product for tourism industries because they are increasingly accessible to middle-class consumers. The growth of this industry has also provided researchers opportunities to further study the consumption of luxury experiences (Chen & Peng, 2018). However, studies on this type of luxury product and its consumers are scarce.

The purpose of this research is to examine the factors that contribute to consumers luxury hotel repurchase and recommendation intentions. Building on luxury product consumption literature and tourism studies, this research incorporates an “expectation” variable into a stimuli-organism-response model (SOR model) to examine perceived experiential value’s (i.e. consumer return on investment, aesthetics, escapism, and service staff excellence) influence on consumers’ satisfaction, sense of belonging, and behavioural intentions (Chen, Peng, & Hung, 2015; Lin, Fan, & Chau, 2014; Wong &Dioko, 2013; Wu & Liang, 2009). Figure 1 shows this research’s proposed framework.

In total, 377 Taiwanese consumers were recruited. This study used structural equation modeling (SEM) to examine the proposed model. The results demonstrate that perceived experiential value (i.e. consumer return on investment, aesthetics, escapism, and service staff excellence) influence consumers’ satisfaction, which in turn affects their sense of belonging. In addition, sense of belonging can affect consumers’ behavioral intentions. Furthermore, expectation positively moderates the relationship perceived experiential value and consumer satisfaction. The theoretical and managerial implications of this study are discussed.

***Keywords**: luxury hotel; expectation; experiential value; sense of belonging, SOR model*

**Figure 1- Research framework**

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# International Business

# Free zones in international business and marketing: A netnographic content analysis

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**Abstract.** Free zones are an important international institution found in three-quarters of the world's countries and yet surprisingly it has not attracted attention in business research. This study examines the characteristics of 218 free zones worldwide using netnographic content analysis of their websites and finds that poor understanding of the zones' role and execution of their marketing communications explains many of the challenges they face.

***Keywords***. *Free zones; Free trade zones; Special economic zones; Content analysis*

## Introduction and Background

Free zones (FZs) are designated geographic areas or fenced-in enclaves that aim to promote trade and foreign direct investment (FDI) through special incentives and a relaxed regulatory environment for tenant firms. Zones have experienced strong growth, rising from fewer than 200 in the mid-1980s to about 4,300 in about 150 countries as of 2015. However, as noted by *The Economist* magazine, the world is littered with failed FZ initiatives and the title of its article says it all: "Special economic zones: Not so special – The world is awash with free-trade zones and their offshoots. Many are not worth the effort".Surpsignly,while research on FZs in economics and development studies is voluminous, interest in them among business scholars has been limited, with fewer than 50 published studies to date. Why do so many FZs fail, and what might a business perspective contribute to understanding their nature and role in international marketing? Taking a first step to address these questions is the main goal of this paper.

It is generally assumed that the Freeports of the Hanseatic League in Germany, which were active in medieval times (13th to 17th centuries), are the predecessors of today's FZs. More recently, the U.S. enacted its Foreign Trade Zones Act in 1934 (FoTZ), the first European zone was established in Ireland in 1959, China developed Special Economic Zones (SEZs) and other similar FZ typesin the 1980s, and Canada followed earlier initiatives with a full network of FoTZs and several other related types of facilities in the 2000s. As can be seen, the nomenclature alone of FZs can be confusing. This paper uses the generic FZ to include all zones proposed by the of typology Papadopoulos and Malhotra (2007) which includes the most often used term, Free Trade Zone (FTZ);the American and Canadian equivalents FoTZ;the original term "Freeport"; the SEZs mostly in AsiaPacific;the Export Processing Zones (EPZs) typically in developing countries;the broader Economic Development Zones (EDZs) in East Europe;and Industry-specific Zones (ISZs) limited to selected sectors (e.g., high technology in Dubai, jewellery in India).

The prolific literature in economics leaves no doubt that FZs are beneficial to their host countries in generating higher employment, technology transfer, FDI, spillover effects, and overall social welfare.Coupled with the few business studies on FZs, That literature has considered issues on the pros and cons of zones being owned and managed by governments vs. the private sector, the wage escalation result of successful zones, the zone effects on imports, exports, domestic taxation, and FDI attraction, and regional development.

## Method

The study is based on a systematic content analysis using FZ websites as the information source, in line with the growth of international comparative studies based on corporate websites (Robbins and Stylianou, 2001) and through netnography, which Kozinets (2002: 64) notes is "based primarily on the observation of textual discourse" and minimizes researcher interference (Zhang and Hitchcock, 2017). We followed Pitt et al. (2007)in using the textual information in the websites as the unit of analysis. A combination of predetermined categories plus additional ones emerging from the data was used to identify key FZcharacteristics, following the 5-step procedure of McMillan

(2000): 1) Defining the research question; 2) sample selection; 3) coding and data collection; 4) training coders and reliability checking; and 5) analysis and interpretation of the data.

A master database was compiled from the World Export Processing Zones Association, the International Labour Organization of the UN, the Zonas Francas listing for Latin America, and the Foreign Trade Zone Board for the U.S.. Queries via Google and other search engines were run to identify the zones' URLs, resulting after data cleanup in a usable sample of 218 websites including all major zones in the main host countries.A sub-sample of websites was scanned to identify words, terms, and phrases that related to the zone demographics and characteristics. These were added to characteristics put forth in earlier research, resulting in seven categories that comprised the base of the study and are reported below. These included a total of 92 specific descriptors that were used to code the zones' characteristics. The Intercoder reliability reliability coefficient (three coders) was a satisfactory >85% (Kassarjain, 1977, Gross and Sheth, 1989) and the few remaining intercoder differences were discussed and resolved before undertaking the analysis.

## Findings

### Zone demographics

*Zone types*. The sampled websites identified 27 different types that were classified into main categories using the typology mentioned earlier. The results are in Table 1. The diversity in nomenclature, as reflected in the initial 27 types identified, points to the evolving nature of the zones' nature but also to the lack of global rules or guidance on how to name them and what they are supposed to be doing, which contributes to confusion and lack of clarity for users (e.g., zones are called "SEZs" in both China and the Philippines even though the respective types are entirely different).

**Table 1. Type of Zones (n=218)**

| Zone Type | Frequency | Percent |
|---|---|---|
| Freeport | 12 | 6% |
| Free Trade Zone | 58 | 27% |
| Export Processing Zone | 38 | 17% |
| Special Economic Zone | 23 | 11% |
| Economic Development Zone | 32 | 14% |
| Industry Specific Zone | 9 | 4% |
| U.S. Foreign Trade Zone | 46 | 21% |
| Total | 218 | 100% |

*Year of establishment*. The year when a zone was set up was disclosed in slightly more than 50% (115) of the cases in the sample. The difference between those established before or after 1990, 32% vs. 68%, also points to the relative newness of the FZ phenomenon (e.g., since U.S. zones were launched as of 1934, it is not surprising that nine of 16 reporting FoTZs were set up by 1990 – whereas SEZs in China started after it begain experimenting with controlled market capitalism).

### Geographic Characteristics

Among the 140 zones that provide this information, the land area varied from as little as 0.10 to as much as 100,000 hectares, with a median of 216. Some zones are distributed across several separate sites, such as the FZs in Bourgas, Bulgaria (three sites), Slobodna in Croatia (five) and the U.S. zones in San Jose, CA, and Birmingham, AL, which include, respectively, the Hewlett Packard and Mercedes Benz subzones.

Since the location of a zone is an important factor in FDI attraction, virtually all zones mention their *proximity to critical locations* such as major cities, airports, and seaports. On the other hand, few mentioned proximity to rail or highway systems, notwithstanding their potential importance in linking the zones to a country's interior. Surprisingly, while the emphasis on airports and seaports suggests an interest by zone managers in promoting their connections to international markets more than to domestic ones, virtually none provided information on proximity to other countries.

### Main Zone Functions

Table 2 shows the main function of FZs by type (multiple responses). Only 17 zones (8% of the sample) did not provide information on this. Exports, imports, trade (bi-directional), and FDIrepresentedthe bulk of zone functions (respectively, 96, 86, 58, and 46 zones). A key observation is that U.S. FTZs are far more import- than export, trade, or FDI-oriented.

**Table 2. Main Function of the Zones by Type of Zone**

| Zone Type | Main Function | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Export | Import | Trade | FDI | Media Hub | Research | Transport & Shipment | Total (#) | Total (%) |
| Freeport | 2 | 3 | 3 | 0 | 8 | 8 | 0 | 24 | 7 |
| Free Trade Zone | 29 | 23 | 33 | 16 | 18 | 9 | 0 | 128 | 37 |
| Export Processing Zone | 31 | 3 | 3 | 3 | 1 | 1 | 0 | 42 | 12 |
| Special Economic Zone | 16 | 4 | 7 | 0 | 4 | 1 | 4 | 36 | 10 |
| Economic Dev't Zone | 12 | 9 | 10 | 24 | 6 | 0 | 0 | 61 | 17 |
| Industry Specific Zone | 3 | 1 | 2 | 3 | 0 | 0 | 2 | 11 | 3 |
| US Foreign Trade Zone | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 48 | 14 |
| Total (#) | 96 | 88 | 58 | 46 | 37 | 19 | 6 | 350 | - |
| Total (%) | 27 | 25 | 17 | 13 | 11 | 5 | 2 | - | 100 |

**Tenants and Sectors**

Zones tend to be secretive and do not provide information unless it is necessary, and so only 40% provide tenant statistics. The number of tenants/zone ranged from 1 to over 6,000 (Jebel Ali FZ in Dubai), with only six zones reporting more than 1,200 firms. A total of 38 sectors were mentioned, the most common being logistics followed by textiles, agro-industrial products, electronics, and information technologies. Interestingly, given the available pool of low-cost labour in developing counties where the majority of EPZs are located, it was expected that textiles would be important only in this type of zone; however, the data was clear in that this sector is important to virtually all zone types, with agro-industrial goods and electronics also being important to more than one type of zone.

**Management and Ownership**

Seventy-two percent (154) of the 218 zones researched provided this information, with most reporting government ownership (103/67%), including some where management has been assigned to private organizations, and only 42/32% owned and managed by private sector firms and only two zones having mixed ownership. Unlike, for example, subzones in the U.S., the majority of EPZs, SEZs, and FPs, especially in developing countries, are government-owned and operated.

**Tenant Benefits**

There is a wide variety of benefits from operating in a zone, but the vast majority of FZs that discuss the benefits they offer (174/80%) stress duty/tax-related factors while neglecting to emphasize what else they offer to tenants. Accounting for multiple responses, duty/tax is mentioned 392 times (69%) in the websites sampled, compared to only 110 mentions (19%) for broader considerations such as the availability of labour and the attractiveness of the host country's market, and only 68 mentions (12%) for financial advantages including allowances for 100% foreign ownership and repatriation of profits. There were virtually no explicit mentions of most zones' critical function of acting as pivots for the development of supply chains across counries. It is also of interest that while the proportion of firms reporting on "benefits" was at a high 80%, the obverse suggests a paradox: Fully 20% of the websites did not provide this most essential type of information for prospective tenants, and limited themselves, instead, to dry, technical descriptions rather than stressing the benefits to be derived from the technical characteristics.

**Zone Marketing and Communications**

Websites can serve as an important promotional tool for FZs. Nevertheless, few of the available websites were dedicated specifically to a zone, while most were "hidden away" within the websites of various ministries (most frequently a country's Ministry of Finance) or those of a port, airport, or other authority that regulates a country's FZs. Drawing on the potential FZ promotional tools put forth in the literature, and matching them against those found in the sampled websites, these tools were classified into 13 main types, including: Overviews of the FZsmain role and advantages (54%); links to related institutions of interest to potential tenants (42%); news on new projects or benefits of the zone (30%); guides on how to set up a business at the zone (29%); "search" tools to facilitate the retrieval of zone information (16%); media file demonstrations of zone facilities (15%); online access to the FZ's intranet (13%); links to promote other zones in the country (10%); statistics on tenants or regional demographics (10%); links to the zone's annual reports (7%); tenant testimonials on success stories (3%); case studies illustratingzone benefits in action (found only at the US/FTZs websites); and cost calculators, which makes it possible to enter hypothetical data and estimate the advantages from operating within vs. outside the zone (rarely presented).

## Conclusion and Implications

As noted, FZs have been the subject of much research in the field of regional economics and development studies, but not in business, international business, and their sub-disciplines such as, of particular relevance here, international marketing. The full version of this study advances theoretical research on FZs through a critical review of the extant literature and a first-ever examination of the key characteristics of FZs worldwide based on a detailed content analysis of 218 zones representing the better-developed facilities of this kind.

In summary, the findings show that: Zone names and functions are inconsistent and can be confusing to users; the most common functions are limited to imports/exports and FDI, with "research" and other potential roles taken up in only a few cases; zones typically like to highlight their proximity to airports and seaports, but not to domestic transport systems and certainly not to potential new markets beyond the zone's host; the majority of zones are government owned and emphasize bureaucratic rules more than the advantages of private sector thinking and approaches to "doing business"; the websites emphasize duty/tax remissions more than strategic and operational benefits; and zones use some promotional tools extensively but, surprisingly, not others that could be more powerful, such as user testimonials or case studies.

The main characteristics of FZs as they view themselves, as outlined in this study, provide at least a partial answer of why so many of them fail. The study provides significant information on what makes a zone successful, and understanding this much better than is currently the case can bring benefits to the zone itself, its host country, and the zone’s tenants. For instance, several factors such as the stability of the country, and the location, functions, infrastructure, and benefits of the zone itself, can potentially influence its sustainability as well as the benefits it could generate for its stakeholders. These characteristics can also be used as guides for future empirical research, which, as just two examples, could focus on the effectiveness and efficiency of public vs. private zone management, or, using the promotion findings above, to explore ways for improving the marketing (and marketability) of zones through their websites. Policymakers can also gain useful insights from the key characteristics of free zones and create policies that will help them be more efficient and useful for their current tenants and more attractive to potential future tenants and investors.

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# Behavioural factors in international business relationship establishment of family businesses

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## INTRODUCTION

Internationalisation is defined as "*a process of initiating, developing, and maintaining international business relationships*" (Johanson&Mattsson's, 1998, p. 288) and it is important to all types of firms, not withstanding Family Businesses (FBs), since it provides fruitful opportunities and great potential for survival and growth (Kontinen&Ojala, 2010). FBs, i.e. "*business that the family owns the majority of the stock and exercises full managerial control*" (Gallo&Sveen, 1991, p. 182), constitute the majority of all firms around the world and are of great importance to any economy (Kraus et al., 2011;Kontinen&Ojala, 2012).

FBs behave distinctively when they internationalise compared to other types of firms and ownerships structures(Fernández& Nieto, 2006; Pukall&Calabrò, 2014). Specifically, FBs tend to demonstrate a risk-averse behaviour towards internationalisation (Plakoyiannaki et al., 2014) and follow different international pathways than non-FBs (Kontinen&Ojala, 2012). They are also less prone to engage in international business relationships than non-FBs (Pukall&Calabrò, 2014), despite the importance of such relationships in entering foreign markets (Fernández& Nieto, 2006; Graves & Thomas, 2008; Kontinen&Ojala, 2011).

This distinct behaviour of FBs in their strategic decisions and choices is mainly due to Socio-Emotional Wealth (SEW) preservation tendencies (Berrone et al., 2012;Gomez-Mejia et al., 2007). SEW refers to the non-economic rewards that family owners may derive from their FBs, (e.g. continuation of the family dynasty, retention of a strong family identity, family's desire to exercise authority etc.) manifested in important strategic decisions (Gomez-Mejia et al., 2011; Liang et al., 2014). In particular, FBs are motivated by and committed to the preservation of their family values (the FBs distinctive culture), their emotional connection with the FB (e.g. family or business loss) and their altruistic behaviour (e.g. the desire to benefit FBs ties with their employees, independent of their contributions or competencies to the firm) (Pukall&Calabrò, 2014; Liang et al., 2014). Although SEW is the "*single most important feature of a family firm's essence that separates it from other organisational firms*" (Berrone et al., 2012, p. 3), research in the behaviour of FBs when establish international business relationships in the context of internationalization is limited (Pukall&Calabrò, 2014).

Viewed in this light, the current study participates in the aforementioned discourse and aims to contribute to the emerging topic of FBs internationalisation research by focusing in the behavioural factors of FBs when they establish business relationships to enter foreign markets. In particular the twofold purpose of this study is: 1) *to examinethe different types of business relationships and the types of international business partnersthat FBs selectwhen entering key foreign markets (direct, indirect)*and 2)*to explore the behavioural factors on the establishment of FBs relationships with business partners in the context of internationalisation*. In doing so this study takes into account the priority that FBs place on the preservation of SEW and integrates different theoretical lenses, including the network theory of internationalisation (Johanson&Mattsson's, 1998) and the theoretical framework by Mohr and Spekman (1994), that highlight the importance on behavioural factors, namely attributes of partners, communication attributes and resolution factors, on the successful partnerships.

## METHODOLOGY

In order to fulfill the twofold purpose of the study, we employed a qualitative multiple case study research. Qualitative case study research was selected for this study as it allows capturing "how" FBs' establish relationships with their business partners in order to enter a foreign market and "why" certain relationships are chosen to others (Eisenhardt, 2007). Multiple case study design was chosen to address the twofold purpose of the study (Dubois &Gadde, 2014). We followed the selection strategy of criterion sampling (Patton, 1990) and selected FBs that met the following criteria: 1) had at least one year of international experience in foreign market, 2) operated in the Greek apiculture sector, and 3) met the general definition of a FB as "a firm where the family owns the majority of the stock and exercise full managerial control" (Gallo &Sveen, 1991, p. 181). We included case study firms that had at least one year of international experience in order to collect retrospective accounts (Craig-Lees et al., 2001) on "how" and "why" FBs developed business relationships that led to internationalisation. Even though a relationship with a partner in the context of internationalization does not immediately translate to international expansion, it positively influences FBs internationalisation after short period time (e.g. a year) (Eberhartd& Craig, 2012). The apiculture sector was selected given its dynamic nature, its critical role in the Greek economy and its growth potential in foreign markets (International Trade Centre, 2011).

Our case study research lasted six months. Following Yin's (2009) suggestions data were collected from multiple sources. We conducted 18 in-depth, open-ended personal interviews which were all tape-recorded and ranged from 60 to 90 minutes. Interviewees were invited to elaborate freely on questions such as: *"How does your company develop relationships with business partners in order to enter key foreign markets? Why?"*.Secondary materials, such as web pages and documents (e.g. trade press publications and internal presentations) were utilized as well. The secondary material was used to understand the history of each firm as well as to triangulate with the insights gleaned from the interviews (Yin, 2009).

Data analysis was conducted in two phases: first, within-case analysis that included write-ups for each FB and second, cross-case analysis that involved the identification of cross-case patterns (Eisenhardt, 1989; Miles &Huberman, 1994) across our dataset. Specifically, we followed an abductive approach to analyse rich case study data (Dubois &Gadde, 2002; 2014). This process involved iterating between the data and the existing body of knowledge (Miles &Huberman, 1994). To organise the data collected from multiple contexts and enhance rigour, our analysis was aided by the use of computer-assisted qualitative data analysis software (Atlas) (Sinkovics&Ghauri, 2008). The use of Atlas allowed the categorisation, abstraction and integration of qualitative data (Spiggle, 1994).

## FINDINGS

The case study firms are all operating within the Greek apiculture sector (which is experiencing a steady growth). They all produce and market bee products (particularly honey), with Firm B specialising also in cosmetic products, which are based on derivatives of the honeybee. They are strong players in the domestic market but also operate internationally in the key markets shown in table 1.

***Table 1**: The case study FBs&entry situation*

| Firms | Size of firm | Key international Markets | Type of Relationship | Type of partner |
|---|---|---|---|---|
| **Firm A** | SME | USA, Germany, UK | Indirect relationship with the customer<br>Direct relationship with the customer | Foreign exclusive representative<br>Foreign customer |
| **Firm B** | Large | Spain, Japan, USA | Direct relationship with the customer<br>Indirect relationship with the customer | Foreign subsidiary<br>Foreign customer<br>Foreign exclusive representative |
| **Firm C** | Small | Germany, UK | Direct relationship with the customer<br>Indirect relationship with the customer | Foreigncustomer<br>Domesticintermediary |
| **FirmD** | Small | Germany, UK | Indirect relationship with the customer | Foreignintermediary<br>Domesticintermediary |
| **Firm E** | Small | Germany, UK | Direct relationship with the customer<br>Indirect relationship with the customer | Foreigncustomer<br>Domesticintermediary |

### *4.1* ***Research objective 1**: **Types of business relationships and types of business partners in FBs' entrance to key foreign markets***

Building upon Sandberg's (2013) four entry situations, our case study evidence highlights direct and indirect relationships of FBs in the context of internationalization and brings to the fore an additional indirect relationship with the customer, namely: *tetrad via home market*. A tetrad is a system of four nodes and contains three relationships (Holmen &Pedersen, 2000). Particularly, this entry situation includes four nodes, namely the FB, the domestic intermediary, the foreign intermediary and the final customer and three relationships created in network. The FBs that used such an entry situation initially used a domestic intermediary with network relationships with a foreign intermediary in a key international market. This foreign intermediary had already developed network relationships with other partner firms in the foreign market. In this entry situation the domestic intermediary constituted the business partnerthat connected the FBs with the foreign intermediary's market network. Our case study evidence illustrates that this business partner, i.e. the domestic intermediary, was extremely significant for FBs' international operations in the key international markets. Specifically, the domestic intermediary: 1) compensated for the lack of knowledge (i.e. language barriers) of FBs and facilitated the development of direct relationships with foreign customers or intermediaries and 2) managed the communication with customers or intermediaries belonging to other business cultures (Eriksson et al. 1997, Hilmersson&Jansson 2012).

In triads, the business partner was a foreign exclusive representative or a domestic intermediary. Our case study evidence illustrates that firms A and B have already developed relationships with foreign exclusive representatives. Those relationships were long-term and were characterised by high commitment. Especially firm B managed to develop direct relationships with other partner firms in the key foreign market. Firm B increasingly invested in its network and development by building a wholly owned subsidiary in the key foreign markets. This finding shows that FBs are becoming more willing in a high commitment entry situation, when their size increases. Such dyads offered the FBs the advantages of control over customer relationships.

Given that relationships are at the core of internationalisation process (Jansson& Sandberg, 2008), these empirical evidence on FBs' types of business partners in the context of internationalization enriches our understanding on how FBs internationalise through networks and relationships. Such knowledge is extremely important since it can serve as a roadmap to FB owners in terms of developing effective and enduring relationships with network partners in the international arena.

### *4.2 **<u>Behavioural factors on the establishment of FBs relationships with business partners in the context of internationalisation</u>***

Our findings are in line with previous researchers who highlighted the importance of behavioural factors, namely the attributes of partners, the communication attributes and resolution factors that influence the establishment of international partnerships (Mohr &Spekman, 1994; Kauser& Shaw, 2004). In addition to these factors, the investigated FBs prioritised the role of "emotional values" and partners' "openness" in the establishment of international partnerships.

As far as partner attributes are concerned, all our investigated FBs acknowledged their willingness to develop stable and long-term relationships with their international business partners and therefore selected carefully their partners in the international arena. All FBs agreed in the importance of mutual objectives and mutual respect for long-term partnerships. As quoted below:

> *"We have mutual goals and mutual respect with our partners. Since we are a small firm, we are dependent on our partners in order to survive in the international arena. Therefore, we aim at finding partners who understand what we are trying to do." (CEO and owner, Firm C)*

From the above quotation attributes of commitment and interdependence were highlighted as important factors in the relationship establishment. Moreover all our interviewee respondents acknowledged that individual attributes, such as honesty and reliability, influenced their network relationships establishment, since those attributes enhanced FBs' trust toward their partners:

> *"Our partners constitute the most important part in our firm. We aim at long-term partnerships in which both parts are satisfied in a friendly environment. We see our partners as we see ourselves and we want our partners to consider us family. I remember that I had to choose among two representatives from the same country. Since we wanted an exclusive partner, I selected the one that I though was more honest and reliable in our everyday general discussions. Although the other representative wanted bigger quantities of our product, I could not trusted him since he did not seem reliable to me." (CEO and owner, Firm C)*

The family owners' "openness", namely the receptivity to learn and change in new situations encountered in the internationalisation process (Caligiuri, 2000), constituted an extremely important factor, especially for those FBs who developed direct relationships with exclusive representatives:

> *"We continuously get multiple messages from our partners in our target countries about our products, packaging etc. The information we get from our partners is extremely important for us, since we can understand what our customers want and can adapt to those demands. Different people from different cultures have different needs and preferences." (Export marketing manager and owner, Firm A)*

This finding is in line with the partner selection literature who underlines "openness" as an important factor for the establishment of relationships (Caligiuri, 2000).

Regarding communication attributes, all our investigated FBs illustrated that *informational* and *institutional knowledge sharing*, i.e. "knowledge that concerns the macro-environment institutions in the foreign country, such as culture and local government" (Sandberg, 2014, p. 22) played a significant role in their relationship establishment:

"*Since we do not have specialised knowledge on each foreign market, we want our partners to know the foreign market. We are selecting partners that know the local customers' needs and the countries' restrictions from the government. For example, there are some countries that require specific standard certifications. If we do not know about those things we cannot enter to those markets*." (*CEO, Firm B)*

Our findings are in line with Sandberg (2014) who illustrates that experiential knowledge is extremely important in international business relationships and with those studies highlighting the importance of knowledge of the foreign market (e.g. Eriksson et al., 1997), when selecting partners in the international arena. Our case study evidence illustrates that FBs selected potential international partners based on their knowledge and expertise of the key foreign market that company intended to enter.

As far as resolution factors are concerned, our interviewees mentioned that they tended to terminate partnerships due to institutional barriers rather than partner dissatisfaction:

*"We build long-term and stable relationship with our partners. Some partnerships though were terminated due to governmental issues. For example in Venezuela we found difficulties in introducing our product because the government wanted to protect their country's own production." (CEO and owner, Firm A)*

An interesting concept that emerged from our data was that of "emotional value", namely "that part of willingness to accept endowed emotional benefits and costs related to the ownership stake" (Zellweger&Astrachan, 2008, p. 348). Emotional benefits are related to the value from power, prestige and satisfaction, whereas emotional costs refer to personal sacrifices, a lack of opportunity to interact, responsibility for the employees etc. (Zellweger&Astrachan, 2008) Our investigated FBs acknowledged that they had no intention of changing their relationships with their international business partners even when those relationships were not economically beneficial to them. As quoted below

*"Our relationships with our partners are basedon mutual respect, trust, friendliness. If you do not respect you partner you do not respect your company. Currently, we have no intention of changing our relationship with our partners. We feel happy with our partners and we think that we did the right choices." (CEO and owner, Firm A)*

Although some of our respondents acknowledged that some partnerships were not as beneficial as they expected, the family owners' personal pride (e.g. from the above quotation: "*…we think that we did the right choices")* as well as family owners satisfaction(e.g. from the above quotation: "*…we feel happy with our partners...")* were "emotional values" that contributed to emotional attachment to their international business partners.

These insights provide evidence on the dimensions of the SEW perspective and suggest that emotional attachment with their external partners influence the establishment of relationships with international partners. This finding is very important since it highlights the role of emotions and sentiments in FBs international strategic decisions. A better understanding of such emotional attachment with international business partners may provide a better understanding on how FBs choose their international business partners.

## DISCUSSION AND CONCLUSION

This study contributes to a better understanding of FBs internationalisation through relationship building activities and has both theoretical and managerial implications. Our study enriches our understanding on the role of knowledge in the establishment of international network relationships by providing empirical evidence on the institutional and experiential knowledge that influence network relationships establishments. Our study also brings to the fore new behavioural factors that influence international network relationship establishment, such as emotional values. Such behavioural factors have been rarely examined within the FB internationalisation field (Pukall&Calabrò, 2014). Finally, our evidence may serve as a roadmap to FB owners in terms of developing effective and enduring relationships with network partners in the international arena.

Our study has several limitations that can suggest directions for future research. First of all, a limitation of our study is that we explored only behavioural factors that influence international network relationship establishment. Future research can examine organisational factors such as structure or control mechanisms (for more see Kauser& Shaw, 2004) and their role in international business relationship establishment. Second, we call for more qualitative research on FB international networking activities that will enhance our understanding on the choice of FBs international business partners. Finally, since our case study evidence emerged from a single-country and –sector context, we suggest that future research may expand our sampling choices to include FBs from multiple countries and sectors.

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# Multinational Enterprises, Institutions and Economic Development: A Holistic Approach

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**Abstract**

Whether economic development is the goal, and MNEs bring about this goal, a critical question emerges: how can countries encourage MNEs to participate positively in the economic development process (Kedia and Gaffney, 2012, p. 177)? One possible answer may be the adoption of the right institutions which make the country attractive to MNE capital investment. International Business (IB) literature has extensively stressed the importance of the institutional framework (new institutional economics, new organizational institutionalism, comparative institutionalism (Hotho and Pedersen, 2012) for a country's level of economic development (Borensztein et al., 1998). On the one hand, this stream of literature inaugurated a new area and era in the approach of multinational enterprises, economic development and institutions and emphasized it as an undisputable relationship. On the other hand, the inclusion of institutions in this context was often employed as a control variable rather than as an internal part of a holistic framework.

This study, although it recognizes the importance of the above, it simultaneously emphasizes the need for the development of an integrated framework that will encompass the streams of MNEs, institutions and economic development. In this framework, the purpose of the present paper is to synthesize, develop and explore in depth the uncharted waters of the interrelationship between institutions, MNEs and economic development.

The above take place by adopting the coevolutionary approach produced by Cantwell, Dunning and Lundan (2010). This framework reconciles the approach of North (1990, 2005) and Nelson (2003, 2008) by producing a theoretical angle that in a general level asserts that firms and institutions coevolve producing an institutional change. We present our framework in the context of the OLI paradigm which has been widely recognized as the preeminent theoretical paradigm within IB. We propose that the quality of a nation's institutions is directly related to the level of MNE investment as well as that endogenous and exogenous effects tend to mediate the relationship between MNEs and poverty in countries where they invest.

***Keywords:*** *Multinational enterprises, Institutions, Economic development.*

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# The Crucial Role of Trust and Knowledge Acquisition for the Establishment of Greek ISAs in South East Europe

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**Abstract**

An increasing number of firms which aim to gain access to global markets and sustain their competitive advantage are seeking for suitable partners for the establishment of International Strategic Alliances (ISAs). Two of the most important factors associatedwith higher alliance performance, are trust among partners and knowledge acquisition. This paper builds on the findings of a previous research (Rotsios et al., 2018) on these two key factors. A sample of 171 Greek ISAs operating in the under-researched region of South East Europe is examined. More specifically, using the Social Exchange Theory and the Resource Based View as theoretical background, the authors examine a) the perceived level of Greek managers' trust towards their foreign alliance partners, and b) the perceived level of the Greek firms' knowledge acquisition from their participation in the ISA. The empirical findings are presented in details, while managerial implications and issues for future research are also discussed. The results, concerning Greek managers' perceptions on trust and knowledge acquisition from the ISAs they have formed in the region of South East Europe, constitute an important contribution to International Business (IB) literature by providing support to prior research findings. In addition, to the best of the researchers' knowledge, it is the first research regarding the concepts of trust and knowledge acquisition that has been conducted in the region of South East Europe.

***Keywords***: *International Strategic Alliance, Trust, Knowledge Acquisition, South East Europe.*

# Marketing & Social Media

# The impact of Facebook and Instagram on consumer buying behaviour in the fashion retail market of Rhodes, Greece

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**Abstract:**

Connecting buyers and sellers through social media in Greece is fast growing; social media is an important toll in creating a "conversation" between companies and consumers. While it is recognised that social media is a powerful digital platform, professionals speak of a more strategic approach to social media marketing. This approach has the potential, in the long term, to be more beneficial to a business that many traditional mass media outlets, as many international retail chains have a strong social media presence. The economic situation in Greece has been such over the past decade that the market in general has suffered a significant downturn, and still struggles to recover. Having said that, the retail market in Rhodes has been observed to be relatively health, with a steady growth of stores and outlets even through the years of economic difficulty. In the past ten years, the island has seen the arrival of most chain-fashion retailers, and the island has also seen growth in local boutiques. This study attempts to explore the impact of Facebook and Instagram of consumer buying behaviour in the retail fashion market in Rhodes, Greece. More specifically, when we look to ascertain whether exposure to the two social media tools has changed the way Rhodians shop for fashion. We look into the extent to which social media has changes Rhodian consumer preference toward certain stores and analyse the extent to which promotion of sales and offers through the two social media has 'driven' consumption in Rhodes. This is an area of interest due to the seemingly extensive use of social media on the island, as well as the use of social media in the fashion industry. The study is conducted on site, using quantitative methodology and close ended surveys to obtain data. we find that Facebook and Instagram have an influence on Rhodian consumer behaviour. Rhodians find advertising on Facebook and Instagram more interesting than on traditional media and think that these two social media are more influential in consumer purchasing decisions than traditional media. They also think that fashion is more accessible because of Facebook and Instagram compared to five years ago. Our findings can be used to improve the fashion retail market in the area – perhaps also motivating other research organisations or independent researchers to look into social media marketing more extensively, as a way to benefit the country's economy overall.

***Keywords:*** *retail fashion, social media marketing, consumer buying behaviour*

# The impact of dialogic communication on citizens' engagement with local governments through Facebook: The case of the municipality of Larissa

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**Abstract**

Local governments around the globe are increasingly utilizing social media in order to communicate with their citizenry, to promote an open and transparent image (Bonsónet al., 2017), as well as to interact, trigger dialogic communication, and involve them in public decisions (Agostino and Arnaboldi, 2016). Although the benefits of social media presence of local governments have been well documented by researchers, there is a need for a more in depth understanding of the way social media are used by local governments, especially, in regards to the content posted (Gesuele et al., 2016, Bellströmet al., 2016). Moreover, there is also a need to shed lighton theway citizens' interact with social media content of local governments (Hoffman et al., 2013) and the impact of dialogic versus non-dialogiccommunication strategies on citizens' online engagement (del Mar Gálvez-Rodríguez et al., 2018). Hence, the present study will try to address the following research questions: (1) what is the type of Facebook posts and communication strategies (dialogic/one-way) used by a local government in Greece? (2) What is the level of citizens' engagement with the online content of a Greek municipality on Facebook, (3) What is the impact of the different types of posts (link, photo, video, and status) on citizens' engagement, (4) Whether dialogic and responsive communication strategies on Facebook differ in terms of citizens' engagement compares to one-way communication strategies?

In order to address the above research questions, a single case study of the Facebook presence of the Greek municipality of Larissa will be examined. The municipality of Larissa is the sixth largest municipality of Greece and has a prominent presence on Facebook with frequent post updates. The messages posted by the municipality of Larissa in its official account over a three-year period (2016-2019) were retrieved and analyzed based on the type of post (link, photo, video, and status), the strategy used (one-way information provision and dialogic communication). Moreover, the responsiveness of the municipality to citizens' comments was also measured. In addition, the number of likes, shares, reactions, comments, and comment replies were also collected for each post. Analysis of the data was conducted through one-way analysis of variance and independent samples t-test using SPSS.

In total, 999 posts were content analyzed. Results indicate that photos were the most frequent post type utilized by the municipality on Facebook. To a lesser extent links, videos and statuses were used. Concerning the communication strategies, one-way communication dominated (97.6%) while dialogic strategies were found in few posts (2.4%). The level of responsiveness of the municipality to users' comments was also extremely low, as it was found in a small percentage of the total posts (4.4%).

Examining, the impact of post type on citizens' engagement, the use of video was related to higher number of likes and reactions while the use of status (plain text) was associated with more comments and comments' replies. Dialogic communication strategies performed better (although used to a lesser extent) than one-way communication strategies in terms of users' likes, comments, shares, and reactions. In addition, the use of the responsive strategy by the municipality on Facebook triggered higher number of likes, comments, reactions, and comment-replies.

Findings suggest that dialogic communication and responsiveness is the key to enhance citizens' engagement and participation in public issues through Facebook. Important implications for social media managers of local governments in Greece, as well as for managers implementing city branding campaigns through social media, could be derived.

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# Consumers' Perceptions and Usage of Social Media in Fashion Marketing

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**Abstract**

In the Fashion Industry, social media is an important component of product/service promotion, brand awareness, and recognition. Nowadays, the fashion industry is increasingly using social media and social networking sites innovatively, leaving behind obsolete marketing techniques, to achieve a stronger relationship with consumers and to strengthen brand awareness. In this paper, we are investigating consumers' relationship with Social Media and the way they use them in the Fashion Industry. Our sample consisted of 327 consumers, who completed a questionnaire concerning their participation in Social Media platforms and their daily experience with them. Our results showed that consumers' relationship with Social Media platforms of fashion companies is strongly affected by interaction with other users, eWoM, entertainment and user experience.

***Keywords**: Social Media, Fashion Marketing, Fashion Industry, Brands, Consumer Behaviour, Greece*

# The impact of influencer marketing on consumers' responses towards food and beverage products

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**Abstract**

Today, companies tend to spend a great deal of their resources to attract public attention and influence the decision-making process. In their effort, they usually ignore the fact that consumers are in many cases affected by other people who trust them. In this context, influencer marketing is a new and very important issue that is a trend in the marketing industry and it is seen as a new way to influence purchasing decisions in the chaotic environment of the Internet and social media. Based on the above, this research aimed to investigate the views of consumers towards influencers. A questionnaire was used to conduct the survey and the results showed, among other things, that Mega Influencers are considered to be the most appealing, Macro Influencers are considered to be highly specialized, while Micro Influencers are considered the most trusted and authentic.

**Keywords:** Social media, influencers, influencers marketing, consumer behavior, e-promotion

## Introduction

E-commerce is a reality and consumers are more that familiar with it.Opinion leaders, journalists, experts and celebrities consisted one of the pillars of indirectly influence in the marketing filed. However, these terms adapted in the digital environment with the appearance of a new counterpart, the ordinary individual who has the power via social media platforms to influence consumers' perceptions for brands. At the present, users are seeking for an open-dialogue, credibility, expertise and originality in their source of information. The emergence of influencer marketing is a fact and a great tool for the fashion industry. Taking into account that Greece ranked first in the category of adblockers (Newsman et al, 2017), it is a breeding ground to research for influencer marketing. The aim of the present study is to exam and analyze this recent phenomenon and its impact on fashion advertisers and consumers in Greece.

## Literature Review

### Digitalization

Due to intense competition, companies need to adapt on world market growth, political and economic developments and the continued technological changes (Karjaluoto, Mustonen&Ulkuniemi, 2015). Marketing consists of new dimensions and marketing managers are confronted with a new reality. Needs have to be evaluated while the updated information that appear on a permanent basis should be appropriately exploited to solve any problems. Traditional marketing has evolved by enabling new tools to be used. Businesses began to grow electronically and marketing was forced to be adapted to new market conditions using new tools and methods (Leeflang et al., 2014). The internet has revolutionized the advertising industry and certainly it could not be left unexploited (Stephen, 2016).
In recent years, the internet penetrates more and more modern marketing strategies as a tool of promoting companies and products (Karjaluoto, Mustonen&Ulkuniemi, 2015). This new mean of communication enables global advertising, resulting in more profits and other benefits for businesses. The use of the Internet and new technologies lead on the term e-marketing or web marketing, internet marketing, digital marketing, etc. with the aim of promoting products and services electronically. E-Marketing is nothing more than the evolution of traditional marketing, where

factors such as globalization of the economy and technology have contributed to its development (Thomas & Thomas, 2018). Company's strategy can be determined according to the needs of the prospective buyers. Making any marketing decisions either in the past or in the present, it was first necessary to identify the needs and / or problems of consumers / companies in order to increase the demand and of course the profits of the company. It was always necessary to research and analyze what consumers need, what they like, and what they expect from buying a particular product or service (Royle& Laing, 2014). The above are the main steps followed by marketing, traditional and electronic, but the fact that they present similarities, does not mean that they do not have differences.

The advantages of implementing an E-Marketing strategy are multiple. One of the most important positive points is the direct communication with customers (Levy &Gvili, 2015). Through attractive and well-structured presentations of products, services and applications, companies are able to offer the customer a complete picture, resulting in a reduction in the steps of the decision process and an additional reduction in the cost of communicate and spreading information (Stone & Woodcock, 2014). At the same time, every business despite its size, it can enter the global Internet market that includes millions of consumers. Within the e-marketing environment, measurement of effectiveness is important and it is connected to consumer satisfaction (Baltes, 2015). Another important advantage of e-Marketing is the reduction on customer service costs as well as the 24-hour online service and access on information (Crittenden & Crittenden, 2015). Customer Relationship Marketing (CRM) is also being implemented when the main goal is to increase customer loyalty and raise business-to-consumer communication (Bilgihan&Bujisic, 2015). E-marketing provides flexibility to companies in order to adapt to market changes such as price variations, short-term bidding, product testing, etc. Assuming the company wants to update its product portfolio and inform its audience, it will certainly be burdened in terms of cost and time in relation to updating its online webpage. Informational material and other forms of communication such as electronic newspapers etc. are distributed online (Mittal & Bhattacharjee, 2017). The distribution network, intermediaries, vendors, and dealers can communicate daily and ask for product information. E-marketing also enables direct communication with suppliers, direct tracking of competitors, but also it helps to reduce cost of product development and delivery time (Buchanan, Kelly &Yeatman, 2017). The development and growth of marketing and sales across the internet has not been as great as expected for the Greek companies who simply minimize its use in having a web page. The number of facilities provided by the Internet is accompanied by a series of concerns (Rubin, 1997; Padmanabhan, 2018) regarding its ability to target on specific customers and to those over 50 years old, and its effectiveness for every type of market sector (Sharif & Butt, 2017).

Finally, e-marketing consists a new way of communication and business transaction between companies and customers (Sharif & Butt, 2017). Nowadays advertising is everywhere and the promotional tools that a company can use are multiple. The internet has a dominant position among them since it gives the opportunity to inform a large number of people about the products or services advertised and marketed, and achieving the maximum possible result (Sharif & Butt, 2017). Past research show that the number of people accessing the Internet is constantly increasing, while on the contrary the time spent on T.V. presents a reduction.

**Social media and its impact on consumers**

Social Media Marketing is a relatively new type of marketing and according to Luigi (2011) it can be defined as "The use of social media to promote the products and services".Social media and their high impact on the consumers have provided businesses with a new way of communication. Reasons for using social media networks vary as appropriate. Specifically, social media can be used to increase website traffic, increase the reader's commitment to the business, instantly inform the public, make announcements, transfer information and collect feedback (Hill & Moran, 2011; Ashley &Tuten, 2015).

Consumers more and more tend to reject the traditional means of advertising and promotion of products such as television, radio, newspapers and magazines (Boyd & Ellison, 2010; Chang, Yu & Lu, 2015). They are looking for easy access to information, and as a result social media and the internet in general are considered the fastest and most worthwhile choice (Hollebeek, Glynn & Brodie, 2014). Written reviews, photos and tags created by social media users are a reliable and easy way to promote a product (Mangold & Faulds, 2009; Schivinski&Dabrowski, 2016). The purchase of a product or service consists a social interaction since the participants interact with other people and companies, fact that it has been more and more intensive in recent years through the use of social media (Hudson et al., 2015). Social media has enabled consumers to support their loved ones, collecting information, but also interacting with other consumers and exchanging views, as well as reducing the risk of a purchase decision (Chung & Austria, 2010; Zhang &Benyoucef, 2016). Consumers could support their favorite products before the introduction of social media but through social media, this support became more distinct and more intense (Burton & Khammash, 2010). Nowadays, more and more consumers are reluctant to trust traditional forms of promotion such as television, and they are looking for the quickest and haphazard access to the necessary information (Chung & Austria, 2010; Zhang &Benyoucef, 2016). The use of social media to collect information through company pages or to obtain advices from third parties that can be considered to be trustworthy are common practices (Benson et al., 2010; Kumar et al., 2016). According to Burton and Khammash (2010), consumers use various forms of Social Media in order to collect information, and they consider social media as a comparatively more reliable source of information than traditional forms of product and service intelligence.

The various reviews and images published in social media from various sources such as businesses and consumers consist an important source of information for consumers in their product search process (Chung & Austria, 2010; Cantallops& Salvi, 2014). According to Szabo and Huberman (2010), 20% of Facebook users use it to search for information about a product or service, while 42% of users before make a purchase they have written some reviews about others experiences. Moreover, the same author separates social media users regarding their frequency of publishing content to high and low sharers, and according to Benson and his colleagues (2010), the publication of reviews by the consumers can be considered as a form of electronic Word of Mouth, an important form of communication, which can directly affect consumer behavior (Benson et al., 2010; Erkan & Evans, 2016).

According to Hajli, Sims, Zadeh and Richard (2017), social media have reduced the distance between people, they have increased the flow of information among them, while at the same time they assisting consumers in making their decisions about any purchase. Despite the above findings, research on the influence of social media on consumer purchasing behavior is at early stages with rapid development in recent years. Burton and Khammash (2010) in their research into the relationship between consumer behavior and social media found that 1/3 of respondents are affected by Social Media during their purchasing decision while only 25% remain unaffected. Similarly, Saini and Moon (2013) have pointed out that consumers using a social media platform are more prone to make online purchases. Barreto (2014) has concluded that positive electronic word-of-mouth through social media can influence consumers' purchasing decisions, their trust in a product or company, and their overall perception. Calin (2013) in his research on purchasing behavior, the factors influencing it and the social media, he has concluded that in addition to the positive influence of social media on the purchasing decision, social media also have an impact on the consumer's commitment to the brand name of a product. On the contrary, Durukan and his colleagues (2012) in their research on consumer behavior, they end up with three distinct behaviors: a) users use social media to make a purchasing decision; b) the behavior of users is affected by their social media “friends” and c) social media ultimately affect consumption. Also, the emergence of these behaviors was found to be common and therefore the influence of social media on consumer behavior can be important.

In general, social media are an attractive destination for users and therefore their importance to business is equally great (Gneiser et al., 2012). One of the reasons for using advertising as a promotional tool was to create a positive opinion and perceptions on a product without showing its drawbacks. However, after the introduction of social media, the consumers have access to opinions of other consumers who have tested the product and which can encourage or deter them from buying it. Finally, users tend to rely on selfless information provision (Tuten&Angermeier, 2013; Hajli, 2014). In conclusion, it can be concluded that consumers want to know more about the companies and their products while on the other hand, companies try to control consumers' views on social media so they can intervene.

**Consumers’ attitudes towards digital advertising**

Generally, extensive research has been conducted in order to investigate the impact of different types of ads (Aydin, 2016). Digital ads in social media, search engine machines, mobile devises, and webpages receive much attention over the last few years (Celebi, 2015; Alamanos, Brakus& Dennis, 2015).Generally, the results from those studies are diverse. Some of them suggest that the attitude towards e-mail, mobile and banner advertisements is negative (Lukka& James, 2014; Luna Cortes, &Royo Vela, 2013), while on the other hand other studies suggest that those types of communication can have a positive impact on sales (Unal, Ercis&Keser, 2011; Barutcu, 2007). A possible explanation can be the significant differences on how an advertisement is presented to the consumer as well as the existence of possible differences on cultural and social level (Taylor, Lewin &Strutton, 2011). For example, banner ads pull the consumers towards the advertisement while on the contrary e-mail advertisements push the content of the advertisement towards the consumer. As a result, different types of digital advertising can have different impact on consumers’ behavior (Aydin, 2016).

During the years, multiple models have been developed in order to explain consumers’ ads towards the digital advertisements. Based on those models, several factors have been identified and tested towards this direction. The most important of them are the perceived informativeness which refers to the ability of the advertisement to inform the consumer with relevant, accurate and timely information, the perceived entertainment which refers to the degree that the consumer found entertaining the content of the advertisement, the credibility which refers to the extent in which the advertiser is considered as credible, truthful and trusted, and finally irritation which refers to how annoying the advertisement can be for the consumer (Aydin, 2016).

**Influencer Marketing**

Companies tend to spend a great amount of their resources in order to attract the attention of the public audience and influence their decision process. In their attempt, they usually ignore the fact that consumers usually affected by other people who they trust and they considered as credible (Bokunewicz& Shulman, 2017). Past studies indicate that in some cases the impact of people's environment is greater than the one of traditional media and marketing tactics (Booth &Matic, 2011). According to Archer and Harrigan (2016) and Kotler (2012), around 15% of consumers' purchases are affected by word of mouth and the people they trust for collecting information. In online environment, those influencers are even broader since the consumers have the ability to discuss, exchange opinions and experiences and through that process to affect each other's purchase decisions (Freberg et al., 2011). Today, the number of people who participate in social media platforms is constantly increased (Felix, Rauschnabel&Hinsch, 2017) and a person can share different types of content with many other individuals, while in fashion industry consumers tend to follow specific fashion influencers who they consider as valuable sources of information (Zietek, 2016). According to De Veirman, Cauberghe and Hudders (2017), it is difficult and at the same time important to detect who the right influencers are within the social media environment. Word of mouth refers to the transmission of information between consumers, while influencers marketing tactics focus on those who can affect a big part of the target audience (Weiss, 2014; Castellano &Dutot, 2017). In this context, influencer marketing is a new hot topic and trend in marketing industry and it is considered as a new way to affect purchase decisions on the chaotic environment of the Internet and social media (Castellano &Dutot, 2017). Many years ago, Rosen (2000) mentions the term "influencer marketing" on his attempt to highlight the importance of those who shape the opinions of the public audience. Based on that, it can be stated that influencer marketing is not a new concept since it presents similar points to word of mouth and buzz marketing where opinion leaders have a great impact on consumer behavior (Chatzigeorgiou, 2017).

Nowadays, the Internet offers multiple options to a company in order to share content that it can be read by its target audience and potential clients. Based on that, the importance of opinion leaders is even greater than before (Evans et al., 2017). Influencer marketing can be defined as the choice of a company to cooperate with celebrities, experts, bloggers or social media "leaders" in order to promote products or services (Williamson, 2016). Generally, influencers can be considered as one more channel of communication with the target audience of a company. Companies control all the part of influencers' communication with their audience, they design the content and they give directions about the frequency of communication. Similar to every other media campaign, influencers marketing in social media is also being monitored and assessed based on its effectiveness in terms of return on investment, engagement, sales, conversions, and traffic generation (Jaakonmaki, Muller &VomBrocke, 2017).

**User-generated content in contemporary world**

The development of internet and web-based applications besides the opportunities for companies, they also allow the consumers to share their experiences and views. Generally, the Internet is characterized as a highly personalized information location / place where consumers use the available media platforms according to their needs (Ye et al., 2011). Consumers generate content multiple times per day and by making it public they can affect other consumer's opinions. Additionally, interaction is considered as the fundamental characteristic of social media and through sharing and receiving user generated content information transmitted all over the world (Daugherty, Eastin & Bright, 2008).

Furthermore, many factors can motivate consumers to share content on the internet (Halliday, 2016). Internal factors such as behavioral patterns, psychological indicators and demographic characteristics have been detected as determinants of publishing user generated content on the Internet and its applications. Finally, there are external factors which are related to internet accessibility, and the usability of internet applications that prompt consumers to publish content easier (Chiu, Bae & Won, 2017).

**Types of Social Media Influencers**

Influencers affect the purchase decision of consumers before the introduction of social media in people's lives (Kotler, 2012). Groups of people or individuals that have been close to consumers usually affect them when they are going to make a purchase (Karimi, Papamichail& Holland, 2015). Additionally, influencing people commonly is taking place in politics and religions. According to Gladwell (2005) there are three distinctive categories of influencers, the connectors, the mavens and the salesmen. The connectors are those who have many connections in the market, mavens are experts on their field and they have all the available knowledge for a product or service, finally, salespeople are highly persuasive persons who have financial motives when they transmit information. Another approach is based on the adoption of a new product or service, where people who can be characterized as innovators and early adopters have a great impact on the rest of the public (Hinz, Schulze &Takac, 2014; Nakata & Weidner, 2012). Additionally, there are the experts who can affect people's opinion on the specific topic of their expertise since they enjoy trust and acceptance from their fellow citizens. Those can be scientists, columnists or artists (Nakata & Weidner, 2012). Different types of influencers present also different levels of influence on the final consumer (Hinz, Schulze &Takac, 2014; Nakata & Weidner, 2012). Depending on the topic, product or service, influencers' opinion present different levels of credibility and when someone lacks of credibility is consequently cannot affect people's opinion (Jaakonmaki, Muller &VomBrocke, 2017).

In social media, influencers are usually characterized by a frequent share of information or content (De Veirman, Cauberghe&Hudders, 2017). In other words, influencers are mainly those who post product-related content on a regular basis and usually more often than the average user (Evans et al., 2017). According to Keller and Berry (2003) influencers can be defined based on the number of followers they have. In the online context, influencers can be bloggers that create content and they have a great number of followers in social media platforms (Archer & Harrigan, 2016). Generally, social media are considered as a place where everyone can publish content and express his opinions (Chu & Kim, 2011). People can make public their experiences from a product or service, spread information and give advises to potential customers. In that way everyone can be a potential influencer (Chu & Kim, 2011). Celebrities are usually considered as influencers, especially in the fashion industry, since through product endorsement they can affect purchase indention and promote those products to the consumers. According to Hassan Fathelrahman Mansour and Mohammed Elzubier Diab (2016) in order celebrity endorsement to be successful and meets its full potential, it should be characterized by attractiveness, trustworthiness and expertise. Additionally, Ioanid, Deselnicu and Militaru (2017) state that celebrities and generally influencers should be connected and be in line with the type and characteristics of the product / service they want to promote. Another approach is the one of Mavrck (2014) who describes influencers as the people who hold a relevant position, their opinion is based on their knowledge and they are characterized by originality. Finally, in the current research, the categorization of influencers is based on recent studies (Stevens, 2017; Mavrck, 2016; Brown & Fiorella, 2013) which classify them regarding their professionalism, the specific incentives they may have and how popular they are. As a result, the distinctive categories of influencers that they will be analyzed further on the follow chapter are those of "Mega-influencers", "Macro-influencers" and "Micro-influencers".

**Mega-influencers**

Mega-influencers are usually celebrities who through their popularity they can add additional value to a product or service and positively influence their brand image (Djafarova&Trofimenko, 2018). Those celebrities can be famous singers, actors and athletes with over a million followers on social media platforms and a mere impact between 2 and 5 percent on consumer engagement (Stevens, 2017; Mavrck, 2016). Mega-influencers affect the audience through publishing specific content on social media or by being part of relevant advertisements. Their impact is not limited to sales but also they can affect brand awareness and the recall of a product or a brand name (Djafarova&Trofimenko, 2018). Additionally, Mega-influencers influence consumers' perception towards the brand but they are not able to prompt people's behavior (Mavrck, 2016). Finally, the fact that celebrities are getting paid for promoting a product or telling their opinion about it, it makes them a less reliable and credible source of information compare to the other types of influencers (Djafarova&Trofimenko, 2018).

**Macro-influencers**

Macro-influencers are people with an expertise on a topic or field (Mavrck, 2016; Stevens, 2017; Brown and Fiorella, 2013). They can be scientists, journalists, professionals or bloggers with a specific field of expertise or interest such as fashion, politics, sports etc. Usually, Macro-influencers are considered as opinion leaders which they have some celebrity characteristics but with only subject related opinion, high levels of credibility, low interest on make a profit from expressing their opinion and as a result the can highly affect consumers' opinion and behavior (Kozinets et al., 2010, Mavrck, 2016; Stevens, 2017). According to Ghrhardt (2018) the great effect of Macro-influencers on consumers' behavior is related to their professional knowledge on the specific matter, their credibility and reliability.

**Micro-influencers**

Micro-influencers are the category that includes a large amount of people who can are not famous or experts but they have a highly active and engage audience of followers in different social media platforms (Khamis, Ang & Welling, 2017). According to Mediakix (2016) there is a shift on companies' strategy since they tend to prefer influencers with relatively small (< 100.000 followers) audience compare to celebrities. Those influencers can be Youtubers, Instagramers or bloggers, known only from a limited number of people, and they present a more direct approach when they post content in social media (Marwick, 2016). In other words, micro-influencers are regular people who want to attract attention for personal reasons, they strongly express and support their opinions and their interaction with their followers is much more authentic and spontaneous (Jerslev, 2016; Marwick, 2016; Khamis, Ang & Welling, 2017). Moreover, micro-influencers usually do not have financial motives when they mention a product or service, therefore, they are perceived as original and through that they aspire credibility (Khamis, Ang & Welling, 2016). Finally, the relationship that micro-influencers develop their followers can affect their purchase decision as well as their attitude towards a brand or company (Jersley, 2016; Brown & Fiorella, 2013).

**SMI in the global consumers' markets**

In consumers' markets, the ability of influencers marketing in terms of effectiveness and return on investment is considered to be unknown (Sudha & Sheena, 2017; Archer & Harrigan, 2016). Brands are looking for the appropriate influencer that can be the tool to approach their target audience. Companies do not have full access on specific data regarding the audience that follow an influencer, thus the number of followers is usually the main criterion for selecting an influencer (Hassan Fathelrahman Mansour & Mohammed Elzubier Diab, 2016). The more followers a person has, the more he is considered as an opinion leader and he can affect purchase intention, attract consumers and make them to engage with the product (Chu & Kim, 2011). However, the number of followers that an influencer has, is not the only metric for his quality. Followers engagement with the influencer and their reaction to his posts can be considered as an additional key performance indicator that can illustrate how effective an influencer can be (Chu & Kim, 2011; Bokunewicz, & Shulman, 2017). Specifically, the level of engagement indicates that the followers actually see the posts, and that the brand reached its audience (Hassan Fathelrahman Mansour & Mohammed ElzubierDiab, 2016).

The incorporation of influencers marketing in a general marketing communication campaign can be made with various ways such as posting content on multiple social media platforms, make reviews for products, make use of products, through vlogs, and offering gifts in contests (Piskorski& Brooks, 2017; Sudha & Sheena, 2017; Garland, 2018). Especially, in consumers' markets, influencers commonly receive as a gift the product they are going to promote and according to E-consultancy (2015) this is the case for around 82% of influencers. However, the same research reveals that the high competition and the extensive use of influencers marketing practices make difficult for companies to justify their choice and measure the effectiveness of influencers marketing. Furthermore, companies face the challenge to select the right influencer since his characteristics can positively or negatively affect brand image (Bokunewicz, & Shulman, 2017; Keller & Fay, 2016). Similar to celebrity endorsement, in some cases the product is associated with the characteristics of the influencer (Bokunewicz, & Shulman, 2017; Keller & Fay, 2016). A successful choice can increase brand awareness or raise sales but on the contrary an unsuccessful selection can be problematic (Kirkpatrick, 2018; Sammis, Lincoln &Pomponi, 2016; Ioanid, Deselnicu&Militaru, 2017).

Marketing strategies usually aim on affect consumers' behavior and persuade them to make a purchase (Chu & Kim, 2011). Analyzing the content of influencer marketing, it is crucial to detect how the consumer thinks, which factors affect the most his behavior and how a company can influence his purchase decisions (Keller & Fay, 2016). According to Ioanid and his colleagues (2015) there are six (6) distinctive principles of influence and persuasion that can characterize and affect online communication. Those principles are (Ioanid et al., 2015):

- Consistency. Consumers who are involved and be part of a process or a decision present higher levels of commitment. For example, people in social media can be easier affected by someone they made the choice to follow rather that from an advertisement or video that it is presented to them.
- Authority. Field experts and people with some kind of authority tend to be believed by the public audience when a discussion on their specialty is occurred.
- Liking. Liking refers to people’s tendency to like and have a positive behavior towards someone attractive (Solis, 2016).
- Reciprocity. People usually tend to present a positive reaction to someone who make them a favor or send them a gift. Similarly, people act on a certain way when they expect something in return (Solis, 2016)
- Social proof. Social proof refers to the need of consumers to know what the others think, and which are their choices in order to confirm their own and feel acceptable and safe.
- Scarcity. Scarcity is based in people’s tendency to feel free to decide. In cases, when a product is on offer for a limited of time, consumers feel that they are not free to decide and their freedom is minimized by the circumstances.

**Primary Research**

**Research Justification**

The interest on this specific topic has been aroused by the dearth of a systematic research regarding the emergence of influencer marketing in Greece. Despite a number of studies and the plethora of relevant articles for multiple industries and countries like United States and England, relevant studies in the Greek market, which attempted to identify the importance of influencer marketing and how consumers respond are limited.

The effects of globalization, the continuous technological developments and the extremely high number of the available products and services have formed the current marketplace for every company in any sector. In this difficult and demanding environment, the companies make specific strategic choices and through them they are trying to gain competitive advantage in order to compete and stay in the market (Schilke, 2014; Singla &Apoorv, 2015). Especially, in consumers’ markets, consumers tend to follow specific trends which among others are formed based on the choices of the main influencers of the market.

The term competitive advantage is reflected in the performance of a company in comparison with the performance of its competitors. The question and a fundamental target for every company in any sector and market is to learn why a competitor performs better, why he has more profits and why he attracts more clients (Paek& Lee, 2017; Kai-Yu, Wenpin& Ming-Jer, 2015). In order to answer these questions and stay competitive, some companies try to cooperate or affect the main influencers of the market. On the other hand, Adblocking became a common practice for a great part of the consumer audience (Nithyanand et al., 2016), fact that made more difficult for companies to approach their target audience and pass their messages. Additionally, Greece ranked at the first place among the European countries regarding Adblocking practices or applications (Newsman et al., 2017), thus the challenge for Greek and international companies is much greater.

Having in mind the developments in external environment, the importance of digital media, and consumers’ behavior to trust micro and macro-influencers since they consider them as a credible source of information, the adoption of a strategic approach that aims to affect micro and macro can help a company to successfully approach customers.Under this scope, the objective of this study is to conduct an exploratory research to provide a contribution to knowledge regarding the emergence of influencer marketing in Greek food and beverages industry by revealing the perceptions of consumers on the topic. The investigation of these perceptions can lead to specific results that can highlight the need for more holistic and integrated approach of influencer marketing by organizations in order for them to stay in the market and be competitive. Based on that, the outcomes of the research will lead to conclusions regarding the validity of the hypotheses that formed and in relation with the existing literature will create a panoramic and clear view of the role and importance of influencer marketing in the Greek consumers’ markets.

**Research Methodology**

This exploratory research aims to identify the emergence of influencer marketing in Greek food and beverages industry by revealing the perceptions of consumers on the topic. Additionally, mega, macro and micro-influencers will be compared in terms of their characteristics in order to assess their importance for the Greek audience. Taking into careful consideration the findings discussed in the previous chapters and in accordance with the objective of the primary research, the following research questions, were compiled.

1. Are there significant differences among the types of influencers regarding their attractiveness to the consumers?
2. Are there significant differences among the types of influencers regarding their credibility / authenticity?
3. Are there significant differences among the types of influencers regarding their expertise on the subject matter?
4. Are there significant differences among the types of influencers regarding their impact on purchase intention?

**Primary Research Procedure**

**Data collection**

The recruitment of participants in the research took place in the first half of September 2018. At first, a pilot questionnaire was tested in order to correct any possible mistakes, change unclear questions and meet the requirements of the research. All questionnaire items were extracted from well-established scales with high validity that were used in previous studies. Particularly, the different sections of the questionnaire were formed based on the literature review that have been made prior to the research, as well as, the studies of Paco and Oliveira (2017), and Gupta, Kishore and Verma (2013). However, necessary changes have been made in some in order to adapt the questions on the type of the product category that it has been selected for the primary research.The questionnaires were completed by the consumers hand by hand and a consent form with an additional information sheet was available in order to let them know the purpose of the research and assure them about the confidentiality of the data, their anonymity and the use of the research outcomes only for academic purposes. Last but not least, the respondents were informed that the researcher would be willing to answer any question regarding the questionnaire. Finally, the analysis of the data was made with the statistical software for data analysis SPSS version 24.

**Constructs measurement**

- Attractiveness. Attractiveness refers to how the influencer is perceived by the consumers in terms of appearance and characteristics. Example of a statement on this construct is “I perceived him as elegant”.
- Credibility / authenticity. Credibility and authenticity refer to the ability of the influencer to be perceived as a reliable person. Example of a statement on this construct is “I believe that their recommendations are true and credible”.
- Expertise. Expertise refers to the knowledge that the influencer has on a specific topic. Example of a statement on this construct is “He/she demonstrated high levels of knowledge”.
- Impact on purchase intention. Impact on purchase intention refers to the ability of the influencer to affect the intention of the consumers to buy a product or service. Example of a statement on this construct is “I actively seek for his/her reviews for fashion items (clothes, shoes, etc.) before a purchase”.

**Reliability and validity of the questionnaire**

Questionnaire was the data collection tool and it was tested for its validity and reliability. The fact that the selected variables are based on theoretical analysis confirm the internal validity of the questionnaire. Additionally, the validity of the questionnaire was supported by the presence of the researcher at the section point and the clear form of all the questions. On the contrary, reliability tests whether the questionnaire collects the information that it intends to collect. Reliability is checked through the repeatability of results, while a common method for reliability measurement is the coefficient of internal consistency, alpha (a) of Cronbach. In thiscase, valuesover0.70 indicatereliablescales (Bryman, 2015).

**Reliability Statistics**

| | Cronbach's Alpha | N of Items |
|---|---|---|
| Attractiveness | .712 | 3 |
| Credibility | .739 | 5 |
| Authenticity | .798 | 4 |
| Expertise | .811 | 3 |
| Impact on purchase intention | .871 | 6 |

The reliability analysis performed resulted Cronbach Alpha over 0.70 for all constructs therefore the questionnaire can be considered as reliable source of collection information on the research topic.

**Sampling and Recruitment**

The target population was Greek consumers and the final research sample was 134 consumers, number that can give reliable information since according to Tabachnick and Fidell (2001) and their formula for calculating sample size requirements, the necessary sample was 82 respondents. Based on similar previous studies, the sample size can give reliable information and have a positive impact on external validity.Moreover, the sample of the quantitative research was consisted by respondents who are fluent in English, since the research questionnaire was only available in English. The sampling method that was used during the quantitative research was simple random sampling in order to allow the researcher to easily generalize the findings.

**Results**

The majority of the research sample is consisted by men (60.7%), followed by 34.5% of respondents from 26 to 35 years of age, 44.1% were University graduates, 38.6% were private employees, and 54.5% of the respondents had family income from 10 to 25.000 euros.
With regard to Influencers, 80.7% of respondents have heard the term marketing influence, 50.3% visit Facebook more frequently than any other platform and 41.4% Instagram, while 71% of respondents follow a famous person or influencer at Instagram. Additionally, 95.2% of respondents do some research for information when they make purchases, and 53.1% have never bought anything because they saw a famous person / influencer advertised it. Finally, 27.6% read, watch or listen frequently to ratings, comments or suggestions from influencers about products of interest to them.

**Comparisons**

**Attractiveness**

Table 1 show that attractiveness displays higher levels in Mega Influencers (M = 5.21, S.D. = .925) following by Micro Influencers (M = 3.82, S.D. = 1.340). On the contrary, lower levels of attractiveness occurred in Macro influencers (M = 3.22, S.D. = 1.556).

**Table 1: Attractiveness by influencer type**

| | Mean | SD | N |
|---|---|---|---|
| Megainfluencers Attractiveness | 5.2172 | .92574 | 145 |
| Macro influencers Attractiveness | 3.2276 | 1.55677 | 145 |
| Micro influencers Attractiveness | 3.8207 | 1.34070 | 145 |

Moreover, Repeated Measures ANOVA illustrates that there is a significant statistical difference between the three types of influencers (Mega, Macro, Micro) regarding their attractiveness for the consumers ($F(1,144) = 2927.463$, $p < 0.05$).

**Table 2: Tests of Between-Subjects Effects for attractiveness**

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 7271.407 | 1 | 7271.407 | 2927.463 | .000 |
| Error | 357.676 | 144 | 2.484 | | |

**Expertise**

Table 3 show that attractiveness displays higher levels in Macro Influencers (M = 4.76, T.A. = .570) following by Micro Influencers (M = 4.27, T.A. = 1.011). On the contrary, lower levels of attractiveness occurred in Mega influencers (M = 4.10, T.A. = 1.026).

**Table 3: Expertise by influencer type**

| | Mean | SD | N |
|---|---|---|---|
| Megainfluencers Expertise | 4.1034 | 1.02662 | 145 |
| Macroinfluencers Expertise | 4.7600 | .57087 | 145 |
| Micro influencers Expertise | 4.2703 | 1.01120 | 145 |

Furthermore, Repeated Measures ANOVA illustrates that there is a significant statistical difference between the three types of influencers (Mega, Macro, Micro) regarding their expertise for the consumers ($F(1,144) = 5407.314$, $p < 0.05$).

**Table 4: Tests of Between-Subjects Effects for expertise**

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 8337.332 | 1 | 8337.332 | 5407.314 | .000 |
| Error | 222.028 | 144 | 1.542 | | |

**Credibility**

Table 5 show that attractiveness displays higher levels in Micro Influencers (M = 4.83, T.A. = 1.035) following by Mega Influencers (M = 4.34, T.A. = 1.392). On the contrary, lower levels of attractiveness occurred in Macro influencers (M = 3.69, T.A. = 1.282).

**Table 5: Credibility by influencer type**

| | Mean | SD | N |
|---|---|---|---|
| Megainfluencers Credibility | 4.3494 | 1.39296 | 145 |
| Macroinfluencers Credibility | 3.6989 | 1.28279 | 145 |
| Microinfluencers Credibility | 4.8368 | 1.03572 | 145 |

Moreover, Repeated Measures ANOVA illustrates that there is a significant statistical difference between the three types of influencers (Mega, Macro, Micro) regarding their credibility for the consumers ($F(1,144) = 2306.833$, $p < 0.05$).

**Table 6: Tests of Between-Subjects Effects for credibility**

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 8024.527 | 1 | 8024.527 | 2306.833 | .000 |
| Error | 500.917 | 144 | 3.479 | | |

**Authenticity**

Table 7 show that attractiveness displays higher levels in Micro Influencers (M = 4.62, T.A. = .653) following by Macro Influencers (M = 4.33, T.A. = .696). On the contrary, lower levels of attractiveness occurred in Macro influencers (M = 3.97, T.A. = .784).

**Table 7: Authenticity by influencer type**

| | Mean | SD | N |
|---|---|---|---|
| Megainfluencers authenticity | 3.9747 | .78453 | 145 |
| Macroinfluencers authenticity | 4.3333 | .69639 | 145 |
| Micro influencers authenticity | 4.6207 | .65336 | 145 |

Furthermore, Repeated Measures ANOVA illustrates that there is a significant statistical difference between the three types of influencers (Mega, Macro, Micro) regarding their authenticity for the consumers ($F(1,144) = 7812.047$, $p < 0.05$).

**Table 8: Tests of Between-Subjects Effects for authenticity**

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 8079.023 | 1 | 8079.023 | 7812.047 | .000 |
| Error | 148.921 | 144 | 1.034 | | |

**Purchase intention**

Table 9 show that Mega Influencers present higher impact on purchase intention (M = 3.17, T.A. = 1.339) following by Micro Influencers (M = 2.64, T.A. = 1.216). On the contrary, lower impact on purchase intention occurred in Macro influencers (M = 2.50, T.A. = 1.144).

**Table 9: Impact on purchase intention by influencer type**

| | Mean | SD | N |
|---|---|---|---|
| Microinfluencers purchase intention | 2.6410 | 1.21649 | 145 |
| Macroinfluencers purchase intention | 2.5068 | 1.14411 | 145 |
| Mega influencers purchase intention | 3.1733 | 1.33936 | 145 |

Furthermore, Repeated Measures ANOVA illustrates that there is a significant statistical difference between the three types of influencers (Mega, Macro, Micro) regarding their impact on consumers' purchase intention ($F(2,143) = 6.066$, $p < 0.05$).

**Table 10: Tests of Between-Subjects Effects for authenticity**

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 18.549 | 2 | 9.275 | 6.066 | .003 |
| Error | 140.942 | 143 | 1.529 | | |

**Discussion**

Consumers more and more tend to reject the traditional means of advertising and promotion of food and beverage products such as television, radio, newspapers and magazines. They are looking for easy access to information, and as a result social media and the internet in general are considered the fastest and most worthwhile choice. Nowadays, the Internet offers multiple options to a company in order to share content that it can be read by its target audience and potential clients. Based on that, the importance of opinion leaders is even greater than before. Based on that, influencer marketing is of greater importance and it can have multiple effects. However, different types of influencers present different effects on consumers' behaviour since they are perceived differently.

The results of the analysis showed that consumers believe that Mega influencers have higher levels of attractiveness following by credibility and expertise, while at the lowest point are their authenticity levels. Then, with regard to Macro influencers, consumers believe they are experts, authentic and credible but less attractive. Finally, Micro influencers, consumers have said they have higher levels of credibility following by authenticity and specialization, while at the lowest point are their levels of their attractiveness. Thus, as confirmed by previous research efforts (e.g. Bokunewicz& Shulman, 2017; Brown & Fiorella, 2013; Zietek, 2016), the famous persons or popular influencers are considered the most attractive, followed by friends / with the latest industry experts. Accordingly, the experts of each industry are considered as the most specialized followed by the friends / family, with their last famous, the friends / family are considered as the most trusted and authentic.

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# Marketing Research

# A critical analysis of research on obesity and marketing: an integrative framework and an agenda for future inquiry

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**Extended Abstract**

Obesity rates globally have escalated to the point of becoming a problem of epidemic proportions (Moore et al. 2017; Argo and White, 2012). It is estimated that one every three Americans are currently obese with a body mass index over 30 (Haws et al. 2017), whereas this number is more than doubled (64%) if we include overweightcitizens as well (Argo and White, 2012).Also, obesity is growing at an exponential rate, not only in the United States, but in other developing countries as well,such as China and India, as they adopt more Westernized diets (Ma et al. 2013; Raghunathan et al. 2006). Moreover, an issue of even greater significance is the fact that this epidemic obesity has spread to children as well, making childhood obesity a serious global problem (Moore et al. 2017).Adding to this, compared to 1980, there has been approximately a 50% increase in the proportion of overweight children worldwide (Moore et al. 2017;Ng et al. 2014). The consequences related to obesity are many and span in various dimensions.In terms of health risks, people worldwide face severe health problems in the form of incidence of obesity-related diseases, such as, heart diseases, stroke, various types of cancer and Type 2 diabetes (CDC, 2018). According to the Centers for Disease Control and Prevention (CDC), one-third of U.S. citizens are characterized as obese and one in ten has been diagnosed with diabetes, a rate that isestimated to increase to one in three people by 2050 (Ma et al. 2013; CDC, 2010). The consequences obesity are not only physical.For children, obesity brings teasing, bias and social marginalization, which can lead to lower self-esteem and enhanced risks of depression, eating disorders, (Moore et al. 2017; Puhl and Lattner 2007). For countries, this has profound economic repercussions as well. For instance, the total health costs associated with overweight people in the United States alone estimated at about $92.6

billion in 2002 alone (Argo and White, 2012).The consequencesof obesity havealso socialdimensions as it reduces the quality of life for consumers worldwide (Ma et al. 2013).

Thus, assessing the concept of obesity and the consequences of excessive food consumption habits has emerged as a topic of substantive theoretical and managerial importance in recent years (Pham, 2014; Talukdar and Lindsey, 2013; Raghunathan, et al. 2006).Consumption research in marketing has tended to focus on issues such as how advertising and promotions influence a consumer's food consumption (Garg et al. 2007). Furthermore,marketing researchers have investigated the effects of various factors on food consumption and they found that the amount of food consumersconsume is not only affected by physiological hunger cues, but also by various external cues, such as the social environment (family and friends), pricing and packaging issues, choice variety, colors lights, shapes and smells, distractions and distances, among others (Tangari et al. 2019; Moore et al. 2017; Haws et al. 2017; Deng and Srinivasan, 2013).In practice, this research stream has attracted the interests of businesses as well. Even though no organizations in the food and beverage industry would like to discourage consumers from purchasing their goods, it is in their benefit to comprehendthe factors thataffect consumers' food intake. For instance, excessive consumption can lead not only to weight gain but also to rapid satiation and delayed repurchasing. Also, helping consumers over the long run, in order to bettercontrol their overconsumption habits could also help promote more favorable responses toward the firm and the brand (Garg et al. 2007).

Accordingly, researchers produced a great amount of knowledge on this domain over the past decades, in an effort to examine the interplay between obesity and marketing (e.g., Deng and Srinivasan, 2013; Argo and White, 2012). Based on this, there are several calls from the scholar community for a better understanding of the relationship between marketing and caloric overconsumption (Argo and White, 2012), as well as to identify further research avenues that will focus on nudging consumers from the consumption of unhealthy food choices to healthier food options (Talukdar and Lindsey, 2013).Moreover, there is also the need for a clear understanding of the underlying mechanisms of consumers' demand response patterns to product characteristics as regards to healthy and unhealthy food choices, for effective design of policy tools that enhance healthier food consumption behavior (Talukdar and Lindsey, 2013; Epstein et al. 2010).

Based on these realities, a backward look at the way that major themes have emerged and evolved in the obesity and marketing domain is warranted. This will then allow us: a) to adopt a forward-looking, future-research-oriented perspective to help chart the next phase of interesting, rigorous, and relevant research in this domain, and; b) to provide a better understanding to consumer researchers, public health professionals, and marketers of the drivers of food choice and howto encourage consumers with obesity related health problems to make necessary changes to their consumption attitudes.Also, this critical review is timely, and perhaps necessary, because of the exponential growth of obesity and its negative consequences globally, which requires a solid understanding of how academics and practitioners could contribute in minimizing this epidemic problem, including marketing research and practice. Our research takes this as its goal.

In terms of methodology, we will apply a systematic literature review methodology, following the examples of other state-of-the-art systematic reviews published in top marketing and management journals (i.e., Nofal et al., 2018; Leonidou et al. 2018; Cleeren et al. 2017). We will begin with the selection of the publication outlets to be considered for the final sample of articles which will be based on existing systematic reviews conducted in premier journals of the marketing field (i.e., Stephen and Lamberton, 2016; Eisend, 2015; Chabowski et al. 2011; Jarvis et al. 2003). Next, we will conduct keyword searches on EBSCO,ScienceDirect and Emerald databases to identify relevant articles within the premier journals considered for this research. We will start our search using general keywords (obese OR "excessive consumption" OR overconsumption OR "over-consumption" OR "over consumption" OR obesity OR heav* OR corpulence OR weight OR bariatric OR fat OR calorie OR "food consumption" OR "food intake" OR eat) without any time restriction in terms of publication date. Next, we will examine these articles' references to identify other relevant articles published in these journals. The identified total number of articles appearing in the selected journalswill be based on the inclusion and exclusion criteria of the study and will cover both conceptual articles as well as empirical studies on the topic employing both quantitative and qualitative methodologies. The selected papers will be critically analyzedwith the aim ofmapping extant research and providing guidelines for further evolving this research domain and expanding its boundaries into new research streams.

In particular, our analysis will consist of four parts. In the first part, the descriptive analysis section, we will analyze the research contributions of authors and their institutions (inputs) to identify major contributors of marketing researchon obesity. The result is a helpful toolto understand the development of obesityresearch in the field, as research published in high impact and top-tier journalsis a commonly used method for identifying scholarly debates and research trends in a domain (Atewologun et al., 2017; Foss and Saebi, 2017). Moreover, we will provide an analysis of the articles' characteristics (i.e., year of publication, type of contribution, methodology applied, etc.) to identify possible weaknesses of extant research and thus to provide corrective suggestions, as well as insights, as to how future research should progress. The second part will focus on providing a thematic analysis of the extant literature. First, we will categorize the thematic content of all articles published on the topic in an effort to understand the domain's various research streams and to provide suggestions for further research. Second, we will identify the various theories that extant research utilized on the topic, in order to identify other possible research routes through cross-disciplinary fertilization.The third part consists with the synthesis of extant research. Following the example of Lamberton and Stephen (2016), we will first provide a categorization of extant literature into eras, according to the research focus of the selected studies and their timeframe of publication. We will then synthesize the findings into an integrative framework that presents the state of current research on the topic. Finally, the synthesis part will also allow for fleshing out the complementary and synergistic insights from the selected studies. The fourth and final part will provide additional recommendations for future research, integrated into a future research framework that draws on both an understanding of significant emerging topics and an examination of the ways that scholarly and practice-related dialogues have converged or diverged throughout time. Our hope is that we provide clear paths for future research on obesityin the marketing discipline that do not repeat existing studies and consequently provoke repetitive patterns that will provide little to no value on research, practice and public policy in a topic that is of genuine substantive and managerial significance (Pham, 2014).

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# Penetration of local agri-food products in the restaurant business: Heraklion city as a case study

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## SUMMARY

The agri-food sector in Greece is a key pillar of growth with a multidimensional impact on the economy, the society and the environment. In the years to come, the food and agricultural products market is expected to make a significant contribution to the Greek GDP growth, through the increasing consumers' preferences towards the Mediterranean food diet, which is based on agricultural products that have proven to enhance people's health and wellbeing. Cretan rural products, with the competitive advantage of the Mediterranean climate and rich soils have a significant presence in the markets in the rest of Greece and Europe. However, the demand from the local consumers also plays an important role to local producers, as well as to local businesses offering processed or fresh products. A segment of the market that consumes a large percentage of local agricultural production is restaurants. The current research seeks to investigate the penetration of Cretan agricultural products into the local food market, and more specifically the incentives for local restaurant owners/managers to choose local agri-food products, the problems associated with that decision and their views regarding the satisfaction of their customers from choosing meals that are based on local agricultural products. Towards this aim, a qualitative research methodology has been applied with 20 interviews held with restaurant managers/owners in the Municipality of Heraklion, Crete in winter 2018-19. The results of the study lead to important suggestions on how the penetration of local products into the food sector could be improved, while the impact of the overall political and socio-economic environment on the penetration of local agri-food products into the restaurant sector has also been discussed.

Keywords : agriculture, local agri-products, restaurant industry, local development.

## INTRODUCTION

Agri-food directly connects agriculture with the secondary, manufacturing sector of the economy. The agri-food sector consists of all fresh and processed agricultural products coming from agriculture, forestry and fisheries (FoodandAgricultureOrganization, FAO, 2019). Two different agri-food systems, local and globalized, have prevailed inthe market. The globalized system provides consumers with a huge variety of products coming from all around the world, while decisions on agricultureturnsfrom national to international. On the other hand, the local agri-food system offers products of higher quality, by creating direct personal relationships between producers and consumers, allowing the local population to express their sense of responsibility towards the local community (Warner, *etal.,* 2017).The term "local product" is defined as the natural goods or services produced or provided by businesses in rural areas with a well-established socio-economic identity (European Committee of the Regions, 1996). Bosona&Gebresenbet (2011) describe as local products, the ones for which their production, sale and consumption take place in a specifically defined area. Adefining element of locality is linked to the distance products need to cover, from their point of production to thepoint of consumption (Pearson*et al.,* 2011). Martinez *et*

*al*., (2010) also assign a geographical identification, indicating that, in addition to the close distance between producer and consumer, local products can be definedon the basis of supply chain characteristics.
In Europe, 4.57 million people are employed in the food and beverage industry with a turnover of 1.1 trillion euros and an added value of 230 billion euros, according to the European portal Food Drink Europe (2018). This makes it the largest processing industry in the EU.The most recent data in Greece indicate that the Greek food industry consists of 88.127 businesses and 353.450 employees (Hellenic Statistical Authority, 2016).
Agricultural research studies focus on the quality, safety and certification of agri-food products (Malidretos, 2015), logistics and distribution chains (Liu, et al., 2017), ways of attracting gastronomy visitors (Garibaldi 2016; Ellis*etal*., 2018) or the role of food with respect to marketing in tourism (Richards, 2015).However, there are only few surveys that examine the interrelation between the agri-food sector and other sectors of the economy. In particular, there are no studies so far as regards the development of the agri-food sector in Greece and the degree of penetration of local products in service industries, for example in tourism.An exception is the recent study by Hammami, *et al*.(2018) on gastronomy tourism in Crete,which examined the behavior of tourists towards gastronomy and demonstrated that local Cretan products can positively influence the intention of tourists to visit the island again in the future. The study contributes through empirical results to the prediction of the behavior of tourists towards the Cretan local diet.
The aim of the current study is to cover the existing void in the literature, by examining the degree in which local food businesses, and more specifically local restaurants, useCretan agri-food products in their menu offerings,and moreover to identify the factors that affect restaurant managers in choosing their food supplies. At the same time, the study examines potentialobstacles associated with the above choice. The ultimate goal is to make suggestions that would enhance the use of Cretan products bylocal restaurants, for the benefit of both the local food industry and the producers. Local consumers themselves as well as tourists in the city of Heraklion are also expected to benefit by the results of this study.
The structure of the paper is as follows: The first section presents the relevant definitions and basic concepts that are associated with research, i.e. the terms agri-food, local products and food sector.In the second section, the respective literature review is presented, including statistical data and results provided by previous researchers with respect to the agri-food sector. The research methodology and the results of the primary data analysis are being presented thereafter, followed by some key conclusions, policy implications and suggestions for future research.

## LITERATURE REVIEW

### *i. Agri-food*

The food industry is considered as an industry closely linked to different social and economic activities such as tourism, processing, waste management, transport, health, prosperity, security (Cavicchi&Stancova, 2016).National governments, regional authorities and agricultural organizations assert that food and its connection mainly to tourism can enhance regional economic development (Gössling, & Hall, 2016).Agri-food is an industry within the agricultural sector, influenced by the sector's basic features, such as complex and time-consuming supply chains, instability in quality and quantity of products produced, safety, control procedures and natural environment. The agri-food sector should be governed by flexible production and distribution chains and be based on a market-oriented local or regional market economy (Liu, *et al*., 2017).According to a study by Hockmann, *et al*., (2013), the main developments over the last twenty years on agri-food in the European Union, concern changes in consumer preferences for products of higher added value, increased demand for organic food, new technologies, quality control procedures, increase of quality labels, demand for food traceability, strict safety rules, price volatility and market development.
In the European Union, France is considered to be the largest producer of agricultural products, with 17,8% of total European production, followed by Germany (13,9%), Italy (13,0%) and Spain (10,1%). The Netherlands also represents a fairly large share of agriculture (6,5%). The agricultural sector provides employment to 22 million people in Europe, while food-related industries (agriculture, food processing, retail and services) account for around 44 million jobs (European Commission, 2017).Greece,on the other hand, with 10.4 billionincome from agricultural production, accounts for 2,5% of the sector in total (Eurostat, 2016).
There are several cases of successful practices applied in the agri-food sector, in various European countries. In Italy, gastronomy tourism has led producers to develop activities that incorporate food, art and culture, which can benefit producers and the local economy, by strengthening the links between the different sectors, i.e. food, culture and tourism (Garibaldi, 2016).In the Netherlands, there are networks between governmental agencies and Dutch companies in various sub-sectors of agricultural production, which help producersenter the market, set common goals and identify opportunities for both the public and the private sector (Westenbrink, *et al.,* 2017).Croatia has identified new areas for potential growth, based on its natural health products (nutraceuticals), while at the same time is increasingly focusing on the exploitation of waste and by-products of the primary and secondary sector

(processing phase).Throughout Europe, funded national and international consortia have been set up in connection to local food systems, in an effort to enhance city branding that would ultimately attract more international visitors (Cavicchi, &Stancova, 2016).
In Greece, the agri-food sector accounts for 1/3 of all Greek exports with a value of around € 8 billion in 2013. In particular, olive oil exports grew by 42% in 2013, dairy products by 13%, fresh fruit and vegetables by 3% (Malidretos, 2015). Furthermore, farmers working in the primary sector make up 12% (500,000) of all workers, in a country that currently employs 3.5 million workers, a percentage that is considered to be quite big for developed countries (Eurostat, 2018). In the Region of Crete, there are 89,426 agricultural operationsthat employ 147,930 workers, according to the Hellenic Statistical Authority(ELSTAT, 2018).

*ii. Local products*

Local food and diet has an integral role in the cultural, social, environmental, and economic history of nations. This is due to the fact that local products reflect a certain way of life and lifestyle in different geographical areas, expressing traditions in rural areas or modernization in urban areas (Jiménez-Beltrán, *et al*., 2016).Local food has recently gained popularity on the assumption that is more sustainable than food produced away from the consumer, although this has been questioned by supporters of the global agri-food model (Schmitt, *et al*., 2016).Nowadays there is an increasing interest in local food products by consumers who perceive locally produced food as being fresher, healthier and of higher quality. These consumers also consider their choice as a way to contribute to the development of local economies and to the sustainability of the local community and its environment (Born & Purcell, 2006; Gracia, *et al*, 2016).
In Greece, the certifications of agricultural products, which represent local origins and have so far prevailed in the market, are PDO-Protected Designation of Origin, PGI-Protected Geographical Indication, while TSG-Guaranteed Traditional Identical Products can be found at an early stage of development (Stachtiaris,2011). Based on the most recent data provided by the European Commission (2015), Greece has registered more than 100 PDO and PGI products in a total of 1,350 all over Europe. Despite the fact that Greece is ranked 5th in the European Union, accounting for 8.4% of the total number of branded "registered" products, its share in the total value of the European market is less than 5%, mainly due to the low levels of food processing and standardization (Markou, 2016).Jackson, *et al.*(2013), believe that technological advancements in production and new trends in entrepreneurship could enhance Greek local products' competitiveness against the growing international competition.

*iii. Food sector and local products*

The increased utilization of local products by the restaurant industry could develop new market opportunities for farmers, especially in regions that rely heavily on tourism. In order for the agri-food sector to exploit this opportunity, at least two conditions should apply; the first one refers toproduct safety and quality guarantees provided by restaurant owners to their customers; the second concerns farmers and their ability to cooperate in order to meet consumer requirements in terms of reliability, price stability and product quality (Contini*et al*., 2017).The benefits of restaurant participation in local food systems include the support of local producers and local economy overall, the fact that customers enjoyproducts of higher quality and the development of personal relationships with local businesses in the supply chain. Inaddition, thereisareductioninproduction and transportation costs (Roy, 2016).
In a recent study, which examines the attitude of restaurant owners towards local food products, it turned out that most restaurant owners are in favor of using local products(Rowland, 2018). This trend seems to be positively related to the owners' level of education and age and the employment of full-time employees in the restaurant outlet. An important element that was revealed in another study is that customers are willing to pay an increased pricein order to enjoy local products in their meals(Gracia, *et.al,* 2016). In a comparative study between the cities of Christchurch (New Zealand) and Vancouver (Canada), restaurant owners and chefs were inclined to buy local food from wholesalers rather than directly from producers, due to the ease of access, timely delivery, and product quality. Delay in delivery and high costs were reportedas the most important barriers in choosing local products. Social and customer relationships on the other hand, were proved to be a significant incentive for restaurant managers, chefs and wholesalers towards the collaboration with local producers (Roy, 2016).
Greeks perceive dinning out as a basic element in their culture, as a means of social interaction and entertainment. At this point, it is worth notingthat Greece ranks third after Ireland and Cyprus, in householdspending on restaurants and hotels despite the ongoing financial crisis in the country. The relevant figure is found to be 18%, above the European average, which has been estimated at around 15% (Kolev, 2018).However, a recent study has revealed the fact that Crete, Thessaloniki, and Santorini are the only destinations in Greece, where it is easy for a visitor to find high quality restaurants that offer local dishes and traditional recipes. It has to be noted moreover, thatsuchrestaurant operationshave been developed as individual entrepreneurial endeavors, and merely in the frame of a planned local

or regional policy in the field of gastronomy tourism (Moira, *et.al.* 2015).

## METHODOLOGY AND DESIGN OF RESEARCH

This paper seeks to investigate the degree of penetration of local agri-products into Cretan restaurants, based on a study that was conducted in the city of Heraklion. Furthermore, it aims to identify the main reasons in favor of using local products, to point outpotentialbarriers and difficulties and to provide suggestions that would enhance the use of local products by the restaurant industry in Crete.

The main research questions have been formulated as follows:

• To what extent do Cretan restaurants use local agri-products and what are the main incentives for using these products?

• What are the main factors that inhibit the utilization of the local products?

•How do restaurant managers perceive customers' attitudestowards the use of local products in Cretan restaurant?

• Whatwould be the main suggestions to enhance the use of local agri-food products by the restaurant industry?

A qualitative methodology was chosen as the most appropriate, since the study seeks to examinein great depth views and attitudes of restaurants managers towards local products. Besides, thepowerofqualitativeresearchisitspotentialto explorea topic in a great depth (Cleary, &Hayter, 2014).

Personal in-depth interviews were chosen as the most appropriate methodology for this study, sinceinterviews offer researchers flexibility, while giving the respondents the opportunity to express their personal views and concerns (Isari&Pourkos, 2015).

The study population consists of all restaurants in the greater area of the city of Heraklion. In order for the researchers to identify the restaurant businesses that should be included in the population, the relevant data from the Chamber of Commerce of Heraklion were initially obtained andexamined. However, it was found that, due to tax reasons, many of these businesses have been officially registered under different sub-sectors (not directly related to the restaurant industry), creating confusion over their main activity. As a result, in order to define the study population more accurately, the website of TripAdvisor wasconsulted (www.tripadvisor.com.gr). Heraklion is a popular tourist destination and acts as an entry point for Crete, since more than 3.1 million international tourists arrive in the island through the city's international airport (Civil Aviation Authority, 2017). As a result almost all restaurant and catering businesses in the city are expected to be listed in the famous Trip Advisor website.

A thorough examination of the above-mentioned website reveals that there are 208 restaurants in the greater Heraklionare ,that include various categories, such as pubs, seafood restaurants, Mediterranean, Italian and International Cuisine. Due to this diversity within the population, stratified sampling methodology has been chosen as the most appropriate, based on the type of restaurants, in order for the sample to be as representative of the population as possible. According to Boddy (2016) and Sandelowski (1995), ten participants are considered to be sufficient for a qualitative sampleof a homogeneous population. However, since thecurrent survey is not characterized by population homogeneity, the sample was set to twenty restaurant operations. The reasoning behind this decision was to include a satisfactory number of operations of all restaurant type,s in a sample that would represent 10% of the population. Interviews were semi-structured, with approximate 20 minutes duration each. All interviews were recorded (participants' consent was obtained). Interviews took place over a 3-month period, during summer 2018.

The questionnaire consists of 15 open questions, accompanied by probe questions, to assist the interviewersthroughout the interview discussions.More specifically, the questionnaire is structured in four sections, each one corresponding to the research questions that were set during the study's research design. The first section includes demographic information of the participating businesses, namely,restaurant capacity, number of employees, years of operation, etc. The second part examines the degree of of Cretan agri-food products utilization. The third section seeks to identify the factors influencing participants'preferences towards the use of local agri-food products and the final sectioninvestigates the degree of satisfaction and the benefits from using local products.

There have been some limitations in the implementation of the survey. First of all, it has not been possible to determine the size of the population with precision, due to the above-mentioned restrictions. Moreover, the small sample size did not allow for statistical conclusions and generalizations; due to limited resources, in has not been possible to include more interviews, nor to extend the study in other areas around Crete, so as to end up to conclusions with respect to the island as a whole.

## STUDY RESULTS

*Demographics*

The study sample includes 2 Italian restaurants, 5 taverns, 5 restaurants with Greek-Mediterranean cuisine, 4 coffee &food operations and 4 seafood restaurants respectively (as presented in the following table). In terms of capacity, most of the sample restaurants can accommodate a small number of people ranging from 20 to 400.With respect to participants' demographics, the intervieweesinclude 11 restaurant owners, 7 chefs, of which two were also the owners, and 2 supplies managers. On average, 12 people are employed in the restaurants under examination. The majority of restaurants seem to operate from 2 up to 10 years, while in terms of experience most respondents have been employed from 20 up to 50 years.

Table 1: Sample Characteristics

| **Restaurant Category** | **Capacity** | **Employee** | **Years of running** | **Time of employment in food sector** |
|---|---|---|---|---|
| Coffee & food | 400 | 20 | 10 | 30 |
| Tavern | 50 | 4 | 20 | 20 |
| Seafood restaurant | 70 | 11 | 10 | 30 |
| Tavern | 150 | 12 | 7 | 7 |
| Italian restaurant | 80 | 10 | 2 | 15 |
| Tavern | 90 | 6 | 2 | 2 |
| Seafood restaurant | 70 | 10 | 20 | 30 |
| Coffee & food | 300 | 22 | 30 | 8 |
| Tavern | 20 | 7 | 18 | 8 |
| Tavern | 150 | 14 | 8 | 16 |
| Restaurant with Greek-Mediterranean cuisine | 100 | 8 | 37 | 50 |
| Restaurant with Greek-Mediterranean cuisine | 150 | 9 | 50 | 17 |
| Restaurant with Greek-Mediterranean cuisine | 80 | 10 | 9 | 9 |
| Seafood restaurant | 60 | 6 | 30 | 30 |
| Seafood restaurant | 120 | 20 | 60 | 40 |
| Coffee & food | 200 | 20 | 10 | 20 |
| Coffee & food | 70 | 15 | 8 | 8 |
| Italian restaurant | 47 | 7 | 4 | 11 |
| Restaurant with Greek-Mediterranean cuisine | 30 | 6 | 18 | 25 |
| Restaurant with Greek-Mediterranean cuisine | 80 | 19 | 5 | 20 |

The restaurant types that indicated the highest degree of local agri-products use in their meals were local taverns and seafood restaurants.

*a.* Use of local agri-food products

The degree of use of various local product categories varied in the sample from 0%, for processed products, up to 100% for honey and herbs. Most of the interviewees believe that there is no Cretan processed productsin the local market and thus indicated 0% use of this food category. Fresh fruit and vegetables on the other hand are usually supplied by wholesalers, at the local market. Despite the fact that a significant percentage of fruit and vegetables come from local wholesalers, a few of the interviewees expressed their doubts with respect to the products' origin. One of the participants mentioned:

*'We get our fruit and vegetable supplies from the local wholesalers' market; however, we can never be sure that potatoes that are supposed to beproduced in Lassithi Plateau, as indicated in their label, are indeed a produce of Lassithi or if they have been imported from Egypt. This is an issue out of our control...".*

Honey is the only productfor which participants indicated use of 100% local production. The same is true with respect to herbs, that were found to be used to a great extent by most participating restaurants.Olive oil is used in most restaurants for the preparation of cooked meals and salads (not for fried dishes), while dairy products is also a category with a high market penetration, since local products are used in all restaurant types, except from Italian.

On the other hand, when it comes to meat, fish and seafood products, there are interesting variations with regard to the extent these products are use by the participants. In particular, the owner of a Greek & Mediterranean tavern, that chooses not to use local meat & fish supplies at all, wondered:

*΄Local meat production is far from being adequate in terms of quantity. Since there is not enough production to cover the demand, we have no choice but to use imported meat products, especially beef.΄*

Finally, with respect to wine penetration in the restaurant business, there were also significant variations among the participants' opinions: coffee bars and Italian restaurants were found to offer a list of both Greek and imported labels, while on the other hand Cretan restaurants and taverns offered mainly local wine, both private label house wine and branded labels.

*b.* *Preference towards local agri-food products*

Most of the participants identified quality of Cretan agri-products as one of the main factors that influence their choice for using local products. Being able to contribute to the local economy, was also found to be an equally important factorto affect their preference. On top of that, they believed that building strong relationships with local producers can create direct positive effects, since local suppliers and their families become also restaurant customers. Ease of access to a huge variety of local fresh products,that are usually available in the local wholesalers' market, was found to be an important factor as well. Only five out of the twenty participants identified the use of local supplies as a factor that could enhance their competitive position in the restaurant industry.

As far as the barriers are concerned, participants asserted that local agri-food products are usually less affordable compared to imported products. Three people in the sample reported that local products are more expensive than imported ones, and one of them complained that:

*'The price for locally produced lemons is three times higher compared to imported lemons'*

He also pointed out that there are strong fluctuations in prices due to seasonality issues.

Finally, in terms of product quantity, the vast majority of participants (15 out of 20) believed that the local production, especially with respect to fruits and vegetables is more than adequate in most of the cases. Their main concerns were related to the fact that product quality is usually lower in high-demand periods. Regarding their relationships with suppliers, their main concerns are usually related to lowerproduct quality at peak times, reliability in product delivery or, more rarely, demand for a higher price, compared to the initially agreed one. Most restaurant operations indicated that they use one up to three suppliers per product category.

c. *Customer Preferences and Satisfaction*

All respondents seem to agree that customers appreciate it when restaurants use local agri-products in their menu. The interviews revealed that customers nowadays look for quality reassurance and perceive food safety and quality as an issue of utmost importance. Therefore, restaurant managers and owners try to find ways to communicate the fact that they use local agri-products in their food preparation. They argue that one way to achieve that is 'mouth-to-mouth' advertising, stating that happy customers easily convey their positive opinion. In addition, some of the participants indicated that they usually organize special evening eventsin collaboration with Cretan wineries, during which they promote local dishes and the Cretan diet. It is also quite common for restaurant chefs and employees to inform their customers on the spot about the origins of the supplies used to prepare their dishes.

Interviewees also pointed out that current economic crisis in Greece had a negative impact on the average spending of Greek population on entertainment. As a result Greeks nowadays choose more affordable restaurants. However, at the same time they are willing to spend more when it comes to more tasty, fresh and traditional dishes that have been prepared using local and/or organic products.Along these lines, a participant operating a coffee & food outlet, commented that:

*"Both Greeks and foreign visitors are nowadays considered to be more "informed"and show their preference towards restaurants that offer local products of high quality."*

*d.* *Suggestions to improve agri-food penetration in the local restaurant business*

Participants expressed a strong disappointment with respect to the ability of the Greek state and local authorities to take measures that would enhance local product penetration in the tertiary sector of the economy (e.g. in the restaurant and /or hospitality industry). They showed a great degree of criticism, revealing mistrust along with a strong lack of expectations for possible positive developments in the future.However, they provided several suggestions that include reduction ofValue Added Tax (VAT)andmeasures to improvefinancial liquidity in the

economy. In addition, several participants argued that the actions taken by the state authorities so far have caused a great damage in the restaurant business, especially through the application of increased VAT rates.
Participants also suggested thatpenetration oflocal products in the restaurant business could be enhanced through subsidies to local producers. Moreover, the owner of a Mediterranean restaurant commented on the importance of setting strict quality controls and certifications on local products, especially organic ones, as a means to improve their image and brand awareness. It has also been proposed that producers should be supported in their efforts to collaborate directly with restaurant outlets. For example a participant suggested that networks development would improve cooperation among local producers and farmers, and therefore their ability to sell their products, avoiding the use of intermediaries.
Several suggestions regarding producers' contribution have also been identified, including product price and quality consistency, as well as commitment towards the production of healthier food products. Furthermore, restaurant managers would welcome and appreciate the development of customer relationships with their suppliers, in order to enjoy supplies consistency in terms of quantity, as well as reduced prices. However, participants admitted that it is quite difficult for food producers and suppliers to cope with the high levels of demand for agri-products, mainly during the summer season, when the demand is higher, a fact that makes it difficult to maintain product quality and reliability in the delivery.

## CONCLUSIONS

Local agri-food products can be considered as one of the most significant pillars for local rural development, and could be used to a great extentat the restaurant and food industry, if the main requirements of safety andquality were met.The main findings of the studythat took place in the city of Heraklion are, in principle, quite encouraging; it has been revealed, that the average degree of use of local agri-products in the restaurant industry is more than satisfactory, since more than half of the agri-products used by local restaurants come from local suppliers. However, the degree of utilization varies among the various food categories, with honey, herbs, olive oil, fruit and vegetables and dairy products to be the categories that are used the most.
The main reasons for choosing locally produced supplies are related mainly to theirperceived high quality. In addition restaurant owners feel that, by choosing local products they contribute to the local economy and moreover build long-term relations with producers and suppliers that could secure lower prices and direct access to supplies, as per demand. Contribution to the creation of the company's competitive advantage has also been stated as an additional factor that enhances preference towards local products. The results of this research are in line with previous studies by Born & Purcell(2006) and Gracia, *et.al.*(2016), who considered the contribution to the local community as the main decisional factor for choosing local products.Another study stressed the importance of social relations with local producers (Roy, 2016). At the same time, the literature suggests that local products are preferred as being healthier and more fresh compared to those produced away from the point of consumption(Schmitt, *et al*., 2016).On the other hand, several barriers against the use of local products have been identified, including producers'inability to meet demand at all times, inconsistency with respect to product quality and high price fluctuations Previous studies also indicated delays in delivery and increased product prices as the most significant barriers against the use of local products by the restaurant and food industry (Roy, 2016).
As far as customers' preferences are concerned, the participants stressed out that customers acknowledge the quality of local agri-food products and do not hesitate to pay extra in order to enjoy dishes prepared using local supplies. Gracia, *et. al*.,(2016)reached to the same conclusion, indicating that customers are willing to pay more for locally produced food.
Finally, several suggestions have been proposed by the respondents,to enhance the use of Cretan products in the restaurant industry. These include the reduction of VAT for restaurants, subsidization of local agri-food producers, the encouragement of producers' networks and cooperative formations. In addition, the current study pinpointed the importance of consistency in product quality and safety, reliability in product procurement,stability in prices, as well as the introduction of product certifications.

## POLICY IMPLICATIONS

The results of primary research, when combined with conclusions from previous studies in other regions, can lead to important recommendations that would boost the use of local agricultural products in the tertiary sector of the economy and more specifically in the restaurant industry. In particular, it is suggested that mapping the supply value chains of local products would reveal weak areas andwould improve the value enjoyed by both the final consumer and the local food producer. In addition, the reduction of intermediaries in the agri-food chain couldlead to amore

flexible procurement scheme thatwould offer restaurants and consumers cheaper, safer and more fresh products, while at the same time would improve the producers' income.
On the other hand, state authorities could bring local products to market by developing regional strategies and policies, building on the characteristics and peculiarities of each region. Moreover, farmers' training should be a priority and for that reason agricultural vocational schools should be established. Training should include not only technical issues in relation to safe production processes, but should also provide farmers and local producers with entrepreneurial and marketing skills.In Italy for example, producers have contributed in the establishment ofvocational schools that provide training to farmers on how to combine food, art and culture (Garibaldi, 2016). Well-trained farmers can better manage their natural resources and claim their share from the sustainable development of the local economy.
Intensive controlsat all production stages of certified (PDOs, PGIs, TSGs) and organic productsshould be the state's responsibility and would improve the local products' brand image. Launching uniform quality labels at regional levels or even national levels,is considered to be of utmost importance, if it is for local products to gaingreater recognition in international markets. Another priority would be the development of clusters that would include public and private stakeholders, agri-food producers and businesses, which would give the opportunity to all team members to set common goal. Moreover, co-operative schemes between producers of similar products could help reduce the cost of agricultural supplies, increase bargaining power, mass promotion and certification of agri-food products produced by group members.
An important synergy of Cretan chefs with local authorities could include the financial support of events and activities that promote the gastronomic peculiarities of the local cuisine to highlight the inherent characteristics of agri-food raw materials. Restaurants, on the other hand could conduct market studies in order to identify customerpreferences and requirements with respect to locally produced food, in order to provide farmers and food producers with all necessary knowledge regarding the products that are expected to enjoy higher demand levels. Last but not least, local authorities should implement frequent inspections to make sure that all necessary requirements and procedures are followed by food companies that use local food labels.

## SUGGESTIONS FOR FUTURE RESEARCH

This study aims to fill a gap in the current literature regarding penetration of local products in the food industry in Crete, and moreover to outline the problems that restaurant owners and chefs may encounter in their attempt to use local products in their offerings. In the future, the results of the study could be generalized by extending the sample to other regions of Crete or the rest of Greece. It would be interesting to study and comparethe degree in which local products are used in tourist versus urban areas. A topic of particular research interest, especially in tourism-oriented countries is related to the degree of local products penetration in the food and beverage departments of hotel outlets(in Crete and Greece altogether). Moreover, in a future extension of this study, it would be useful to identify the reasons behind an anemic foodmanufacturing sector in Crete, as well as the actions and means that could contribute to the development of the local food sector.In addition, a study on the role of intermediaries in the local agro-food chain could be of interest. As far as exportable products such as oil or wine, are concerned, it would be useful to carry out a comparative survey on penetration degrees of these products on the local vs. the foreign food market. Finally, the results of this qualitative research could be combined with a quantitative survey that would examine customers' preferencestowards the use of local supplies in local restaurants.

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# Making ethical decisions when conducting research for marketing – The role of the marketing researchers

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**Abstract**
Ever wondered how important decision making in marketing research is, when it comes to affecting the entire decision making processes of the marketing function of a business? Marketing research, as one of the functions of marketing, has been found to be one of the most troubling with regards to causing and presenting ethical dilemmas (Lund, 2001). Debates and discussions about the ethicality of different marketing research practices, tactics, methods and methodologies have often attracted publicity (Philips, 2010). One of the first scholarly works investigating ethics in marketing research was published by Crawford in 1970, and later on Akaah and Riordan (1989) study in attitudes towards marketing research practices followed-up. However, since Akaah and Riordan study, attitudes have evolved (Ibrahim, Angelidis&Tomic, 2009), the business environment and ecosystems has changed and technology has progressed particularly in the way data is collected and analysed in marketing research. For years, marketing research practices have attracted the attention, as they have occasionally trigger negative publicity through published marketing research scandals (McKinney, 2010). The way a company conducts its marketing research or outsources research information can have serious ethical repercussions, impacting on the lives of consumers in ways that have yet to be fully understood. Further, companies can be faced with a public backlash if their marketing research practices are perceived as unethical. This in turn highlights the importance of ethics in marketing as a business function, and thus influences the strategic decision-making processes of different moral agents engaged or influenced by marketing research tactics, and ultimately in the entire business.

Disputes and even disapproval of various practices in marketing research has grown extensively (Aggarwal, Vaidyanatha& Castleberry, 2012), due to the fact that marketing researchers areentering other disciplines' territories to address marketing questions, i.e. neuroscience. Nowadays, one of the most serious ethical considerations involved in marketing research is invasion of privacy. For competition purposes, companies have an unprecedented ability to collect, store and match information relating to customers that can infringe on a person's right to privacy, entering thus the data protection grounds. In many instances, the customer does not know or understand the extent of the company's infiltration into his life, but still the company uses this information to reach the customer with targeted advertising. And ultimately this process of targeting can have an adverse effect on personal freedom (Masters, 2014).Considering this, the marketing research practitioners hold a vast amount of ethical responsibility towards the various moral agents they interact directly, and/or impact both directly and indirectly.

Considering all the above, understanding marketing researchers' ethical decision making premises becomes imperative. Therefore, the present study investigatesmarketing researchers' (un)willingness to practise marketing research techniques that trigger ethical issues in a social setting, with implications for norm generation in the agenda of marketing research practice.This study employs a qualitative research design and in-depth elite interviews (from marketing research agencies in the UK), and was initiated on descriptive behavioural ethics, in order to investigate marketing researchers' behavioural intentions on various ethically questionable research techniques. The study though has a normative purpose towards norm generation in the field. For these reasons, the 'Theory of Planned Behaviour' and the 'General Theory of Marketing Ethics' (i.e. H-V model) were applied for the initial theoretical considerations of this study. By utilising descriptive and normative ethical accounts, this study has found that ethical decision making in marketing research is grounded in a social contract ethics foundation of a multidimensional structural functionalistic premise. Within this ethical setting the marketing researcher is considering their respondents' decision making processes with regards to norm generation,governed by social consensus, social proof and conformity.

***Keywords****: ethical decision making, marketing research, normative ethics, descriptive ethics, TPB, H-V Model*

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# Marketing Strategy

# Gelotophobes, gelotophiles, katagelasticists and their media preferences: A new market's psychographic variable

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**Extended Abstract**

**Introduction**
Market segmentation is a vital stage in brand development and a complex process for marketers, with the most common segmentation approaches being demographics, behavioral characteristics and psychographics (Kotler & Keller, 2012). Effective segmentation enables marketers to successfully communicate with their target audience (Vyncke, 2002) and develop a positive attitude toward the brand and an increased purchase intention. The preponderance of segmentation research hasfocused on demographic characteristics such as gender (Stafford, 1996), age (Stephens, 1991), and ethnicity (e.g. Lalwani, Wang, & Janiszewski, 2018; Veresiu, Giesler, & Ger, 2018), while only a few studies looked into behavioral (e. g. Summers, Smith, &Reczek, 2016) and psychographic (e.g. values–Novak & MacEvoy, 1990; lifestyle–Vyncke, 2002; personality–Sandy, Gosling, & Durant, 2013) segmentation. The present study advances a new classification scheme in psychographic market segmentation, introducing the characteristics ofgelotophobia, gelotophilia, and katagelasticism. These laughter-related concepts,widely acceptedin humor and psychology research (Hofmann, Ruch, Proyer, Platt, & Gander, 2017), seem to have a significant role intheaudience's appreciation of disparaging humorous advertisements (Voutsa, Hatzithomas, & Boutsouki, 2018).

**Literature Review & Research Question**
A decade ago the concept of gelotophobia, which is "the fear of being laughed at", was introduced in psychology research (Ruch &Proyer, 2009; p. 183).People with high levels of gelotophobia are self-conscious and believe that others laugh at them because they did something ridiculous (Renner & Heydasch, 2010). Gelotophobes are constantly vigilant for circumstances where they may be laughed at or ridiculed by others (Titze, 2009;Titze&Kühn, 2014). Gelotophobes are introverted, unable to appreciate humor (Papousek et al. 2014) are characterized by a lack of spontaneity and creativity (Proyer, 2012;Chan, Chen, & Lavallee, 2013),as well as the absence of self-confidence and joyful mood (Ruch, Beermann,& Proyer, 2009). In some cases, gelotophobes have been characterized as withdrawn neurotics with low levels of openness, inhibited and insecure (Ruch, Harzer,&Proyer, 2013) with low life satisfaction (Hofmann et al., 2017), but at the same time self-controlled (Chiu, Hsu, Lin, Chen, & Liu, 2017) and conscientious (Ruch et al., 2013) with divergent thinking (Chiu et al., 2017).

At the other end of the spectrum, gelotophilia and katagelasticism correspond to the love of laughter (Ruch &Proyer, 2009). People with high levels of gelotophilia like being laughed at asthey appreciate jokes and ludicrous situations, regardless of who the victim orthe victimizer is. Gelotophiles are mostlymen (Ďurka& Ruch, 2015) often described as extroverted and complex-free (Proyer& Ruch, 2010), who love being laughed at (Ruch &Proyer, 2009; Renner &Heydasch, 2010) and are known for their sense of humor (Proyer, Wellenzohn, & Ruch, 2014). Gelotophiles are considered as cool, happy, warm people (Ďurka& Ruch, 2015), creative and communicative (Chan et al., 2013, Ruch et al., 2013) with high life satisfaction (Hofmann et al., 2017). They are also considered to be spontaneous, expressive, creative, silly and funny personalities (Proyer, 2012).

Along this line, people with high levels of katagelasticism are people who enjoy humor that is associated with the humiliation of others (Ruch & Proyer, 2009). They are classified into passive and active katagelasticists based on whether they only laugh at and narrate a person's misfortunes, or they actively participate in, and laugh with, somebody's humiliation (Renner&Heydasch, 2010). Katagelasticists are usually men of a younger age (Proyer& Ruch, 2010; Proyer, Platt, & Ruch, 2010; Proyer, Flisch, Tschupp, Platt, & Ruch, 2012; Renner & Heydasch, 2010)who greatly appreciate humor (Proyer et al., 2014).

Gelotophobes along with gelotophiles and katagelasticists represent a considerable proportion of the population. For instance, a study in Ukraine specified that 18.4%, 24.8%, and 32.8% of their sample corresponded to the three groups respectively (Nosenko & Opykhailo, 2014). As such, the three laughter-related traits, could provide a useful tool for marketers to successfully target their audience. For instance, it would be useful if marketers could have an insight on gelotophobes, gelotophiles, and katagelasticists' media and social media preferences as it would enable them to establish effective communication avenues with their audience. It is therefore the objective of the present study to address the following research proposition.

**RP:** Audience media and social media preferences are affected by the audience's level of gelotophobia, gelotophilia, and katagelasticism.

**Methodology**

Our sample consisted of 318 undergraduate students at the Economics Department of a large Greek University. Participants stated their demographics (gender, age), their level of gelotophobia, gelotophilia, and katagelasticism (Ruch & Proyer, 2009; 4-point Likert scale), and their media (Sandy, Gosling, & Durant, 2013; 5-point Likert scale) and social media (Vlachopoulou, Boutsouki, & Hatzithomas, 2012; 5-point Likert scale) preferences. Based on three dichotomous attention check questions (DeSimone, Harms, & DeSimone, 2015; yes / no), thirty respondents were disqualified from further analysis, resulting in 285 valid responses (47.3%women), from individuals aged between 18-35 ($M$ = 22.31, $SD$ = 2.78) years old.

**Results**

According to our findings, 25.3%, 55.4%, and 11.6% of young adults were gelotophobes, gelotophiles, and katagelasticists respectively (mean score of the four-point Likert scale exceeded the midpoint value of 2.5). Gelotophobia seems to have a statistically significant negative effect only on the hours spent listening to the radio ($\beta$ = -.129, $t$ = -2.192, $p$ = .029), while it has a statistically significant positive effect on soap operas ($\beta$ = .218, $t$ = 3.808, $p$< .001), morning shows ($\beta$ = .117, $t$ = 2.014, $p$ = .045), reality competitions ($\beta$ = .176, $t$ = 3.304, $p$ = .001), hours spent watching TV ($\beta$ = .208, $t$ = 3.690, $p$< .001), hours spent on the internet ($\beta$ = .204, $t$ = 3.612, $p$< .001), Instagram usage ($\beta$ = .155, $t$ = 2.930, $p$ = .004), Snapchat usage ($\beta$ = .141, $t$ = 2.442, $p$ = .015), and Facebook usage ($\beta$ = .233, $t$ = 4.022, $p$< .001).

Gelotophilia on the other hand has a statistically significant negative effect on Twitter usage ($\beta$ = -.139, $t$ = -2.295, $p$ = .022). On the contrary, gelotophilia has a statistically significant positive effect on sitcoms ($\beta$ = .116, $t$ = 1.987, $p$ = .048), adult animation ($\beta$ = .206, $t$ = 3.537, $p$< .001),hours spent on the internet ($\beta$ = .270, $t$ = 4.778, $p$ < .001), hours spent watching TV ($\beta$ = .239, $t$ = 4.287, $p$< .001), hours spent reading online magazines ($\beta$ = .119, $t$ = 2.015, $p$ = .045), and YouTube ($\beta$ = .162, $t$ = 2.843, $p$ = .005).

Katagelasticism has a statistically significant negative effect on hours spent listening to the radio ($\beta$ = -.131, $t$ = -2.240, $p$ = .026), action dramas ($\beta$ = -.130, $t$ = -2.195, $p$ = .029), and on cable ($\beta$ = -.136, $t$ = -1.990, $p$ = .048). In contrast, it has a statistically significant positive effect on morning shows ($\beta$ = .176, $t$ = 2.646, $p$ = .009), financial news ($\beta$ = .192, $t$ = 3.280, $p$ = .001), movies watched in theaters ($\beta$ = .220, $t$ = 3.837, $p$< .001), local news ($\beta$ = .122, $t$ = 2.060, $p$ = .04), WhatsApp use ($\beta$ = .161, $t$ = 2.736, $p$ = .007), Twitter use ($\beta$ = .180, $t$ = 3.014, $p$ = .003), and Snapchat usage ($\beta$ = .210, $t$ = 3.684, $p$< .001).

**Discussion**

Our findings reveal that media and social media preferences are to a significant extent affected by an individual's level of gelotophobia, gelotophilia, and katagelasticism, and that these characteristics can be a promising psychographic variable of market segmentation. This study revealed that gelotophobes, gelotophiles, and katagelasticists can be recognized and approached through their media and social media preferences. Specifically, consumers with high levels of gelotophobia seem to prefer programs (e.g. soap operas) and social media (e.g. Instagram), in which disparagement humor is not used. In contrast, consumers with high levels of gelotophilia seem to prefer more cheerful programs (e.g. sitcoms) and social media (YouTube) as well. Consumers with high levels of katagelasticism seem to prefer programs (e.g. action dramas) and social media (e.g. Twitter) that favor disparagement humor. Hence, our results highlight the need for further research in order to decipher the link between consumer behavior and these individual laughter-related personality traits.

**Limitations & Future Research**

As with any other study, this study has some limitations. Our sample consists of young people, aged between 18 and 35 years, who are considered a dynamic audience. Future research could extend this study in consumers of an older age. Moreover, these findings are culture specific, meaning that marketing researchers could replicate this study in countries with different cultural contexts.

*Keywords: gelotophobia, gelotophilia, katagelasticism, media preferences, psychographic segmentation*

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# Business accounting. How does it help to business operations and strategy in Greek and Cypriot wood enterprises

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**Abstract**

The main aim of the present research paper is to draw attention on the major accounting systems that the Greek and Cypriot wood enterprises are implementing, especially after the crisis period. The framework of this approach is based on the investigation of these elements that indentify the basic operational parameters of enterprises, lead to useful information and help firms to confront with obstacles in order to shape a competitive and proactive strategy, by using appropriate accounting systems and pricing of products. The data were collected with the use of a specially constructed questionnaire from Greek and Cypriot wood enterprises and all the relative analysis of the results was made. Results show that a very small number of industries make use of automatic accounting systems, while the overwhelming majority of them remain stick to the classic and maybe long gone by accounting systems. Additionally, their applications and accounting software, are not statistically related to the size or the exporting strategy of the enterprises. Relation exists with the systematic monitoring of the costing centers e.g. the supplies, storage, delivery and sales. We argue that this is the first time that a research of this kind takes place in Greece and Cyprus and could stand as a fundamental tool for the wood sectors in both countries for shaping a competitive and extrovert strategy.

***Keywords:*** *accounting, accounting systems, wood enterprises, business strategy, competitiveness, production cost*

# Do culture dissimilar really decrease M & A performances?

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**Abstract**

The purpose of this study is practical examining the culture dissimilarity and poster performances of acquirers in China merger and acquisition. We create national culture dissimilar index (NCDI), industry & organization dissimilar index (IODI), and corporate governance dissimilar index (CGDI), and using hierarchical regression analysis to examine our model. Data on 92 merger and acquisition firms during 1985 to 2005 indicate that the culture between acquirers and targets have significant difference. Moreover, results show that the more national culture dissimilarity, the worse for acquirers' growth ratio of ROA and ROE. The difference of board structure will reduce the growth ratio of ROA and the difference between organization atmosphere of busy board and non busy board will increase growth ratio of ROE.

Besides, national culture dissimilarity can explain approach 1.5 times phenomenon of acquirer s' reduction in ROA and 4 times in ROE than organization culture dissimilarity. But no culture factors can explain the negative change of stock premium. We also examine the interactive relationship. Results show that there are significant interactive relationships between national culture dissimilar, organization culture dissimilar, and poster performance in China.

***Keywords:*** *Merger and Acquisition, national culture, organization culture, culture dissimilar indexes.*

# Retail Marketing

# The Millennium Generation x Merchandising

**Sheila Alves dos Santos – Janeiro**

**Abstract**

Social media outreach strategies stir up customer curiosity. However, the purchase decision still happens at the point of sale. In addition,the interaction of the consumer with the brand inside the store or supermarket is very important, not just online. But according to research of Millennial Marketing The Millennium Generation (Generation was born between 1980 and 2000) is 2.5x more likely to be an early adopter of technology than other generation and 46% of millennials post original photos or video online that they themselves have created.

So What the retail can do to get The Millennium Generation? The companies has been updated with the new consumer, invested in “intagramers” and bloggers is to be in tune with the current marketBut the creativity is in bringing to the store the online experience and the interactivity. For example:Nike and Jordan brings out the best outcome of indoors and outdoors by providing the desirable products with the real ground to try-on the shoes. You can found this new experience in the Nike Store.

The challenge to follow the millennium generation is to put forward the smart merchandising, authenticity and uniqueness. So bringing a new model of merchandising is bringing a probably loyal customer.

**Keywords:** Millennium Generation/ New Generation/ Retail/ Merchandising/ Visual Merchandising/ Trade Marketing

# Antecedents of Shopper's Technology Adoption in a Digital Retail Context

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**Abstract**

With the advancement of technologies and the introduction of artificial intelligence, automation and advanced algorithms have pushed the retail industry to provide the customers with new in-store experiences. According to Gartner's report on retail IT forecast, retailers are spending 196.6 billion dollars on technologies and predicted to increase to 225.4 billion dollars by 2022 (Gartner, 2018)to provide unique customer experience and to increase profits (Verhoef et al., 2009). With options like Scan and Go, mobilePOS, iBeacons, retail automation it has become increasingly important for the managers to understand what motivates the customers to use such technologies for retail shopping. Although, there is anever-increasing pressure to digitally engage customers and provide simultaneously a personalised shopping experience(Pantano et al., 2017; Dacko, 2017),yetsuch autonomous retail technologies are not implemented at a larger scale. One of the reasons for a slow adoption by the retailers can be attributed to the limited research from retailer's perspective (Tsai, et al., 2010; Pantano and Vannucci, 2019) that can help them make an informed decisionwhen they are faced with a number of technologies that can confuse the retailers especially the technological fit and the customer response. Also, existing research aims to understand the antecedents of such retail technology adoption by narrowly focusing on shoppers perceptions, retail management strategies and the role of technology in influencing shopper's experience (Pantano andVannucci, 2019) perspective but lack a comprehensive framework that identifies both technological perceptions and consumer psychological usage factors that lead to adoption of these retail technologies. Therefore, this paper aims to develop and evaluate a framework for retail technologies adoption that will help the retailers make informed decisions and develop efficient marketing strategies.
Technological innovation has changed the servicescape of retail shopping. With the Internet and smartphone proliferation to advancements in technology new means of shopping has emerged lately. Considering the past retail technologies from barcode scanning, kiosks, Walmart Smart Network has moved to Mobile apps, self-scanning, Que Vision, smart selves, Scan and Go and Amazon Gothat has changed the way consumers shop. It is paramount to understand the shopper facing retail technology adoption behaviour whereas retailers are more focused on profit implications as technologies increase profits and decrease cost (Inman and Nikolova, 2017).However, there is a gap in the literature that can benefit both the practitioners and scholars in having a holistic understanding of retail technology adoption from the shopper's reaction and technology perceptions views.
A study by See-To and Ngai (2019) provides an understanding of how different payment technologies directly impact the consumer purchase behaviour in a retail context and found out significant effect on the spending behaviour.Consumer psychological perspective has been studied extensively to understand technology adoption in a retailing context (Plouffe et al. 2001: See-To and Ho, 2016). Inman and Nikolova (2017) studied shopper facing retail technology and its impact on retail by understanding the shopper's perception and how it impacts retailer's performance in terms of revenue and increase in the number of shoppers. Based on the equity theory of perspective of retail technology adoption Inman and Nikolova (2017) developed a framework with shopper's perceptionsof fairness, value, satisfaction, trust, commitment, loyalty and privacy affects shopper's reaction that facilitates behavioural intentions when introduced to new technology.
Technology adoption has been a hot topic among scholars and has produced many pieces of research on IS issues. In recent years, technology adoption has caught attention from the retail context and IS theories have been adopted to understand retailing technologies in terms of consumer acceptance (Agag and El-Masry, 2016a; Gupta and Arora, 2017;Jahanmir andCavadas, 2018). There are many IS theories and modelssuch as TAM, TRA,TPB, Innovation of diffusion (see review: Hamed, 2018) to understand consumer behaviour towards technology adoption. Perceived ease of use and perceived usefulness are the strong determinants of technology adoption theories and have been adopted significantly to study various technologies (Perry, 2016). New technology always affects the consumer shopping experience (Verhoef et al., 2009) and the enjoyment of the shopping experience will increase purchase

behaviour (Kim and Kim, 2008). Therefore, apart from ease of use and usefulness, another variable that is strongly associated with technologies is perceived enjoyment. Many retailers are providing their customers with in-store devices forself-scanningand scan and go for example supermarkets Tesco, Sainsbury and Walmart. This allows the customer to shorten their waiting time in the queues that require scanning the item at the cashier's desk and for the retailers an opportunity for labour savings. Time-saving has been linked to greater customer satisfaction (Inman and Nikolova, 2017). Hence, it’s important to understand retail technology adoption from perceived time reduction perspective.
To answer the research question of the study that is what are the retail’s technological and consumer psychological factors that lead to usage intentions of the retailing technologies, following research model has been developed (figure 1).

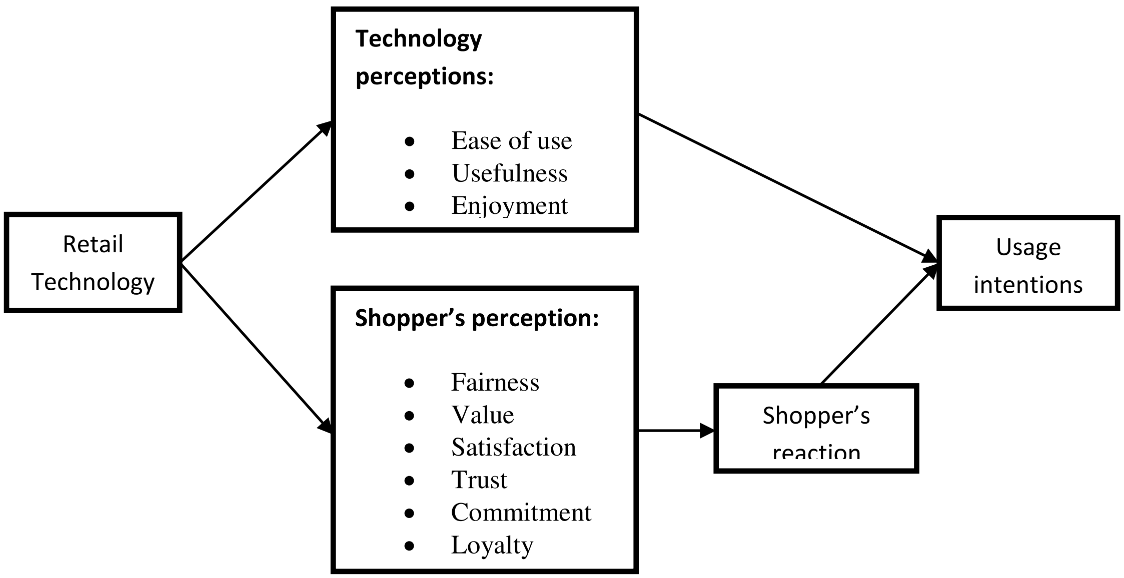


**Figure1:**Retail technology adoption model

This model will be tested using a quantitative method similar to the approach adopted by Aloysius et al. (2016), Kleijnen et al. (2007) and Inman and Nikolova (2017). Amazon’s Mechanical Turk will be used as a platform to recruit 500 participants and their participation will be rewarded with a small payment. Participants will be asked to imagine one of the 4 retail technologies (scan and go, self-checkouts, smart shelves and Amazon Just walk out) and answer the survey questions. Results will be analysed to see what technological and psychological factors have a significant impact on the usage intentions and among the 4retail technologies, with varying autonomous capabilities, which ones are most significantly affected. The data will be analysed using AMOS application and structural equation modelling will be the main quantitative method to test the consistency and reliability of the research model. One-way ANOVA will reveal if there is any difference among the technologies with respect to each variable and a post-hoc pairwise comparison using Bonferroni adjustment will test pairwise technologies for the differences among the 4 technologies. It is expected that the findings will reveal that retailer’s evaluation method of new retail technology should go beyond the revenue/cost method and what the technology can deliver but to assess shopper's perceptions and technology perception simultaneously that mediate shopper's usage intentions. It will further reveal that shopper’s overall perception is influenced by the introduction of new retail technology and the automation capacity. Such an understanding has a practical implication for the retailers who can make informed decisions based on the shifting patterns of shopper's perceptions towards retail technology. This will also help the retailer to reduce the unnecessary deployment of a wrong retail technology that has a direct impact on the revenues/costs and considers the right shopper's perceptions for each technology for influencing behaviour. Marketing strategies can be better designed with an understanding of comprehensive consumer perception and targeted at the right customer.This study alsocontributes to the literature in the domain of digital psychology, marketing and retailing by combing two theories from information systems and consumer psychology that helps in understanding shopper’s behaviour in a comprehensive manner. This study can be further researched by adding product involvement as a mediating variable to find changes in the behavioural intentions with retail technologies.

*Keywords: retail technology, technology adoption, consumer psychological perspective*

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# Offers just for you: intelligent recommendation of personalised offers employing multidimensional statistical models

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**Abstract**

In this paper, preliminary results are presented on the development of an intelligent recommendation system, which enables personalised promotion campaigns through mobile channels. The current work is focused on the field of supermarket special offer promotions and is part of an ongoing research project on artificial intelligence technologies.

One of the most widely applied marketing tool in retail, and in particular in the domain of supermarkets, are special offers, either as time-limited discounts at particular products, promotional combo offers or gift vouchers. In combination with special offers and discounts, the enterprises most often run loyalty programs, aiming at up-selling, customer loyalty and attraction. It is however common knowledge that the real value of loyalty programs for the enterprises is to reach their customers more effectively and extract knowledge from their data (Byrom, 2001). In addition to traditional advertising, supermarkets can nowadays communicate special offers with customers through a variety of channels, such as mobile apps, SMS, personalized web and push notifications, which allow for better targeting and feedback collection. Companies specialized in mobile marketing report achievements using data-driven methods such as 800% increase in push notification engagement due to personalization based on device, location, timing and content (Fleit, 2016). From the customer's side, according to our previous research on their stance regarding special offers and loyalty programs (Stalidis, 2018), 74% of the respondents felt that the smart designing of offers achieved by data-driven marketing is beneficial to them, 68% would like that the companies know their needs in order to address them better and a similar percentage accepts the monitoring of their behavior as long as it follows strict regulations.

Modern business informatics platforms offer powerful tools for managing and monitoring campaigns, analytics/reporting as well as intelligent customer behavior analysis. Market basket analysis is probably the most traditional technique which provides knowledge about purchasing habits (Agrawal, 1993). The discovered rules about which products are often bought together is useful not only for topological design and optimisation of packaging strategies but can also guide the designing of offers with improved impact. Nevertheless, this relatively simple technique can easily fail to predict the customers' needs if there is no relationship or understanding of who the customers are and what they really wish. More advanced machine learning techniques aim at more accurate models that learn from individual customers' data and try to match customers with products based on similarities among people and items (Christodoulou et al, 2017). Furthermore, contextualisation techniques have been reported, where recommendations are adjusted to circumstances/occasions such as holidays, birthday or marriage, aiming at optimising for event marketing (Zheng, 2016).

Employing the latest evolutions in machine learning and recommendation systems, the "Flexible Recommendation Systems for Big Data" – FRES project is aimed at developing an intelligent recommendation engine to produce personalised notifications about special offers and to select content, tailored to the profile of individual customers. The starting point of the FRES project is an existing multi-channel digital campaign platform, which facilitates interactive communication with consumers through mobile apps. These apps support not only the basic functionality related to the loyalty program i.e. collecting and managing points, sending/redeeming coupons, etc., but also personalised information provision, push notifications and games. The aim of the intelligent component under development is to learn from accumulated Big Data and from feedback collected dynamically via the mobile app and act as an intelligent engine that assists individual customers to choose the most interesting offers. At the same time, it enables the marketing platform to optimize the postage of push notifications with respect to (a) best time to

post notification, (b) next best offer considering relevance, customer profile, past actions and context, (c) acceptance and (d) the priorities of the promotion campaigns.

The current paper is focused on the first stage of the FRES project, that is to investigate the algorithms and architectures that constitute the most promising solutions for the specific problems at hand. As input data for development purposes, the “Instacart Online Grocery Shopping Dataset 2017” has been used. This dataset includes sequences of 4 up to 100 online orders corresponding to 200.000 individual anonymised customers. The problem considered within the limits of this paper was to search for patterns in the customers’ purchase history so that customer profiles are associated with classes of products and with parameters such as day of week and days since last order. Additionally, we evaluated a prediction algorithm based on multidimensional statistical modelling, that predicts the next purchases of individual customers, given their previous buys. The goal was to evaluate methodologies which, unlike Market Basket Analysis, capture personalised behaviour and can be exploited as part of a “next offer” recommendation mechanism.

As a first step, Multiple Correspondence Analysis (Benzecri,1992) was applied on a sample of market baskets, using as variables the customer id, the Day of Week (DoW) and the number of products from each product Department that the basket includes. The factorial plane 1X2 showed 3 prevailing profiles (a) orders given on Sundays, containing products from dry goods & pasta, canned, meet & seafood and frozen, (b) orders given on Mondays, Tuesdays and Wednesdays, containing beverages and snacks and (c) orders given on Thurdays, containing alcohol and international goods. Around 10% of the customers were projected on the same factorial plane and were thus strongly associated with one of these profiles.

At the second step, a feature vector was constructed for each customer, including the number of orders he has given and their frequency, the departments from which he has bought in his history and the corresponding frequency, day of week and hour of day of each order. A combination of Multiple Correspondence Analysis and multidimensional clustering was then performed, identifying certain interesting profiles, e.g. a group sized around 4% who constantly buys from the breakfast and the babies department and a large group (42%) that never buys canned food and pantry. The association table resulted from this analysis was evaluated as a prediction model, applying the learning on the sequences of each customer’s orders (except the latest one) and using as target the specific customer’s latest order. The method resulted in 44% Top5 accuracy, which was practically equivalent with a parallel effort using a prediction algorithm based on neural networks (not yet published). Although the accuracy is not impressive, the fact that 2 or 3 from the algorithm’s top 5 predictions are indeed included in the customer’s next order, is considered encouraging for further refining the method. An important limitation of the current process is that it has not yet been implemented in a Big Data environment and therefore not tested with a large number of items.

As a conclusion from this study, it was found that statistical methods from the family of multidimensional data analysis can be a useful tool for profiling customers in the supermarket sector, associating them with purchase patterns and predicting their next orders. It is noted however, that an important part of the methods is based on graphical interpretation, which calls for human participation. Therefore, within the context of the FRES project, multidimensional data analysis is seen as a component suitable for extracting knowledge, which can then be used in conjunction with a fully automatic machine learning algorithm towards a more robust hybrid recommender system.

*Keywords: recommender systems, multidimensional data analysis, personalised offers, intelligent messaging platform*

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# Supply Chain Management

# The effectiveness of the implementation of Supply Chain Management, Logistics & Marketing Functions. «A quantitative research - The Greek Paradigm »

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**Abstract**

In today's era of high competition and globalisation, it is an indisputable fact that customers are more demanding not only in the quality of products but also on the services provided. Consequently, the pressure on companies to discover new ways to create and provide quality to their customers has increased much more. More specifically, customer service has become a key tool for diversification, as culture and customer demands are constantly increasing. Greece stands on a strategic crossroad for the development of transportation in the greater region of Europe, Asia and Africa.Its geographical position renders it highly attractive for investments in logistics and transport to take advantage of these increasing trade flows and marketing functionsin an efficient and cost-effective manner. In this paper, we carried out a quantitative research in Greece using a questionnaire to analyse the importance and effectiveness of the application of supply chain management, logistics and marketing functions in businesses with regard to customer service, which serve as a critical source of sustainable competitive advantage. By applying this method, a business will have its customers satisfied, thereby giving them the motivation to remain loyal and faithful to their purchasing practices within the company.
***JEL: SMLM***

***Keywords***: Supply chain management, logistics companies, customer service, questionnaire

# Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer

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## INTRODUCTION

"Operations" is a function or a system that transforms inputs (e.g., materials and labour) into outputs of greater value (e.g., products or services); in other words, the operations function is responsible to match demand and supply (Ivanov et al., 2018). In direct connection to that, the American Marketing Association points out: „Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (ama.org., 11th May 2019)." That means, efficient operations and a flawless Supply Chain (SC) are the crucial enablers to fulfil the fundamental objectives of Marketing, because Marketing means fulfilling customer demands in a profitable way (see Kotler et al., 2015, p. 9). Hence, operational transformation processes are conducted in order to add value from the suppliers to the final customer in an efficient manner (Bozarth/Handfield, 2013). The illustration below provides and overview and shows a few examples related to value adding transformation processes:

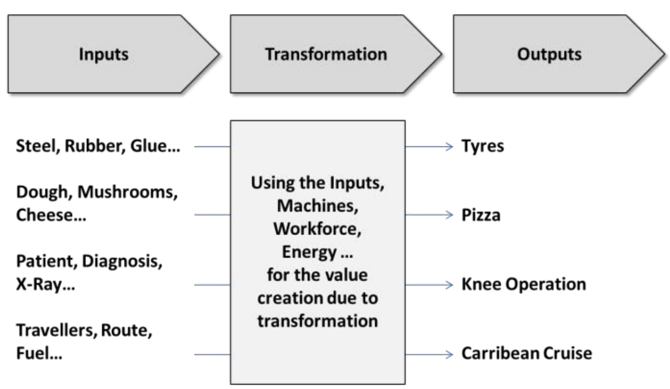



**Figure1: Input – Output Model of Operations Management (author's illustration)**

Supply Chain Management (SCM) focuses on the requirements and on the design of supply chains respectively global value adding networks (Chopra/Meindl, 2010 / 2014). Jacobs/Chase (2014, p. 13) contribute: "The central idea of supply chain management is to apply a total system approach to managing the flow of information, materials, and services from raw material suppliers through factories and warehouses to the customer. Trends such as outsourcing and mass customization are forcing companies to find flexible ways to meet customer demand. The focus is on optimizing core activities to maximize the speed of response to changes in customer expectations." The following illustration shows a symbolic supply chain.

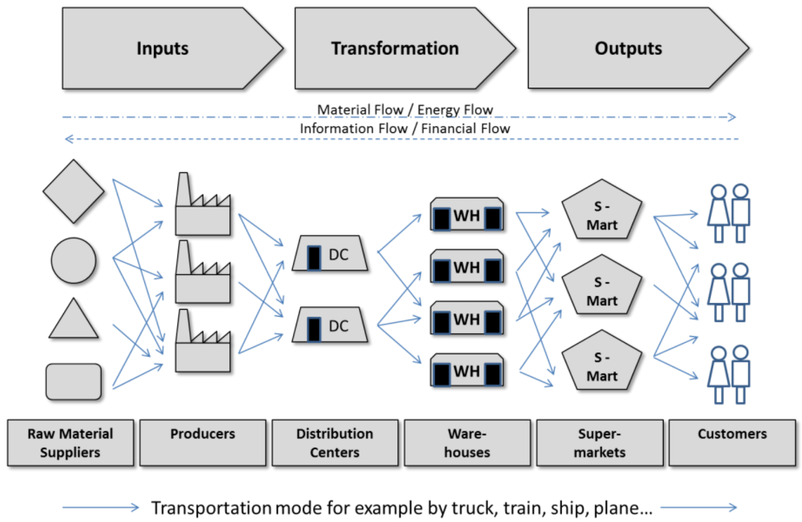



**Figure2: Principleof a Supply Chain (author'sillustrationbased on Ivanov et al., 2018)**

As Ivanov et al. (2018, p. 7) point out: "A supply chain (SC) is a network of organizations and processes wherein a number of various enterprises (suppliers, manufacturers, distributors and retailers) collaborate (cooperate and coordinate) along the entire value chain to acquire raw materials, to convert these raw materials into specified final products, and to deliver these final products to customers."

## GAP IN KNOWLEDGE

It becomes obvious, that the core definition of operations management is an integral part of the management of supply chains and all transformations involved in order to meet the objectives of Marketing, as elaborated above. Christopher (2005, p. 5) mentioned: "Whilst the phrase "supply chain management" is now widely used, it could be argued that it should really be termed "demand chain management" to reflect the fact that the chain should be driven by the market, not by the suppliers. Equally, the word "chain" should be replaced by "network" since there will normally be multiple suppliers and, indeed, suppliers to suppliers as well as multiple customers to customers' customer to be included in the total system." It could be suggested to apply another - maybe more appropriate – term: "demand network management" instead of "supply chain management". The resulting question is, how to make the pathway from company to customer more efficient, how to manage the satisfaction of demand and which digital solutions will help to secure excellent processes and thus generate competitive advantage inside the network of collaborating partners and companies. Let's look at this knowledge gap in more detail. According to Association of Supply Chain Management (APICS), Supply Chain and Operations Management is dealing with all relevant processes and activities related to ***Plan, Source, Make, Deliver and Return*** parts or products along the entire value adding network in order to meet the customers' demand. The process starts with the sourcing of raw materials, covers the respective transformation and transport steps until the product reaches the final customer (see Supply Chain Operations Reference SCOR-Modell, APICS[1] SCC Supply Chain Council, 2016). The illustration below shows the principle of the SCOR-Model:

[1] „APICS is the premier professional association for supply chain and operations management and the leading provider of research, education and certification programs that elevate supply chain excellence, innovation and resilience (http://www.apics.org/about/overview)."

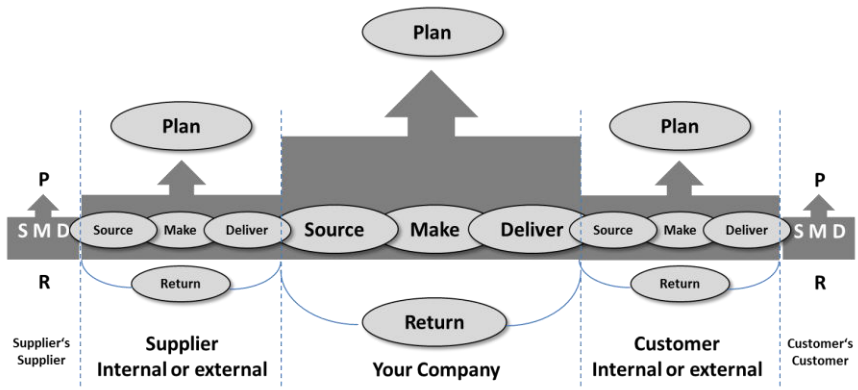



**Figure3: Simplified SCOR Model (author's illustration based on APICS SCC)**

Christopher (2005, p. 18) adds, that leading-edge companies "…have realized that the real competition is not company against company but rather supply chain against supply chain." That's why efficiency in SCM is a real differentiator. The combination of the classical Lean Thinking philosophy with the technologies of the fourth industrial transformation (Industry 4.0) is expected to contribute to significant efficiency improvements of more than 25% (Tsipoulanidis, 2017a /ICCMI; Tsipoulanidis, 2017b / IPM) and it also helps to build resilient strategies to mitigate SC risks, such as strikes, national catastrophes, political instability or terrorist attacks that significantly influence supply chains (Simchi-Levi/Schmidt/Wei, 2014; Ivanov, 2018). Fast changing customer needs and expectationsresults in a challenge for the enterprise to manage that continuous change, adaptation and thus confirms the need to redesign the supply chains and operations steadily. A useful framework to assess challenges in the business environment is the "CORRIDOR-Model" and to use that for the development of a digital strategy in SCM (Kiehne/Tsipoulanidis, 2016; Tsipoulanidis, 2018; Ivanov et al., 2018)in order to strive for operational excellence (Martin, 2008; Hossenfelder, 2010; Miller, 2014) at digital times.

To summarize, supply chains and operations need to be able to cope with all these global challenges, need to be efficient on the one hand side and at the same time the supply chains need to be adaptable and agile. This is how and why the digital transformation will be an enabler to reduce unnecessary wastes and activities. The digital transformation will for example provide data and information that was not available beforehand. Thus, the digital transformation will have a huge impact on supply chains and operations management in order to generate a sustainable competitive advantage (Tsipoulanidis, 2015). This is further substantiating the identified gap in knowledge: how does the classical SCOR Model shown in Figure 3 has to be interpreted at times of the digital transformation?

That means the following research questions can be formulated to close the gap in knowledge:

1. *How will digital and smart solutions support the classical Supply Chain processes on the side of plan, source, make, deliver and return?*
2. *Why and how will efficient Supply Chain and Operations Management create foundation to meet the objectives of Marketing?*
3. *What are the implications regarding the resulting management skills and capabilities for SCM leadershipat digital times?*

In essence, the purpose of this paper is to discuss and to describe "Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer". To answer these questions, the relevant literature has been reviewed and multiple expert interviews have been conducted at the relevant academic and practitioner conferences. Also site visits served as basis for participant observation. Furthermore, academic research with practitioners in form of the supervision of Bachelor's and Master's theses was undertaken in order to answer the research questions and thus to close the identified gap in knowledge.

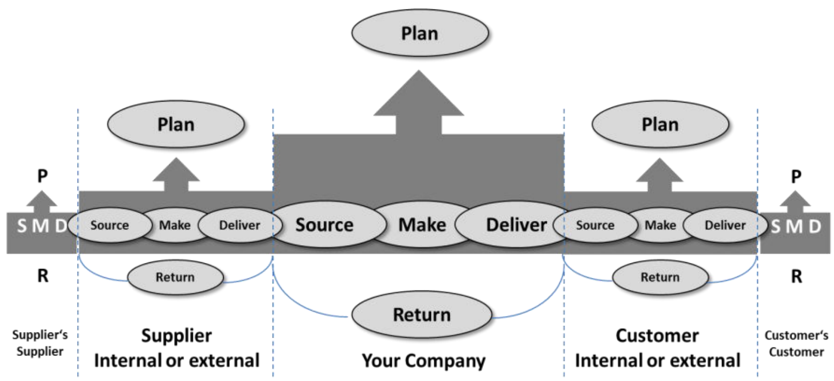
**DIGITAL AND LEAN SUPPLY CHAINS AND OPERATIONS**

Let us have a look at the first research question: *"How will digital and smart solutions support the classical Supply Chain processes on the side of plan, source, make, deliver and return?"*Smart products are in principle determined by their physical shape, i. e. by its parts and components. A smart product is equipped with sensors, actuators… and in order to exchange data with the environment and therefore the third criterion - connectivity - is needed(Porter/Heppelmann, 2014 / 2015 / 2018).How do smart products influence supply chains to become smart value adding networks? Just think about smart products such as a car, an elevator, a train or an aircraft… and their connection to the supply chain. During their lifetime, these smart products generate data. Actually, it is a lot of data that is generated leading to the so-called "Big Data" (Nguyen et al., 2017; Niesen et al., 2016; Papadopoulos et al., 2017).

And this is the difference – the smart products generate also data regarding the user behaviour, the usage conditions and using profiles and this helps to understand, why products might fail due to certain usage conditions. This new understanding supports the improvement of existing products, it serves for improved maintenance and it also helps to predict failures prior to their potential occurrence. It also significantly helps to improve the product development of the next generation of products. As stated, the data generated by the smart product in use also helps regarding the monitoring of the product during its usage (for example during the operation of a train the condition of its operating devices are monitored and spare parts could be ordered and the maintenance work can be scheduled early before something fails). This is important for the preventive maintenance of the products (i. e. planned and un-planned repairs, pro-active recognition of wearing of components, defects of parts). In this way, "Lean wastes" such as unplanned down-times are avoided or reduced.

Due to monitoring, the right amount of spare-parts can be kept, needed resources for the replacement can be scheduled and the availability of the product is increased. This leads to the reduction of unnecessary inventory, resulting in less transportation, avoidance of over-production etc… In essence, such smart products support efficiency gains from a "Lean" perspective(Womack/Jones, 1998 / 2007), also considered as Lean Thinking combined with Industry 4.0 (Leandustry 4.0, see Tsipoulanidis, 2017).Baur and Wee (2015) characterized Industry 4.0 in the following way: "We define Industry 4.0 as the next phase in the digitization of the manufacturing sector, driven by four disruptions: the astonishing rise in data volumes, computational power, and connectivity, especially new low-power wide-area networks; the emergence of analytics and business-intelligence capabilities; new forms of human-machine interaction such as touch interfaces and augmented-reality systems; and improvements in transferring digital instructions to the physical world, such as advanced robotics and 3D printing."

Thanks to the amount of data generated during the product lifetime, indications about good or poor supplier quality respectively defective batches might also be possible. That means also, that the efficiency of sourcing processes as well as the process of supplier evaluation and supplier development and thus the supply chain is significantly affected, e. g. by the usage of Robotic Process Automation (RPA, see Alicke et al., 2019). And this confirms, that a digital and efficient Supply Chain represents the foundation to create value for the customer and thus to fulfil customer demands in a profitable way (compare ama.org; Kotler et al., 2015, p. 9), which is answering the first research question. Looking at the second research question, one will ask, what is the connection of smart products as intelligent part of the supply chain and relate it to the core processes of the SCOR Model (Plan, Source, Make Deliver, Return). Where can we see significant process improvements? Here are first aspects, that will be further elaborated in the next sections:

| **SCOR Process** | **Application Case** | **Examples of supporting technology** |
|---|---|---|
| *<u>Below:</u>* *The classical SCOR Processes are considered* | <br>Above: Simplified SCOR Model (author's illustration based on APICS SCC) | *<u>Below:</u>* *Examples of Digital & Lean SCOR technologies are shown: Digital Solutions in SCM for Excellent Value Creation Processes from Company to Customer* |
| **Plan** | The value adding processes are planned and the supply chain is prepared. The extended Supply Chain definition also considers product development to be part of SCM (e. g. Fandel et al., 2009; Ivanov et al., 2018).<br>Once the SC is activated, the data at the Point of Sale (PoS) is used for SC planning or when the created products are used (e. g. a turbine), the generated data help to plan better parts / components for the next generation of smart products. It also helps to reduce uncertainty. It also helps to plan production processes and material flows / logistics using (VR or AR).<br>Fundamental data source: Sales Data | PoS Data, Big Data Analytics (BDA), Artificial Intelligence (AI) Digital Twins, 3D CAD simulation, Augmented Reality (AR), Virtual Reality (VR)… |
| **Source** | The data helps to assess the quality, reliability and durability of sourced parts and components, i. e. is related to the assessment of supplier quality. Suppliers can be better selected / developed / substituted. That means that the data from the smart products support the improvement of the source process. Suppliers can also use the generated data to increase durability of their components. This reduces failure risk and increases reliability and availability of the products.<br>Fundamental data source: Supply Data | RPA, Supplier Collaboration Portals, Supply Visibility and Control Towers, eProcurement, Procurement 4.0, eCatalogues… |
| **Make** | During the make processes, i. e. the production embedded identifiers (e. g RFID) in the smart product give instructions regarding the production process. Individualized products can be created and production processes can be improved, as the smart product also sends instructions to needed logistical devices or to the production robots. The embedded systems help to avoid defective parts, because the support the classical principle of "Poka-Yoke".<br>Fundamental data source: Manufacturing Data | Sensors, Robots, Drones, Additive Layer Manufacturing / 3D Printing… |
| **Deliver** | Furthermore, the delivery process becomes more transparent and thus we avoid over-processing or bad processing. Increased transparency and visibility reduces the supply chain risk and reduces the effects known under the abbreviation VUCA (vulnerability, uncertainty, complexity and ambiguity).<br>Fundamental data source: Logistical Data | Drones, Autonomous Driving Fleets, Automated Guided Vehicles, Tracking & Tracing, SCM Transaction Data |
| **Return** | If a product is returned, the diagnosis of the failure or problem can faster be made, and as elaborated, repairs can faster be completed. In the case of | Big Data Analytics (BDA), Artificial |

| | | |
|---|---|---|
| | returns of ordered products e. g. in e-commerce, the reasons for claims or rejections will need to serve as a basis for the improvement of product descriptions… Fundamental data source: Claims or Rejection Data | Intelligence (AI), Digital Twin |

**Figure 4: SCOR Model processes and a selectionofsuitable digital technology(author's illustration based on APICS SCC)**

Many of the aspects summarized in the table above are related to the availability of data generated, stored and analysed during the various value adding processes. For a detailed presentation of digital technology and solutions in SCM see Ivanov et al., 2018, chapter 16. It is important to emphasize, that it is however unlikely, that the presented approaches and technologies will only be applicable for just one of the major processes according to the SCOR-Model. The aspect of big data analytics might be used for planning, sourcing, making, delivering or returning processes. Additive manufacturing (AM) might for example be used for the source or for the make processes, but also for rarely needed spare parts. Robots could be used in manufacturing, logistical or retail processes etc. In essence, multiple applications and thus a very broad utilization and process coverage is expected, as the following sections summarize.The attempt is, to create a framework that links the digital technologies to the primary value adding processes derived from the SCOR-Model. In addition to Figure 4, Ivanov et al (2018, p. 494) presented a digital Supply Chain and Operations Management (digital SCOM) framework, in which the classical SCOR process elements (Plan, Source, Make, Deliver) are reflected, as the following figure summarizes:

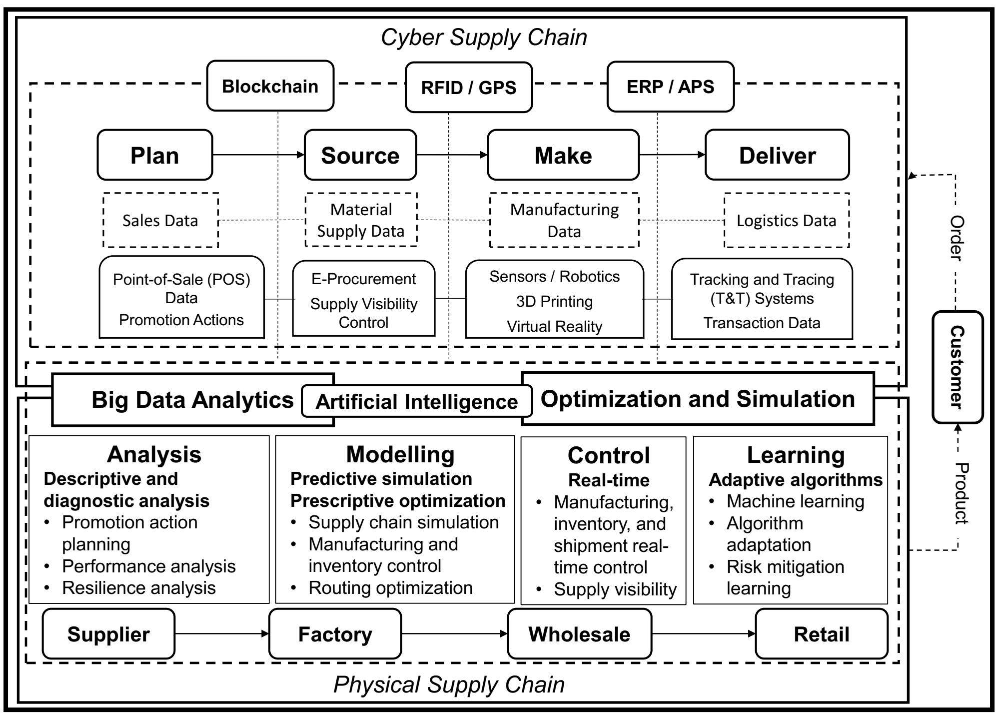



**Figure 5: Digital SCOM Framework (source: Ivanov et al., 2018)**

Additionally to the classical SCOR processes, also components of the Cyber Supply Chain as well as the Physical Supply Chain are integrated in this framework.This is strongly related to the second research question: *"Why and how will efficient Supply Chain and Operations Management create foundation to meet the objectives of Marketing?"*On the side of the physical flow of products from company to customer also digitally supported activities need to take place. These are the activities of

- Analysis: Descriptive and diagnostic data analysis, i. e. for specific promotional actions, the analysis of the SC performance of for the evaluation of SC risks / resilience
- Modelling: Predictive simulation and prescriptive optimization, i. e. for supply chain simulation, manufacturing or inventory control or transportation / routing optimization
- Control: real-time control of the manufacturing or value creation processes or to control the SC

- Learning: adaptive algorithms that are used for machine learning, deep learning or for the continuous mitigation of SC risks

Intermediately, we can observe that the digital SCOM framework including the technology to support the classical SCOR processes of Plan, Source, Make, Deliver and Return are the drivers to exploit untapped potentials in terms of efficiency (lean principles and significant waste elimination and risk reduction) and agility (responsive supply chain, e. g. AI + postponement). According to Ziegler et al., 2018, using Data and AI will lead to identify critical production and logistical processes, will lead to better usage of resources, and improved material flows, will reduce inventory and improves the planning in case of unexpected events.

That means, that "Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer" represent the core elements to meet the classical needs of International Marketing: *"International marketing processes and decisions require the firm to identify needs and wants of customers, to produce assets to give a differential marketing advantage, to communicate information about these assets and to distribute and exchange them internationally through one or a combination of exchange transaction modalities* (Chee/Harris, 1998, p. 41)." In order to meet the objectives of Marketing, robust, lean and agile SCM processes according to the classical SCOR-Model will need to be established and in order to exactly understand, forecast and to satisfy customer needs the digital solutions presented in figure 4 and 5 will contribute to the generation of competitive advantage.

## COMPETENCIES FOR DIGITAL LEAN SUPPLY CHAIN LEADERS

This paper focuses on the subject of "Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer". The third research question was focusing on: *"What are the implications regarding the resulting management skills and capabilities for SCM leadership at digital times?"*In order to answer this, one should firstly understand the implications of the digital transformation. Achieving digital excellence in value creation and value delivery requires an integrated and structured approach. In order to be successful at digital times, Westerman et al (2014) point out that a company will need to shape digital capabilities but also to develop its leadership capabilities.

| The relevant **digital capabilities** are: | The relevant **leadership capabilities** are: |
|---|---|
| • Creating a Superb Customer Experience<br>• Exploiting the Power of Core Operations<br>• Re-Inventing Business Models | • Crafting your Digital Vision<br>• Engaging the Organization at Scale<br>• Governing the Transformation<br>• Building Technology Leadership Capabilities |

**Figure 6: Digital and Leadership Capabilitiesbased on „Leading Digital“ (source: Westerman et al., 2014)**

The fundamental question is, what leaders will need to do in order to manage the digital transformation but also, which skill sets and competences are required to be successful in future (see Chaskel, 2018).

The following figure summarizes the four dimensions reflecting the four main "leadership languages", which are called the "Business, Technological, Framework and Human Language (BTFH)". Thus, the relevant attributes at digital times can be clustered in the four main categories which are wrapped around the core skill to always have a clear view on the "Big Picture Process View", as figure 7 shows:

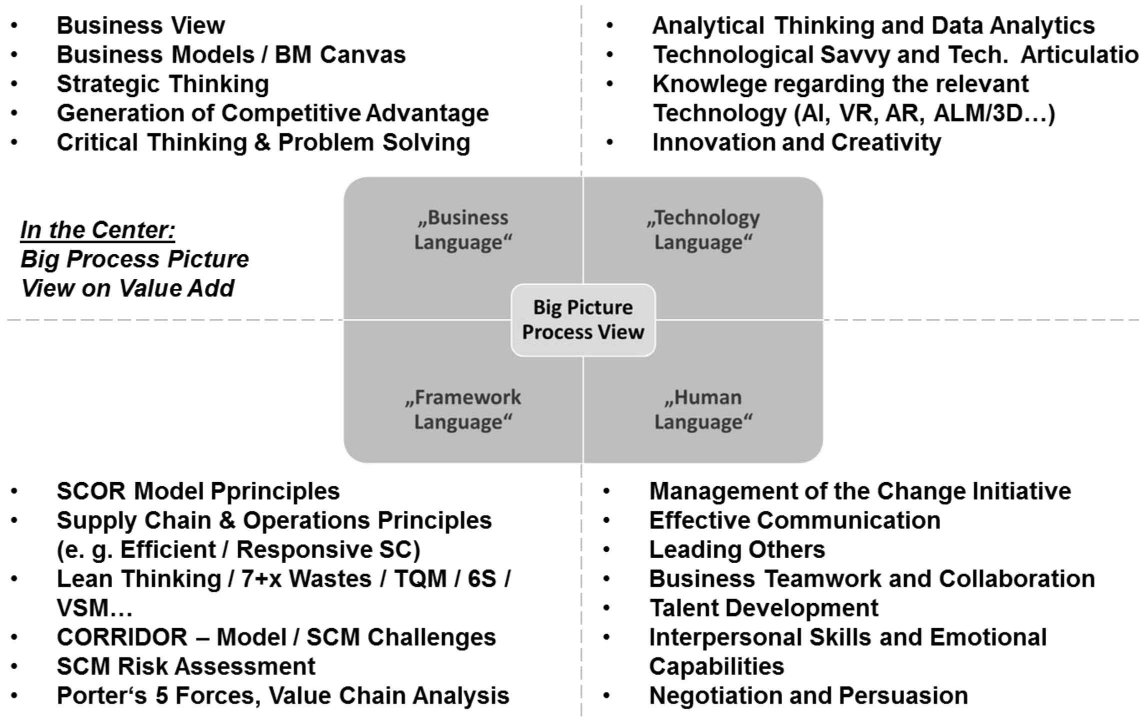



**Figure7: Four Main Digital Leadership Dimensions with a focus on SCM**

Details on the generation and the content related specifics of each of these identified "languages" are presented in the following section. In a research conducted by Wolf (supervised by Tsipoulanidis and Fischer, 2018), 260 job postings were analysed, interviews with 15 managers conducted and 14 questionnaires analysed, in which she extracted the relevant attributes of supply chain and operations leaders at times of the digital transformation. The results have been initially clustered into three main categories afterwards. But there was criticism around that. The author's exchange with experts from practice revealed, that not only business, technology and human related skills are required (see Tsipoulanidis, 2018) but it was repeatedly mentioned that the knowledge to use fundamental management and SCM frameworks is essential as well. This is the reason, why the fourth dimension – the *Framework Language* – has been added in order to mitigate this lack of completeness. The resulting four dimensions on the SCM leadership capabilities at digital times are now introduced:

The "***Business Language"*** is a metaphor related to the leader's ability to draft a vision and to create a striking strategy, to draft new business models as well as being able to use KPIs and to give directions, even without having all necessary details (often mentioned: "we are not living in a perfect world, we do not have all data, but we need to take decisions"). It is about the assessment of supply chain and operational problems and related challenges and risks, to analyse them and to develop a strategy under usage of the other leadership languages to generate competitive advantage. It is important to make sure that there is a very strong and solid connection between the company's competitive strategy and the supply chain strategy, which is referred to as strategic fit (Chopra/Meindl, 2014, p. 47). In other cases, it is important that the leader needs to know, which key partners, activities and resources are needed to deliver the proposed value. According to the set up of a business model canvas BMC (see for example http://alexosterwalder.com or https://www.strategyzer.com/canvas), understanding the value proposition is related to the following questions: "What value do we deliver to the customer? Which one of our customer' s problemsare we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?(www.startplatz.de )". Furthermore, it is needed to explain to the management, how to build customer relationships and which customer segment to satisfy how via which channel. Most probably, this will lead to the development of a completely new business model under usage of digital and lean technology for excellent value creation processes from company to customer.

The "***Technology Language"*** is an expression that focusses on the leader's ability to talk to software developers, data scientists, business analysts, data engineers, IT technicians etc. The leader needs to be able to understand the current technology and thus to use it, to develop new ideas to generate competitive advantage and to exchange his/her thoughts with the technical experts in a clear and precise manner. As in figure 4, the leader needs to know the related SCOR-Model as the fundamental framework in SCM, but will also need to be able to connect suitable technology to it, as elaborated earlier in this paper. It is also required to be able to act as a Business Relationship Manager or better as a Supply Chain Relationship Manager. According to Alicke, Hoberg and Rachor there will be new roles related to data management or algorithmic optimization. They also suggest the role to work on "SCM business partner management: The shift toward more capabilities-centered roles requires a translator role within supply chain management to act as a counterpart to the business and operations—to translate their requirements and reality into the planning process. This "SCM business partner" will play a pivotal role in shaping the design of the supply chain planning processes and systems. Also, the SCM business partner will be driving and optimizing the S&OP/IBP process, to facilitate between the functions and find an overarching business optimum (Alicke et al., 2019, p. 47)".

The "***Human Language"*** needs to be understood as the leader's competence to talk to the workforce, the colleagues, superiors, stakeholders or partners. The need for the development of a new business model or the required implementation of e. g. artificial intelligence (AI) for demand prognosis or supply chain planning needs to be communicated and the urgency for change needs to be advocated. The leader of the future might suggest to use AI for the analysis of on-line or mobile sales clicks and the analysis of social media postings in combination with the classical "postponement" strategy in SCM (see Chopra/Meindl, 2014, p. 428). If for example Blockchain technology will need to be implemented, strong use cases need to be presented and the success should be able to be demonstrated via lighthouse projects ("low hanging fruits"). Once a digital solution was implemented, the new processes will need to be reinforced and in that way will be sustained.

Thus, the "Human Language"is related to the ability to enlighten the fire, to explain and to persuade, to share the vision and to manage the change but also to understand fears and worries as well as to be able to deal with resistance. This is important, as the leaders in SCM might need to communicate effectively in order to implement a digital lean change strategy or will guide the digital transformation. Besides effective teamwork and collaboration also the identification and development of new talents is needed.

The "***Framework Language"*** is related to the knowledge of the fundamental management frameworks, such as the classical SCOR-Model (see the introduction of this paper). A manager or leader in SCM without robust understanding of the core models, principles and frameworks will not be successful, as experts at conferences confirmed in unison. That means also, that the characteristics of efficient and responsive supply chains have to be known by heart, as the leader will need to identify technical or digital solutions to identify and leverage efficiency gains in order to reduce cost without reducing responsiveness. One idea is the earlier mentioned combination of AI with the classical postponement strategy. Furthermore, fundamental concepts like Lean Thinking (Womack/Jones, 1998 / 2007) and the avoidance of the strongly related 7+x wastes need to be part of the leaders' DNA and they will need to derive ideas how to eliminate wastes under usage of Big Data and thus to reduce inventory significantly. They will use the 7+x wastes to communicate how 3D Printing will secure the availability of spare parts (exactly demand driven without the risks of over production or unnecessary transportation) or how Augmented Reality will help to reduce waiting times in maintenance and smart connected products will help companies to apply predictive maintenance.

But also challenges and turbulence drivers in SCM will need to be diagnosed and a very suitable framework for that is the CORRIDOR Model (Ivanov et al., 2018, p. 486 - 487) and to use this in order to develop a future oriented digital SC strategy. One approach might be to use AI for the early identification of SC risks (see prewave.ai or DHL's approach to protect a SC https://www.resilience360.dhl.com/ ) and to take proactive measures or to reflect on

Porter's Five Forces Framework (Porter, 1999, p. 29) and a s a logistics service provider to use 3D printing and the principle of platform economy to create a substitute of existing production companies[2].

As shown in the examples of all four "SCM Leadership Languages", understanding the big picture process view is essential and it needs to be enhanced be the previously mentioned four leadership dimensions (BTFH).

## CONCLUSION AND OUTLOOK

In conclusion, this paper has provided an overview regarding "Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes from Company to Customer" and the initially identified research questions have been successfully answered in the previous sections, as the subsequent table summarizes:

| Initially Formulated Research Questions | Condensed Answer to Close the Knowledge Gap |
|---|---|
| *Why is efficient Supply Chain and Operations Management the foundation to meet the objectives of Marketing?* | Efficient SCM based on the principles of a robust, lean and agile SCOR-Model (Fig. 2) secures the relevant Marketing "processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (ama.org.)." |
| *How will digital and smart solutions support the classical Supply Chain processes on the side of plan, source, make, deliver and return?* | Digital solutions in line with the SCOR Model (Fig. 4) are the basis to establish cyber and physical supply chains (Fig. 5) in order to exploit potentials in terms of efficiency (lean) and agility. |
| *What are the implications regarding the resulting management skills and capabilities for SCM leadership at digital times?* | The resulting four SCM leadership dimensions can be summarized as the Business, Technology, Framework and Human Language wrapped around the need for the big picture view (Fig. 6 and 7). |

**Figure 8: Initial Research Questions and elaborated answers to close the Knowledge Gap**

This paper has synthesized, how "Digital and Lean Solutions in Supply Chain and Operations Management for Excellent Value Creation Processes" with a strong Marketing focus secure the pathway "from Company to Customer". Furthermore, a view on the suggested Digital SCOM framework was presented that serves as a starting point to understand the connections and needs for the "Cyber and the Physical Supply Chain".

The connections concerning the effects of the classical SCOR-Model in combination with digital solutions were presented and some examples were presented how for example postponement and AI will increase agility and responsiveness or how AI will help companies to proactively manage or mitigate SC risks.

It was also presented, that successful companies developed digital and leadership capabilities in order to create a solid foundation as digital masters (Westerman et al, 2014). Following that, the identified skills and competences of leaders at digital times were summarized in line with the practically identified three clusters of the "BTFH: Business, Technology, Framework and Human Language" in parallel to look at excellent value adding processes considering the necessary view on the "Big Process Picture".

In future, the quantitative potentials and qualitative benefits elaborated in earlier papers (Tsipoulanidis, 2017a / 2017b / 2018) to guide the successful implementation of Leandustry 4.0 using the CORRIDOR-Model with a view on successful change management will need to be combined with the findings presented within this paper. As the exchange with practice has revealed, this is very important since not only the digital transformation but also the cultural and competence transformation needs to be successfully mastered. On the other side, it needs to be avoided, that the digital transformation takes place without strategy and vision, which requires a solid leadership.

[2] https://www.dbschenker.com/de-de/ueber-uns/presse-center/db-schenker-news/als-erster-logistikdienstleister-weltweit-bietet-db-schenker-3d-druck-loesungen-an-534760

Business and SCM experts confirmed at multiple conferences, that the identification, development and / or recruitment of the next generation of digital Supply Chain Leaders represents a huge challenge. It is a state of the art subject, which is currently discussed, for example at the Supply Chain Industry week in May 2019 (https://supplychainindustryweek.iqpc.com/). In essence, the four "BTFH Language"dimensions need to be known by Digital Lean Leaders.

In order to conclude, this paper has summarized, how that the enhancement of the classical SCM SCOR-Model by digital technologies will contribute to the generation of competitive advantage and how leaders will need to deal with it to implement so that excellent value creation processes from company to customer can be executed at times of the digital transformation.

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It's essential that the industry makes its voice heard on thes kills needed byAustralia'ssupply chains. The 13 new draft units on which the committee really value your feedback are:

- Establish blockchain in a supply chain.
- Enable trace ability in a supplychain.
- Compliance in supplychains.
- Manage outsourced supply chain operations.
- Monitor ethical supply chain practices.
- Supply chains supporting mass customisation.
- Customer focussed supply chains.
- Monitor digital supply chain services.
- Build digital supply chain capability in the work force.
- Lead digital supply chain implementation.
- Employ supply chain risk managemen tpractices.
- Stock control and receivals.
- Manage stock and inventorysystems.

Commenting on the draft units is completed online through a quick and easy process. An interactive model is used where by once registered, you simply read through the unit/s you'reinterested in, click on the word or sentence that you want to comment on and type your feedback in situ.

**(source: https://www.tandlnews.com.au/2018/12/04/article/what-skills-does-the-future-supply-chain-need/**

# Tourism Marketing & Management

# The development of wine tourism in Crete according to wine producers' perception

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**Abstract**
The purpose of this paper is to present the evolution of wine tourism in Crete along with the level of its interaction with the local community according to wine producers' estimations. The necessity of studying thoroughly the wine makers' opinions with regard to the utility of wine tourism and its benefits has been emerged from the fact that employers of both sectors, tourism and agriculture too, are confronting on a daily basis the negative impacts of the financial recession which has triggered the increase of unemployment and the decline of business activities generally in Greece.
The answers indicated the important steps that have been done as well as the weaknesses and the problems that wineries are faced with during their attempts to embrace wine tourism. Especially, the answers that were given by the wine makers who are not engaged with wine tourism are very interesting since they reveal which factors from the internal and external business environment account for their unwillingness to get involved with wine tourism.
The proposals for the further growth of wine tourism derive primarily from the wine producers. They firmly believe, in their majority that the state of Greece in conjunction with the cooperation of businessmen from the hospitality and tourism division and of representatives from academic institutions and searching laboratories of Crete will contribute to the enforcement of wine tourism as a form of sustainable development.
***Keywords***: *wine tourism, Crete, marketing, sustainability*

## INTRODUCTION AND LITERATURE REVIEW

It has stemmed from the study of international literature that wine tourism, as a type of alternative tourism, has become an important conduit for wine sales, for developing and maintaining relationships with clients and for boosting a winery's brand name. Many wineries are taking advantage of the relationship between wine and tourism, hosting thus visitors to their cellar door. Hall and Mitchel (2007) had classified the main advantages that can be gained by wineries from taking part in wine tourism, such as increased consumer exposure to product, brand awareness and loyalty built through establishing links between producer and consumer, increased margins through direct sales, to name but a few.
In addition to this, wine tourism has been proved to be in many cases a vital instrument for the development and the financial empowerment of rural areas around the world. In particular, wine tourism contributes to the transformation of these previously isolated areas into popular destinations without distorting their local identity and their special character. By way of example many Europeans quote they visit wine regions such as Burgundy and Tuscany in order to enjoy the local food and the architecture of the ancient wine villages whereas the romance and culture of wine attract some others for an elegant get-away weekend. A smaller, but growing majority provides reasons of eco-tourism and desire of enriching their knowledge about grape growing in conjunction with sustainable practices. Given such conditions, for the producers and the visitors of a wine making area wine is not considered as a common consuming product meant only for tasting experience- it is a part of the heritage and the culture of this area.
Many areas all over the world exemplify the implementation of wine tourism as sustainable source of development, including Bordeaux, Bourgogne, Rioja, Chile, Napa Valley, New Zealand etc. rendering thus wine tourism as ammunition against mass tourism industry. Going some steps forward, networks and clusters have been sustained by the cooperation among wineries and other enterprises from wine and tourism industry contributing thus to the

creation and establishment of holistic touristic experiences for the visitors. Australia and Spain are both excellent examples of countries which have created strategies and have provided funds to build wine centers and encourage the development of new hotels, restaurants, wine trails and other infrastructure components with the aim of promoting wine tourism (Thach, 2007: 134). Canada provides excellent regional examples, such as the wineries of the Okanagan Valley and the Niagara Peninsula and their promising efforts to attract tourists with the additional components of golf and culinary specialties. Burgundy has invested in a comprehensive plan that includes not only wine trails and restaurants, but promotes regional activities such as barge cruises and biking tours. In Napa Valley alone, tourism dollars to the famous wine region increased by 25.2% from 2014 to 2016, with tourists providing a $80.3 million tax revenue boost. Looking at California as a whole, the average wine tourist spent about $3,180 annually in 2017, with much of that money spent in wineries, restaurants, at events or festivals, and also at other non-wine local attractions such as local and state parks (Wine Institute data). These are just a few examples from a growing host of regions, which are ramping up wine tourism efforts. Yet, topline arrival figures from the UNWTO in 2016 reveal that wine tourism is in different stages of development in many countries. These figures indicate the following results:

- in the US, wine tourism is dominated by domestic visitors and it is estimated that 15 million travellers were motivated by wine tourism in 2014
- in the same year there were up to 10 million wine tourists in France and 5 million in Italy, and the domestic market is believed to carry less weight than in the US.
- Argentina supports 1.5 million wine tourists with a considerable proportion from international sources, meaning that a high percentage of all 5 million international arrivals to Argentina go on to visit wineries
- although the global leader in terms of land under vines and third in production terms, Spain has relatively few wine tourists at 2.1 million, which represents a very small percentage (3%) of the 65 million international tourists it welcomes each year; as a consequence, there is a great need for institutional support to develop the industry in one of the world's leading tourism destinations.
- it is further estimated that Italy welcomes between 4 and 6 million wine tourists every year while New Zealand and Germany each have 1 million.
- with 41.6 million arrivals attributed to just eight countries, it can be estimated that globally, wine tourist arrivals must exceed 50 million by some margin (Mintel: 2017).

Nonetheless, the orientations and the techniques of wine tourism differentiate not only among the countries but also among regions in the same country. On many occasions wine producers seems to be reluctant concerning the perspectives of wine tourism and they preserve hesitations regarding the role of wine tourism in the promotion of regional wine and in the strengthening of their business activities. In Greece, the 11 wine producing regions display great variations in terms of the development in the section of wine tourism. A very characteristic example which depicts those variations among the wine regions of Greece is the following one: while in North Greece the establishment and spread of wine tourism had already started at 1993 by means of networks and wine enterprises cooperation, in Crete the mindset of cooperation and synergies started with deliberate steps in 2006.

***<u>The case of Crete:</u>*** As for the island of Crete, it hosts one of the largest vineyards in Greece, in terms of both size and production. The Cretan vineyard has the longest history and continuous presence in Europe, if not in the whole world. Archaeological findings and historical sources have proven that the Cretan vineyard has never ceased to produce wine from the Minoan times to the present day. It is only natural then that vine-growing and wine are such an inseparable part of the everyday life of Cretans, inextricably interwoven of the time, the main bulk of wine production came from domestic vinification, a most widespread tradition among Cretan households. This production was mainly intended for private consumption. However, the lack of technical infrastructure and the unfavorable wine conservation conditions in the warm climate of Crete quickly downgraded the quality of these wines.
The change of this condition seems to have started on the late 70's with the rise of tourism which led firstly to the occupation of local manpower with non- agricultural activities and secondly to the establishment of new quality standards in accordance with the appetites of European tourists. Meanwhile, the main bulk wine production in Crete was gradually passed on to organized wineries. Many new small- and medium-sized vineyards were gradually added to the few winemaking units of the past, many of which were updated. All the more types of wine started being produced with increasing care to meet the growing demand of tourists.
At the same time, the wine preferences and views of Cretans themselves also started to change. Functioning as core production of bottled wines, Prefecture of Heraklion, provided the initial impulse for the creation of the Heraklion Winemakers' Network. This network has been funded by C.I. Leader+ and has the legal form of a civil, non-profit Organization with 20 members, whose businesses are located in the Prefecture of Herakleion, Crete. The Seat of the

Network is located in the Municipality N. Kazantzakis, seat of viticulture in the Prefecture. The geographical location of the Network builds by definition a comparative advantage, owing to its proximity to the urban and commercial center of Heraklion city, as well to its proximity to the airport and sea port of the city, which are the main entrance gates of Crete. Access to the Network's Main Office is also easy from the National Road (North Axis) which also attracts significant visitor flows to the Network's products and services. Furthermore the comparative advantage is the natural and cultural environment and the surrounding areas, where visitors may experience living cultural traditions, feel the spirit of the place and enrich their tourism experience with a diversity of activities, events etc. That network led to the generation of the Chania - Rethymnon Winemakers' Network two years later. Subsequently, Prefecture of Lasithi joined the network of Heraklion's, in an attempt to perform a better organized promotion of Cretan wine not only within the island but to other places as well. The two networks proceed in operating in autonomy, yet cooperating at all levels in parallel[3].

## RESEARCH OBJECTIVES

Nowadays, stakeholders of wine tourism have to deal up with the new challenges provoked by the financial recession in Greece in conjunction with the increased worldwide competition. Under these circumstances and given that the wine makers' opinions has not been examined in depth regarding the utility of wine tourism and the benefits that derives from it, it is considered to be interesting the conduct of a research that deals with the notions and the perceptions from wine growers' aspect about the effects of wine tourism on the development of the island. Thus, several questions emerge which are concentrated on two main axes:

A) Which are the prevalent perceptions in the wine makers' business environment about the potential of wine tourism in Crete and in what extend those perceptions determine the quality level and the sort of the offered customer services along with the promotion techniques? The first goal of this question is to be specified the diversities among the wine makers' perceptions as for the profits that can be obtained from wine tourism. The second goal is the examination of the methods that are used by the wineries of Crete in order to appeal the wine lovers' interest and make the wine product more attractive to prospective visitors. Finally, the third goal of the question is to define the wine producers' attitude towards the wine tourism and their willingness to invest on that section as a kind of investment capable of giving an impulse to their business expansion.

B) How they evaluate the contribution of partnerships, collaborations and organizations to the growth of wine tourism in Crete? The aim of this question is to examine the effectiveness and the role of governmental agencies, state organizations, networks and clusters to the holistic development of the region "Crete" by supporting wine tourism practices.

## RESEARCH METHOD

Owners and executives of 49 from the total 55 wineries that located in Crete accepted to participate in the conduct of the research, representing thus 89% of the wineries in Crete. Semi- structured interview is the tool that was used for the data collection. The questions of the interview were either closed or opened whereas their contents are adjusted to the distinctive features of each winery that is represented by the interviewees. The main factor that defined the differentiation among the questions of the interview is the separation of wineries between those with cellar doors activities and those with no cellar doors activities.

Despite the modifications of the questions depending on the case, the main body of each interview is divided in two main parts. The questions of the first part dealt with the rate as well as the type of development of a wine enterprise either that enterprise is occupied with wine tourism or not. Some of the subjects which are tried to be described in the first part are related to:

- The sort and the spectrum of services and facilities that are provided by the wineries to their visitors, including flexible time- table, multi- language conducted tour in the winery and in the vineyard, wine tasting, holding events, overnight ability etc.,
- The improvement of the equipment and the quality of wine (natural and technological recourses),
- The influence of wine tourism to the financial indicators and the efficacy of a winery,
- The changes in the internal structure of the wine producing enterprise and in the techniques of promotion and communication.

The topic of the second part is to examine how the growth of wine tourism and the general development of the area are being connected with each other, namely improvement of substructures and road network, exploitation of the natural resources and of cultural capital of the region, decline of unemployment, cooperation with other enterprises

[3] Source:http://www.winesofcrete.gr/cretewines/en/Article/TheIsland/HistoryofWineinCrete/ThenewgenerationofCretanwines_1037.html

from the division of tourism (restaurants, hotels, travel agencies), empowerment of countryside, support from organizations[4]. The next part reports the key findings revealed so far.

**RESULTS**

Initially, the research presents some descriptive features of the wineries which are substantial for performing well or underperforming in terms of their general business activities. Some of the wineries that are represented to the study are dated from the beginnings of 20th century whereas some others count centuries of history. Notwithstanding, most of the participated wineries are dated to the midst of 20th century and 7 of them are dated from 2000 and after. In their majority they are family business, passed from one generation to the next and their size varies from very small wineries to wineries with significant export wine trade.

From the 49 wineries the 24 are open to visitors. In addition to this, 8 from those 24 wineries offer to the visitors a wide and well organized range of tourist services, such as tour- guiding in various languages to the winery and to the vineyards, wine tasting rooms, culinary services, sales of other products, educational and cultural activities. Only one of those 8 wineries offers accommodation services. The eight wineries that provide the most professional wine tourism services are engrossed in wine tourism for more than 20 years and they are concerned as the leaders in the promotion and improvement of wine tourism in Crete. According to the statements of the participants who work on those wine enterprises, the annual revenues from wine tourism are getting higher every year and the 'direct to customer' sale model has been proved very profitable as they are seeing higher rates on visitors' purchasing. Nevertheless, there is a considerable cost for the operation of tasting rooms and for the improvement of the offered services and facilities.

The rest wine tourism orientated wineries have been starting to get busy with wine tourism after 2006, together with the incorporation of wine networks in Crete. In the beginning their steps were very hesitant, but as the time passes, they are getting bolder and more willing to introduce innovative methods in order to offer better quality products and services to their customers, either they are visitors or not. Moreover, on their effort to attract more visitors and to be more competitive, wine makers have proceed to the renovation of wineries' premises and equipment and they have developed new marketing techniques such as participation in exhibitions and in wine competitions, advertising via mass and social media of wineries' brands combined with the leisure opportunities of the region as well, partnerships with other hospitality and tourism enterprises and so on.

One of the greatest challenges that wineries have to handle is the rising competition from other wine tourism destinations. Another issue of equal significance for many wineries is the management of human resources from the aspect of finding and retaining tasting room staff. Indeed, good staffing is essential for the successful performing of wine tourism activities but it is not so easy for employees in wine tourism to combine the knowledge of agriculture and wine production with the principles and the techniques from the division of hospitality. What is more, the decrease in the income of citizens in Crete and in Greece in general has resulted in the decrease of outdoor activities, including wine tourism.

Those matters are of great importance and they discourage other wineries from espousing the general philosophy and the values of wine tourism. The participants who represent the other 25 wineries expressed their worries about their every - day attempts to correspond to the needs and to the demands of the enterprise where they work. As the making of wine is a long- term lasting procedure which requires a lot of expenses in advance with no immediate earnings, owners of those wine enterprises feel uncertainty for their future and despite the fact that in their majority have a very positive perception towards wine tourism they believe that they won't be able to fulfill the requirements for implementing successfully the wine tourism strategies.

Though, leaving aside these all – too- common apprehensions, should not be underestimated the contribution of wine tourism to the overall development of local communities of Crete. Youths who live in the country side of the island find in wine tourism vocational opportunities whereas new eco- friendly methods for the cultivation of grapes have substituted the previous. Furthermore it has started the constitution of a brand name for the wine zones of the island which now is getting more recognizable not only among wine tourists but also among wine consumers. Furthermore it has already started the exploitation of the historical monuments and of the cultural capital of the region in a more rational and sustainable way as the wineries of Crete take the initiative to organize events and festivals with the aim of presenting and enforcing the civilization and the traditions of Crete. On these events usually participate all the wineries of an area, without distinction to those with cellar doors and those without.

As for the role of Greek state and of official administrative services, the opinions among the interviewees are divided. Some participants expressed their satisfaction for the way that the Greek state has supported them by providing financial and non-financial support to their operations in relevance to wine tourism. Still, other

[4] Samples of interview's questions are included in the appendix

interviewees expressed their discontent towards the actions of the state in terms of wine tourism policies making thus obvious that they do not trust the purpose and the motives of Greek government.

## CONCLUSIONS AND PROPOSALS

One of the greatest changes that has been caused thanks to the expansion of wine tourism in Crete and the alternation of wineries to visiting destinations is the increase of premium wine production instead of the production of bulk wine, which, until recently it was the only type of produced wine for many wineries in the region. Furthermore, that change in the orientations in terms of quality standards has led to the cultivation of indigenous grapes varieties with the implementation of innovative refined methods. Likewise, more and more wine producers have been pursuing the accession of their wineries into funding programs related with operational and rural development and alternative tourism as well.

However, it has been noticed in many occasions that the accompanied services of wine are not performed with the proper way to the visitors whereas many wine producers are not familiar with the role of tourist businessman. In other words quite a few wine producers have difficulty to integrate the principles of tourist's and costumer's service so as to create and support a combination of entertaining activities for the visitors of their wineries. Another matter is the failure of many wineries to cooperate effectively with other local enterprises either due to the lack of understanding among the partners or due to the wrong estimation of the expected results. In addition to this, the answers that were given by the wine makers who are not engaged with wine tourism are very interesting since they reveal which are the factors from the internal and external business environment that account for their unwillingness to get involved with wine tourism. According to their opinion, one of the most important obstacles that hosting and not hosting visitors' wineries have to confront is the long – term financial recession that has been taking place in Greece in conjunction with the increased taxation. The long duration of this situation makes the wine producers hesitant to invest in other kind of business, like wine tourism. The proposals for the further growth of wine tourism derive primarily from the wine producers. From their point of view, state of Greece can foster the section of wine tourism in many ways, for instance by offering financial initiatives to the wine makers, with the rebuilding of infrastructure in order to facilitate the accessibility to wineries etc. They also recommend the conduct of short- term educational seminars, workshops and courses as well as meetings and forums in which they will participate along with the presence of businessmen from the hospitality and tourism division and representatives from academic institutions and searching laboratories of Crete. The majority of wine producers believe that those actions will help them to get informed about the international tendencies and prospects in the market of wine and tourism whereas they will have the opportunity to exchange opinions and express their concerns about use the of wine tourism as a form of sustainable development.

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## APPENDIX

### MAIN BODY OF THE INTERVIEW – SAMPLE

*In order to achieve the better comprehension of the given answers for the readers, below each question there is a brief explanation of its goal.*

### GENERAL QUESTIONS

- **The winery you represent dates back to …… years**

Goal: to classify wineries in new and old in wine industry

- **Which is the size and the type of the winery that you represent on this interview?**

Goal: to identify the potential of each winery

- **Is the enterprise where you are occupied engaged with wine tourism?**

Goal: to identify the relation of wines enterprises with wine tourism

### FIRST PART

**(The questions of this part are classified in two categories: For participants who work in cellar door wineries and for those who work in not cellar door wineries)**

### A1. QUESTIONS FOR TOURISTS' VISITING WINERIES (PERFORMING CELLAR DOOR'S ACTIVITIES)

1. **If yes, for how long?**
   Goal: to specify the long or short time of experience with wine tourism
2. **How many visitors can the winery afford?**
   Goal: to categorize the wineries in terms of their potential of tourists' acceptance
3. **Describe the steps that have been done from the time you decided to adapt wine tourism practices until now**
   Goal: to evaluate the overall progress that has been done through the passing of time as regards the wine tourism activities
4. **Describe the services that you offer to the wine visitors**
   Goal: to see in what extend the wineries are investing in wine tourism services
5. **What means you use to promote your winery as a destination worth visiting by wine interested tourists? Which of them is the most effective?**
   Goal: to diversify the main and most influential means of promotion techniques, concerning wine tourism, approaching target – group etc.
6. **In which section and in what extend wine tourism has been contribute to the improvement or to the stagnation of your wine business?**
   Goal: The influence of wine tourism in other departments of a wine enterprise.
7. **Are the benefits from wine tourism practices of equal significance with the other business activities of the winery you represent? Justify your answer.**

Goal: Sorting the wineries to those in which wine tourism is encompassed in their main business activities and to those in which wine tourism is just a mere part of their total performance with no remarkable financial profits.

8. **From your personal aspect of view what are the greatest obstacles in your effort to keep pace with changes in wine tourism?**
   Goal: to illustrate the weaknesses of a winery from its internal environment and the threats which are connected with its external environment.
9. **To your mind, which is the greatest challenge in wine tourism business where you are occupied?**
   Goal: Assessment of the existing and the future opportunities and difficulties they have to cope with.
10. **How your wine tourism product differentiate regarding the wine tourism product of other competitive businesses**
    Goal: description and evaluations of their comparative advantages

**A2. QUESTIONS FOR NON TOURISTS' VISITING WINERIES (WITHOUT CELLAR DOOR'S ACTIVITIES)**

11. **Which policies do you follow in order to promote your wine business?**
    Goal: to describe the prime methods for promoting and sale products
12. **What is your opinion about the role wine tourism concerning the expansion of a wine business in general?**
    Goal: to express their attitudes and their beliefs in relation to the value and the role of wine tourism
13. **Why until now the wine enterprise you are working in hasn't invested in cellar door's sales?**
    Goal: to explain the reasons that prevent wineries from receiving wine tourists.
14. **Are you thinking to turn to wine tourism practices and cellar door sales in the future? Justify your answer.**
    Goal: to detect the sources of their willingness or unwillingness to apply wine tourism strategies.

**SECOND PART**
**(The questions of this part are common to all the participants)**

15. **How the winery business you are working in interacts with the local community?**
    Goal: analyze the character of the relation among cellar door wineries and not cellar door wineries with the local societies
16. **Which factors of the region where the winery is situated affect the tourists' willingness to visit or not the place?**
    Goal: Evaluation of the opportunities and the virtues of the area.
17. **Describe the types of collaborations with other enterprise from wine business or hospitality section. The results from those collaborations are positive or not? Justify your answer.**
    Goal: to reveal the positive and the negative aspects of the cooperation among enterprises and if there is still room for improvement.
18. **Express your estimations about the role of official or governmental organizations and institutions in relation with the expansion of wine tourism strategies in your region.**
    Goal: to estimate the role of the state in the infusion of wine tourism policies.
19. **Can you name the profits that local society has already gained by wine tourism strategies?**
    Goal: to mention and estimate the ways in which the implemented wine tourism policies from the state combined with the practices of wine enterprises are conducive to the growth of local society.
20. **To your mind, which are the prospects for the advance of wine tourism in the future?**
    Goal: to express their expectations and their concerns about wine tourism development. Moreover, to express their proposals about the improvement of wine tourism practices for the coming years.

# Participative co-Creation of Archaeological Heritage: Case Insights on Creative Tourism in Alentejo, Portugal

**Abstract**

This paper focuses on the creative ingenuity of tourism providers in storying and providing varied readings of archeaological sites.In conceptualising providers' efforts in mobilising (in)tangible aspects of archaeological heritage to accord them an inimitable identity and visible presence, we draw upon research on creativity and creative tourism. Our findings reveal how innovative meaning-making opportunities transform archaeological heritage into valuable creative tourism resource which can be used in enhancing the market appeal of local products and resources through theming and creative storytelling. Overall, this study contributes to nascent work on participative co-creation of archeaological heritage that can serve as an effective means of creating meaningful interpretive experiences at cultural tourism destinations.

# Human resources management on tourism businesses: The degree of satisfaction of employees of hotels in Crete

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**Abstract**

The interest of modern enterprises in measuring the job satisfaction of their employees is now a common practice. This is because modern businesses have understood that satisfied employees have higher returns, this performance has an impact on the quality of services and, of course, better financial results. In this paper, job satisfaction is analyzed in the hotel industry and the problems associated with it, and tourism data on a global and international level are also mentioned. The collection of primary data was based on the questionnaire analysis, based on the P. Spector questionnaire, which was distributed to several hotel employees in Chania, Crete. The main objective is to identify job satisfaction in all departments of hotels, to highlight the weak points of companies so that it can undertake improvements and moves. Also, through the survey, the strengths of companies emerged, which in any case should be strengthened and maintained for a long time. The hotels that participated in the survey occupy a large number of employees andgive the intense competition that exists in the hotel sector in Chania, the need for excellent and quality service provision, the proper management of their staff and thus the satisfaction of employees is one of the main issues in which oriented. The analysis of the results and the resulting conclusions give possible solutions and ways of dealing with the identified problems.

***Keywords***: *job satisfaction, employees, measuring job satisfaction, hotels.*

# Alternative forms of tourism development and management: The case of wedding tourism potential in Mykonos

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**Abstract**

Nowadays, the predominant trend of the tourist development is the alternative forms of tourism, which have been developed since the 1980s. One of the most contemporary and rapidly developing form of alternative tourism is wedding tourism. The key point in this paper is the destination weddings, meaning the weddings away from the permanent residence of the couple. Destination weddings have been evolved due to financial and social reasons, while the development of internet and social media has played a key role. In any case, the effects of wedding tourism are multiple for the destination both in the private and the public sector. Innovation defines wedding tourism, as new forms of wedding ceremonies have been appeared and promoted, contributing to the emergence of new tourist destinations. However, classic wedding destinations such as Italy or Mauritius have been established on the world tourist market, while in Greece the island of Santorini stands out. This paper focuses on the island of Mykonos, which is considered to be one of the main Greek tourist destinations. In Mykonos, a cosmopolitan destination, various alternative forms of tourism have been developed, including wedding tourism. The aim of this study is to explore the potential of Mykonos as a wedding destination exploring the key aspects that attract wedding tourists and to prove if wedding tourism works in favour of the island.

***Keywords:*** *Alternative tourism, wedding, wedding tourism, destination weddings, Mykonos*

# An Overview of the Future Perspectives on the use of Multimedia Technology in Tourism Marketing

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**Abstract**

Nowadays, tourism constitutes one of the most powerful tools for developing a country's economy. The tourism industry has already expanded to a large extent through marketing, in line with the technology of the 21st century. This has an impact on the economic growth of these countries as well as their emergence in leading travel destinations. The numerous innovations of multimedia technologies have now modernized the field of tourism promotion, such as Virtual Reality that has been adopted by many countries. Also, the use of Augmented Reality applications is considered as a key challenge for the future and sustainability of travel agencies. These technologies have a broad scope in the tourism-related fields of marketing, advertising, and cultural heritage promotion. This paper aims to investigate the benefits of state of the art technologies in tourism marketing, presented through an overview of scientific articles.

***Keywords*****:** *Virtual Reality, Augmented Reality, Information and Communication Technologies, Multimedia, Tourism Marketing*

**Introduction**

The usefulness of Information and Communication Technologies (ICT) as an essential part of the operation of tourism businesses has been perceived by the widespread development of tourism. There is an urgent need for changes in the operation of companies necessary for their survival in line with the new demands they have to fulfill. These changes have contributed to the development and further development of ICT for the benefit of the tourism industry. The three key technological breakthroughs that had a decisive impact on the tourism sector were Reservation Information Systems (CRS), Global Distribution Systems (GDS), and the Internet [2].
ICT has brought significant changes across the range of the organizational structure of the tourism business. Their impact is mainly on improving the quality of products and services, creating new ones, and improving the entire tourism industry by adopting better organizational techniques. Their results are evident in the business areas related to promotion and sales, management, production process, and servicing of tourists. Also, new technology applications provide the opportunity for further training techniques [3].Today tourists are more demanding, with linguistic and technological skills and abilities. They seek and require authentic and complete experiences when visiting a tourist destination. Also, they are impatient, and they want to find reliable information very fast [3].
In the following part of this paper, we will analyze in particular the relationship of state of the art technologies such as virtual and augmented reality with tourism enterprises.

**Virtual Reality (VR)**

According to Sherman and Craig [9], there are four key elements for experiencing the VR: the virtual world, immersion in the virtual world, sensory feedback, and the interactivity. The virtual world is the content of a given medium. Its existence may exist either in the mind of its creator, or be transmitted in a way that it can be shared by a wider audience. In general, the virtual world is the description of a collection of objects within a virtual space, as well as the rules and relationships that these objects contain. An alternative reality may be to represent a real space that exists somewhere in the physical world or a fantastic environment made by computer developers. It is about perceiving an alternative through another perspective. In VR, the entry into the virtual world begins with a natural immersion where an artificial stimulation of some senses exists through the use of technology. Alternatively, the state of spiritual immersion is referred to as the sense of the user's presence in an environment. Physical immersion is, therefore, an essential feature of VR, and spiritual is the target of digital media creators. The user acquires a simulated, real-time experience that has several features common to physical reality. Also, the risks in physical reality are reduced, and new scenariosare created, which are virtual in the real world. A typical VR system records the movements of the user's hands and head. The interactivity is achieved when the user moves into the virtual world and can change his visual field with the movement of his head. In addition to more advanced applications, there is the ability to move objects through different hand movements of the user.

VR can be defined as the medium consisting of interactive computer simulations which records the location and movements of the user and senses feedback to one or more senses, providing the feeling of physical or spiritual emerging into the virtual world of simulation. VR technology, combining interactivity and immersion, can offer virtual experiences to every traveler as well as help simulate destinations that will shape travel planning as well as contribute to the overall marketing of tourism. The technology incorporating multimedia, assist tourism marketers in creating a memorable experience that integrates meaning, perception, consumption and brand loyalty [10].

This technology also provides various innovations in the field of tourism that contribute in particular to tourism policy planning, tourism marketing, tourist attractions, and entertainment, as well as the promotion of tourist sites. Besides, this innovative technology has the potential to be used in the field of tourism education [5]. VR allows tourism-related businesses to communicate with potential consumers and attract them by creating three-dimensional virtual destinations that affect their travel intent. For this reason, 3D virtual worlds have both informative and educational purposes of attracting and contributing positively to the behavior of consumers and to plan their travel [7]. Through this technology it is possible for a potential consumer to interactively understand the content of the package he is about to buy, taking a comprehensive view of the proposed destination. New apps and state of the art devices provide the necessary interaction to enable the potential traveler to make a virtual tour by observing in detail a location or wandering around a hotel. At the same time, the use of VR in educational applications can attract tourist advertisers and travel agents to invest capital in virtual worlds where world destinations and travel sites are already being promoted [6].

## Augmented Reality (AR)

The concept of AR can be defined as an imaging technique that uses data generated by various electronic devices and applications to improve and enhance the user's perception of reality. AR improves the user's perception of the real world and its interaction with it. Through virtual objects, he receives information that he could not obtain only from his senses and which he uses to meet his needs in reality. Although AR has been a theoretical concept since the 1960s, however, technological progress has contributed to the rapid growth of the relevant research field over the last decades. VR creates a virtual environment, which can be a faithful representation of the real environment, but it is not at all true. In VR, the user can use some of his five senses, not the whole of them. In contrast to the AR, the user moves into the natural environment, understands and interacts better with it through virtual information presented in front of him. AR enhances and utilizes all user senses in real time and environment [8].

AR technology can be used for policy measurement and comparison purposes and consequently, for profitable tourism policy. Using AR helps tourists gather more information and better organize their schedule when they are already in the tourist destination [1]. Also, the use of AR through smart technologies enables tourists to recreate and experience different historical seasons themselves, displaying ancient objects in 3D with all the details of an object. The importance of using AR in museums, galleries, theaters, archaeological and religious sites, festivals is great as it enhances the tourist experience [4].

AR technology, in general, is a significant development and an integral part of ICT, which will greatly affect the tourism sector and, undoubtedly, the travel agency companies.

## Conclusions

Tourism is strongly influenced by the progress of the technological revolution that is shaping and changing everyday life. Technology has become an integrated part of daily life with smart navigation systems, and smartphones, thanks to which people are always connected to the digital world. The whole industry has to adopt new technology trends, rethink their strategies, and reshape the way they provide services.

Holograms with avatars for the reception, interactive 3D displays are already becoming a reality for the hotel industry. Some parts of this technological future are expected to become an integrated part of the tourism sector.

The general conclusion we have reached is that VR and AR, thanks to the characteristics of innovation, interaction, detailed depiction and free navigation of the user in the virtual environment, could not only contribute decisively to the strengthening of tourism but also prevail against the other means marketing. However, the adaptation of such technology in each company will depend mainly on its strategy and positioning.

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# Cruise industry in Greece: Possibilities and Prospects

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Tourism comprises the activities of people travelling to and staying in places outside the usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited (UNWTO, 1994). It has become one of the largest and most rapidly growing service sectors in the world during economic crisis periods (McIntoch, Goeldner & Ritchie, 1995; Tang & Tan, 2017).

Maritime tourism is a special form of tourism and one of the most dynamic forms of modern tourism with significant participation in the tourist economies of the countries that have developed it (Moira & Mylonopoulos, 2005; Diakomichalis, 2009; Hall, 2001) and with continuous and rapid growth (Diakomichalis, 2009; Orams, 1999).

Marine tourism includes 'those recreational activities that involve travel away from one's place of residence and which have as their host or focus the marine environment (where the marine environment is defined as those waters which are saline and tide-affected) (Orams, 1999). Maritime tourism consists of transport, journeys and tourism and recreational activities (Wild, 2003).

Cruise tourism, part of Maritime Tourism, is the fastest growing tourism subcategory (Papathanassis & Beckmann, 2011 ; Sun et al., 2011 ; Sanz Blas & Carvajal-Trujillo, 2014) and has recorded continuous growth the last twenty years, despite the economic crisis, with the average growth of 7% per annum (FCCA, 2017 ; Karlis & Polemis, 2018 ; Vaya et al, 2018 ; Simantiraki, Skivalou & Trihas, 2015). The Cruise Lines International Association, CLIA (2019), points out that global demand for cruises has increased by 50% from 17.8 million passengers in 2009, to 26.7 million in 2017. The cruise evolves as a hybrid form of tourism and transport. The main "players" of the cruise industry and their interactions are cruise companies, cruise passengers and destinations (ports and homelands) (Niavis & Vaggelas, 2016).

This rapid growth of cruise tourism (Brida et al., 2012, 2014) has been due to the incorporation of mega-cruise ships and new ports of call (Douglas & Douglas, 2004 ; Sanz Blas & Carvajal-Trujillo, 2014). The rapid growth of the cruise industry has increased the interest of many countries as they see it as the key for tourism development. Several destinations are interested in being included in the selected group of ports chosen by cruise companies (Lekakou, Pallis & Vaggelas, 2009).

The economic benefits affecting the local, regional and national economy include: a) supplies (consumable, food, clothing, fuels, lubricants, etc.); b) port services (mooring, light dues, etc.), c) local and State tax revenue ; d) shipyards (buildings and repairs) ; e) passenger and crew spending (Dwyer & Forsyth, 1998 ; Diakomihalis et al., 2009 ; Castillo-Manzano, Lopez-Valpuesta & Alanis, 2014). The economic impact is expected to vary at local, regional and national level (Dwyer & Forsyth, 1998). The cruise industry is a major source of income for cruise lines and workers, and multiplier benefits are generated in the visited destinations by increasing or improving earnings, tax revenue, employment, foreign exchange gains and economies of scale, raising living standards, improving infrastructure, maintaining and harnessing urban and rural areas, improving public services, improving the quality of catering services, which also spread to neighboring areas with cruise ships' ports, such as hotels, restaurants, transportation, local attractions (Perce et al., 2018 ; Dwyer & Forsyth, 1998 ; Liu & Var, 1986; Akis, Peristianis & Warner, 1996; Tosun, 2002; Brida et al., 2012).

The global cruise market can be characterised as an oligopolistic one and 79.9% of global market dominated by three companies (Carnival Corporation & plc (CCL), Royal Carribean Ltd. (RCL), Norwegian Cruise Line (NCL) (Lekakou, Pallis & Vaggelas, 2009a ; Lekakou, Pallis & Vaggelas, 2009 ; Lekakou, Stefanidaki & Vaggelas, 2011 ; Chang, Lee & Park, 2017 ; Karlis & Polemis, 2018 ; Vaggelas & Pallis, 2016 ; Bjelicic, 2012). Although, the main tourist destination of cruise ships is Caribbean since 1970s, the following years have appeared destinations like Gulf of Mexico, Atlantic, Pacific, Northern Europe, Asia, Australia, New Zealand and especially the Mediterranean Basin (Vaya et al., 2018; Rosa-Jimenez et al., 2018; Mancini, 2014; Sun, Feng & Gauri, 2014). The European cruise industry went up as demand for cruises increased by 72% in the last decade. In the Mediterranean region, the number of visitors has increased by 118% in the last decade (Karlis & Polemis, 2018), while almost 20% of the world market for cruises arrives in the Mediterranean (Vaya et al., 2018).

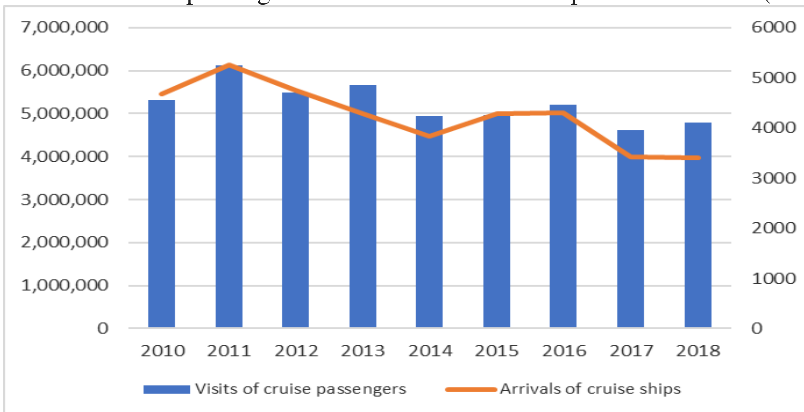
Despite its relevance, before 2000s, cruise tourism has received very limited attention in research (Wild & Dearing, 2000 ; Papathanassis & Beckmann, 2011 ; Sun, Jiao & Tian, 2011 ; Sanz Blas & Carvajal-Trujillo, 2014). Although the number of research studies in the cruise sector has increased mainly, it remains in areas of management, sociology, psychology, economy, as reported by Papathanassis & Beckmann (2011). In particular, a significant number of research studies have analyzed the positive and negative impacts of the cruise sector on economic, environmental, socio-cultural and political reception areas (e.g. Brida & Zapata, 2010; Dwyer, Douglas & Livaic 2004; Dwyer & Forsyth, 1998; Eijgelaar, Thaper & Peeters, 2010; Klein, 2009, 2010; Scherrer, Smith & Dowling, 2011; Scarfe, 2011; Stewart & Draper, 2006). Also, research studies have focused on areas such as Caribbean (eg Hritz & Cecil, 2008), Canada (eg Stewart et al, 2007), the islands of Italy, Sicily and Sardinia (eg Pulina , Meleddu & Del Chiappa, 2013).

At present, the Greek cruise tourism can be considered as a significant participant in the broader East Mediterranean market. Greece as the country with the longest coastline and numerous islands, mild climate, rich cultural and religious background, gastronomy, local tradition and culture and natural environment make it one of the most important tourist destinations in the world and especially in the Mediterranean basin. In Greece, the origin of cruising go back to 1930s, at a time when the first Greek cruise firms introduced cruising routes in the Aegean Sea and the greater area of the Mediterranean basin (Διακομιχάλης, 2009 ; Diakomihalis et al., 2009).

According to their use by cruise companies, cruise ports are classified in three categories: a) homeports (starting port or ending port, point for a cruise or even both these points), b) ports of call (ports visited by a cruise ship during the cruise) and c) hybrid ports (a blend of the previous two categories) (Lekakou, Pallis & Vaggelas, 2009 ; Lekakou, Pallis & Vaggelas, 2009a ; Lekakou, Pallis & Vaggelas, 2009b, Troumpetas et al., 2015 ; Pallis et al., 2017). It is worth noting that, up to 1999, the Greek cruise sector was operating under cabotage protection. The aim of the European Law (No 3577/92) was to create a market between the Member States and the equalization of all European flags. Nowadays, the Law No 4439/2016, has been included the Community Directive on the use of liquefied natural gas. For Greece, the ports of Piraeus, Thessaloniki, Igoumenitsa, Heraklion and Patras should be able to supply ships with LNG fuel (Nautemporiki, 2018).

The present research focused on the ports of Greece for the period 2010-2016, either by comparing annual data or by taking into account the average of the percentage change of periods. The objective of this paper is to examine where firstly the cruise foreign passengers and secondary, the air arrivals of foreign passengers affect the GDP per capita of the region or/and regional unit of Greece. Our empirical approach is based on secondary data collected from a range of sources, the Union of Greek Ports, the Hellenic Statistical Authority and the Bank of Greece. According to the Union of Greek Ports (2018), the Greek port system includes forty-three (43) recorded destinations (land and islands) throughout our country. From these recorded ports, ten are recorded as main ports (total arrivals of cruise passengers > 100.000 per annum) and these are Piraeus (Athens), Santorini (Kyklades), Kerkyra (Ionian), Mykonos (Kyklades), Katakolo (Peloponnese), Herakleion (Crete), Rodos (Dodekanisa), Kefallonia-Ithaki (Ionian), Chania (Souda - Crete), Patmos (Dodekanisa).

**Chart 1**: Visits of cruise passengers and arrivals of cruise ships in Greek Ports (2010-2018)




**Source**: Statistics data of Union of Greek Ports, www.elime.gr

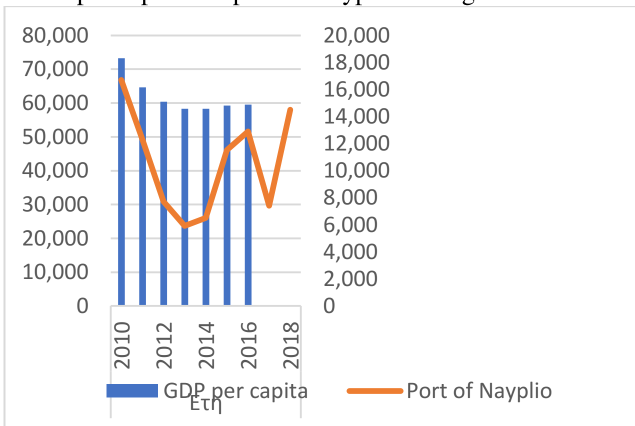
Currently, six ports (Piraeus, Thessaloniki, Heraklion, Kerkyra, Lavrio, Rodos) from Greek ports operating on the cruise market also operate as homeports (Elime, 2018). In 2018, these ports received 2,234,703 million cruise passengers, or 46.67% of all passengers. Cruise ship approaches amounts to 1.339. For the selection of a port as a homeport, apart from the attractiveness of the area, are the port's infrastructure, the supplies, the safety of tourists, the easy access to the means of transport (train, metro, tram), the facilitation of cruise ships and passengers and the connection with the historical sites (Lekakou & Pallis, 2005; Kefala, 2016; Roza-Jimenez et al., 2018).
Based on our empirical findings, we result that in the Region of Attica, the Regional Unit of Kavala, the Regional Unit of Thesprotia, the Regional Unit of Fokida, the Regional Unit of Kefallonia even though the arrivals of foreign passengers (arrivals of cruise passengers and air arrivals) were increased, they did not affect GDP per capita, which decreases. On the other hand, the Regional Unit of Evros, the arrivals of foreign passengers (arrivals of cruise passengers and air arrivals) were decreased, they did not affect GDP per capita, which increases. Moreover, for some regional units (e.g. Regional Unit of Thessaloniki, Regional Unit of Preveza, regional unit of Achaia and Hleias, Regional Unit of Messinia, Regional Unit of Lakonia, Regional Unit of Argolida, Region of Crete, Regional Unit of Zakynthos, Regional Unit of Kerkyra, Regional Unit of Magnisia, Region of North Aegean Sea, Region of southern Aegean Sea) we have mixed results, if we take into consideration different periods of research (Table 1).

**Table 1**: Empirical Findings

| **Regions / Regional Units** | **Periods** | **GDP per capita** | **Total of cruise passengers** | **Total of arrivals** | **Effect** |
|---|---|---|---|---|---|
| Region of Crete | 2010-2016 | ↓ 3.62% | ↑ 5.75% | ↑ 7.73% | No |
| | 2012-2016 | ↑ 2.91% | ↑ 2.91% | ↑ 6.94% | No |
| | 2014-2016 | ↑ 0.57% | ↓ 0.31% | 5.62% | Yes |
| Regional unit of Thessaloniki | 2016/2010 | ↓ 19.89% | ↑ 17.76% | ↑ 50.89% | No |
| | 2015-2016 | ↑ 1.94% | ↑ 2.64% | ↑ 4.53% | Yes |
| Regional Unit of Kerkyra | 2010-2016 | ↓ 2.79% | 5.09% | 9.22% | No |
| | 2014-2016 | ↑ 1.69% | ↑ 0.75% | ↑ 9.46% | Yes |
| Regional Unit of Argolida | 2016/2010 | ↓ 18.7% | ↓ 22.80% | - | Yes |
| | 2014-2016 | ↑ 0.7% | ↑ 32% | - | Yes |
| Region of North Aegean Sea | 2010-2016 | ↓ 4.17% | ↑ 24% | ↓ 3% | No |
| | 2014-2016 | ↓ 7.7% | ↓ 4% | ↓ 3.7% | Yes |
| Region of Southern Aegean Sea | 2016/2010 | ↓ 18% | ↓ 11% | ↑ 49% | No |
| | 2014-2016 | ↓ 0.2% | ↑ 0.5% | ↑ 4.7% | No |

More specifically, from the Regional Unit of Argolida (Port of Nayplio), we result that, the year 2016 compared to the year 2010, the arrivals of cruise passengers decreased by 22,80%, they might affect GDP per capita, which decreases by 18,7%. Also, the period 2014-2016, the cruise passengers increased by 32% and they might affect the increase of GDP per capita by 0.7% (Graph 2).

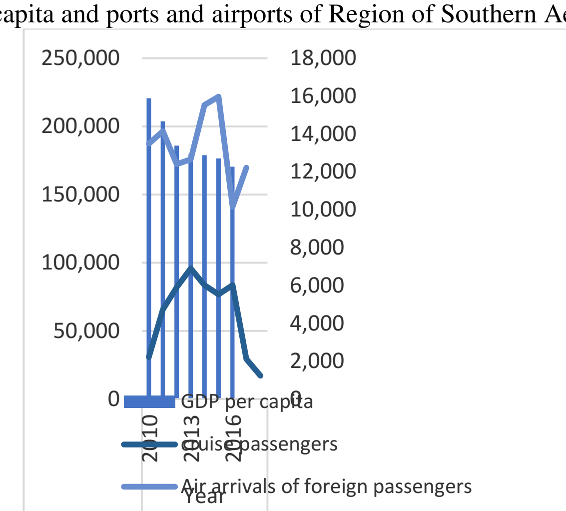
**Gragh 2**: GDP per capita and port of Nayplio of Regional Unit of Nayplio (2010-2018)




Source: Statictic data of Union of Greek ports, www.elime.gr

Also, the Region of North Aegean Sea, the period 2010-2016, the arrivals of foreign passengers increased by 21% (increase 24% of cruise passengers, decrease of air arrivals by 3%) and they do not affect the GDP per capita, decrease 4,17%. On the other hand, the period 2014-2016, the arrivals of foreign passengers declines by 7,7% (decrease 4% of cruise passengers and 3,7% of air arrivals) and they might affect the decline of GDP per capita by 1,7% (Graph 3).

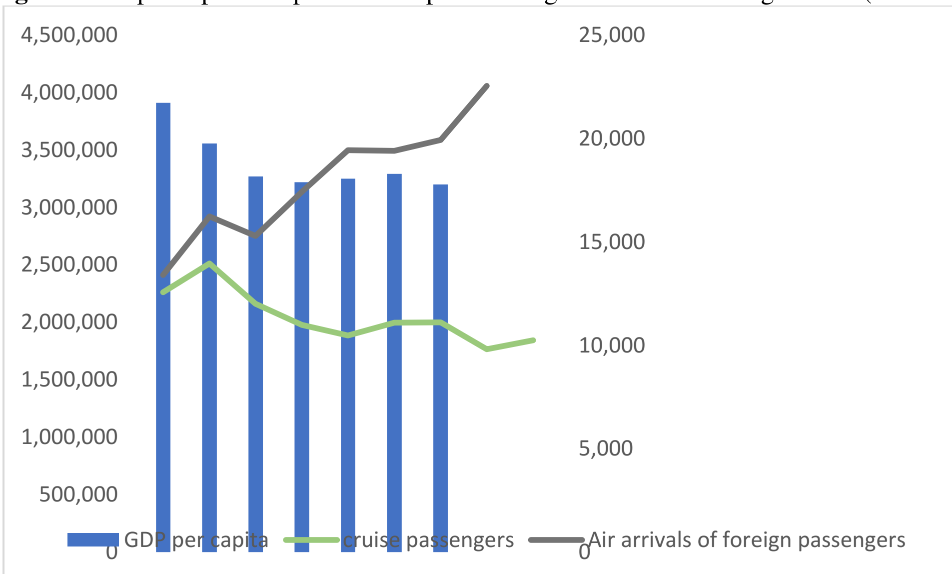
**Gragh 3**: GDP per capita and ports and airports of Region of Southern Aegean Sea (2010-2018)




Source: Statictic data of Union of Greek ports, www.elime.gr

Also, the Region of southern Aegean Sea, the year 2016, compared to the year 2010, the arrivals of foreign passengers increased by 38% (11% decrease of cruise passengers, increase of air arrivals by 49%) and they do not affect the GDP per capita, decline 18%. Moreover, the period 2014-2016, the arrivals of foreign passengers increase by 4,8% (increase 0,5% of cruise passengers and 4,7% of air arrivals) and they do not affect the decline of GDP per capita by 0,2%. Specifically, Kyklades, the year 2016 compared to the year 2010, the arrivals of foreign passengers increased by 143% (7% increase of cruise passengers, increase of air arrivals by 136%) and they do not affect the GDP per capita, decrease 19%. Moreover, the period 2014-2016, the arrivals of foreign passengers increases by 21% (increase 4% of cruise passengers and 17% of air arrivals) and they do not affect the decline of GDP per capita by 0,1%. On the other hand, the year 2016 compared to the year 2010, the arrivals of foreign passengers decreased by 10% (46% decrease of cruise passengers, increase of air arrivals by 36%) and might affect the GDP per capita, decrease 17%. Moreover, the period 2014-2016, the arrivals of foreign passengers declines by 6,7% (decrease 9% of cruise passengers and increase 2,3% of air arrivals) and they might affect the decline of GDP per capita by 0,1% (Graph 4).

**Gragh 4**: GDP per capita and ports and airports of Region of Southern Aegean Sea (2010-2018)




Source: Statictic data of Union of Greek ports, www.elime.gr

As we conclude, the attractiveness of the Southeast Mediterranean as a cruise destination has diminished, as a number of external factors such as the Arab Spring, the adoption of tax measures from southern countries, the war in Syria, the political instability in Turkey and the negative publicity accompanies the socio-economic crisis experienced by our national economy has helped the cruise companies to turn into new destinations. Also in Greece, according to research studies, there is a reduction in the average cost per arrival of passenger. As can be seen, in many regions and / or regional units, arrivals of foreign visitors have increased, but visitors do not spend money to improve GDP per capita GDP of region and / or regional unity.

Some measures are an appropriate marketing strategy, continuous participation on exhibitions, Web pages of ports and social media in order to improve the attractiveness of ports as cruise destinations and to penetrate new tourist markets. Initiatives are needed to attract investment, in order to operate new hotel units, but also to connect ports with the means of transport for easy access. In addition, long-term partnerships with tourist companies and cruise companies are needed to compete with areas such as Barcelona and Trieste. It is necessary to modernise the infrastructure of the ports in order to meet the needs of the new cruise ships, as well as connecting the tourism of the cruise with alternative forms of tourism of the region (cultural tourism, religious tourism, etc.). Furthermore, actions are needed to reduce the environmental impacts of cruise tourism, such as the installation of power supply systems.

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