

**Title: The Impact of Interaction between Religion and Legal Environment on Expense Misclassification and Real Activities: International Evidence**

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**ABSTRACT**

We examine the interaction between variations in religious social norms and legal environments on real activities manipulations and expense misclassification using a global sample of 63 countries. Our inquiry is motivated by a paucity of research on the interaction between legal environment and religion on earnings management practices in an international setting. We report that variations in religious social norms and legal environments interactions around the world subdue the positive association between religion, expense misclassification and real activities noted in prior studies. We find variability in the interaction between religion and legal environment on expense misclassification and real activities in developed, emerging and developing countries sub-samples. We conduct several robustness tests and our results provide more empirical evidence and indicate that strengthening the legal environment will complement religion, IFRS and other monitoring mechanisms put in place to mitigate unethical expense misclassification and real activities earnings manipulation.

**Keywords:** religion; legal environment; classification shifting; real activities, IFRS; international evidence.

**JEL:** G3, M41, K42, Z12

## 1. INTRODUCTION

There are variations in religious social norms and legal environments around the world. In this paper, we explore the role that varying religious social norms and legal environments play together in affecting expense misclassification<sup>1</sup> and real activities manipulation<sup>2</sup> in an international setting. Prior research suggests that the presence of religion in the firm's environment decreases accruals earnings manipulation but increases real earnings manipulation (Abdelsalam et al, 2020; Cai et al., 2020; Boahen & Mamatzakis, 2020; McGuire et al., 2012; Callen et al., 2011; Dyreng et al., 2012). For example, Abdelsalam et al, (2020); Ma et al. (2019) and Bjornsen et al. (2019) observe that religion decreases accruals manipulation but Boahen and Mamatzakis (2021); Cai et al. (2020) and McGuire et al. (2012) report that religion induces real activities manipulation and expense misclassification that violate the legal framework. A stream of research has also investigated the effect of legal environment and investor protection on accruals earnings management, real activities manipulations and classification shifting and reported positive/negative relationship (Behn et al 2013, Cohen et al., 2008; Cohen & Zarowin, 2010; Fields et al. 2001; Jiang et al, 2018; McGuire et al., 2012; Zang, 2012). However, the interaction between the legal environment and religion on real activities manipulation and classification shifting behaviour in an international setting has remained unexplored, and this is the focus of our study.

In this paper, we investigate the interaction between variations in religious social norms and legal environments on expenses misclassification and real activities manipulation in an international setting. We argue that both religion and law can serve as constraints, or religion can serve as a substitute for law. Therefore, their interaction will play a complementary role to mitigate unethical business practices, such as classification shifting and real activities manipulation around the world. Recent research indicates that law and religion are inseparable and inevitable in maintaining order, equity, and social justice (Leontiev, 2024; Sonkar, 2024; Young & Billings, 2020). The link between law and religion is very strong due to the fact that foundations of societies are shaped by laws, individuals' religious beliefs and values (Chaplin, 2012, Foster, 2016; Kirk, 2020). For example, Kirk (2020) observes that law influences religion and religion influences law. Therefore, we

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<sup>1</sup> We use expense misclassification or classification shifting interchangeably.

<sup>2</sup> We use earnings manipulation or earnings management interchangeably. In terms of earnings manipulation, expense misclassification is an accounting approach while real activities manipulation is a transactional approach to influencing reported profit.

propose to examine the influence of the interaction between varying religious social norms and legal environments on expense misclassification and real activities manipulation, which from an ethical point of view do not comply with the expected moral standards. Prior research has debated an association between religion and law that motivates our further investigation of this puzzle.

First, Lemons (2019) and Sonkar (2024) indicate that religion and law are seen as monitoring mechanisms to control unethical behaviour and illegal practices. Second, Chua and Engel (2018) observe that both law and religion can be found in people's ordinary lives just as law and religion are located in everyday life. Third, both law and religion frown upon fraudulent behaviour, promote transparency and could create value for shareholders (Baxamusa & Jalal, 2014). Fourth, Massoud and Moore (2020) indicate that religion guides decision-making, promote rule following, and legal mobilization which serve as an alternative framework to law. Finally, Chaplin (2012) and Leontiev (2024) indicate that there exists a link between religion and law and that religion influences law significantly and legitimately at country-level. Relatedly, Young and Billings (2020) observe that both law and religion shape behaviour and promote the basis of social equity and justice. Therefore, it cannot be under-estimated the extent, to which religion shapes and influences laws and legislations in different countries. Kirk (2020) and Foster (2016) observe that religion influences law, however, some countries are neutral on religious matters and some countries exercise restraints on religious matters because religion is a sensitive matter that affects every member of the society. These principles of religious constraint and neutrality indicate that religion significantly influences law.

Despite the link between law and religion, the interaction between varying religious social norms and legal environments around the world on earnings management practices has not been explored. However, previous studies have examined the influence of religion or legal environment on earnings management practices with mixed results (Cai et al., 2020; Ma et al., 2019; Bjornsen et al., 2019; McGuire et al., 2012; Callen et al., 2011). For example, Abdelsalam et al. (2020) find a negative association between religion and accruals manipulation. McGuire et al. (2012) and Cai et al. (2020) find a positive association between religion and real activities and Callen et al. (2011) find no association between legal environment and earnings management practices. This study addresses the gap in an international setting given the variations in religious social norms and legal environments around the world. First, we expand the international evidence to cover firms around the world to shed new light on the influence of religion and legal environment on expense

misclassification as they offer considerable variability across different countries, in the main underlying variables. Second, we explore the interaction between religion and legal environment on classification shifting and real activities manipulation in an international setting. Green (2012) indicates that limited variability in the data generating process of the main variables in empirical studies could bias estimations. This could be the case in previous studies on the subject; especially the fact that religion has limited variability over time within a country (Kanagaretnam et al., 2015; McGuire et al., 2012; Callen et al., 2011; Dyreng et al., 2012). Therefore, it is important to observe cross sectional variability as we propose herein. In addition, we offer insights on the interaction between varying religious social norms and legal environments on classification shifting and real activities earnings management.

At the international level, we provide first time evidence that the interaction between law and religion serves as constraints on earnings management practices. In particular, we show that both classification shifting and real activities manipulation decrease when religion interacts with legal environments around the world. We show that religion strengthens the weak legal environment and the strong legal environment strengthens the weak religious environment to decrease both real activities manipulation and classification shifting when law and religion interacts in an international setting. Therefore, our results contradict Zang (2012) earnings management trade-off evidence and Malikov et al. (2018) evidence that mandatory IFRS adoption is associated with increase in both real activities manipulation and classification shifting. Zang (2012) observes that firms substitute one earnings management method for another based on their relative costs and that firms decrease the level of accrual-based earnings management according to the level of increase in real activities manipulation realized. When firms are unable to use costly, illegal and unethical accruals manipulation or expense misclassification to increase reported profits, they would resort to real activities manipulation. However, our results show that both expense misclassification and real activities decrease when religion interacts with legal environment around the world. Therefore, our results do not support Zang (2012) findings. When religion and legal environment interact, managers cannot substitute expense misclassification for real activities. Again, our results contradict Malikov et al. (2018) who report that firms engage more in expense misclassification and real activities to a greater extent after mandatory IFRS adoption, suggesting that the latter offers more latitude for both earnings management practices. On the contrary, our results show that both classification shifting and real activities manipulation decrease when religion interacts with legal environments around the world.

Additional analysis indicates that religion and strong legal environment complement IFRS to curb expense misclassification (Ball, 2016; Nobes, 2013) in the pre-and-post financial crisis period. Overall, our results suggest that the interaction between variations in religious social norms and strong legal environments around the world decreases both real activities manipulation and classification shifting.

This paper contributes to the extant literature on financial reporting and earnings management (Abdelsalam et al., 2020; McGuire et al. 2012; Zang, 2012) in several ways. First, the study adds to the body of knowledge on real earnings management and classification shifting by being the first to show how the relationship between the legal system and religion inhibits both real activities earnings management and expense misclassification. The interaction between religion and law has not been examined in the existing studies. Most studies have concentrated on religion and accruals earnings management (Abdelsalam et al., 2020; McGuire et al. 2012); religion and real activities manipulation (Cai et al., 2020; McGuire et al. 2012); religion, culture, and classification shifting (Boahen & Mamatzakis, 2021; 2020). However, we argue that the impact of religion should be viewed within a glass house approach. The legal system of a country is important because it provides stability to the social and economic framework of a country. Religion could complement this role of the legal system and could amplify its effect towards raising ethical business standards, which in our case is related to the quality of financial reporting.

To this end, we provide new evidence and show that there is a link between religion and law that subdues both expense misclassification and real activities manipulation at international level. However, there is variability in the extent of the impact in developed, emerging and developing countries sub-samples. In addition, prior research indicates that an increase in real activities manipulation is costly to shareholders and affects long term cash flow and shareholder value (Cohen & Zarowin, 2010; Zang, 2012). Therefore, we contribute to the extant literature that the interaction between religion and legal environment benefits firms and increases shareholder value as real activities manipulation decreases.

Second, we provide further empirical analysis (for the first time) to show the effect of IFRS adoption on classification shifting in the presence of legal environment and varying

religious social norms in an international setting. While extant literature shows that mandatory IFRS adoption induces both real activities manipulation and classification shifting (Ball, 2016; Nobes, 2013; Malikov et al., 2018), we contribute to the extant literature that the interaction between law and religion complement IFRS to mitigate both classification shifting and real activities manipulation in an international setting.

Third, we report the prevalence of classification shifting behaviour and real activities manipulation around the world to provide evidence whether variability exists and to what extent. Existing studies have focussed on real activities or classification shifting at national level (Alhadaba & Clacher 2018; Jarvinen & Myllymaki, 2016; Kothari et al., 2016; Zalata & Roberts, 2016; Zalata et al., 2021). We examine both earnings management methods (real activities and classification shifting) in a global study. Our sample of countries covers all major developed, emerging and developing economies and offers a unique opportunity to observe classification shifting and real activities in the presence of considerable heterogeneity. Overall, we find that religion and law interact effectively and legitimately at country level to mitigate classification shifting and real activities earnings management. Our results are useful to inform policy decision making for firms operating in countries where the legal environment is strong.

In what follows, Section 2 provides the theoretical framework and hypotheses, while Section 3 presents the global sample. Sections 4 and 5 report and discuss the results, while the last Section offers some conclusions.

## **2. BACKGROUND AND IDENTIFICATION**

### **2.1 Theoretical Framework**

Institutional theorists (DiMaggio & Powell, 1983, Meyer & Rowan, 1977) contend that the development of formal structures in an organization is shaped profoundly by the institutional environment. Institutional environments are enduring systems of social beliefs and practices with diverse functional areas of societal systems such as; religion, work, politics, laws, and regulations (Gabbioneta et al., 2013, North, 1990). Research indicates that institutions are social and cultural systems that seek both resources and legitimacy in their environment (Jones, 1999, Scott, 2008). Generally, corporate illegality and unethical business

practices such as earnings manipulation, accounting fraud, anti-competition and embezzlement are illegal and unethical actions that are intended to benefit the organisation or individuals who act in their own interest at the expense of the organization (Greve et al., 2010, Mishina et al., 2010). The desire to improve performance makes all firms vulnerable to corporate illegality and unethical business practices regardless of their environment, conditions, and locations. For example, high-performing firms engage in illegal and unethical practices to maintain high performance, but poor performing firms act illegally to survive (Greve et al., 2010). The above indicates that institutional context; influences, structures and processes motivate illegality and unethical behaviour within organisations, provide opportunities for its occurrence and enable firms to engage in illegality and unethical business practices.

## **2.2 Interaction between Law and Religion**

Both law and religion are inseparable because they deal with the maintenance of order, disputes, address wrongdoing and unethical business practices (Edge and Harvey, 2017; Laborde, 2015; Makdisi, 2022; Sonkar, 2024). The interaction between law and religion has provided unique traction to researchers working on basic issues in religious studies, political theory, legal philosophy, and jurisprudence (Chua and Engel, 2018; Massoud and Moore, 2020). Law and religion constitute an integral part of human society that assists to maintain peace, stability, and progress among people in society and organizations (Chua and Engel, 2018). Therefore, Leontiev (2024) indicates that some religions around the world rely heavily on the law or legal system to regulate social behaviours. Similarly, Dong et al., (2020) observe that the legal and justice system in some part of the world derives its power and authority from the religious belief of the people. Therefore, religion and law interact and are inseparable.

Prior research has explored the interaction of law and religious ideas and institutions, norms and practices, the interaction between law and religion, religious dimensions of law and the legal dimensions of religion (Dong et al., 2020; Beaman, 2020; Makdisi, 2022). These studies observe that law and religion play a complementary role to promote high moral standards, maintain order, protect individuals, organisations and regulate unethical business practices. For example, Dong et al. (2020) and Sonkar (2024) indicate that religion is strengthened by law and law gives religion its structure and encourages its devotion to order and organization. Relatedly, Kabumba, (2023) and Welker (2015) observe that law and religion “continue to cross-over and cross-fertilize each other.” Both law and religion are devoted to human beings behaviour and morality. Therefore, the interaction between law and religion matters because of the extent to which law or religion can impinge on individuals,

communities, and organisations. The interaction between law and religion are inevitable because they are both regarded as social phenomena that often coexist within individual social actors. Relatedly, Kabumba, (2023) observes that around the world, law and religion serve as constraints or law can substitute for religion in some cultures. Therefore, the interaction between law and religion can serve as constraints or play a complementary role to regulate illegality and address unethical business practices.

### **2.3 Earnings Management**

Evidence in prior research suggests that classification shifting, accrual-based and real activities earnings management are not uncommon in U.S. (Bazrafshana, Kandelousib & Hooya, 2016; Jarvinen & Myllymaki, 2016; Kothari et al., 2016; Zalata & Roberts, 2016; Tahir, Ibrahim & Nurullah, 2019; Fan et al., 2010; Cohen & Zarowin, 2010; McVay, 2006; Roychowdhury, 2006). Classification shifting is a form of earnings management that involves the shifting of core expenses into non-recurring ones (Botsari & Meeks, 2018; Zalata & Roberts, 2017; McVay, 2006). For example, Burgstahler et al. (2002, 2006) study the effect of special items on future earnings and report that firms use these to speed up the recognition of future expenses into the current period. They find that income-decreasing special items serve as an '*inter-period transfer*' device. Cready, Lopez and Sisneros (2012) extend the analysis of previous studies and find that earnings increase in post-special item quarters beyond the four quarters considered by Burgstahler et al. (2002, 2006).<sup>3</sup> In addition, as classification shifting does not change the bottom line net income, it is difficult to monitor (McVay, 2006; Zalata & Robert, 2017). This type of expense misclassification involves shifting operating expenses into extraordinary/exceptional items (Barnea et al., 1976); misclassifying core expenses as special items (Fan et al., 2010; McVay, 2006); and misclassifying operating expenses as discontinued operations (Barua et al. 2010).<sup>4</sup>

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<sup>3</sup>Athanasakou et al. (2009) find that in the UK firms are likely to misclassify core expenses into non-recurring ones to meet analyst benchmarks or expectations. Zalata and Roberts (2016) report that the ability to deliberately misclassify core expenses to inflate core earnings is not homogeneous across firms and that internal governance mechanism could mitigate classification shifting. Ali and Zhang, (2015) and Elliot and Shaw, (1998) report evidence that new CEOs are likely to misclassify or overstate the expenses/losses of their firms in the first year of service to discredit the previous CEOs to take credit for the resulting higher profits in subsequent years.

<sup>4</sup> It is worth noting though that misclassification of core expenses into special items could carry information value to investors as it signals managers' inside information (Arya et al., 2003; Scott, 1997).



In terms of international evidence, Haw et al. (2011) examine classification shifting in East Asian countries using a sample over the period 2001 to 2004. They find that countries with strong legal institutions are associated with less shifting. The study noted that the unique corporate governance mechanisms in East Asian countries may have influenced their results. Therefore, generalising them to countries outside of East Asia would be risky. In addition, Behn et al. (2013) extend the international studies and investigate the relationship between classification shifting, financial analyst monitoring and investor protection using firms in 41 countries. They find that a strong investor protection mechanism and more financial analyst following in an organisation reduce managers' incentives to misclassify core expenses into non-recurring or exceptional items.

More recent studies on accounting practices have explored religion as a determinant in the financial reporting literature (Abdelsalam et al, 2020; Boahen & Mamatzakis, 2021; 2019; McGuire et al. 2012 Callen et al., 2011; Dyreng et al., 2012). For example, Ma et al. (2019) and Bjornsen et al. (2019) observe that managers in more religious societies report more conservatively and firms headquartered in countries with higher levels of religion exhibit, on average, higher accounting conservatism in financial reporting. On the contrary, Boahen and Mamatzakis (2021) observe a positive relationship between religion and expense misclassification in india, Cai et al. (2020) and McGuire et al. (2012) find that religion induces real activities manipulation, despite the fact that real activities manipulation are costly and detrimental to shareholder value.

Regarding the interaction term between legal environment and religion on classification shifting, there is little evidence in an international setting. Nevertheless, prior research indicates the influence of legal environment on earnings management. Previous empirical evidence indicates that the legal environment negatively affects accrual-based earnings management (Leuz et al., 2003). However, Callen et al. (2011) observe that a country's legal environment is mediated by culture, and therefore Leuz et al.'s (2003) evidence that the legal environment is negatively related to earnings management is not evident in our data. Haw et al. (2011) argue that the quality of legal institutions and appointing external auditors would reduce classification shifting, which is in line with Francis and Wang (2008) who find close associations between legal environment and auditing. Legal framework related to investor protection also is of some importance as Behn et al. (2013) report that classification shifting is common where investor protection is low.

## **2.4 Religion, Legal environment and Classification Shifting**

Prior studies (Kanagaretnam et al. 2015; Stavrova et al., 2013; McGuire et al. 2012) observe that people who are intrinsically motivated by religious practices have self-control, self-regulation and are less likely to engage in dubious practices or accept morally doubtful decisions. Akerlof (1980) and Dyreng et al. (2012) find that failure to behave in conformity to one's local social norms not only generates strong cognitive dissonance but also brings about social sanctions that are imposed on deviants. Along these lines, Du (2013) highlights the crucial role of religion in mitigating the agency problems and observes that the absence of religion can potentially influence the performance of the organisation and harm stakeholders. Therefore, an environment characterised by religious social norms could exert influence on managerial attitudes vis a vis also with respect to financial reporting. The accuracy of financial reporting subdues asymmetric information between firms and investors (La Porta et al. 1998) and contributes to market efficiency. Akerlof (1970) was the first to propose the importance to overcome asymmetries of information across market participants. We argue that religion, and religion in the presence of legal environment, could reduce classification shifting and thereby improve financial reporting quality.

Previous studies have examined the association of religion with practices such as tax evasion, tax avoidance, tax fraud, accrual-based and real activities earnings management (see Boahen & Mamatzakis, 2021; Stack and Kposowa 2006; Richardson 2008; Callen et al. 2011). In examining the association between tax fraud acceptability and religion in 36 countries, Stack and Kposowa (2006) find that there is a negative association between them, though without controlling for cultural differences. Similarly, Richardson (2008) examines the relation between religion, culture and tax evasion using country-level data from 47 countries. The study finds that religion is negatively related to tax evasion, while uncertainty avoidance is positively related to it.

Given the above discussions, the association between classification shifting and religion in the firms' environment needs further examination in an international setting. Our analyses extend the literature on classification shifting for two main reasons. First, prior research indicates that managers are less likely to engage in detectable earnings management practices (Cohen & Zarowin, 2010; McGuire et al., 2012). Therefore, they will avoid illegal accrual earnings management and engage in earnings management practices that do not violate the legal framework, even though such earnings management practices are unethical and increase cost to shareholders (Cohen et al., 2008; Cohen & Zarowin, 2010; McGuire et

al., 2012; Zang, 2012). Second, extension of the literature is important, because previous studies have indicated that ethically sensitive firms frown on financial reporting irregularities and religion has an effect on individuals' ethical behaviour, attitudes and ethical values (Tayler & Bloomfield, 2011; Vitell, 2009; Parboteeah et al., 2008).<sup>5</sup> Ethical consideration is key to understanding classification shifting. It is up to the ethical beliefs of the firms to safeguard against classification shifting. The role of religion as an external ethical governance code to the firm could be at play and an investigation is thereby warranted. Based on the ethical consideration, we investigate the role of religion on classification shifting. We argue that countries with a high level of religion could be less inclined to misclassify core expenses into special items on ethical grounds. Our first hypothesis regarding the effects of religious practices on opportunistic classification shifting behaviour is:

***H1: There is a negative association between religion and classification shifting behaviour across the world.***

On the other hand, La Porta et al. (1998) find the importance of legal environment in restraining management's financial misreporting practices. Similarly, other studies find that legal environment would enhance investor confidence as it reduces asymmetric information (see Abdelsalam et al., 2020; Behn et al. 2013; Callen et al. 2011; Leuz et al. 2003). There is some variability though as Nabar and Thai (2007) and Douppnik (2008) find little association between legal environment and earnings smoothing. However, Abdelsalam et al, (2020) and McGuire et al. (2012) indicate that religion mitigates accruals earnings management but Callen et al. (2011) do not find any relationship.

Law and religion interact and are inseparable (Sonkar, 2024). Therefore, we shed new light on the influence of the interaction between religion and legal environment on classification shifting in an international setting. This in-depth investigation is possible because of the plethora of countries in our sample that indicate variability in both religious adherence and legal environments. Law and religion are not competing, but they are complementary to regulate and mitigate firms' unethical business and illegal practices (Beaman, 2020; Kabumba, 2023). Religion matters to law because of the importance of

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<sup>5</sup> Shu et al. (2012) observe a positive relation between religion and high ethical values. Research also indicates that a highly religious environment shapes the behaviour and morals of the individuals in that area (McGuire et al., 2012). For example, values such as accountability, honesty and discipline are known to be associated with highly religious environments (Lehrer, 2004; Keister, 2003; Iannaccone, 1998; Kennedy & Lawton, 1998).

religion to broader cultural and communal life, or their role in society and in organisations. Similarly, law matters to religion because of the extent to which law can impinge on individuals, communities, and organisations (Kabumba, 2023; Makdisi, 2022). Both law and religion interact to regulate illegal and unethical practices in society and in organisations. Based on this view, we explore the interaction between the legal environment and religion on expense misclassification in an international setting.

The interaction between religion and legal environment on classification shifting in an international setting could hinder managerial incentive to engage in expense misclassification. When law and religion interact, it is possible that firms would avoid expense misclassification on ethical grounds or to protect firms against possible reputation damage from regulators and auditors. Such firms would have an incentive to engage in real activities earnings manipulation to the detriment of shareholder value because real activities are not fraudulent or illegal but normal business transactions. Lemon (2019) indicates that religion and law interactions are seen as monitoring mechanisms to control unethical behaviour and illegal practices. The interaction between law and religion can be found in people's ordinary lives just as law and religion are in everyday life (Chua & Engel, 2019); interaction between law and religion frown upon fraudulent behaviour, promote transparency and could create value for shareholders (Baxamusa & Jalal, 2014; McGuire et al., 2012). The interaction between law and religion plays complementary role because religion guides decision-making, promote rule following, and legal mobilization which serve as an alternative framework to law (Massoud & Moore, 2020).

In addition, the differences between law and religion could make their interaction provide additional inhibitory effect on the managerial incentive to engage in classification shifting behaviour. Recent research indicates that law and religion use different methods of beliefs and rules to control the actions of individuals in a society or organisations (Leontiev, 2024; Makdisi, 2022). Again, law punishes and imposes penalties on wrong doers in this world, but religion is based on faith or belief systems and those who violate religious practices and belief systems are often threatened with after death punishment (Sonkar, 2024). Strict adherence and compliance with law is required from everyone in society or organisation, but some religious groups allow personal choice and compliance with the same beliefs or faith is not compulsory in several countries around the world. Kabumba (2023) indicates that law and religion differ because the authority to create laws in modern society resides exclusively in the legislature but the source of authority of religious law is often said to be the deity or the first ancestors. Therefore, religious laws differ from secular ones with

respect to their sources of authority, processes of dispute resolution, and mechanisms of enforcement.

The above discussions indicate that religion and law can serve as constraints or religion can serve as a substitute for law to control unethical business practices. Despite these links and differences between religion and law, we do not know the extent to which the interaction between religion and various legal environments could affect classification shifting around the world. Therefore, we argue that the interaction between law and religion could provide additional inhibitory effect on managerial classification shifting behaviour. There is no prior evidence of this interaction, however, from a theory point of view, strengthening the legal environment could complement religion and both could mitigate classification shifting. Evidence is yet to be reported. Therefore, we test for the following hypothesis:

***H2: The interaction between religion and legal environment would negatively affect managers' classification shifting behaviour across the world.***

## **2.5. Religion, legal environment and real activities earnings management**

Prior research indicates that when firms are unable to use costly, illegal and unethical accruals manipulation or expense misclassification to increase reported profits, they would resort to real activities manipulation (Fields et al. 2001, McGuire et al. 2012; Zang, 2012). Zang (2012) and Fields et al. (2001) observe that real activities earnings management is costly to shareholders, detrimental to shareholder value and affects financial reporting quality. Real activities earnings management occur when firms' engage in routine business decisions and practices that decrease shareholder value in the long-run (Cohen & Zarowin 2010; Gunny 2010; Jarvnen & Mallymaki, 2016; Zang 2012). For example, Dechow et al. (2012) and Gunny (2010) report that real activities increase reported earnings in the short-term.

Real activities manipulation decreases shareholder value (Jarvnen & Mallymaki, 2016; Kothari et al. 2016; Roychowdhury, 2006). However, Abdelsalam et al. (2020) and Cai et al. (2020) find that firms favour real activities manipulations in a religious social norm environment because external auditors and regulators find it difficult to detect and real activities are based on separate efficient business decisions from opportunistic decisions. To the extent that firms would favour difficult to detect, costly and value-destroying real activities earnings management in a religious social norm environment to increase reported

earnings in the short-run, we conjecture that the interaction between religion and the legal environment would mitigate real activities to increase long-term shareholder value and cashflow.

Law and religion are inseparable. Religion matters to law and law matters to religion (Edge & Harvey, 2017). The legal environment could strengthen religious social norms in a firm's environment to restrain unethical business practices. McGuire et al., (2012) observe that religion increases real activities manipulation. We argue that the legal environment could interact with religion to decrease real activities manipulation since both play a complementary role to promote high moral standards, maintain order, protect individuals, organisations and regulate unethical business practices. However, this is a testable proposition. The interaction between law and religion on real activities manipulation matters because of the extent to which law and religion can affect individuals, communities, organisations, and unethical business practices.

Kim et al. (2012) argue that firms value reputation and would avoid socially unacceptable activities to protect their reputation. It is possible that when religion interacts with the legal environment, ethical managers would not adopt or engage in malpractices that could harm the business. Therefore, we argue that the legal environment could interact with religion to protect ethical managers, firm's reputation and strengthen monitoring mechanism to discourage real activities manipulation. Again, we conjecture that when religion interacts with the legal environment, firm managers' would not have an incentive to engage in real activities which have negative implications on shareholder value and long-term cash flow. Based on the above arguments and given that real activities earnings management is costly to shareholders, detrimental to shareholder value; we conjecture that firm managers would decrease real activities earnings management when the religion interacts with the legal environment. However, this is a testable proposition. The following hypothesis is therefore presented for testing:

***H3: The interaction between religion and legal environment would decrease real activities earnings management across the world.***

### **3. DATA AND DESCRIPTIVE STATISTICS**

#### **3.1. Measuring the Countrywide Religion Index**

Measuring religion across the world does not come as a straight forward exercise due to data availability issues. The main data source is World Values Surveys (WVS) of the World Bank. The WVS provides religion datasets that vary from wave to wave, indicating variability in religion datasets overtime. Every four years, there are survey data collected by the WVS of the World Bank since 1989. As a result, there is variability over time. The survey is based on surveys, telephone and face to face interviews conducted between 2000 and 2018 with a minimum of 5,000 adults in each country. A total of over 400,000 respondents were interviewed globally. Across all the populations, the median response to the survey questions was 82%. In addition, the survey indicates that 8 out of the 11 countries which are most religious (with a religion index of at least 98%) are poorer nations from sub-Saharan Africa and Asia. On the contrary, the 10 least religious countries from the study have the highest living standards in the world. Of the 27 countries commonly seen as part of the developed world, the median proportion of nationals who state that religion is important, that they attend religious services regularly, and participate in weekly religious activities is below 45%. The only exception is the USA, with a median of 62%.

As in Callen et al. (2011) and Stack and Kposowa (2006) we employ data for religion from the WVS of the World Bank. The WVS is a global network of social scientists studying changing values and their influence on the social and political life of countries. The country level religion index reflects the frequency of attendance of religious services (i.e. weekly participation in religious activities) as well as the level of importance placed on religious activities by individuals. The country level religion index is based on a survey where responses take values from zero, indicating never taking part on religion activity to six. Thus, a high value of the index implies a higher level of religion.

#### **3.2. Measuring the Legal Environment**

We obtain legal environment scores from the International Country Risk Guide (ICRG) (2018), similar to prior studies (Winter & Martinez, 2015; Askarov & Doucouliagos, 2013; Fan et al. 2010; Leuz et al. 2003 and La Porta et al. 1998). The ICRG datasets and methodology are used by academics and researchers at the IMF, as the datasets have received commendation in publications such as The Wall Street Journal, The Economist and Baron's.

The ICRG employs 22 variables to measure risk in three main areas, political, financial and economic; however, a separate index is created for each subcategory. The legal environment scores of International Country Risk Guide (ICRG) provide comprehensive information on the quality of legal framework. The ICRG provides legal environment scores, political risk, financial risk and economic risk ratings for 140 countries on monthly and on an annual basis. Therefore, there is time variability in ICRG legal environment datasets. In some detail, the ICRG provides information on the strength of the legal environment and measures legal environment as the average mark across three main legal indicators: (i) the efficiency of the judicial system, (ii) the appraisal of the rule of law and (iii) the corruption. The strength of the legal environment takes values from zero to ten for all the three main indicators. In addition, to account for economic conditions we include in our analysis from International Country Risk Guide (ICRG): the annual per capita Gross Domestic Product (GDP), inflation, economic risk and political risk to control for differences in countries for all the years.

### **3.3. Accounting Data and Sample Selection**

All accounting data are secondary data and are provided by Compustat Global Finance through WRDS. The full sample consists of 908,125 firm-year observations for the period 2000 to 2018 from 117 countries. We collect financial analysts' data from the IBES summary file. In line with previous studies (Behn et al., 2013; Haw et al., 2011), countries require a minimum of 10 firm-year observations to qualify for inclusion in the sample. To estimate abnormal core earnings, 54 countries and financial years prior to the year 2000 were excluded because of insufficient number of observations. All firm-years and variables with missing firm-year observations are also deleted. In some detail, our sample includes 63 countries, 254,916 firm-year observations for the fiscal years 2000 to 2018. In our sample for each country, there are minimum of 10 firm-year observations while any firm year observation with sales revenue of less than \$500,000 are excluded to correct for outliers (Haw et al., 2011; Fan et al., 2010; McVay, 2006). Table 1a presents the list of countries grouped under International Monetary Fund (IMF) classification of developed, emerging and developing countries. The breakdown of the final datasets consists of 26 developed countries, 26 emerging countries and 11 developing ones with sufficient firm-year observations. Included in the list of the developed countries are ones with significant number of firm-year observations, such as Australia, Belgium, the United Kingdom, Japan and the United States of America. Similarly, China, Indian, South Korea and Malaysia have a significant number of observations among the list of emerging countries. In addition, Croatia, Tanzania, Vietnam



and Sri Lanka are among the list of developing countries with a high number of firm-year observations.

### 3.4. Measuring normal and expected core earnings) to derive classification shifting

In line with previous studies (Behn et al., 2013; Haw et al., 2011; Fan et al., 2010; McVay, 2006; Haw et al. 2011; Fama & French, 1997), we derive Normal/Expected Core Earnings (NOR\_CE thereafter) from the following model.

$$NOR\_CE = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO + \beta_3 ACCRUALS_{t-1} + \beta_4 \Delta SALES + \beta_5 NEG\_ \Delta SALES_t + \varepsilon_t, \quad (1)$$

The lagged core earnings ( $CE_{t-1}$ ) are included in the model because earlier studies indicate that core earnings are unrelenting. We estimate Model 1 to estimate normal core earnings. First, we estimate variables coefficients using observations for each industry-fiscal year with the required minimum observations. Thereafter, we estimate the normal core earnings for each firm by multiplying the coefficients derived from Model 1 by the actual value of the variables included in the model. Following the concerns raised by Fan et al (2010), we exclude current accruals from McVay (2006) model. An asset turnover ratio ( $ATO_t$ ) is also included in the model because Nissim and Penman (2001) observe that asset turnover is inversely related to profit margin. Consistent with Fan et al. (2010) and Behn et al. (2013), lagged operating accruals ( $ACCRUALS_{t-1}$ ) are included because earnings performance is found to be associated with the accruals figure. Sloan (1996) observes that accruals have a significant effect on future performance. Therefore, careful consideration of the accruals figure will help circumvent the econometric problems noted by McVay (2006). Baker et al. (2009) indicate that cost increases are associated with changes in activity level. Therefore, we include change in sales  $\Delta SALES$  (and negative change in sales  $NEG\_ \Delta SALES$ ) as in the McVay (2006) model. For international companies, the alternative accruals estimation model used by Francis and Wang (2008) and Behn et al. (2013) is employed to estimate accruals.

In addition, Table 1b provides additional countrywide descriptive statistics. For each of the 63 countries, the count of firm-year observations, the mean and the median for reported core earnings (REP\_CE), unexpected core earnings (UNEXP\_CE) and income-decreasing special items (SPITEM) are reported. The mean of income-decreasing special items scaled by sales for the 63 countries is 0.003, with Nigeria (0.005), Australia (0.004), the USA (0.004), Estonia (0.004) and Turkey (0.004) exhibiting the highest income-decreasing special items. The mean and median unexpected core earnings (UNEXP\_CE) for the 63 countries are 0.004

and 0.007 and the mean and median income-decreasing special items are consistent with the distribution reported by previous studies (Behn et al., 2013; Haw et al., 2011).

Table 2 presents the descriptive statistics of the full sample for the regression variables. For each of the variables, the count of the firm-year observations, the mean, the median, the standard deviation, the minimum and the maximum are reported. The mean and median sale (in millions U.S. \$) values for the full sample are 72619 and 1180 respectively, suggesting that wide variations in firm size exist among the sample country firms. In addition, the mean and median reported core earnings (REP\_CE) are positive, at 0.166 and 0.112 respectively. Similarly, the mean of income-decreasing special item (SPITEM) is positive at 0.001 and the median is zero. The mean and median unexpected core earnings (UNEXP\_CE) are equal to zero. This evidence is consistent with previous studies (Behn et al., 2013; Haw et al., 2011). Accruals are income-decreasing, as both the mean and median reveal negative -0.024 and -0.021 respectively. The mean religion (RELINT) across the sample countries is 66.03%; the median is 74.65%, the minimum is 10.6% and the maximum is 98.7%. The mean religion figure of 66% suggests that a higher proportion of the country nationals within the sample attend religious services frequently, participate in weekly religious activities and place a high level of importance on religious activities, according to the evidence from the World Values Survey of the World Bank. The mean legal environment (LEGAL) across the countries in the sample is 7.833, the median is 8.891, the minimum is 3.467 and the maximum is 10. The mean of 7.833 also indicates that strong legal environment exists in the majority of the countries sampled for the study, which is consistent with Leuz et al. (2003) and La Porta et al. (1998).

To ensure that there is non-multicollinearity problem, we present both the Pearson and Spearman correlation coefficients for all the variables in the regression model. It is worth noting that the directions of the Pearson and Spearman correlation coefficients are generally similar, an indication that there is a lack of multicollinearity problem within the data. Again, consistent with Green (2012) and Kennedy (2008) we also estimate the variance inflation factor (VIF) for the independent variables and the highest VIF among all the independent variables is below 3.4. Green (2012) indicates that a VIF of 10 or less is a good sign of non-multicollinearity problems. Note that we do not provide tables of VIF and correlation for purpose of brevity. The correlation coefficients corroborate the validity of the model and the multivariate regression results will further corroborate the relation.

### **3.5 Fixed Effects and Mis-specification Tests**

To account for differences in countries and variations in firm sizes, we follow previous studies (Elshandidy & Neri, 2015; Ntim et al., 2013; Behn et al., 2013; Haw et al., 2011) and employ the fixed-effects regression model to assess the influence of religion (RELINT) and legal environment (LEGAL) on unexpected core earnings (UNEXP\_CE). The Hausman test is performed and the results favour the fixed effects regression model. Consequently, the alternative random effects regression model is rejected and the fixed effects regression model chosen to test the relationship between the dependent variable (UNEXP\_CE) and independent variables (RELINT and LEGAL). We also conduct normality tests using Kolmogorov-Smirnov test of normality, tests for the presence of heteroscedasticity, using Breusch-Pagan tests for heteroscedasticity and finally checks for serial correlation or auto-correlation with a Wooldridge test for auto-correlation in panel data. The results of these preliminary tests indicate that the data meet the requirements of normality; there is an absence of heteroscedasticity and auto-correlation or serial effects.

Again, in line with previous studies (Garcia-Herrero et al., 2009; Dietrich & Wanzenried, 2014), we repeat a Wald test to omit insignificant variables and to estimate the model with only significant control variables to the maximum extent possible. Specifically, the Wald joint hypothesis test is estimated to ensure that the coefficients of the individual variables that are insignificant are equal to zero. That is, the null hypothesis is rejected if the p-value is less than 10% (significant) and the study includes the control variable in the model for the analysis. On the other hand, if the p-value is greater than 10% (insignificant), the control variables are omitted from the model. We repeat several Wald tests to reduce the number of insignificant control variables in the model until the remaining variable set of coefficients are equal to zero. This approach has the potential to reduce the number of variables to an efficient or minimum size.

## **4. EMPIRICAL REGRESSION RESULTS AND DISCUSSIONS**

### **4.1. Relationship between Countrywide Religion and Classification Shifting**

When firms engage in classification shifting, unexpected core earnings increase with special items. Having derived a measure of classification shifting, (see unexpected core

earnings), we estimate the unexpected core earnings (UNEXP\_CE) as the difference between reported core earnings (REP\_CE) and expected core earnings (NOR\_CE) for each firm. Thereafter, we employ the following model:

$$UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 SIZE + \beta_5 LEV + \beta_6 ROA + \beta_7 MBV + \beta_8 BIG4 + \beta_9 LEG\_SYS + \beta_{10} INVEST + \beta_{11} CAPINTEN + \beta_{12} GROWTH + \beta_{13} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \varepsilon_t, \quad (2)$$

where UNEXP\_CE is unexpected core earnings and SPITEM is income-decreasing special items multiplied by minus one. In line with Behn et al. (2013) and Fan et al. (2010), we focus on levels, rather than changes, in unexpected core earnings. The coefficient  $\beta_1$  is of interest. When  $\beta_1$  is significantly positive, it provides an indication that firms engage in misclassification of core expenses into special items, which also suggests that reported core earnings have been influenced or manipulated to exceed expectations. On the other hand, when the coefficient  $\beta_1$  is significantly negative, it suggests there is no evidence of classification shifting. Countrywide religion (RELINT) is the measure of religion obtained from the World Values Survey of the World Bank. RELINT x SPITEM is the interactive term between countrywide religion and income-decreasing special items. We expect the coefficient on the interactive term between countrywide religion and negative special items, RELINT x SPITEM (RELSPI), to be significantly negative if religion mitigates classification shifting in international firms.

In line with previous studies (Behn et al. 2013; Fan et al. 2010; Ashbaugh et al., 2003), size and book to market value are included as control variables, plus other variables for year and country fixed effects. Firm size (SIZE) is also included as a control variable because previous research (Ashbaugh et al. 2003; Callen et al, 2011) indicates that small firms are more likely to influence reported core earnings than large firms. Book to market value (BMV) controls for the effects of market capitalisation. We employ leverage (LEV) because Zang (2012) finds firms influence reported profit to meet debt covenants and to secure external financing. The presence of Return on Assets (ROA) tests whether earnings management is a function of firm performance (Zalata & Roberts, 2016; Cohen & Zarowin, 2010; McVay, 2006) as poor performing firms are more likely to engage in classification shifting.

Moreover, as in prior studies (Winter & Martinez, 2015; Askarov & Doucouliagos, 2013; Fan et al. 2010; Leuz et al. 2003 and La Porta et al. 1998), we include common

law/code law legal systems (LEG\_SYS) and outside investor right (INVEST). As in Athanasakou et al. (2009) and Doyle et al. (2003), we control for growth because an increase working capital might be associated with higher growth, which might affect future cash flows. We also control for per capita gross domestic product (GDP) as previous studies in Leuz et al. (2003) so as to capture wealth effects. Finally, in line with previous studies (Behn et al., 2013; Fan et al., 2010), we include levels of unexpected core earnings.

Table 3 presents the results for the full sample, developed, emerging and developing countries sub-samples. Regardless of the sample examined, SPITEM is significantly positive at 1% for both the full sample and sub-samples, (see Table 3), corroborating that classification shifting is prevalent in all the sub-samples. First, we test hypothesis 1. The results in Table 3 indicate that RELINT is negatively related to UNEXP\_CE at 5% and 10% significance levels in the developing and emerging countries sub-samples respectively. Again, we interact religion with negative special items and observe that the association between RELINTSPI (RELINT×SPITEM) and UNEXP\_CE is significantly negative at 1%, 5% and 10% levels for the developing, emerging and developed countries sub-samples. This result is consistent with McGuire et al., (2012) and suggests that countrywide religion mitigates misclassification of core expenses into special items. Note that the effect is much more pronounced in developing countries and our results are not consistent with those of Callen et al. (2011), who observe that religion is unrelated to earnings management.

#### **4.2. Testing the Relationship between Legal Environment, Religion and Classification Shifting**

Next we test hypothesis 2. We examine the association between legal environment (LEGAL), interactions between the legal environment and special items (LEGAL x SPITEM) and classification shifting (UNEXP\_CE). Thereafter, we incorporate interactions between the legal environment and countrywide religion (LEGAL x RELINT).

Lastly, as there might be an underlying association between the legal environment and classification shifting, we include also the legal framework at country level and examine the interaction between religion and legal environment. We follow (Winter & Martinez, 2015; Askarov & Doucouliagos, 2013; Leuz et al. 2003; La Porta et al. 1998) to measure the legal environment for each country. La Porta et al. (1998), as corroborated by Leuz et al. (2003), define legal environment as the average score across three legal variables, namely (i) the

level of corruption index, (ii) an index of the assessment of rule of law and (iii) an index of the efficiency of the judicial system. Therefore, we augment Model 3 to include the interactive term between religion and legal environment as follows:

$$UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} LEG\_SYS + \beta_{14} INVEST + \beta_{15} CAPINTEN + \beta_{16} GROWTH + \beta_{17} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \varepsilon_t, \quad (3)$$

where LEGAL captures the legal environment at country level and LEGAL x SPITEM is country's legal environment multiplied by negative special items. LEGAL x RELINT is the interactive term between religion and legal environment. Table 4 presents the results of the relationship between LEGAL x SPITEM and UNEXP\_CE for the full and sub-samples. As indicated below, the association between LEGAL x SPITEM and UNEXP\_CE in the developing country sub-sample is insignificantly negative (-0.098). The coefficients on UNEXP\_CE for both emerging (-0.054) and developed (-0.051) sub-samples are also significantly negative at 10% and 5% respectively. The results suggest that the countrywide legal environment subdues misclassification of core expenses into special items. However, the influence is pronounced in developed and emerging countries. Our results are consistent with earlier studies (Behn et al., 2013; Haw et al., 2011; Leuz et al., 2003; La Porta et al., 1998), which observe that a strong legal environment and investor protection mitigate classification shifting and accrual-based earnings management. However, the results contradict those of Callen et al. (2011), who find no association between legal environment and accrual-based earnings management. The insignificant negative relationship between LEGAL x SPITEM and UNEXP\_CE in developing countries also suggests that the legal environment in developing countries is weak. The converse is true for the developed and emerging countries sub-samples, as evidenced by previous studies (Behn et al., 2013; Haw et al., 2011; Leuz et al., 2003).

Next, we examine the interactions between special items (SPITEM), religion (RELINT) and legal environment (LEGAL) on classification shifting. The variable of interest is LEGAL x RELINT x SPITEM. The results in Table 4 indicate that the coefficients on LEGAL x RELINT x SPITEM is significantly negative (-0.468) at the 1% level in developing countries sub-sample. Similarly, there are negative coefficients (-0.132 and -0.358) and a

significant relationship at the 5% level between LEGAL x RELINT x SPITEM and UNEXP\_CE in both developed and emerging countries sub-samples. This result suggests that countrywide religious social norms are induced by the legal environment to subdue classification shifting. Thus, the interaction between countrywide religion and legal environment play a complementary role to curb managerial classification shifting behaviour in developed, emerging and developing countries. We find that a strong legal environment in developed countries, complement the weak countrywide religion to constrain managerial motivation to misclassify core expenses into special items to boost reported core earnings.

Similarly, the weak legal environment is induced or strengthened by the high religious social norms in developing countries. This evidence provides an important contribution to the literature on managerial opportunistic classification shifting behaviour. The results build on prior research in the U.S.A and Asia, and other international studies on classification shifting (Behn et al., 2013; McGuire et al. 2012, Callen et al., 2011, Haw et al., 2011, Leuz et al., 2003). In conclusion, the results in Table 4 reveal that both legal environment and religion restrain classification shifting behaviour in developed, emerging and developing countries. However, the legal environment is effective in developed countries and religion is effective in both developing and emerging countries in subduing classification shifting. The interactive term LEGAL x RELINT x SPITEM on UNEXP\_CE is much more pronounced in mitigating classification shifting behaviour in all the sub-samples than the individual variables.

#### **4.3. Testing the association between Legal Environment and Religion on Real Activities**

Next we test hypothesis 3. We examine the association between legal environment (LEGAL), interactions between the LEGAL and RELINT and our proxies for real activities earnings management. Managers manipulate earnings through an accounting approach (e.g. accruals earnings management or classification shifting) and transactional approach (e.g. real activities manipulation). These analyses, so far have focussed on an accounting approach rather than a transactional approach to earnings management. If the interaction between religion and legal environment mitigates earnings manipulation, then, we expect to see a decrease in real activities manipulation. Therefore, we examine the interaction between LEGAL and RELINT on real activities manipulation. First, we construct three measures of real earnings manipulations: abnormal cash flows (AB\_CASH<sup>6</sup>), abnormal discretionary

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<sup>6</sup> Model 4: where CASFO is the cash flow from operational activities; SALES<sub>it</sub> represents annual sales revenue and TA total assets is the aggregate of both non-current and current assets, whilst  $[\Delta\text{SALES}]_{(it)}$  is change in sales.

expenses (AB\_DEXP<sup>7</sup>) and abnormal production costs (AB\_PCOST<sup>8</sup>) for each firm and industry classified by its two-digit SIC code (see Roychowdhury, 2006; Dechow et al. 1996). We estimate the following regression model for each industry and year:

$$\frac{CASFO_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \left( \frac{SALES_{it}}{TA_{it-1}} \right) + \beta_2 \left( \frac{\Delta SALES_{it}}{TA_{it-1}} \right) + \varepsilon_{it} \quad (4)$$

$$\frac{PCOST_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \left( \frac{SALES_{it-1}}{TA_{it-1}} \right) + \beta_2 \left( \frac{\Delta SALES_{it}}{TA_{it-1}} \right) + \left( \frac{\Delta SALES_{it-1}}{TA_{it-1}} \right) + \varepsilon_{it} \quad (5)$$

$$\frac{D\_EXP_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \left( \frac{SALES_{it-1}}{TA_{it-1}} \right) + \varepsilon_{it} \quad (6)$$

To generate abnormal level of cash flows (AB\_CASH) and abnormal discretionary expenditures (AB\_DEXP), the residuals from the models are multiplied by negative one (-1), in line with previous studies (Cai et al., 2020; Zang, 2012; McGuire et al., 2012; Roychowdhury, 2006). Again, consistent with Cohen and Zarowin (2010), we estimate abnormal production costs (AB\_PCOST) as deviations from predicted values from the industry-year regression. Firms that manipulate earnings upwards are characterised by unusually low cash flows from operations, low discretionary expenses and high production costs. In this way, a higher value is an indication that firms are engaged in real activities manipulation to boost reported earnings.

Next, we estimate REM1 and REM2 as our proxies for real activities earnings management in line with prior studies (Cai et al., 2020; Cheng et al., 2015; McGuire et al., 2012; Cohen & Zarowin, 2010; Roychowdhury, 2006). In our analysis, we employ an aggregate measure (REM1 and REM2), which are the sum of the three real earnings management variables. REM1 is the aggregate of abnormal discretionary expenses (AB\_DEXP) and abnormal production costs (AB\_PCOST). REM2 is the aggregate of abnormal cash flows (AB\_CASH) and abnormal discretionary expenses (AB\_DEXP). A higher value of REM1 or REM2 is an indication that firms might engage in real activities to push earnings upwards.

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<sup>7</sup> Model 5: where D\_EXP is the sum of advertising expenses, research, and development (R& D) expenses and selling, general and administration expenses. Sales equal annual sales revenue and assets (TA) is the aggregate of both non-current and current assets.

<sup>8</sup> Model 6: where PCOST is the aggregate of cost of sales and change in inventory during the year.



Initially, we test the influence of individual variables: LEGAL and RELINT on REM1 and REM2. We estimate separate regressions for RELINT, LEGAL and REM1 as well as RELINT, LEGAL and REM2 for the sub-samples. Table 5 presents the regression results. RELINT is significantly positive at 5% and 1% level for the full, developed and emerging/developing countries sub-samples respectively, suggesting that religion induces real activities manipulation and firms prefer real activities manipulation to expense misclassification or accruals manipulation because real activities are not fraudulent, less chance of detection, do not violate GAAP accounting rules or are not subject to auditor scrutiny (McGuire et al., 2012). However, LEGAL is significantly negative at 10% and 5% level for the full and developed countries sub-samples respectively but negative and insignificant for the emerging/developing countries sub-samples, suggesting that legal environment in developed countries is strong and could constrain real activities.

Next, we examine the interaction term, RELINT x LEGAL on both REM 1 and REM2. Table 6 presents the results of all the sub-samples for both REM1 and REM2. Interestingly, RELINT x LEGAL is significantly negative across all samples at 1% or 5% level, suggesting that the legal environment induces religion to reduce real activities manipulations. Even though, real activities are difficult to distinguish from normal business decisions, they are costly, affect growth negatively and decrease shareholder value (Cohen & Zarowin, 2010; Roychowdhury, 2006). Therefore, firms' incentive to use real business transactions to manipulate earnings becomes less pronounced when law and religion interact. Legal environment restrains real activities in a religious social norm environment, suggesting that firm managers are risk averse and not necessarily ethically sensitive. However, the effect is much more pronounced in developed countries, suggesting that a strong legal environment exists in developed countries to mitigate the effect of religion on real earnings management practices. This is the first time the interaction between religion and legal environment on real activities manipulation is reported in prior research.

In addition, prior research (Haga et al., (2018; Cohen & Zarowin, 2010) indicate that aggregating the individual proxies to derive REM1 and REM2 might weaken the results or provide misleading results, Therefore, we test the individual proxies for real activities manipulation to examine the moderating role of religion and legal environment on the individual proxies for real activities manipulation. The untabulated results indicate that our inferences remain the same. The results are robust and clearly indicate that religion induces

real activities manipulation but the legal environment moderates religion to curb real activities and expense misclassification.

## **5. ROBUSTNESS ANALYSIS**

### **5.1. Validity of the Expectation Model**

As part of our sensitivity analyses, we use working capital accruals (WC\_ACC) instead of total accruals (ACCRUALS) to compute normal core earnings (NOR\_CE) (see McVay's 2006; Athanasakou et al. 2009). This approach is warranted so as to correct for possible bias due to depreciation expenses and special items. Table 7 reports the new results that are in line with the results previously reported in Table 4, passing the test of sensitivity in measurement of normal core earnings. Moreover, Table 7 columns (5) to (8) present the regression results when NOR\_CE and UNEXP\_CE are re-estimated without accruals, consistent with McVay (2008) and Fan et al. (2010). We estimate model 2 for all the sub-samples to re-estimate the main regressions by excluding accruals. Interestingly, the results in columns (5) to (8) indicate that there is still a significantly positive relationship between SPITEM and UNEXP\_CE for the full sample, and the developed, emerging and developing country sub-samples.

This evidence corroborates the existence of expense misclassification in the full sample and sub-samples, as noted in previous studies (Behn et al., 2013; Haw et al., 2011). The result is consistent with our main evidence and indicates that special items are inflated as core expenses are shifted down the bottom line into special items, resulting in an increase in reported core earnings. This result is consistent with McVay (2006), who observes that special items increase with core earnings. Specifically, in column (6) the co-efficient on SPITEM for the developed country sub-sample is significantly positive (0.095) at 5% level. Similarly, the coefficient on SPITEM for the emerging and developing countries sub-samples are significantly positive (0.231 & 0.269) at 1% level respectively. The inference remains the same and confirms evidence of classification shifting in the developed, emerging and developing countries sub-samples.

## 5.2. High and Low Religion Countries

These analyses reveal a significantly negative association between RELINT, RELINT x SPITEM, LEGAL x RELINT x SPITEM and UNEXP\_CE in all the three sub-samples. However, they do not indicate the extent to which the results might be affected by the geographic location of the countries. For instance, the results might be attributable to countries with high or low levels of religion in the developed, emerging and developing countries sub-samples. To address this concern, we follow previous studies (McGuire et al., 2012; Dyreng et al., 2012) to segregate the datasets into two samples, consisting of high and low religion countries. We define countries with above the median religion figure in each sub-sample as having high religion, and those below the figure as low. The results are presented in Table 8. Interestingly, the coefficients on SPITEM are still significantly positive at 5% or 1% levels for both high and low religion countries in the sub-samples.<sup>9</sup> Thus, the inferences remain unchanged, corroborating the previous results that core earnings increase with special items in both high and low religious countries. In highly religious countries, the coefficients on RELINT and RELINT x SPITEM are significantly negative at 1%, 5% and 10% respectively for developing, emerging and developed countries. However, the effect of low religion on expense misclassification in developed and emerging countries is insignificant. Note that in developing countries, both high and low religious sub-samples reveal a significantly negative association between RELINT, RELINT x SPITEM and UNEXP\_CE at 1% and 10% respectively. This evidence is consistent with previous studies (McGuire et al., 2012; Dyreng et al., 2012) and indicates that geographic dispersion in relation to high countrywide religion mitigates classification shifting and that the effect is much more pronounced in developing countries.

In addition, the coefficients on LEGAL; LEGAL x SPITEM, LEGAL x RELINT and LEGALxRELINTxSPITEM are significantly negative at 5% or 1% for both high and low religion in developed countries. There is also a similar result of 5% or 10% levels between LEGAL; LEGALSPI, LEGAL x RELINT, LEGAL x RELINT x SPITEM and UNEXP\_CE in emerging countries for both high and low (religion) areas. Consistent with previous results,

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<sup>9</sup> In addition, we opt for t-test for equality of the two coefficients between high and low religion. Results show statistically significant differences in the two sets of coefficients across all samples. The average t-stats for the difference in the two sets of coefficients consisting of the samples of high and low religion are: 4.943 for developed countries; 4.270 for emerging countries; and last 4.511 for developing countries. All t-stats reject the  $H_0$  that the two sets of coefficients are equal at 1%.

the coefficients on LEGAL and LEGAL x SPITEM are negative but not significant in high and low (religion) developing countries. However, LEGALxRELINT and LEGALxRELINTxSPITEM are significantly negative at 5% and 1% in highly religious developing countries, but 5% and 10% in developing countries with low religion respectively. The results are consistent with the notion that the legal environment in developing countries is weak and has limited influence on expense misclassification but the legal environment is strengthened by the countrywide religion to subdue classification shifting behaviour. The results are consistent with previous results and corroborate that the interaction between the legal environment and religion reduce classification shifting behaviour in developed, emerging and developing countries, although the negative effect is stronger and much more pronounced in countries with a strong legal environment and high level of religion.

Finally, additional robustness tests are conducted. For example, we control for country-specific variables such as inflation rates, economic risk and political risk to ensure that the regression results are not attributable to by certain country-specific or macroeconomic variables. Previous studies (Dietrich & Wanzenried, 2014; Behn et al., 2013; Haw et al., 2011) indicate that countries associated with high inflation rates, and economic and political risk might influence our results. Therefore, the main regression models are repeated by controlling for country-specific variables and the model re-estimated with the full and censored data. Even though some changes are observed in the coefficients and estimates, the untabulated results and, most significantly, the relationship between LEGAL x RELINT, LEGAL x RELINT x SPITEM and UNEXP\_CE is significantly negative and positive at 1% or 5% level respectively. The untabulated results indicate that our results are not influenced by additional controls for inflation rates, and economic or political risk. Therefore, the results are robust and are not affected by the expectation model, extreme values, large sample size and geographic location.

### **5.3. Misclassification in Pre and Post Financial Crisis Period and IFRS Adoption**

Several events occurred during the study period that could have confounding effects or significant influence on the results of the study. One of these events is the financial crisis between 2007 and 2009. Another important event over the years is the adoption of IFRS. We next investigate the extent to which religion and the interactive term between religion and legal environment affect expense misclassification in the pre-or post-financial crisis (IFRS) period. We estimate our models for the period prior to financial crisis (2000-2006) which also

coincides with the adoption period of IFRS. In addition, we estimate our models during the financial crisis (2007-2009) and post-financial crisis period (2010-2018).

Table 9 presents the results of all the sub-samples, which indicate a significantly positive relation between SPITEM and UNEXP\_CE, suggesting that developed, emerging and developing countries engaged in expense misclassification throughout the study period. Therefore, classification shifting is prevalence management practice in the period pre-post financial crisis and IFRS adoption. It is worth noting that classification shifting is somewhat more acute during the financial crisis period than the pre-financial crisis period. In relation to whether religion subdues classification shifting, the results indicate that the interactive terms RELINT x SPITEM and RELINT x LEGAL x SPITEM are negatively related to UNEXPE\_CE at 5% or 1% significance level in both the pre and post-financial crisis (IFRS adoption) period. The coefficients and t-values of the interactive term (RELINT x LEGAL x SPITEM) are more significant during and post-financial crisis (IFRS adoption) periods' in all the sub-samples, suggesting that religion complements the legal environment and other monitoring mechanisms to decrease the opportunistic managerial expense misclassification. Note that the effect is much more pronounced in developing countries. The results indicate that across the sub-samples, the respective legal environment should be strengthened to complement religious social norms to mitigate expense misclassification to boost core earnings. This evidence is consistent with our main results and indicates that expense misclassification is a global phenomenon. The interaction between religion and legal environment has significant negative effect on expense misclassification around the world.

In line prior studies (Ball, 2016; Malikov, Manson & Coakley, 2018), we break our datasets (see Table 1c) into IFRS adopters (ie. countries that report under local GAAPs during the period 2000-2004 and IFRS during the period 2005-2018) and IFRS non-adopters (those countries that have not fully adopted IFRS or reported financial statements under IFRS). The results are presented in Table 10. Specifically, columns 1 and 2 present the results of IFRS adopter countries and columns 3 and 4 present the results of IFRS non-adopter countries. In both sub-samples, the interaction term between religion and legal environment mitigates expense misclassification at 1% or 5% significance level. The inferences remain the same. However, the effect is much more pronounced in IFRS adopter countries than non-adopter countries. This evidence is consistent with the notion that IFRS improves financial reporting quality (Ball, 2016; Nobes, 2013) but contradicts recent results that firms in the period

following mandatory IFRS adoption are associated with an increase real activities manipulation (Malikov et al. 2018). As a policy implication, for the first time, we provide evidence suggesting that IFRS complements religion and legal environment to mitigate classification shifting behaviour.

## **6. CONCLUSION**

Our analyses suggest that there exists a link between law and religion and the interaction between law and religion around the world decreases both expense misclassification and real activities manipulation. The evidence indicates that in the presence of varying religious social norms, the legal environment subdues earnings manipulation behaviour in developed and emerging countries; however, an insignificant negative association is found in developing countries. We interact the legal environment with religion and find that a strong legal environment induces religion to mitigate managers' expense misclassification behaviour. Specifically, the interaction term between religion and strong legal environment on classification shifting and real activities is significant in all the sub-samples. These results are robust after addressing the concerns of the validity of the McVay (2006) expectation models, high and low religion countries and the confounding effects of financial crisis between 2007 and 2009 as well as the adoption of IFRS.

Prior studies (Zalata & Robert, 2016; Behn et al., 2013) examine the effect of corporate governance, analyst behaviour and investor protection on expense misclassification while neglecting the influence of social norms. We respond to Hirshleifer (2015) who calls for more research on how the social norms and moral attitudes affect firm decisions. We report that there is a link between religion and law and that religion influences law significantly and legitimately at country-level to reduce managers' classification shifting behaviour. Again, the extant literature (Cai et al., 2020; McGuire et al., 2012) observes that religion induces real activities manipulation. However, we report that firms' incentive to use real business transactions or activities to manipulate earnings becomes less pronounced in the presence of religion and strong legal environment. A strong legal environment moderates religion and makes it costly for firms to engage in real activities, suggesting that firm managers are risk averse and not necessarily ethically sensitive. Overall, our results contribute to the extant literature on religion, classification shifting, real activities, legal environment and corporate governance. We find evidence suggesting that the interaction between legal environment and religion can function as an alternative governance mechanism to mitigate earnings management and thereby improve financial reporting. The limitation of our study is the

exclusion of the role of cultural factors due to availability of data. Therefore, future research should consider the role of cultural factors among religion, law and earnings management behaviour in an international setting.

Our study has several policy implications. Notably, we find the importance of incorporating the ethical value of religion in business decisions. We find that complementarity between religion and legal environment subdues classification shifting and real activities manipulation. We find evidence suggesting that the interaction between religion and legal environment complements IFRS adoption to improve financial reporting quality and mitigate expense misclassification. From a policy point of view, these results emphasise that it is essential to support the institutional infrastructure in terms of legal environment to improve financial reporting, while endorsing religion within the society is also useful. Regulators, researchers, auditors and investors could benefit from our evidence as it signals that weak legal environment and low religion could insinuate deviation of accurate financial reporting towards classification shifting and real activities manipulation.

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## Appendix: A - Variables Definitions

Variable Name	Variable Acronym	Definition
Reported Core Earnings	REP_CE	Estimated as sales – cost of goods sold (COGS) – selling, general and administration expenses (SG&A) scaled by sales. Consistent with Behn et al. (2013), where firms fail to disclose COGS and SG&A, REP_CE is calculated as (sales – total operating expenses)/sales.
Unexpected Core Earnings	UNEXP_CE	Calculated as the difference between expected core earnings (estimated from model 1) and reported core earnings by industry and fiscal year. A minimum of 10 firm year observations are required per industry group.
Special Items	SPITEM	Income-decreasing special items scaled by sales.
Asset Turnover	ATO	Calculated as $Sales_t$ scaled by average net operating assets $[NOA_t + NOA_{t-1}]/2$ ; average NOA is required to be $> 0$ .
Net Operating Assets	NOA	Calculated as the difference between operating assets (OA) and operating liabilities (OL).
Operating Liabilities	OL	Calculated as total assets – total debt (debt in current liabilities + long-term debt) – book value of common and preferred equity – minority interests.
Operating Assets	OA	Calculated as total assets – cash and short-term investments.
Accruals	$ACCRUALS_{t-1}$	Calculated as in Francis and Wang (2008), as detailed previously.
Total Accruals	TACC	Difference between earnings before extraordinary items and discontinued operations and the cash flow from operational activities scaled by lagged total assets, similar to Behn et al (2013).
Working Capital Accruals	WC_ACC	Calculated as a change in current assets net of a change in cash, minus a change in current liabilities net of a change in the current portion of long-term debt, similar to Behn et al (2013).
Change in Sales	$\Delta SALES_t$	Calculated as $(Sales_t - Sales_{t-1})/Sales_{t-1}$
Neg. Change in Sales	$NEG\_SALES_t$	Indicator variable equal to 1 if change in sales $< 0$ , and 0 otherwise.
Religion	RELINT	Country level of religiosity measured by the World Values Survey (WVS) of the World Bank, (Callen et al., 2011).

Religion x Special Items	SLAVESPI	Interaction term between income-decreasing special items and a country's level of religiosity.
Legal Environment	LEGAL	Legal environment score from Leuz et al. (2003) and La Porta et al. (1998).
Legal Environment X Special Items	LEGALSPI	Interaction term between legal environment and income-decreasing special items
Size of Firms	SIZE	Natural log of market value of equity (Behn et al., 2013).
Return on Assets	ROA	Calculated as net income plus interest expenses scaled by total assets at the beginning of the period (Behn et al., 2013).
Market Book Value	MBV	Natural log of book value of equity scaled by market value of equity (Behn et al., 2013).
Leverage	LEV	Calculated as total liabilities scaled by total assets (Behn et al., 2013).
Big Four Auditors	BIG4	Indicator variable equal to 1 if the firm's auditor is a BIG4 audit firm, otherwise zero (0).
Annual Per Capita Gross Domestic Product	GDP	GDP per capita U.S. \$.World Development Indicators computed by the World Bank and International Monetary Fund (IMF).
Capital Intensity	CAPINTEN	Calculated as long-term assets scaled by total assets (Leuz et al., 2003; Behn et al., 2013).

**Table 1: Comparison of Most and Least Religious Countries in the World - 2018**

Ten Most Religious Countries in the World	Ranking Top Countries	Ten Least Religious Countries in the World	Ranking Bottom Countries
Niger	1	China	1
Sri Lanka	2	Japan	2
Malawi	3	Estonia	3
Indonesia	4	Sweden	4
Yemen	5	Denmark	5
Thailand	6	Czech Republic	6
Armenia	7	Hong Kong	7
Bangladesh	8	Netherlands	8
Georgia	9	United Kingdom	9
Morocco	10	Vietnam	10

**Notes:** Table 1a presents a comparison of most and least religious countries in the world, as compiled by Gallup. Since 1965, Gallup has conducted interviews about the countrywide religion of adults. The results suggest that religious attitudes are very stable, consistent with the World Values Survey of the World Bank as computed by Stack and Kposowa (2006).

**Table 1a : List of Developed, Emerging and developing Economies /Countries**

<b>Developed</b>	<b>Emerging</b>	<b>Developing</b>
Australia	Argentina	Côte d'Ivoire
Austria	Brazil	Croatia
Belgium	Chile	Gabonese Republic
Canada	China	Lebanon
Czech Republic	Colombia	Malawi
Denmark	Estonia	Morocco
Finland	Hungary	Oman
France	India	Papua New Guinea
Germany	Korea (South)	Sri Lanka
Greece	Kuwait	Tanzania
Iceland	Lithuania	Vietnam
Ireland	Malaysia	
Italy	Mexico	
Japan	Namibia	
Latvia	Nigeria	
Luxembourg	Peru	
Malta	Philippines	
Netherlands	Poland	
New Zealand	Russian Federation	
Norway	South Africa	
Portugal	Thailand	
Spain	Tonga	
Sweden	Tunisia	
Taiwan	Turkey	
United Kingdom	United Arab Emirates	
United States of America	Venezuela	

Source: IMF Outlook Groupings and World Bank Country Classification. The IMF classifies a country's economy based on its Gross Domestic Product, Gross Domestic Profit per capita, its export diversification, and its degree of integration into the global financial system.

**Table 1b: Country-Level Descriptive Statistics**

COUNTRY	COUNT	REP_CE (Mean)	REP_CE (Median)	UNEXP_CE (Mean)	UNEXP_CE (Median)	SPITEM (Mean)
Argentina	865	0.203	0.173	0.002	0.001	0.003
Australia	15384	0.19	0.138	0.003	-0.003	0.004
Austria	971	0.314	0.277	0.003	0.001	0.001
Belgium	1285	0.328	0.222	0.002	0.001	0.001
Brazil	2030	0.369	0.149	0.003	0.001	0.001
Canada	1256	0.305	0.280	0.009	-0.001	0.003
Chile	2091	0.126	0.116	0.009	0.001	0.002
China	24650	0.114	0.104	0.002	0.001	0.002
Colombia	334	0.255	0.237	0.002	0.001	0.004
Côte d'Ivoire	65	0.130	0.108	0.006	0.002	0.002
Croatia	553	0.209	0.186	0.012	0.001	0.001
Czech Republic	219	0.26	0.213	0.002	0.003	0.003
Denmark	1695	0.149	0.134	0.002	0.001	0.001
Estonia	212	0.207	0.183	0.008	0.005	0.004
Finland	1796	0.434	0.384	0.004	0.002	0.003
France	8108	0.259	0.187	0.014	0.002	0.001
Gabonese Republic	19	0.501	0.455	0.002	0.001	0.000
Germany	8416	0.312	0.220	0.002	0.002	0.001
Greece	2054	0.187	0.121	0.006	-0.006	0.001
Hungary	250	0.180	0.128	0.003	0.002	0.003
Iceland	119	0.155	0.129	0.004	0.002	0.001
India	25621	0.253	0.119	-0.011	-0.006	0.002
Ireland	727	0.130	0.123	0.007	0.004	0.002
Italy	3272	0.318	0.217	0.002	0.001	0.001
Japan	23897	0.133	0.103	0.007	0.006	0.001
Korea	9127	0.179	0.108	0.002	0.002	0.001
Kuwait	694	0.194	0.142	-0.002	-0.007	0.002
Latvia	323	0.119	0.102	0.005	-0.007	0.001
Lebanon	13	0.326	0.233	0.002	0.001	0.000
Lithuania	382	0.171	0.119	0.007	0.006	0.001
Luxembourg	371	0.117	0.105	0.001	0.001	0.002
Malawi	24	0.298	0.278	0.001	-0.002	0.004
Malaysia	9217	0.169	0.138	0.002	0.001	0.002
Malta	115	0.275	0.284	0.002	-0.003	0.001
Mexico	1390	0.206	0.168	0.002	0.001	0.004
Morocco	363	0.226	0.171	0.003	0.001	0.001
Namibia	26	0.123	0.115	0.004	0.001	0.002
Netherlands	1945	0.324	0.207	0.002	0.002	0.001
New Zealand	1280	0.275	0.180	0.006	0.006	0.002
Nigeria	595	0.165	0.139	0.003	0.003	0.005
Norway	2035	0.253	0.232	0.002	0.003	0.003
Oman	765	0.194	0.164	0.002	0.002	0.001
Papua New Guinea	31	0.420	0.382	0.004	0.003	0.003
Peru	1140	0.292	0.171	0.003	0.005	0.003
Philippines	1677	0.291	0.177	0.001	0.001	0.001
Poland	3630	0.22	0.182	0.001	-0.001	0.001
Portugal	698	0.303	0.255	0.001	0.006	0.003
Russian Federation	1866	0.207	0.18	0.003	0.002	0.001
South Africa	3097	0.201	0.131	0.005	0.002	0.001
Spain	7716	0.312	0.220	0.002	0.002	0.001
Sri Lanka	1649	0.170	0.122	0.001	0.002	0.003
Sweden	5071	0.147	0.109	0.004	0.001	0.002
Taiwan	15170	0.194	0.113	0.004	0.001	0.002
Tanzania	61	0.321	0.308	0.003	0.002	0.004
Thailand	5838	0.251	0.201	0.005	0.004	0.003
Tonga	118	0.216	0.173	0.001	-0.001	0.001
Tunisia	284	0.219	0.205	-0.001	-0.003	0.002
Turkey	1873	0.352	0.296	0.004	0.002	0.004
United Arab Emirates	491	0.218	0.189	0.004	0.003	0.001
United Kingdom	18221	0.262	0.105	0.004	0.001	0.002
United States of America	29761	0.266	0.258	0.002	0.001	0.004
Venezuela	145	0.325	0.256	0.002	0.001	0.002
Vietnam	1829	0.146	0.108	0.003	0.002	0.002

**Notes:** The sample consists of 63 countries, of which 26 are from developed countries, 26 are from emerging ones and 11 from developing countries. UNEXP\_CE is computed as the difference between reported core earnings (REP\_CE) and expected core earnings (NOR\_CE) by industry and fiscal year (Behn et al., 2013). REP\_CE is the reported core earnings estimated as sales – cost of goods sold – selling, general and administration expenses scaled by sales. For countries that disclose only the total value of operating expenses, REP\_CE is calculated as (sales – total operating expenses)/sales. SPITEM is negative special items as a percentage of sales. Income-decreasing special items are multiplied by (-1) but income-increasing special items are given a value of zero (0).



**Table 1c: List of IFRS Adopter and Non-Adopter Countries**

IFRS ADOPTER COUNTRIES						IFRS NON-ADOPTER COUNTRIES		
No.	Countries	Count	No.	Countries	Count	No.	Countries	Count
1	Argentina	865	24	Luxembourg	371	1	Côte d'Ivoire	65
2	Australia	15384	25	Malaysia	9217	2	Gabonese Republic	19
3	Austria	971	26	Malta	115	3	India	25621
4	Belgium	1285	27	Mexico	1390	4	Japan	23897
5	Brazil	2030	28	Netherlands	1945	5	Kuwait	694
6	Canada	1256	29	New Zealand	1280	6	Lebanon	13
7	Chile	2091	30	Nigeria	595	7	Malawi	24
8	Colombia	334	31	Norway	2035	8	Morocco	363
9	Croatia	553	32	Oman	765	9	Namibia	26
10	Czech Republic	219	33	Peru	1140	10	Papua New Guinea	31
11	Denmark	1695	34	Philippines	1677	11	Russian Federation	1866
12	Estonia	212	35	Poland	3630	12	Thailand	5834
13	Finland	1796	36	Portugal	698	13	Tonga	118
14	France	8108	37	South Africa	3097	14	Tunisia	284
15	Germany	8416	38	Spain	7716	15	United States of America	29761
16	Greece	2054	39	Sri Lanka	1649	16	Vietnam	1829
17	Hungary	250	40	Sweden	5081			
18	Iceland	119	41	Taiwan	15170			
19	Ireland	727	42	Tanzania	61			
20	Italy	3272	43	Turkey	1873			
21	Korea	9127	44	United Arab Emirates	491			
22	Latvia	323	45	United Kingdom	18221			
23	Lithuania	382	46	Venezuela	145			
			47	China	24,650			

Table 1c presents IFRS adopters (ie. countries that report under local GAAPs during the period 2000-2004 and IFRS during the period 2005-2018) and IFRS non-adopters (those countries that have not fully adopted IFRS or reported financial statements under IFRS) during the period 2000 -2018. Source: <http://www.ifrs.org/Use-around-the-world/Pages/Analysis-of-the-IFRS-jurisdictional-profiles.aspx> and Ball, (2016).

**Table 2: Descriptive Statistics (Full Sample) of Accounting Data**

Variables	Count	Mean	Median	Std Dev	Min	Max
SALE	254916	72619.15	1180.305	316145.6	147.574	12280.05
REP_CE	254916	0.166	0.112	0.118	0.004	0.216
UNEXP_CE	254916	0.000	0.005	0.031	-0.066	0.023
SPITEM	254916	0.001	0.000	0.013	0.000	0.005
ATO	254916	3.947	2.605	2.188	2.432	5.430
ACCRUALS	254916	-0.024	-0.021	0.370	0.107	0.371
ΔSALES	254916	0.136	0.069	0.393	-0.042	0.225
NEG_ΔSALES	254916	0.106	0.049	0.360	-0.027	0.179
<b>Control Variables</b>						
SIZE	254916	7.443	7.354	3.071	5.302	9.544
ROA	254916	0.037	0.051	0.150	0.009	0.100
MBV	254916	2.731	2.030	3.223	1.477	2.978
LEV	254916	0.557	0.565	0.196	0.129	0.862
CAPINTEN	254916	0.662	0.660	0.309	0.389	0.873
GDP	254916	19856	19782	15125	306	88003
<b>Religion and Legal</b>						
RELINT	254916	66.03	74.65	25.88	10.6	98.7
LEGAL	254916	7.833	8.891	1.893	3.467	10.00

Notes: The final sample consists of 254,916 firm-year observations, of which 137,884 are from developed countries, 112,023 from emerging countries, and 5,009 from developing countries. UNEXP\_CE is computed as the difference between reported core earnings (REP\_CE) and expected core earnings (NOR\_CE) by industry and fiscal year (Behn et al., 2013). REP\_CE is the reported core earnings estimated as sales – cost of goods sold – selling, general and administration expenses scaled by sales. For countries that disclose only the total value of operating expenses, REP\_CE is calculated as (sales – total operating expenses)/sales. SPITEM is negative special items as a percentage of sales. Income-decreasing special items are multiplied by (-1) but income-increasing ones are given a value of zero (0). ΔSales is (Sales<sub>t</sub> – Sales<sub>t-1</sub>)/ Sales<sub>t</sub> and NEG\_ΔSales where ΔSALES is less than 0, otherwise zero. ATO is sales scaled by average net operating assets, where net operating assets is the difference between operating assets and operating liabilities. Operating assets = Total assets – Cash and Cash equivalent. Operating Liabilities = Total assets – Total debt - Book value of common equity – Preferred equity – Minority interests. ACCRUALS are calculated following Francis and Wang's (2008) method. SIZE is the natural log of the market value of equity; LEV is measured as total debts scaled by total assets. CAPINTEN is capital intensity measured as the ratio of long-term assets scaled by total assets. ROA is measured as net income before extraordinary items + interest income, divided by total assets at the beginning of the period and MBV is measured as the natural log of book value of equity scaled by the market value of equity.

**Table 3: Regression of Countrywide Religion and Classification Shifting**

Dependent Variable: UNEXP_CE				
VARIABLES	Model 1 Full Sample	Model 2 Developed	Model 3 Emerging	Model 4 Developing
SPITEM	0.851*** (2.869)	0.110*** (3.586)	0.784*** (8.681)	0.235*** (6.437)
RELINT	-0.054** (-1.980)	-0.072 (-1.430)	-0.171* (-1.779)	-0.237** (-2.304)
RELINTSPI	-0.906*** (-3.493)	-0.308 (-1.551)	-0.349** (-2.512)	-0.676*** (-3.208)
SIZE	-0.063*** (-7.166)	-0.105*** (-6.884)	-0.018*** (-4.953)	-0.014 (-1.247)
ROA	-0.088*** (-7.242)	-0.274*** (-4.548)	-0.565*** (-5.259)	-0.136* (-1.726)
MBV	-0.001 (-1.472)	-0.002 (-1.069)	-0.001 (-1.130)	-0.002 (-0.694)
LEV	0.387*** 9.448	0.151*** 4.941	0.663*** 4.164	0.405*** 6.855
BIG4	-0.029** (-2.034)	-0.057*** (-3.861)	-0.057*** (-6.106)	-0.133** (-1.945)
LEG_SYS	-0.026** (-2.263)	-0.034** (-2.142)	-0.026* (-2.021)	-0.019* (-1.847)
INVEST	-0.034** (-2.217)	-0.031** (-2.083)	-0.014* (-2.097)	-0.016* (-1.882)
CAPINTEN	-0.305*** (-15.307)	-0.293*** (-9.163)	-0.316*** (-15.363)	-0.025 (-0.489)
GROWTH	-0.007** (-2.287)	-0.045* (-1.691)	-0.055*** (-3.425)	-0.052** (-2.498)
GDP	-0.379 (-0.642)	-0.99 (-0.799)	-0.481 (-0.216)	-0.981 (-0.748)
CONSTANT	-0.644 (-1.219)	-0.383 (-1.004)	-0.381* (-1.781)	-0.699 (-1.163)
Observations	254916	137884	112023	5009
R-squared	0.21	0.22	0.37	0.42
Country & Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

**Notes:** \*, \*\* and \*\*\* are used in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. The study presents co-efficient estimates and t-statistics (in brackets). All variables are winsorized at the 1st and 99th percentiles.

$$UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 SIZE + \beta_5 LEV + \beta_6 ROA + \beta_7 MBV + \beta_8 BIG4 + \beta_9 ANA\_FOL + \beta_{10} LEG\_SYS + \beta_{11} INVEST + \beta_{12} CAPINTEN + \beta_{13} GROWTH + \beta_{14} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \epsilon_t$$

**Table 4: The influence of Countrywide Religion and Legal Environment Interactions on Classification Shifting**

Dependent Variable: UNEXP_CE				
VARIABLES	(1) Full Sample	(2) Developed	(3) Emerging	(4) Developing
SPITEM	0.741*** (8.477)	0.531** (2.553)	0.493** (2.377)	0.942*** (5.123)
RELINT	-0.035** (-1.978)	-0.022 (-1.428)	-0.153* (-1.739)	-0.228*** (-2.866)
RELINTSPI	-0.296** (-2.386)	-0.137 (-1.478)	-0.493** (-2.059)	-0.425*** (-5.358)
LEGAL	-0.013* (-1.702)	-0.062* (-1.761)	-0.011 (-0.846)	-0.010 (-0.967)
LEGALSPI	-0.186** (-2.451)	-0.051** (-2.334)	-0.054* (-1.791)	-0.098 (-1.506)
LEGALREL	-0.133** (-2.328)	-0.043* (-1.872)	-0.143** (-2.218)	-0.214** (-2.464)
LEGRELSPI	-0.315*** (-4.196)	-0.132** (-2.190)	-0.358** (-2.076)	-0.468*** (-7.397)
SIZE	-0.063*** (-7.162)	-0.105*** (-6.813)	-0.018*** (-4.886)	-0.015 (-1.321)
ROA	-0.089*** (7.287)	-0.275*** (-3.578)	-0.570*** (-5.387)	-0.136 (-1.332)
MBV	-0.002 (-1.564)	-0.002 (-1.102)	-0.001 (-1.153)	0.001 (0.483)
LEV	0.383*** (9.243)	0.148*** (4.841)	0.663*** (4.192)	0.383*** (6.407)
BIG4	-0.065*** (-3.580)	0.057*** (3.883)	-0.057*** (-6.091)	-0.135** (-2.029)
LEG_SYS	-0.023** (-2.263)	-0.032** (-2.142)	-0.024* (-2.024)	-0.017* (-1.842)
INVEST	-0.032** (-2.217)	-0.028** (-2.083)	-0.013* (-2.100)	-0.015* (-1.881)
CAPINTEN	0.304*** (15.262)	0.292*** (9.153)	0.316*** (15.369)	0.016* (1.703)
GROWTH	0.017** (2.137)	0.074* (1.857)	0.054** (2.170)	0.027* (1.819)
GDP	-0.534 (-0.661)	-0.517 (-0.851)	-0.855 (-0.123)	-0.888 (-0.731)
CONSTANT	0.031 (1.076)	0.245 (1.364)	0.986 (0.818)	0.704 (1.052)
Observations	254916	137884	112023	5009
R-squared	0.21	0.22	0.38	0.48
Country & Industry FE	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES

**Notes:** We use \*,\*\*and \*\*\* in a two tailed test to respectively indicate statistical significance at the 10 percent, 5 percent and 1 percent levels. The table presents the co-efficient estimates and t-statistics (in brackets). All variables are winsorized at the 1st and 99th percentiles.  
 $UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} ANA\_FOL + \beta_{14} LEG\_SYS + \beta_{15} INVEST + \beta_{16} CAPINTEN + \beta_{17} GROWTH + \beta_{18} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \varepsilon_t$

**Table 5: Influence of Religion and legal environment on Real Activities Manipulation**

VARIABLES	Full Sample	(REM1) Developed	(REM2) Developed	(REM1) Emerging & Developing	(REM2) Emerging & Developing
RELINT	0.106** (2.525)	0.114* (1.846)	0.078* (1.879)	0.216*** (3.645)	0.194*** (3.984)
LEGAL	-0.134* (-1.789)	-0.114* (-1.845)	-0.136** (-2.324)	-0.172 (-1.082)	-0.202 (-1.339)
ROA	-0.048** (-2.933)	-0.084*** (-3.290)	-0.036 (-1.452)	-0.078** (-2.425)	0.021 (1.368)
SIZE	-0.013* (-1.832)	-0.002** (-2.458)	-0.269 (-0.857)	0.004* (1.837)	0.009 (1.087)
MBV	-0.009* (-1.808)	0.013 (1.273)	-0.048 (-1.315)	0.056** (2.409)	0.044 (1.093)
BIG4	-0.054** (-2.021)	-0.098*** (-3.421)	-0.039** (-2.045)	-0.067** (-2.253)	-0.021* (-1.814)
LEV	0.038* (1.825)	0.062** (2.089)	0.048 (1.230)	0.076** (2.458)	0.031 (1.617)
CAPINTEN	-0.023* (-1.809)	-0.068** (-2.338)	-0.014* (-1.798)	-0.028 (-1.539)	-0.031 (-1.343)
GDP	-0.221* (-1.781)	-0.325 (-1.452)	-0.117** (-2.128)	-0.137 (-1.238)	-0.117** (-2.254)
CONSTANT	-0.931 (-0.936)	-0.037** (-2.348)	0.261 (1.383)	0.083** (2.125)	0.034* (1.741)
Observations	254,916	148,149	148,149	106,767	106,767
R-squared	0.023	0.036	0.031	0.078	0.028
Country FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

Notes: We use \*\* and \*\*\* in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. The study presents co-efficient estimates and t-statistics (in brackets). All variables are winsorized at the 1st and 99th percentiles.

**Table 6: Interaction between Religion & legal environment on Real Activities Management**

VARIABLES	Full Sample	(REM1) Developed	(REM2) Developed	(REM1) Emerging & Developing	(REM2) Emerging & Developing
RELINT	0.049** (2.351)	0.488* (1.798)	0.687* (1.887)	0.238* (1.869)	0.098** (2.076)
LEGAL	-0.148* (-1.892)	-0.344* (-1.857)	-0.168** (-2.521)	-0.228 (-1.569)	-0.078 (-1.648)
RELINT x LEGAL	-0.213** (-2.356)	-0.639*** (-4.177)	-0.815*** (-4.538)	-0.431** (-2.185)	-0.189** (-2.359)
ROA	-0.178*** (-4.231)	-0.212*** (-3.258)	-0.118** (-2.064)	-0.265*** (-3.065)	-0.091** (-2.068)
SIZE	-0.045* (-1.838)	0.056* (1.845)	-0.013* (-1.808)	0.018 (1.425)	-0.052 (-1.341)
MBV	-0.015 (-1.204)	-0.032 (-1.078)	0.087* (1.857)	-0.025 (-1.238)	-0.018 (-1.403)
BIG4	-0.049** (-2.134)	-0.086*** (-3.218)	-0.034** (-2.041)	-0.062** (-2.245)	-0.019* (-1.826)
LEV	0.078* (1.876)	0.193** (2.375)	0.161* (1.867)	0.068* (1.822)	0.016 (1.606)
CAPINTEN	-0.021* (-1.805)	-0.063** (-2.319)	-0.010* (-1.796)	-0.021 (-1.635)	-0.037 (-1.680)
GDP	-0.610* (-1.868)	-0.218 (-1.532)	-0.184** (-2.052)	-0.184 (-1.341)	-0.124** (-2.514)
CONSTANT	0.032** (2.082)	0.107* (1.823)	-0.084 (-1.184)	0.143* (1.854)	0.085*** (3.047)
Observations	254,916	148,149	148,149	106,767	106,767
R-squared	0.018	0.028	0.030	0.034	0.032
Country	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

Notes: We use \*\* and \*\*\* in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. The study presents co-efficient estimates and t-statistics (in brackets). All variables are winsorized at the 1st and 99th percentiles.

**Table 7: Religion and Legal Environment on Classification Shifting**

Variables	(Using Working Capital Accruals)				(Without Accruals in Expectation Model)			
	Full sample	Developed	Emerging	Developing	Full sample	Developed	Emerging	Developing
SPITEM	0.686*** (6.487)	0.125** (2.068)	0.289*** (4.625)	0.307*** (3.238)	0.474*** (4.354)	0.095** (2.231)	0.231*** (3.547)	0.269*** (3.125)
RELINT	-0.014** (-2.174)	-0.078* (-1.701)	-0.022* (-1.745)	-0.042** (-2.214)	-0.024* (-1.754)	-0.045* (-1.712)	-0.034* (-1.712)	-0.024** (-2.014)
RELINTSPI	-0.512** (-2.235)	-0.289* (-1.738)	-0.229** (-2.186)	-0.272*** (-3.989)	-0.053** (-1.978)	-0.068* (-1.748)	-0.071* (-1.774)	-0.037*** (-3.315)
LEGAL	-0.013* (-1.702)	-0.062* (-1.761)	-0.011 (-0.846)	-0.01 (-0.967)	-0.012* (-1.700)	-0.060* (-1.759)	-0.01 (-0.844)	-0.01 (-0.967)
LEGALSPI	-0.073** (-2.145)	-0.064** (-2.136)	-0.051* (-1.786)	-0.052 (-1.427)	-0.024** (-2.049)	-0.034* (-2.096)	-0.013 (-1.076)	-0.21 (-1.027)
LEGALREL	-0.120** (-2.401)	-0.042* (-1.752)	-0.232** (-2.073)	-0.125** (-2.487)	-0.205*** (-3.401)	-0.041* (-1.744)	-0.236** (-2.226)	-0.201*** (-3.400)
LEGRELSPI	-0.122** (-2.518)	-0.089** (-2.354)	-0.271** (-2.364)	-0.425*** (-4.487)	-0.205** (-3.401)	-0.094** (-2.484)	-0.284** (-2.564)	-0.320*** (-3.786)
SIZE	-0.058*** (-6.148)	-0.094*** (-6.982)	-0.017*** (-4.876)	-0.018* (-1.779)	-0.047*** (-5.292)	-0.086*** (-4.175)	-0.013*** (-3.263)	-0.016* (-1.743)
ROA	-0.083*** (-6.467)	-0.086*** (-3.375)	-0.066*** (-5.198)	-0.036* (-1.752)	-0.064*** (-3.851)	-0.058*** (-3.108)	-0.049*** (-3.376)	-0.032* (-1.745)
MBV	-0.001 (-1.325)	-0.002 (-1.074)	-0.001 (-1.109)	-0.002 (-0.636)	-0.001 (-1.247)	-0.002 (-1.021)	-0.001 (-1.087)	-0.002 (-0.631)
LEV	0.327*** (5.862)	0.148*** (4.924)	0.421*** (4.214)	0.367*** (6.563)	0.285*** (4.784)	0.124*** (3.852)	0.257*** (3.683)	0.228*** (3.427)
BIG4	-0.025** (-2.344)	-0.024** (-2.215)	-0.032*** (-3.112)	-0.037** (-2.126)	-0.023** (-2.018)	-0.021** (-2.186)	-0.027* (-1.762)	-0.029** (-1.746)
LEG_SYS	-0.026** (-2.265)	-0.034** (-3.143)	-0.025* (-2.021)	-0.020* (-1.842)	-0.027** (-2.266)	-0.034** (-2.144)	-0.026* (-2.022)	-0.021* (-1.845)
INVEST	-0.035** (-2.220)	-0.030** (-2.083)	-0.015* (-2.100)	-0.016* (-1.882)	-0.035** (-2.220)	-0.029** (-2.080)	-0.017* (-2.102)	-0.017* (-1.885)
CAPINTEN	0.031** (-2.321)	0.022** (-2.149)	0.018* (-1.725)	0.028* (-1.742)	0.026** (-2.183)	0.021** (-1.897)	0.016* (-1.718)	0.019* (-1.738)
GROWTH	0.057*** (-3.424)	0.054*** (-3.764)	0.056*** (-6.124)	0.047*** (-5.281)	0.04*** (-3.125)	0.038*** (-2.884)	0.033** (-2.124)	0.034** (-2.298)
GDP	-0.342 (-0.768)	-0.28 (-0.789)	-0.357 (-0.784)	-0.345 (-0.848)	-0.187 (-0.506)	-0.194 (-0.724)	-0.162 (-0.768)	-0.155 (-0.843)
CONSTANT	-0.024 (-1.391)	-0.424 (-1.367)	-0.154 (-1.159)	-0.421 (-0.708)	-0.246 (-1.191)	-0.351 (-1.291)	-0.127 (-1.187)	-0.256 (-0.946)
Observations	254916	137884	112023	5009	254916	137884	112023	5009
R-squared	0.23	0.25	0.39	0.42	0.22	0.24	0.38	0.41
Country & Industry FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FEs	YES	YES	YES	YES	YES	YES	YES	YES

**Notes:** We use \*,\*\*and \*\*\* in a two tailed test to respectively indicate statistical significance at the 10 percent, 5 percent and 1 percent levels. The table presents the co-efficient estimates above and t-statistics (in brackets). All variables are winsorized at the 1st and 99th percentiles.

$$UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} LEG\_SYS + \beta_{14} INVEST + \beta_{15} CAPINTEN + \beta_{16} GROWTH + \beta_{17} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \varepsilon_t$$





**Table 8: High and Low Religion and Legal Environment Interactions on Classification Shifting**

VARIABLES	Dependent Variable : UNEXP_CE					
	(HIGH) Developed	(LOW) Developed	(HIGH) Emerging	(LOW) Emerging	(HIGH) Developing	(LOW) Developing
SPITEM	0.710** (2.487)	0.451** (2.413)	0.397** (2.231)	0.794* (1.763)	0.663*** (2.746)	0.487** (2.232)
RELINT	-0.663* (-1.750)	-0.705 (-0.611)	-0.016** (-1.981)	-0.023 (-1.552)	-0.204*** (-3.121)	-0.085* (-1.713)
RELINTSPI	-0.709** (-2.084)	-0.056 (-1.465)	-0.233*** (-5.236)	-0.185 (-1.589)	-0.234*** (-4.716)	-0.117* (-1.877)
LEGAL	-0.086** (-2.467)	-0.249** (-1.962)	-0.083* (-1.713)	-0.178 (-0.866)	-0.056 (-0.166)	-0.099 (-0.285)
LEGALSPI	-0.397*** (-3.253)	-0.549** (-2.297)	-0.095* (-1.763)	-0.098* (-1.718)	-0.379 (-1.318)	-0.319 (-1.139)
LEGALREL	-0.044* (-1.747)	-0.040* (-1.776)	-0.333** (-1.997)	-0.266** (-2.038)	-0.218** (-2.405)	-0.058** (-2.135)
LEGRELSPI	-0.839*** (-4.263)	-0.051* (-1.722)	-0.128** (-2.359)	-0.458** (-2.255)	-0.237*** (-4.693)	-0.174** (-2.297)
SIZE	-0.064*** (-3.726)	-0.139*** (-3.018)	-0.011** (-2.106)	0.047** (2.436)	-0.012 (-0.821)	-0.018 (-0.973)
ROA	-0.239*** (-3.939)	-0.345** (-2.123)	-0.389*** (-3.301)	-0.208*** (-3.525)	-0.163* (-1.706)	-0.069* (-1.705)
MBV	-0.004*** (-3.047)	-0.001 (-0.607)	-0.004*** (-2.878)	-0.005*** (-2.892)	-0.007* (-1.669)	-0.005 (-1.646)
LEV	0.395*** (3.157)	0.090** (2.503)	0.485*** (4.058)	0.961*** (5.763)	0.342*** (3.971)	0.507*** (5.911)
BIG4	-0.018** (-2.496)	-0.017** (-2.359)	-0.024** (-2.022)	-0.034** (-2.433)	-0.072* (-1.738)	-0.204 (-1.332)
LEG_SYS	-0.033** (-2.142)	-0.023** (-2.106)	-0.025* (-2.021)	-0.022* (-2.019)	-0.020* (-1.847)	-0.018* (-1.837)
INVEST	-0.031** (-2.086)	-0.023** (-2.003)	-0.014* (-2.092)	-0.014* (-2.070)	-0.018* (-1.886)	-0.014* (-1.872)
CAPINTEN	0.087** (2.077)	0.097* (1.742)	0.024** (2.207)	0.014** (2.064)	0.007* (1.787)	0.068 (1.032)
GROWTH	0.168*** (10.996)	0.117*** (6.659)	0.024** (2.022)	0.114*** (7.433)	0.072** (2.138)	0.204*** (7.332)
GDP	-0.524*** (-4.266)	-0.855 (-0.895)	-2.695 (-0.289)	-0.316 (-0.212)	-0.726 (-1.475)	-0.940 (-0.361)
CONSTANT	-0.633 (-1.503)	0.068 (0.967)	-0.119 (-0.327)	0.777 (1.302)	-0.080 (-0.179)	0.558 (0.426)
Observations	63,520	74,364	70,742	41,281	3,568	1,441
R-squared	0.50	0.24	0.28	0.36	0.45	0.48
Country&Ind. FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

**Notes:** We use \*, \*\* and \*\*\* in a two-tailed test to indicate statistical significance at 10 percent, 5 percent and 1 percent levels respectively. The table presents co-efficient estimates above and t-statistics below in brackets. All variables are winsorized at the 1st and 99th percentiles. In addition, we opt for t-test for equality of the two coefficients between high and low religion. Results show statistically significant differences in the two sets of coefficients across all samples.

$$UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} LEG\_SYS + \beta_{14} INVEST + \beta_{15} CAPINTEN + \beta_{16} GROWTH + \beta_{17} GDP + Year\ Fixed\ Effects + Country\ \&\ Industry\ Fixed\ Effects + \varepsilon_t$$

**Table 9: Religion, Legal Environment and Misclassification in Pre-and Post-Financial Crisis Periods**

Variables	(Pre-Financial Crisis Period and IFRS adoption)			(During Financial Crisis Period,)			(Post-Financial Crisis Period)		
	2000-2006			2007-2009			2010-2018		
	Developed	Emerging	Developing	Developed	Emerging	Developing	Developed	Emerging	Developing
SPITEM	0.321*** (3.104)	0.268** (2.251)	0.268*** (3.081)	0.627*** (7.423)	0.382*** (4.573)	0.487*** (5.338)	0.237** (2.117)	0.258** (2.329)	0.434*** (3.106)
RELINT	-0.068 (-1.428)	-0.158* (-1.784)	-0.219** (-2.207)	-0.075 (-1.438)	-0.165* (-1.792)	-0.249** (-2.487)	-0.072 (-1.432)	-0.160* (-1.788)	-0.237** (-2.304)
RELINTSPI	-0.196* (-1.752)	-0.203** (-2.332)	-0.187*** (-3.218)	-0.289** (-2.384)	-0.237** (-2.564)	-0.474*** (-6.989)	-0.227* (-2.031)	-0.213** (-2.264)	-0.274*** (-3.759)
LEGAL	-0.008* (-1.785)	-0.059 (-1.409)	-0.007 (-0.803)	-0.011* (-1.827)	-0.011 (-0.948)	-0.005 (-1.359)	-0.007* (-1.784)	-0.011 (-0.858)	-0.011 (-1.028)
LEGALSPI	-0.172** (-2.253)	-0.098* (-1.794)	-0.377 (-1.424)	-0.239** (-2.536)	-0.099* (-1.796)	-0.472 (-1487)	-0.193*** (-2.278)	-0.094* (-1.789)	-0.379 (-1.318)
LEGALREL	-0.244** (-2.185)	-0.143** (-2.218)	-0.210** (-2.460)	-0.048** (-2.423)	-0.144** (-2.216)	-0.218** (-2.486)	-0.045** (-2.193)	-0.145** (-2.219)	-0.212** (-2.462)
LEGALRELSPI	-0.382** (-2.428)	-0.318* (-2.476)	-0.343*** (-4.211)	-0.131*** (-3.354)	-0.567* (-2.494)	-0.627*** (-6.724)	-0.053** (-2.314)	-0.323* (-2.207)	-0.361*** (-5.278)
SIZE	-0.051*** (-3.146)	-0.093*** (-6.980)	-0.017*** (-4.876)	-0.018* (-1.779)	-0.018* (-2.741)	-0.045*** (-5.286)	-0.082*** (-4.171)	-0.013*** (-3.260)	-0.015* (-1.741)
ROA	-0.089*** (-7.274)	-0.055*** (-4.954)	-0.014** (-2.203)	-0.088*** (-7.264)	-0.056*** (-5.194)	-0.062*** (-3.831)	-0.059*** (-3.138)	-0.059*** (-5.105)	-0.138** (-2.347)
MBV	-0.001 (-1.466)	-0.001 (-1.164)	-0.035 (-1.323)	-0.001 (-1.469)	-0.001 (-1.181)	-0.001 (-1.244)	-0.001 (-1.528)	-0.001 (-1.156)	0.002 (0.599)
LEV	0.388*** (5.486)	0.674*** (4.720)	-0.002 (-0.637)	0.388*** (5.478)	0.666*** (4.326)	0.226*** (4.284)	0.389*** (5.541)	0.667*** (4.379)	0.405*** (6.860)
BIG4	-0.025*** (-2.659)	-0.048*** (-6.133)	0.409*** (6.916)	-0.029** (-2.287)	-0.054*** (-6.121)	-0.022** (-2.017)	-0.026** (-2.387)	-0.058*** (-6.141)	-0.133* (-1.742)
LEG_SYS	-0.018** (-2.241)	-0.019** (-2.020)	-0.032** (-2.100)	-0.035*** (-3.112)	-0.020* (-1.847)	-0.028** (-2.085)	-0.031** (-2.198)	-0.020** (-2.023)	-0.031** (-2.076)
INVEST	-0.024** (-2.014)	-0.010** (-2.043)	-0.032** (-2.003)	-0.029** (-2.472)	-0.017** (-2.079)	-0.039** (-2.082)	-0.027** (-2.049)	-0.014** (-2.058)	-0.038** (-2.026)
CAPINTEN	0.018** (2.140)	0.015* (1.721)	0.026* (1.740)	0.021** (2.304)	0.019* (1.769)	0.047* (1.733)	0.019** (2.158)	0.017* (1.725)	0.027* (1.753)
GROWTH	-0.087** (-2.187)	-0.086** (-2.358)	0.031** (2.345)	-0.082** (-2.125)	-0.090** (-2.205)	0.041*** (-2.411)	-0.087** (-2.159)	-0.092** (-2.245)	-0.036*** (-3.103)
GDP	-0.089 (-0.274)	-0.055 (-0.954)	-0.012 (-0.190)	-0.088 (-1.264)	-0.056 (-1.194)	-0.052 (-1.182)	-0.085 (-1.138)	-0.059 (-1.105)	0.242 (1.572)
CONSTANT	-0.001 (-0.218)	-0.001 (-1.164)	0.753 (1.586)	-0.001 (-1.469)	-0.001 (-0.741)	(-0.504) (-0.246)	-0.001 (-0.351)	-0.001 (-1.156)	-0.138** (-2.347)
Observations	61,038	4,720	2,190	25,348	21,004	945	51,498	42,009	1,873
R-squared	0.29	0.26	0.34	0.31	0.28	0.37	0.28	0.30	0.40
Country& Ind.FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FEs	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: We use \*, \*\* and \*\*\* in a two tailed test to indicate statistical significance at 10 percent, 5 percent and 1 percent levels respectively. We present co-efficient estimates above and t-statistics below in t-values (in brackets). All variables are winsorized at the 1st and 99th

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percentiles.  $UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} LEG\_SYS + \beta_{14} INVEST + \beta_{15} CAPINTEN + \beta_{16} GROWTH + \beta_{17} GDP + \text{Year Fixed Effects} + \text{Country \& Industry Fixed Effects} + \epsilon_{it}$

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**Table 10: Religion, Legal Environment and Misclassification in IFRS Adopter/Non-Adopter Countries**

Variables	IFRS Adopter Countries		IFRS Non-Adopter Countries	
	(1)	(2)	(3)	(4)
SPITEM	0.697*** (7.116)	0.498*** (6.110)	0.569*** (6.219)	0.419*** (5.418)
RELINT	-0.321** (-2.408)	-0.309** (-2.382)	-0.232** (-2.102)	-0.298** (-2.067)
RELINTSPI	-0.417** (-2.302)	-0.406** (-2.172)	-0.317** (-2.102)	-0.314** (-2.088)
LEGAL	-0.122* (-1.854)	-0.121* (-1.844)	-0.102* (-1.794)	-0.094* (-1.779)
LEGALSPI	-0.117** (-2.212)	-0.116** (-2.194)	-0.107** (-2.012)	-0.105** (-2.009)
LEGALREL	-0.018** (-2.345)	-0.015** (-2.338)	-0.011** (-2.003)	-0.010*** (-2.001)
LEGALRELSPI	-0.461*** (-4.252)	-0.448*** (-4.123)	-0.362** (-2.058)	-0.296** (-2.049)
SIZE		-0.055*** (-4.025)		-0.045*** (-4.003)
ROA		-0.078*** (-7.033)		-0.076*** (-6.983)
MBV		-0.051 (-1.128)		-0.051 (-1.128)
LEV		0.328*** (3.027)		0.321*** (3.022)
BIG4		-0.243*** (-3.003)		-0.241*** (-2.893)
LEG_SYS		-0.038** (-2.310)		-0.037* (-2.309)
INVEST		-0.032** (-2.005)		-0.031** (-2.003)
CAPINTEN		-0.268** (-2.246)		-0.256** (-2.242)
GROWTH		0.029** (2.247)		0.026** (2.238)
GDP		-0.409 (-1.247)		-0.398 (-1.239)
CONSTANT		0.048 (1.047)		0.041 (1.039)
Observations	139821	139821	115095	115095
R-squared	0.284	0.292	0.261	0.281
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes

Notes: We use \*, \*\* and \*\*\* in a two tailed test to indicate statistical significance at 10 percent, 5 percent and 1 percent levels respectively. We present co-efficient estimates above and t-statistics below in brackets. Columns (1) and (3) present the results without control variables, while columns (2) and (4) present the results with a full set of control variables. All variables are winsorized at the 1st and 99th percentiles.  $UNEXP\_CE = \beta_0 + \beta_1 SPITEM + \beta_2 RELINT + \beta_3 RELINT \times SPITEM + \beta_4 LEGAL + \beta_5 LEGAL \times SPITEM + \beta_6 LEGAL \times RELINT + \beta_7 LEGAL \times RELINT \times SPITEM + \beta_8 SIZE + \beta_9 LEV + \beta_{10} ROA + \beta_{11} MBV + \beta_{12} BIG4 + \beta_{13} LEG\_SYS + \beta_{14} INVEST + \beta_{15} CAPINTEN + \beta_{16} GROWTH + \beta_{17} GDP + Year\ Fixed\ Effects + Country \& Industry\ Fixed\ Effects + \varepsilon_t$