Accounting Enforcement's Determinants—A Global Study

The purpose of this study is to investigate whether the national characteristics of culture, religion and political factionalization are associated with the strength of accounting enforcement. The study uses data on percentages of religious adherents in a sample nation, the Hofstede cultural dimensions and political factionalization as key independent variables. This study also controls for national legal code (e.g., Common Law or Civic Code) and market liquidity. It uses factor analysis to generate factor scores from the data. These factor scores are then used as the independent variables. The dependent variable, accounting enforcement, is drawn from Brown, Preiato and Tarca (2014). The findings demonstrate that these national characteristics are strongly associated with national accounting regulatory enforcement. The implications of this research are that national characteristics should be taken into account in considering the impact of accounting standards on accounting comparability across nations. The limitation of this study is that, like much international research, the sample size is limited, here to 42 nations. This study provides an important contribution to the literature by helping establish that national characteristics do affect accounting enforcement efforts cross-nationally. This helps researchers and regulators better understand whether international standards can provide the link in comparability across nations that proponents are seeking. It does so by focusing on the variation in enforcement across nations rather than on the standards themselves.

KEYWORDS: Accounting Enforcement, Accounting Quality, Culture, Religion, Political Factionalization, Regulation

Accounting Enforcement's Determinants—A Global Study

One of the central goals of having a global set of financial reporting standards is to create a more cohesive and comparable international financial reporting environment.[1] In fact, the call for global reporting standards has been ongoing since the mid-20th century, with the SEC reiterating its commitment to a global set of accounting standards in 2010 and beyond.[2] However, it remains unclear whether global standards themselves are an achievable goal, and further, whether these standards would provide the cohesive and comparable financial reporting desired (Leuz, 2010). Recent events also point to a trend of pushback against globalization. These events include the "Brexit" vote in the United Kingdom, France's "Frexit" movement's growth, the rise of the Alternatives for Germany Party (AfD), and rising nationalistic, populist movements in the United States and elsewhere. This trend has caught the attention of financial and political elites cross-nationally, fueling arguments that more attention should be paid to national characteristics and national welfare as opposed to an elite preference towards globalization (e.g. Summers 2016; King 2016).

Although there has been a push for globalization of accounting standards, Gillis, Petty and Suddaby (2014) note that little research has been done on the transnational regulation of accounting, and they argue that it is important to understand the drivers of such regulation. BPT (2014) and Preiato, Brown and Tarca (2015) address transnational regulation of accounting by studying the enforcement of accounting standards, noting that

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[1] http://www.ifrs.org/About-us/Pages/IFRS-Foundation-and-IASB.aspx

[2] http://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176156304264

enforcement of regulation varies between nations and has significant impacts on uncertainty in the financial markets. *The BPT (2014) and PBT (2015) studies demonstrate that the accounting enforcement index that they developed impacts accounting quality of nations in their sample, as measured in their studies.* However, no studies have looked at the potential drivers of accounting standards enforcement in a multi-national setting. This paper fills this gap in the literature. By doing so, this study adds important findings to the discussion of whether it is reasonable to expect similar enforcement of accounting standards across nations, and provides researchers with an important control for studies exploring international accounting standards.

Studying accounting standards enforcement is particularly important with the widespread adoption of IFRS and other local accounting standards. Although there have been many studies evaluating IFRS adoption, they do not take into consideration, to any great extent, the operating environment of the countries adopting these standards and how this affects enforcement, and ultimately the quality and comparability of financial statements across nations. Without comparable enforcement, the same type of standards "on paper" can easily lead to differing financial reporting results. Consider IFRS 13, which permits reporting of certain assets at fair value. It uses a variety of hierarchical measurement techniques. In a country with weak enforcement, corporations may have much latitude to report assets at the value most advantageous to them, whereas in a country with strong enforcement, corporations may not have such latitude. It would seem as if the same standards should result in the same accounting, but, given different levels of enforcement, it may not. Thus, when utilizing judgment required by many IFRS

standards, strong enforcement would appear necessary to ensure maximum comparability.

This paper sheds light on the relationship between national characteristics and the level of regulatory enforcement. This paper specifically identifies legal origin, culture, religion, and market development following Leuz (2010). It also includes a political factor, political factionalization of the elite. This has been missing from prior literature. While Leuz (2010) incorporates several important characteristics that encompass a nation, he does not account for political factions, which is likely to influence regulation. Additionally, Leuz (2010) looks at culture as a package of attributes making it difficult to draw conclusions. This paper breaks down cultural attributes to enable a specific understanding of which are associated with accounting regulation. It focuses specifically on religion and other cultural variables found to be associated with societal behaviors and with regulation (e.g. Duong, Kang, and Salter 2016; Cowperthwaite 2010). Religion and culture are very powerful forces affecting human behavior (KLP, 2014). In doing this analysis, this study provides a more focused lens into factors associated with accounting regulation.

Global reporting standards are intended to create financial reporting that is consistent across nations. However, from a functionalist perspective, which views aspects of a society as connected so that they mutually influence each other, national characteristics are likely to influence how accounting standards are implemented and further how they are enforced. In fact, the practice of law, medicine and accounting, have all been found to differ between nations (see, for example, La Porta, Lopez-De-

Silanes, Shleifer and Vishny 1998; McPherson 1989; Evans, Baskerville and Nara 2015; Nabar & Boonlert-U-Thai 2007).

This study focuses on the influences of national characteristics on enforcement[3] of accounting standards for 42 nations. The results of this study show that a country's religious environment, national culture, political environment, legal origin, and financial market liquidity are all associated with the level of accounting enforcement in the sample nations. This is an important contribution to the literature on the relationship between culture and regulation because it will help regulators understand whether adjustments to local regulation will have the desired effect of making accounting standards more uniform. Further it will help regulators create enforcement legislation that may be more useful when considering specific cultural nuances. This contribution is particularly important given the current political climate in which Western alliances have been facing increasing stress, where it is likely that national characteristics will become even more pronounced and important in regulation and enforcement.

These results should also be of interest to standard setters, who are concerned with factors that influence financial statement quality and comparability, and to researchers who want to understand the nexus between accounting standards, accounting standards enforcement, and the financial statements themselves. They should also provide an understanding of how national characteristics may influence other globalization efforts. Section II provides an extensive literature review and hypothesis development,

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[3] Enforcement represents enforcement infrastructures (also called regimes here) recommended by the European Commission (2000) for the enforcement of accounting standards, captured in an index created by BPT (2014).

Section III discusses the sample and methodology, Section IV presents a discussion of results, and Section V provides concluding remarks.

Literature Review and Hypothesis Development

This study looks at the potential drivers of accounting enforcement. This section reviews both empirical and theoretical literature that guides the choice of factors used in the current study. Then hypotheses based on this prior literature are developed.

A recent theoretical study by KLP (2014) postulates auditing enforcement regimes are a function of many national cultural characteristics (e.g., Hofstede, 2001), as well as of religion, source of auditing and accounting standards, and legal code origin. KLP notes that there may be systematic differences in the implementation of common regulations based on variation in national regulatory regimes, a point noted by Leuz (2010) as well. Kleinman and Lin (2017) provided empirical evidence supporting this theory. However, their study focuses on the influence of national characteristics on *auditing* regulatory enforcement and not *accounting* regulatory enforcement. It is important to study the relationship of national characteristics to accounting standards enforcement because accounting standards provide guidelines for corporate reporting and therefore the enforcement of these standards provide a window into the rigor with which corporate financial statements are prepared within a nation. Auditing standards, on the other hand, provide oversight to the audit professionals, with the auditors acting as an independent check on corporate financial reporting. The enforcement of auditing standards provides a window into the environment within which the audit firms exist.

Leuz (2010) studies the relationship between national characteristics and financial market regulation by clustering nations into groups by characteristics that he deemed to represent their culture. Characteristics including legal origin, cultural region, market development and country wealth are used as a basis for determining cluster membership when associating these characteristics with financial market regulation, including securities offering disclosure requirements, liability standards of directors, distributors and accountants, public enforcement of securities regulation and shareholder rights. His findings indicate several distinct clusters, and based on these findings, he argued that effective international regulation and enforced comparability of financial statements is unlikely without special arrangements. Although this study addresses the issue of national characteristics and their effect on financial market regulation, it is not clear from his study which specific cultural characteristics influence the regulation decision because he uses very broad indices and cluster analysis. Leuz (2010) also reports wide variation within his clusters but does not identify the source of this variation. In comparison, this study seeks to understand which specific cultural, religious, and political variables are related to regulation. In addition, this study looks at regulation differently, using an accounting enforcement index developed by BPT (2014). It calculates an accounting enforcement activity score for 52 nations from 2002 to 2008. BPT (2014, p. 1) note that their auditing and accounting enforcement indices "have additional explanatory power (over more general legal proxies) for country-level measures of economic and market activity, financial transparency and earnings management." This index is more relevant to an accounting study than the measures used by Leuz, which focus broadly on financial

markets. This study uses a combination of regression and factor analysis to look directly at the relationship between each country's enforcement efforts, and its religious, cultural and political environment, in contrast to Leuz' approach.

Other literature has also shown strong support for the notion that institutional differences in infrastructure, culture, legal requirements, as well as socio-economic and political systems, may lead to non-comparable accounting figures despite similar accounting standards (Cascino and Gassen 2015; Gordon, Greiner, Kohlbeck, Lin and Skaife 2013; Leuz, 2010; Ball et al. 2003; Cuijpers and Buijink 2005; Nabar & Boonlert-U-Thai 2007).[4] Gordon et al (2013) note, for example, that the development of accounting standards and their enforcement is likely influenced by a complex set of variables.

Many other studies have found a relationship between national characteristics and how they influence financial reporting quality (e.g. Armstrong, Barth, Jagolinzer, and Riedl 2010, a result supported analytically by Ball 2001; Ball et al 2003)., However, these research studies have focused most frequently on legal and political systems. Results show that markets in countries operating under code law systems had less of a reaction to IFRS adoption than those operating under common law systems, indicating that participants in code law systems expected lower financial reporting value from IFRS adoption than participants in common law systems (e.g., Ball et al., 2003). Soderstrom and Sun (2007) conducted an extensive literature review and note that legal (e.g., code

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[4] Such arguments are in line with the economic sociology approach of Granovetter (2017). Granovetter argues that human behavior and their institutions are the outcome of the interactions between individuals, institutions, and the social, economic, political, religious and cultural environments within which they are embedded. Fligstein & McAdam (2012) present a theory of fields, providing a mechanism by which institutional and other development may occur.

law versus common law) and political factors such as government corruption and the threat of expropriation may also affect accounting quality.

Although prior literature has addressed the relationship between national characteristics and regulation broadly, no studies have looked at the relationship between a comprehensive model of specific national characteristics and accounting standards enforcement. It is important to look at this relationship because other literature finds that social order is a partial function of such characteristics (Friedland and Alford 1991; Hallett and Ventresca 2006; Friedland 2009; Nabar and Boonlert-U-Thai 2007). Additionally, while Leuz (2010) finds that characteristics of countries cluster into meaningful segments, and that segment membership did have an impact on enforcement, his approach does not allow a breakdown of particular variable influences upon the regulatory enforcement choice, a choice that, he notes, varies a great deal between nations in the same segment in his own sample. Even in very embedded stews, it is important to know which ingredients best affect the flavor.

Next, relevant literature in regard to culture, religion and political factionalization is reviewed.

Culture

Literature looking at the influence of culture on various matters of interest frequently utilizes cultural dimensions identified and defined by Hofstede (1980, 1983, 1984 pp. 83-84) and his subsequent works. This literature often connects culture with other influences. According to Richardson (2007), Hofstede (1980) argues that his

cultural framework is impacted by external influences (e.g. natural events, investment, and conquest). Such influences affect ecological factors including history, economics and demographics, which in turn affect Hofstede's cultural dimensions. These cultural dimensions potentially impact such institutions as religion, political, legal and education systems. The institutions, of course, further affect the cultural dimensions and the aforesaid ecological factors.

This characterization is consistent with Granovetter (2017) and Fligstein and McAdam (2012). Karaibrahimoglu and Cangarli (2016), find a moderating effect of culture on the relationship between the strength of auditing standards and firms' ethical behaviors. Karaibrahimoglu and Cangarli (2016) agree with Granovetter on the important impact of culture and other institutional factors. Accordingly, ethics and regulation may be seen as alternatives to each other but not as mutually exclusive means of controlling the financial reporting behavior of corporations. Ethics and what are considered ethical violations are influenced by culture, as are the consequences of such behavior. Since the impact of conscience on behavior is uncertain, in that conscience speaks to different people in different ways, understanding culture's relationship to regulation and behavior is important.

Minnis & Shroff (2017, p. 5) explore determinants of financial regulation (specifically on financial disclosure and auditing reports, not standard setting), finding that there is a "…rich heterogeneity across countries in terms of both reporting differences and institutional differences." Minnis and Shroff (2017, p. 3) note that "the extent to which each of the benefits and costs weighs into a country's culture and

institutional framework is likely to shape the country's level of regulation (Leuz 2010)." Because of the strong connection between culture and its influence on consequences, it is important to include cultural variables here.

Hofstede identifies and defines significant societal values to include Individualism (versus Collectivism), Power Distance (Large versus Small), Uncertainty Avoidance (Strong versus Weak), Masculinity (versus Femininity), Long-term Orientation (versus Short-term Normative Orientation), and Indulgence (versus Restraint). Richardson (2007) uses these cultural dimensions and finds that individualism, power distance, and uncertainty avoidance were related to 'tax values' in a sample of 43 nations, but does not find significance for masculinity. Studies by Cowperthwaite 2010; Kanagaretnam, Lim and Lobo 2014 find similar results. Nabar & Boonlert-U-Thai (2007) also find that a nation's uncertainty avoidance influences earnings management. Other studies have demonstrated the relevance of Hofstede's culture concepts to the accounting profession (e.g. Gray 1988; Doupnik and Tsakumis 2004). Further, Hofstede's (2001) measures of culture are used here because the vast majority of culture research in management and international business is built on these scores (e.g., Tosi and Greckhamer 2004; Han, Kang, Salter and Yoo 2010), as well as culture research in finance according to Reuter (2011). Readings in the accounting literature itself support the notion that Hofstede's measure is the most widely-such used measure in accounting research. Further, Voss (2012) does a head-to-head comparison of Hofstede's constructs to the House et al. (2004) GLOBE culture measure, thought by some to be a more current measure, and finds that Hofstede's formulations are superior.

Cowperthwaite (2010) notes that there is increasing evidence that national cultural traits influence all aspects of its citizens' lives, including social interactions, dealing with power inequality, and response to uncertainty. He finds from his professional experience that auditing is no exception. Fisman and Miguel (2007) provide additional direct evidence on the influence that cultural norms and legal enforcement play with regard to corruption patterns. Orij (2010), using a sample of 600 firms drawn from 22 nations, found that national culture influenced corporate social responsibility reporting levels.

Leung, Bhagat, Buchan, Erez & Gibson (2005, p. 362; see also Granovetter, 2017) note that "culture is often viewed as a multi-level construct that consists of various levels nested within each other from the most macro-level of a global culture, through national cultures, organizational cultures, group cultures, and cultural values that are represented in the self at the individual level." This nesting effect argues against Leuz's (2010) division of the world into seven geographic sectors, sectors which conflate culture, legal code, and other characteristics. Leung et al.'s statements about culture as a multi-level construct intimates that much understanding may be lost with higher and higher levels of aggregation. Thus use of national data will provide more important insight into the operation of culture on accounting regulatory enforcement choices, choices that are made at the *national level*, than will Leuz's (2010) aggregation of nations into geographic sectors. While Oh, Pieper and Gerhart (2010) note that cultural variations exist within nations (see also Granovetter, 2017; Fligstein and McAdam,

2012), this does not disturb this effort since national regulatory efforts are the most disaggregated level of measurement possible.

Culture is important because, as Williamson (2000: cited by Lievenbruck and Schmid,2014)) notes, it impacts decision-making. Further, since culture is embedded in the national context, it changes very slowly (e.g., Lievenbruck and Schmid, 2014; Davis and Williamson, 2016). According to Lievenbruck and Schmid (2014; p. 94), Williamson's schema for the impact of culture on decision-making argues that "culture influences decision making in two ways. First, culture shapes the formal institutional environment in a country…. [The] second, direct way in which culture influences decision making: via informal rules and standards." North (1991; cited in Lievenbruck and Schmid, 2014) notes that formal constraints (e.g., laws) on behavior are inadequate in themselves, but require culture-based constraints as an assist to such formal structures as the law. Indeed, the author notes, culture may shape the formal constraints themselves. It is important, then, to understand the relationship of culture to formal constraints, here expressed as regulations over accounting practice. Given the extant literature indicating the importance of culture with respect to behavior, and following prior research that particularly focuses on certain of Hofstede's cultural dimensions, the following variables have been selected for study here: Individualism, Power Distance, and Uncertainty Avoidance.

Hofstede's first societal value, Individualism, refers to the limited interdependence of a society within which individuals tend to take care of only themselves and their immediate families (Hofstede 1984, 2001). This is in direct contrast

to Collectivism, which represents a tightly knit community where relatives and clan members are expected to take care of each other in exchange for complete loyalty (see also Franke, Hofstede and Bond 1991). Individualism may lead to stronger accounting enforcement because individuals are all independently looking out for their own best interests and therefore there is a need for monitoring (e.g., Hofstede, Hofstede, and Minkov, 2010). In contrast, Davis and Williamson (2016) found that highly individualistic countries tended to have lighter regulation of business entry than did less individualistic countries. This effect was stronger in nations with a greater democratic tradition and those having a common law tradition.

Alternatively, a collectivist culture is one in which citizens work together as a group, and this may create a strong alliance towards or against regulations and the enforcement of said regulations. Collectivist culture may serve to mitigate the need for regulation because internal pressures within society may lead to the desired behavior without regulation. On the other hand, it may push groups against adopting norms for compliance with rules and therefore regulation may be needed to constrict group behavior so as to force compliance with the ends that the regulation seeks to bring about. Thus, independence may pull regulation in one direction and collectivism may pull it in another. The literature supports the impact of culture, including independence/collectivism on behavior. Accordingly, the following hypothesis is offered.

H1: A country's degree of Individualism (IND) will be associated with its

accounting regulatory enforcement.

The second societal value, Power Distance, refers to the way a society manages inequalities among members of the society when such inequalities occur (Hofstede 1984). People in societies with large Power Distance are more accepting of hierarchal order and their place in the hierarchy and are unlikely to question this. People in societies with small Power Distance are interested in equal power and would question and demand justification for inequalities in power. Therefore, where small Power Distance is a dominant culture, stronger enforcement of regulations is more likely to ensure that members of the societies are equally protected. Individuals in greater power distance societies may be more accepting of a lack of effective regulation, resulting in less pressure for regulation.

On the other hand, in greater power distance societies, regulation might be seen as a necessary concomitant of social justice, in which the elite themselves impose regulation to at least protect themselves from informational predation by other members of the elite when transacting commercial transactions, including acquisition of other companies' equity. That is, different members of the elite may also suffer from informational insufficiency about proposed transactions. While these powerful elites may possess the resources to gather information on proposed acquisition targets, etc., doing so on any wide scale may prove enormously expensive. Enlisting the power of the state, through regulation, may ease transactional costs that occur in transactions among the elites. The following hypothesis is offered.

H2: The degree of Power Distance will be associated with accounting regulatory

enforcement.

The third societal value, Uncertainty Avoidance, refers to the way the society

reacts to uncertainty, and the degree to which they feel uncomfortable with ambiguity

(Hofstede, 1984). A society with strong Uncertainty Avoidance would have a strict code

of behavior and be intolerant of those defying that code of behavior because such

defiance raises questions about the environment within which people live, whether

financial or otherwise. Thus, environments that are more ambiguous raise the anxieties

of those within that environment. Presumably those who are more uncertainty avoidant

will experience more distress from such rule-breaking or disparate behaviors. A society

with weak Uncertainty Avoidance on the other hand would be more relaxed and tolerant

of those with ideas in defiance of the societal principles or norms of behavior, including

behavior within the financial and accounting fields.

A country with a strong inclination to avoid uncertainty could, on the one hand,

be more likely to strongly enforce accounting regulation because not doing so could lead

to more uncertainty with accounting results and the interpretation of information.

However, it could on the other hand lead to inappropriate enforcement, whereby

whatever is initially enforced becomes the overriding focus of enforcement efforts, even

if it is an inappropriate or inefficient regulatory measure. As has been said, *original*

source unknown, the government that can give you everything you want can take away

everything you have. Moreover, since people in low Uncertainty Avoidance societies

have greater tolerance of uncertainty, they are more open to reforms and changes when such need arises. Therefore, the following hypothesis is offered:

H3: The degree of Uncertainty Avoidance (UA) will be associated with accounting regulatory enforcement.

Factionalized Elites

Hofstede's cultural dimensions capture important aspect of national environment.. The political environment is also likely to be related to behavior at the national level. Hillman and Keim (1995) propose a theoretical framework for understanding the way that governments and businesses operate and intersect, acknowledging that in addition to formal roles and legal constraints within a country, there are also informal rules and constraints set by societal norms and organizational culture. All of these intersect to create within each country a unique political environment that affects the efficiency and functioning of the societal activities. In other words, in addition to Power Distance and hierarchical order, there are also factions that may emerge within a society, based on such roles. These dueling political groups within a society are known as factionalized elites. Although they do not necessarily represent a hierarchical division, they do nonetheless represent a political division in society that may war to push/pull the society in different directions on matters of interest.

It is unclear whether such divisions foster a stronger accounting regulation enforcement environment. On the one hand, a hierarchal society could provide a

circumstance where the higher status members are able to manipulate the regulatory environment, resulting in a weaker enforcement effort (Fukuyama 2014a, b). On the other hand, it could allow those higher status members to suggest a more efficient enforcement environment wherein the most members are provided with the most effective regulation and enforcement. Adding to this, factionalized elites could provide more accountability in a society due to the dissonance within, or it could provide for a smaller enforcement effort due to instability within the government as a result of such groups.

The presence of factionalized elites may make it cost effective for the elites to rely on government or enforcement regimes external to themselves to take on the task of regulation in that such a socialized system of providing accounting enforcement takes the burden of private enforcement off the elites. With such a system, the different factions within the elite could rely on effective government (or other) enforcement efforts to help ensure the quality of accounting in firms that one faction of the elite or the other wishes to buy from the other. This stands in contrast to having the purchasing faction engage in its own investigative activity with respect to the quality of the acquisition target's accounting. A unified, or otherwise monolithic elite, in contrast, may see little use in accounting enforcement in that the unified elite may share accurate financial information amongst themselves, and may not want enforcement of high quality financial accounting information to be made available to non-elite actors who may be interested in investing, wealth redistribution or tax law enforcement.[5]

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[5] The Fund for Peace, which provides this study's measure of factionalized elites, defines factionalized elites here: http://fundforpeace.org/fsi/indicators/c2/.

In a related vein, Ali and Hwang (2000) find that countries with heavy reliance on government standard setters rather than private sector standard-setters place less reliance on published financial reports, likely due to the focus on regulatory standards at the expense of standards demanded by investors. Government standard setters can bring to bear the full power of the government on those noncompliant with government standards without invoking an intermediate mechanism (e.g., court-based activity) that may be both more costly, less efficient and less timely than a socialized system, under the aegis of the government.

Given the values stated above and the uncertainty about how it might impact the enforcement of accounting regulation, the following hypothesis is offered:

H4: The presence of Factionalized Elites will be associated with accounting regulatory enforcement.

Religion and Religiosity

Although culture and political environment may be powerful national forces related to national regulation, religion has also long been argued to be a very powerful force affecting human behavior (e.g., KLP, 2014; Kleinman and Lin, 2017). Durkheim (1995; cited in Fligstein and McAdam, 2012) argues that religion is important in that through it, people have a better understanding of their place and a feeling of being situated in the world that reduces the anxieties of existence. As such, Fligstein and McAdam (2012; p. 56) state, "religion provide(s) a sanctified affirmation and expression

of the collective."   Further, Fligstein and McAdam (2012; p. 58) note, religion embeds "the individual in a system of socially constructed meanings that substitutes the 'inner view' for the alienating aspects of the 'outer' perspective."   In doing these things, religion allows individuals to feel as if they were part of a greater whole.

Saroglu and Cohen (2011; p. 1311) argue that "religion refers to all kinds of behaviors humans do in reference to what they think is a transcendent reality; culture refers to all psychological characteristics that distinguish natural (nonexperimental) groups." Violating perceived religious injunctions, therefore, should be anxiety-arousing amongst the faithful. Religion and its diktat provide guidance on behavior, whether narrowly defined, as in cleanliness rites, or very broadly defined, as in the Ten Commandments in the Judeo-Christian tradition.[6] Maimonides (1956: 314-315) expressed the social function of religion well when he wrote that,

> "Scripture … demands belief in certain truths, the belief in which is indispensable
> in regulating our social relations; such is the belief that God is angry with those
> who disobey him...In some cases the law contains a truth which is itself the only
> object of that law...In other cases, that truth is only the means of securing the
> removal of injustice, or the acquisition of good morals; such is the belief that God
> is angry with those who oppress their fellowmen...or the belief that God hears the
> crying of the oppressed…"

Religion acts beyond the individual, to the group in which he/she is embedded. The power of religion is evident in its ability to foster hostility between groups, often

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[6] Hecht (2003) provides an extensive, historical review of the role that religion plays as a reinforcer of desirable social behavior across centuries, cultures and continents.

leading to war (e.g., Kissinger, 1994; Durant and Durant, 1968). If people are willing to arm themselves and march off to slaughter in the name of their God, they may be willing to undertake other behaviors as well, including engaging in honest dealing.

Durkheim and others lay out strong reasons why religion has often been such a strong motivator of behavior: religion serves as an important tool for reducing the anxieties of existence that humankind faces, doing so by placing placing individuals in a broader context—as noted above. There is a tension, though, between the individual qua individual and the individual as one amongst the collective. Since individuals can engage in individual action to achieve individual ends, then regulation may be unnecessary if that avenue is fruitful. Doing so, however, leaves the doer bearing the burden of the chase, a burden that may be beyond his/her capacity or undesirable for other reasons—for example, why bear the burdens for freeloaders who share in the benefits of one's activity without paying the pain? While different degrees of what is at stake may result in different outcomes, collective action spreads the burden amongst the entire interested class. While one may believe one's own fealty to the faith is sufficient to forfend bad behavior on one's own part, perhaps it is not enough on the part of others. Regulation, therefor, serves to enforce right behavior on others.

Another reason why religion is important in this study is the purported association between religion and morality. Specifically, must people believe in a deity in order to behave morally, or are religion and morality distinct and separate things (e.g., Maimonides, 1956; Hecht, 2003)? As McKay and Whitehouse (2015) note, this question is of ancient vintage, going back at least to the Platonic dialogue Euthyphro (Plato, 1997).

If religion is important to be engaged morally, then, in nations with a population that identifies with religion perhaps regulation would be unimportant. But then, as Mathras et al. (2017) point out, religions differ amongst themselves on various dimensions. Klaubert (2010, p. 2) cites Guiso et al. (2003) as finding that "religious people, among others, are less willing to break the law, believe more in the fairness of the market and have less progressive attitudes towards working women." But then, also as Klaubert (2010, p. 2) notes, "large deviations often exist during the translation of values and beliefs into concrete actions and behavior." Beliefs indeed need not call forth specific behaviors.[7] To the extent that this is understood popularly, an argument exists why even strongly religious communities may favor behavioral regulation.

A variety of studies have found that religion shapes institutional behavior, popular perceptions, and accounting practices.[8] Mensah (2014), for example, while controlling for various economic and political variables in his sample of nations, found that religion plays a role in perceptions of corruption. Specifically, he finds that the percentage of national population adhering to the Protestant, Buddhist and Hindu religions was negatively associated with the perception of corruption. In contrast, the percentages of the population adhering to other Christian religions, Islam and other religions or not adhering to a religion were associated with greater perceptions of corruption. Einolf (2011) also argues that religion plays an important role in shaping behavior. One can argue that the presence of corruption is an important factor in evaluating enforcement

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[7] In addition, there is the argument in Christianity between those who argue that faith alone will save (e.g., Rom 3:20-22; Gal 2:16) and the importance of good works, whether to be saved or at least perhaps as an indication that one is predestined to be saved.

[8] Whether religion affects individual ethical behavior, however, is a different concern (Shariff, 2015).

regulation.

La Porta et al. (1999) present evidence that countries having higher population percentages of Catholics or Muslims suffered from poorer government performance. In a different but related vein, Stulz and Williamson (2003) compared the impact of religion on creditor rights and accounting standards enforcement with that of other predictors, including the country's openness to international trade, its language, per capita income or its legal system. They reported that religion was a better predictor than openness to international trade. Religion, therefore, influenced both policy making and the establishment of laws. Nabar and Boonlert-U-Thai (2007) also argue that religion plays a role in behavior, specifically that of earnings management. They find that Catholicism, Buddhism, Protestantism and Islam were not related to earnings management. This gives rise to this hypothesis.

H5: Religious affiliation will be associated with accounting regulatory enforcement.

Although religious affiliation captures a nation's religious composition, it does not take into account the importance of such religions to its inhabitants. Religious proscriptions against certain behaviors could influence individuals who adhere to that religion to forebear engaging in those behaviors (e.g., Maimonides, 1956). That said, though, individuals might have beliefs without behavioral consequences. That is, they might steal even if a fundamental tenet of the religion to which they adhere proscribes theft. Some nations might work hard at building institutions to enforce religious

proscriptions, while others might not, with the latter perhaps relying on individual internalization of the religious value against, say, theft. Commonplace observations reveal that some people express adherence to religious precepts more strongly than others. Religious observance differs as does the willingness to expose oneself to additional information about what is religiously required and to act on the perceived religious requirements (e.g., Klaubert 2010).

Observance, though, may reflect only a superficial attempt to conform to community norms. That is, there may be no underlying fealty to the moral norms of the faith. Or, observance may for others be a true reflection of underlying beliefs and fealty. To some people then, religion is more important than it is to others, and that felt importance is likely to affect each individual's behaviors (see, for example, Hess 2012, Hilary and Hui 2009 and Durant and Durant 1968; Mathras et al., 2017).

Mathras et al. (2017) note that religious values may increase individuals' self-control, willingness to check selfish impulses, and willingness to work for long-term goals. Hess (2012) reported that individuals living in locales with stronger religious norms had stronger credit quality than individuals in locales with weaker religious norms. Mathras et al. (2017) reports that religious affiliation gives rise to feelings of belonging to a community. As such, the norms of the community grow stronger as the felt claims of the community on the individual within it grow greater. Thus the power of norms would be greater as well.

McGuire, Omer and Sharp (2012) studied the association of religion and financial reporting behavior in the U.S. They find that firms headquartered in areas with strong

religious social norms generally have fewer cases of financial reporting irregularities and are associated with lower accounting risk. Religious influence, therefore, seems to work against enactment of unethical behaviors (see also Maimonides, 1956). Mathras et al. (2017), note that different religions place different emphases on who may forgive offenses and which infractions can be forgiven. Further, Mathras et al. (2017; p. 305) note, "the stronger good-evil divisions in Western religions (but less so in Eastern religions) leads to a heavier insistence on personally avoiding evil and punishing evil-doers." Different religions may rely more on conscience as a constraint, versus external sanction as a constraint. The distinction is important since regulation, by definition, is an external constraint.

Accordingly, the relationship of felt importance of religion to accounting regulatory enforcement is tested. It is possible that greater felt importance of religion is more likely to result in a feeling that greater regulatory enforcement is necessary to ensure that others behave in accordance with religious, ethical and moral precepts, as reflected in the honesty of the financial statements. Conversely, it is possible that societies in which religion is felt to be of greater importance may feel that greater accounting regulatory enforcement effort is not needed because other individuals will almost automatically follow religious precepts of ethical and moral behavior. Accordingly, this study tests the association of the importance ascribed to religion by individuals and levels of regulatory enforcement. The following hypothesis is offered:

H6: Religious importance will be associated with accounting regulatory enforcement.

Sample and Methodology

To test the hypotheses, this study uses the accounting enforcement index created by BPT (2014). This index measures accounting enforcement efforts using an international sample. BPT (2014) argue that using previous "rule of law" proxies (e.g. Leuz 2010; La Porta et al. 1998) to measure regulatory effects on accounting enforcements was not enough. Previous regulation and enforcement proxies were not able to capture the specific accounting enforcement activities that took place in the post-Sarbanes-Oxley period. BPT (2014; p. 3) defines enforcement as the "the activities undertaken by independent bodies (monitoring, reviewing, educating and sanctioning) to promote firms' compliance with accounting standards in their statutory financial statements." They found their accounting enforcement index had significant incremental explanatory power in predicting analyst forecast errors and dispersion when more general enforcement proxies were also included in the model. However, their studies did not explore the association between country characteristics and variation in accounting enforcement efforts across countries. This paper seeks to fill this gap in the literature.

This study uses BPT (2014) sample of 51 countries for the year 2008. Although BPT (2014) used three separate years (2002, 2005 and 2008) in their study, the enforcement indices for each year are very highly correlated (with the correlations exceeding .8). This paper focuses on BPT's data for 2008, which captures the most up-to-date information and immediately precedes the financial crisis. Given that national

characteristics such as culture and religion are unlikely to change, the model presented in this study may have broad applicability to understanding the prospects of other globalization efforts.

The BPT (2014) data on accounting enforcement was collected from national security regulators' data sets about enforcement efforts. Countries scored between a 0 and 2 with respect to 6 dimensions of enforcement. The dimensions of enforcement include whether (a) there are regulators or monitors over financial reporting and financial markets, (b) said monitor has the power to set accounting and auditing standards, (c) the monitor reviews financial statements, (d) the monitor provides a report about such a review, (e) the monitor has taken enforcement action for any financial statements, and (f) the level of resourcing of the enforcement effort (based on the number of staff employed by the monitor or regulator).

The complete data set was available for 42 of the 51 BPT (2014) nations. Table 1 identifies the countries used.

INSERT TABLE 1 ABOUT HERE

Research Model

The model tested is:

ENFORCE2008= b1(Individualism) + b2(Power Distance)

+b3(UncertaintyAvoidance) + b4(FactionalizedElites) +b5(Prot_Pct)

+b6(Buddh_Pct) +b7(Islam_Pct)+b8(Hindu_Pct)+b9(Relg_Oth)

+b10(ReligionImportant)

+ b11(Legal) +b12(Market_Liquidity) + e

The dependent variable, *ENFORCE2008*, is the 2008 accounting enforcement index developed in BPT (2014). Main variables of interest include culture, religious affiliations, religiosity and factionalized elites. Following previous studies (e.g. Duong et al. 2016, Han et al. 2010), Hofstede's cultural dimensions are used to measure each country's cultural values. Hofstede's cultural values are the most widely used measures of national culture.[9] Following the same literature, Individualism (IND), Uncertainty Avoidance (UA) and Power Distance (PD) are used as the main cultural variables relating to regulations and enforcement. Hofstede culture data was drawn from http://geert-hofstede.com/dimensions.html.

To measure the political environment and frangibility of the states, Factionalized Elites scores published by The Fund for Peace are used (http://fundforpeace.org/fsi/indicators/c2/).[10] Religious affiliation data, by nation, were

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[9] Aside then from the widespread use of Hofstede's measures, even the oft-posited alternative, House et al.'s (2004) measure is in itself 'broadly consistent' with Hofstede's own findings (for similar concordance of Hofstede measure-based results with House et al.'s (2004) measure-based results, see Ashraf, Zheng and Arshad (2016)). Further, as Hooghiemstra, Hermes and Emanuels (2015, p. 365) state, Hofstede's measures "are the most widely used measures of national culture and have produced a widely accepted, well defined, empirically based terminology to characterize culture." Even if House et al.'s (2004) GLOBE measure were equal in quality to that of Hofstede (e.g., an assertion which Voss, 2012, finds incorrect) the very widespread use of Hofstede's measure provides researchers the ability to better understand how the current research fits in with the vast array of other research out there.

[10] Of the alternative indicators of national dysfunction developed by the Fund for Peace, e.g., security apparatus, group grievances, state legitimacy, the factionalization of the elite variable seems best to reflect the authors' concerns that the regulatory apparatus over accounting might be a so-called political football, in that its functioning or lack of same may give an advantage to one elite faction as opposed to another.

taken from Mensah's (2014) Table 10, page 281. It measures the percentage of the population professing the following religions: Protestant Christian (coded as PROT_PCT), Roman Catholic/Orthodox (all varieties) and Coptic (coded as CHRST_OTH), Buddhist (coded as BUDDH_PCT), Islamic (all branches—coded as ISLAM_PCT), and Hindu (coded as HINDU_PCT). All other religions, atheist beliefs, and no religions were classified (coded) in RELG_OTH (the residual percentage). Mensah (2014) obtained the data on the "distribution of religious faith" from sources such as the Pew Foundation, Wikipedia.com, CIA Factbook, specific country Internet websites and general web searches. The importance of religion (religiosity) data were obtained from global Gallup Poll research, found at

http://www.gallup.com/poll/142727/religiosity-highest-world-poorest-nations.aspx (Gallup.com, 8/31/2010).

Market liquidity was used as a control variable because a desired feature of a well-functioning capital market is market liquidity. Previous studies have shown the strong link between market liquidity and quality financial reporting (e.g. Diamond and Verrecchia 1991). Greater regulatory enforcement should provide the reassurance to investors (domestic and foreign) that their investments will be safe, that the information disclosed to them about their investments is more likely to be accurate. Christensen, Hail and Leuz (2013) show that the increased market liquidity was attributed to the concurrent enforcement changes of financial reporting in those countries, such as the creation of enforcement bodies supervising compliance with IFRS, instead of existing strong legal

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The variable is a measure of the brinksmanship and gridlock between ruling elites. It is also true that the factionalized elites variable was extremely highly correlated with the other Fund for Peace variables, with the correlations ranging from a low of .754 to a high of .910.

system or financial market regulations. Market liquidity is controlled too, therefore, since previous studies have found that nations whose markets are more developed and better functioning have a better regulatory apparatus and enforcement mechanism (e.g. La Porta et al, 2006). Hence, it is important to control for market liquidity in assessing the impact of our test variables on accounting enforcement. We also used Legal system (common law versus code law country origins) because literature (e.g., La Porta et al.,1998) focuses on whether a country is setup with a common law or code law legal system. Studies have repeatedly found that common law systems are better for investor protections. This could mean that countries with common law legal systems will have stronger accounting regulatory enforcement efforts because of these protections. However, it could also lead to weaker enforcement efforts of accounting regulation because the legal system itself is setup to help provide an atmosphere of compliance. It seemed, therefore, important to control for legal system too. Further, BPT (2014) found that Enforcement scores are significantly higher in common law countries. Here, LEGAL is set as 1 denoting a common law country and 0 denoting a code law country. The variables used, their definitions and the sources are presented in Table 2. The descriptive statistics for these variables are presented in Table 3 Panel A.

Table 3 Panel B shows the comparison of the mean *ENFORCE2008* variable values for countries by various criterion variables. The medians of the data are used as the criterion for cultural dimensions, religiosity, factionalized elites and market liquidity variables to calculate the average accounting enforcement scores above and below the median. For religion variables, this study compares the means of the accounting

enforcement scores among countries with greater than 50% of the population said to be of a particular faith. For the control variable legal systems, this study calculates and compares the means of accounting enforcement scores for countries with common law systems vs. those with code law systems.

The result shows that the mean Enforcement score is 17.14 for countries whose IND scores are above the median (i.e. individualistic countries) vs. 8.62 for those whose IND scores are below the median (i.e. collectivistic countries). Using the median Power Distance score as the criterion, the mean enforcement score is 16.1 for low Power Distance (Lo-PD) countries, versus 9.67 for high Power Distance (Hi-PD) countries. In the same vein, the mean enforcement score for low Uncertainty Avoidance (UA) countries is higher than the one for high UA countries, 15.9 vs. 9.85. Taken together, the result shows that countries that are more individualistic, having lower power distance and lower uncertainty avoidance have stronger accounting enforcement on average.

For religion variables, this paper finds that countries with the majority Protestant Christian populations and those whose population does not have a majority religion, or with religion other than the five major religions, or being primarily atheists have the highest mean accounting enforcement scores, 17.29 and 20.14 respectively. The number in the parentheses indicates the number of countries in that group. The result also reveals that accounting enforcement scores are lower on average for countries with a high degree of religiosity, that is where religion is considered more important, with an enforcement score of 9.76, compared to the mean enforcement score of 16 for countries where religion is considered less important.

As for countries with factionalized elites, the mean enforcement score is 10.48, versus an enforcement score of 15.29 for countries that are more politically coherent, i.e., less factionalized. In addition, for control variables, it is found that the accounting enforcement score is higher for countries with common law system and well-functioning capital markets (measured as market liquidity), as expected

The multivariate analysis is described next.

INSERT TABLE 2 ABOUT HERE

INSERT TABLE 3 ABOUT HERE

Research Method and Statistical Analysis

Before running the model, following Mensah (2014), the CHRST_OTH variable is excluded to avoid the multicollinearity problem that would arise using it since the sum of the religious adherence variables in the model would otherwise sum to 100. The initial results indicated that although the model had a significant adjusted r-squared of .40, the only term in the model showing significance was the constant. In addition, an inspection of the correlation matrix (see Table 4) reveals a pattern of high correlations amongst the study variables. While a formal multicollinearity statistic might not demonstrate a problem, such high correlations are a concern since some regression coefficients might have their significance levels altered due to the high correlations. Given that there are only 42 cases with 12 independent variables, the output statistics might be suspect since

there are only 3.5 cases per independent variable (Draper and Smith 1998; Babyak 2004). Accordingly, principal component analysis, a data reduction technique, was employed to explore whether the variables reflected underlying latent variables that in themselves are meaningful in achieving the research objectives. This use of data reduction techniques is consistent with Ali and Hwang (2000) who noted that variables within a country tend to be very highly correlated, rendering the use of individual variables in a regression problematic.

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INSERT TABLE 4 ABOUT HERE

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The principal components factor analysis resulted in the generation of three factors. The resulting three components or factors were then rotated using the Varimax rotation scheme. An orthogonal rotation scheme was used in order to generate factors that themselves were uncorrelated with the other factors. Using uncorrelated factors eases the interpretation of the factors uncovered. In order to ascertain, though, whether the forced orthogonality affected the results, Direct Oblimin rotation was also performed. It does not force the results to be orthogonal. The results are qualitatively similar.

Factor scores were generated by the SPSS factor analysis routine, using the regression method, and saved to the database.[11] Rummel (1970) notes that factor scores should be interpreted just as any data for any variable is interpreted. He notes, for

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[11] SPSS v. 21 provides three alternative means to generate factor scores: regression, Bartlett, and Anderson-Rubin. Each has advantages and disadvantages, as summarized in DiStefano et al. (2009). The regressions were run using factor scores generated by all three methods. There were no meaningful quantitative or qualitative differences unearthed. Therefor the results are presented using the SPSS default regression method of generating factor scores.

example, that population is a "composite of population subgroups." Rummel goes on to note that the resulting composite variables are useful in other analyses, including regression analyses. Unlike other variables, Rummel notes, the phenomena are highly interrelated. This notion, of course, is consistent with Ali and Hwang's (2000) justification for the use of principal factor analysis in their study. Appendix A provides a more detailed explanation of our use of principal components analysis and factor score regression

It is customary to choose a loading level for 'admitting' variables into interpretation. In this *exploratory* study, the authors interpret each of the three components and the relationship of the variables with the component based on the factor that the variable loaded most highly on, with .3 being the minimally acceptable loading.

The rotated factor loadings are presented in Table 5. Panel A presents the eigenvalues of each factor and the variance in all the variables which is accounted for by that factor. The rotated factor loadings, which measure the correlation between the original variables and the factors, are presented in Panel B. Rotated Factor 1 is most highly loaded upon by variables including Prot_PCT, PD, IND and FactionalizedElites. It captures the difference between nations that are highly unequal, with combative—fractious or factionalized—elites that are less likely to have high percentages of Protestant confessants, are less individualistic, and have less liquid markets. Therefore, it is labelled FractiousPD. Rotated Factor 2, denoted as Religiosity, is most highly loaded upon by ReligionImportant, ISLAM_PCT and OTHER_RELG. It captures the difference between nations that differ in perceived religion's importance and in adherence to the

Islamic faith. Rotated Factor 3, loaded upon most highly by LEGAL and UA, is labeled as LawandUA. It reflects divisions between countries that follow the common law versus civic code and are less likely to be Uncertainty Avoidant. The Hindu_Pct variable loaded most highly on this third rotated factor, but only marginally so.[12]

With these interpretations in hand, the factor scores were entered into a multiple regression routine, allowing generation of the association between the factor scores and accounting enforcement (ENFORCE2008). The regression results are discussed in the next section.

INSERT TABLE 5 ABOUT HERE

Discussion of Results

The results of regressing *ENFORCE2008* on the factors or component scores are presented in Table 6. Given that there were only three component variables in the regression and a sample size of 42, there were 14 observations for each variable in the regression, above the often cited need for at least 10 observations per variable in a regression (e.g., Draper and Smith 1998; Babyak 2004). This supports the validity of the findings reported. Further, the model r-squared was .503, with the adjusted r-squared value being .463. The model itself was significant at the $p<.01$ level, with the F-value

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[12] These are the interpretations of the factors based on the variables included.

being 12.802. There were no multicollinearity issues, an expected result given that the factor scores extracted were orthogonal. Although the variables of interest were presented singly in the hypotheses, the model to test the hypotheses singly could not be interpreted due to multicollinearity concerns and the overfitting of the model. Therefore, the component scores and the items that loaded most strongly on these components are interpreted to ascertain support for the hypotheses.

The hypotheses represent broad categories of national culture, political environment, religion and religious importance. At least one variable belonging to each of these broad categories loaded highly on at least one component and the factor scores generated were used as variables in the regression equation. All three of the resultant independent component variables proved significant predictors of accounting enforcement efforts. Therefore, all hypotheses were accepted at least at the level of .10. The following discussion of the results references the independent variables created through the factor analysis.

The regression results show that the coefficient on *FractiousPD* variable was negative (-.517) and significant at the $p<.01$ level. The *Religiosity* variable was negative (-.428) and significant at the $p<.01$ level as well. The *LawandUA* variable was positive (.229) and marginally significant at the $p=.053$ level. In order to determine the incremental contribution of each factor score variable to the variance of the dependent variable, *ENFORCE2008*, each variable was entered one at a time into the regression equation in descending order of eigenvalues, an index of the strength of the component (Table 5 Panel A). FractiousPD accounted for 26.7% of variance in *ENFORCE2008*.

Religiosity accounted for an additional 18.3% of variance in *ENFORCE2008.* Finally,

LawandUA accounted for a further 5.2% of variance in *ENFORCE2008* (not tabulated).[13]

INSERT TABLE 6 ABOUT HERE

The results show that the most important set of variables in accounting for

national accounting regulatory choices was the cultural and political setting in which the

standard setting occurred. Religion plays an important role as well. The *FractiousPD*

component was significantly and negatively associated with accounting enforcement at

the p<.01 level. It is most highly loaded upon by variables including Prot_PCT (-.852),

PD (.809), IND (-.777) and Factionalizedelites (.628). The numbers in the parentheses

shows the correlation between the variables and the factor. Combined with the sign on

the *FractiousPD* factor, the result indicates that countries ranked high in Individualism

and low in Power Distance have stronger accounting enforcement activities. This is

consistent with the finding of Hofstede et al. (2010) that countries with high

Individualism scores prefer more rules. These settings also happened to be more likely to

be Protestant, as evidenced by the negative loading of the variable on the *FractiousPD*

component.

Further, we can also state that the result shows that in national settings

characterized by fractious elites—essentially (peacefully) warring political/economic

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[13] Please note that the proportion of variance accounted for numbers were rounded, accounting for the difference between the total variance accounted for of the model of 50.3% and the summed variance accounted for of the three individual components of 50.2%.

classes, strong accounting regulatory efforts were less likely.   With respect to the hypotheses, therefore, control variable market liquidity is loaded most highly on the *FractiousPD* component, but with a negative loading, market liquidity was therefore positively related to accounting enforcement, consistent with previous studies. Therefore, the hypotheses on cultural variables IND (Hypothesis 1) and Power Distance (Hypothesis 2), on political variable FactionalizedElites (Hypothesis 4), and on religious affiliation (Hypothesis 5), were accepted. These results, even by themselves, bear out the suspicion that nations are more like syndromes than symptoms, that the confluence of different elements collectively determines the level of accounting enforcement efforts. The underlying relation here may be that more "Westernized" nations with greater commitment to interpersonal equality living in less contentious political and economic environments (at least insofar as national elites are concerned) are more likely to have stronger accounting regulation and better functioning markets as measured here by market liquidity.

The results with respect to the second factor score-derived variable, *Religiosity*, show it was significantly and negatively related to the dependent variable accounting enforcement at the p<.01 level. With respect to the *Religiosity* component, the highest loading variable was RELG_OTH, which loaded negatively on the component. This shows that RELG_OTH is positively associated with accounting enforcement. ISLAM_PCT on the other hand loaded positively on the second component, indicating that it is negatively associated with accounting enforcement. The conjunction of these two religious variables, loading in opposite directions on the *Religiosity* Component,

suggest that religious identification is highly associated with accounting enforcement efforts. Having a religious identification therefore is not enough to support a statement that religious identification is associated with greater accounting enforcement. Instead, the identity of the particular religion or religious identification needs to be taken into account. Therefore, the finding on religion with the second component supports the acceptance of Hypothesis 5. The positive loading of the ReligionImportant variable on the *Religiosity* Component and the latter's negative relationship to the dependent variable suggests that religious importance reduces the presence of strong accounting enforcement, accepting Hypothesis 6.

Given that Mensah's (2014) RELG_OTH variable consisted of a hodgepodge of smaller religions and those who did not belong to any religion or were atheists, the *Religiosity* factor score-generated variable seems to capture the importance of religious adherence. Religion serves an important role in providing guidance to correct behavior, to setting a sense of community solidarity, and orienting one's thoughts about one's place in the universe, and how one might behave to be 'right' with it. The *Religiosity* component's negative relationship to *ENFORCE2008* seems to indicate that as religious importance grows in the constituent nations of the sample, there is a negative association with accounting enforcement regulation. It may be, therefore, that a strongly felt religious devotion itself may be considered sufficient to guide behavior. This is an important finding because it suggests that the longterm growth in secular (non-religious) proportions of the population around the globe will weaken the expected influence of

religion on behavior. Thus, as the binding power of religion on behavior, *to the extent that it exists*, weakens, there will be pressures for greater growth of the regulatory state.[14]

The third and final factor score-derived variable, *LawandUA*, was positively associated with *ENFORCE2008* at less than the $p<.1$ significance level. The *LawandUA* composite variable was created from a component which is most highly loaded with variables LEGAL code (.834), UA (-.722) and BUDDH_PCT (.620).[15] That the resulting factor score variable was positively associated with *ENFORCE2008* indicates that nations with common law codes were associated with having stronger accounting regulation. This result is consistent with La Porta et al. (1998) who found that common law countries had better investor protections than did civil code countries.

This finding suggests that common law country status is associated with stronger accounting regulation, a result consistent with BPT (2014). These results also show that Uncertainty Avoidance (UA)was negatively loaded on the third component, a component whose factor score was positively-related to accounting regulation, accepting Hypothesis 3. This suggests that higher UA countries had less tough accounting regulation.   In the instance, this seems strange. Would greater regulation not protect the investor better, and therefore diminish some of the uncertainty that investors would face in the markets? Perhaps, but stronger regulation betokens as well stronger governments and the actions of governments themselves may be considered threats. As previously noted, *original source*

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[14] For evidence on trends in religious observance around the world, see http://www.pewforum.org/2018/06/13/why-do-levels-of-religious-observance-vary-by-age-and-country/.

[15] The difference in factor loadings of BUDDH_PCT on the third factor, upon which it has a .62 loading, and BUDDH_PCT's loading on the first factor, upon which it had a .52 loading, led us to drop it from consideration in naming the factor since the difference in the loadings between the two factors was just .092. Thus, there was but a piddling difference in loadings between the two factors, rendering interpretation of the variable difficult, given the opposite effect of the first and the third component on ENFORCE2008.

unknown, the government that can give you anything you want has the power to take away anything you have, and since personal control of others is unlikely, such a situation may be more threatening than lack of control. Therefore, people in low UA countries are more tolerant of the change brought forth by regulatory changes if they believe such change is necessary.

Conclusions

This research was undertaken to explore the association between national cultural elements, religious adherence choices and importance and political coherence (as marked by the factionalized elites variable) on national choices of accounting enforcement. In effect, this study tests a model of whether national characteristics are associated with accounting-related enforcement efforts. These results demonstrate the fruitfulness of investigating nation-level constructs in cross-national accounting research.

This study has demonstrated the importance of cultural, religious, political, legal and finance-related (market liquidity) factors in affecting national accounting regulatory efforts. In doing so, it adds a necessary corrective to discussions that focus on the words that set out the structure of a regulatory enforcement regime while ignoring the context within which such enforcement regimes take place. The importance of understanding such context is highlighted by recent anti-globalization trends (e.g., Summers 2016). It is important to note that the effects reported here occurred despite the existence of

difference-flattening organizations such as the European Union. Of the 42 nations in the active sample (nations without an asterisk next to their names in Table 1), 20 are members of the European Union. The fact that religion and national culture still played an important part in predicting levels of regulation argues for the continuing relevance of national characteristics in determining national behavior, even when nations are part of a supranational economic and political entity that has its own regulatory, judicial and political institutions that can make binding decisions for the membership. Such a finding is of particular importance when international news gathering organizations frequently report on the truculence of nations (e.g., Poland in the Summer of 2018) with respect to the (in Poland's case judiciary-related) rules of the larger entity (European Union) of which they are apart. These findings suggest the need for further research into the effectiveness of international agencies and institutions in binding the constituent nations' behaviors. This finer analysis was not a goal in this study, but should be pursued in a variety of areas, within accounting and outside it. Given the importance of transnational capital flows, studies of national characteristics and the effectiveness of crossnational regulation of financial investments and behavior seem appropriate.

This study does have the limitation of a small sample size, but much international accounting literature bears the burden of small sample sizes (e.g., Nabar and Boonlert-U-Thai 2007; Richardson 2007; Kleinman and Lin, 2017). That said, the nations in the BPT (2014) study do include major and medium economic powers, therefore the variables developed in their research are important ones to study. Future research should

investigate the dynamic changes of accounting enforcement across time and regions of the world.

Table 1 Nations Used in BPT (2014)	
Argentina*	Korea (South)*
Australia	Malaysia
Austria	Mexico
Belgium	Morocco
Brazil	Netherlands
Canada	New Zealand
Chile	Norway
China	Pakistan
Croatia	Peru
Czech Republic*	Philippines*
Denmark	Poland
Egypt	Portugal
Finland	Romania*
France	Russia
Germany	Singapore
Greece	Slovenia
Hong Kong*	South Africa
Hungary	Spain
India	Sweden
Indonesia	Switzerland
Ireland	Taiwan*
Israel*	Thailand
Italy	Turkey
Japan	Ukraine*
Jordan	United Kingdom
	United States
*Data availability problems led to the exclusion of asterisked (*) nations from the sample.	

Table 2 Definitions of Variables

Name and Symbol	Measure
ACCOUNTING ENFORCEMENT (ENFORCE2008)	The sum of accounting-related enforcement measures, as calculated and reported on in BPT (2014). The constituent elements are defined in the text itself.
INDIVIDUAL (IND)	Measure of Individualism/Collectivism. The higher the score on this measure, the greater the societal preference for individual self care-taking and responsibilities. Hofstede culture data (IND, PD and UA) were drawn from http://geert-hofstede.com/dimensions.html
POWER DISTANCE (PD)	Measure of Power Distance. The higher the PD score, the more the less powerful members of a society accept and expect that power is distributed unequally.
UNCERTAINTY AVOIDANCE (UA)	Measure of Uncertainty Avoidance. Greater scores indicate a higher desire to avoid uncertainty and ambiguity.
FACTIONALIZED ELITES	This measure of the fragility of states was obtained from http://fsi.fundforpeace.org/rankings-2008-sortable

LEGAL	Measure of legal origin. It is set to 1 if nation is common law and 0 if a civil code nation, following Kanagaretnam, Lim and Lobo (2014).
PROT_PCT	Measures the percentage of the population of the Protestant faith. Mensah's data covers the years 2000 to 2012. He makes the assumption that the population percentages of a given faith are stable over time.
CHRISTIAN_OTH (CHRST_OTH)	Measures the percentage of the population that are of Christian faith *but not* Protestant. Based on Mensah (2014).
HINDU_PCT	Measures the percentage of the population reportedly of the Hindu faith. Based on Mensah (2014).
BUDDH_PCT	Measures the percentage of the population reportedly of the Buddhist faith. Based on Mensah (2014).
ISLAM_PCT	Measures the percentage of the population reportedly of the Islamic faith. Based on Mensah (2014).
RELG_OTH	Measures the percentage of the population said to profess a religion other than described above, or not professing a religion. Based on Mensah (2014).
RELIGIONIMPORTANT	The importance of religion data was taken from http://www.gallup.com/poll/142727/religiosity-highest-world-poorest-nations.aspx

MARKETLIQUIDITY	Market liquidity is the average total value of stocks traded as a percentage of GDP for the period 2005 to 2008 (e.g. La Porta et al. 2006). Source: http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators

Table 3
Panel A: Descriptive Statistics (N =42)

	Mean	Std. Deviation	25%	Median	75%
ENFORCE2008	12.88	6.425	8.000	12.000	19.000
IND	50.90	24.286	27.000	49.500	71.750
PD	55.45	20.800	35.750	61.500	70.000
FACTIONALIZEDELITES	4.295	2.588	1.800	3.950	6.725
UA	64.64	23.465	48.000	66.500	86.000
LEGAL	0.31	0.468	0.000	0.000	1.000
PROT_PCT	20.57	29.006	0.775	4.875	35.858
BUDDH_PCT	6.50	18.644	0.100	0.290	1.025
ISLAM_PCT	17.77	32.712	0.875	3.550	8.550
HINDU_PCT	2.42	12.397	0.000	0.075	0.520
RELG_OTH	16.40	15.884	1.208	12.555	24.435
RELIGIONIMPORTANT	57.71	27.989	32.750	60.000	83.750
MARKETLIQUIDITY	74.97	66.429	22.394	54.844	115.500

Table 3
Panel B: Comparison of Mean Accounting Enforcement Scores for 2008 by Various Criterion Variables

Criterion	Cultural Dimensions					
Median	*Hi-IND*	*Lo-IND*	*Lo-PD*	*Hi-PD*	*Lo-UA*	*Hi-UA*
ENFORCE2008	17.14	8.62	16.1	9.67	15.9	9.85
	Religions					
>50% Populations except *	*PROT_PCT (7)*	*CHRST_OTH (17)*	*HINDU_PCT (1)*	*BUDH_PCT (3)*	*ISLAM_PCT (7)*	*RELG_OTH (7)**
ENFORCE2008	17.29	11.06	6	10.67	7.57	20.14
	Religiosity					
Median	*High*	*Low*				
ENFORCE2008	9.76	16				
	Factionalized Elites					
Median	*Politically Coherent*	*Politically Divided*				
ENFORCE2008	15.29	10.48				
	CONTROLS					
	Common Law (13)	*Code Law (29)*	*High Market Liquidity*	*Low Market Liquidity*		
ENFORCE2008	15.08	11.9	15.86	9.9		

* Note that the following nations did not have a majority of population professing the five major religions and are included Relg_OTH: China, Netherland, Belgium, New Zealand, Germany, Austria and Canada.

Table 4 Correlations

	ENFORCE 2008	IND	PD	Factionalized Elites	UA	LEGAL	PROT _PCT	BUDDH_PCT	ISLAM_PCT	HINDU _PCT	RELG _OTH	Religion Important
IND	.679**											
PD	-.463**	-.702**										
Factionalized Elites	-.456**	-.585**	.638**									
UA	-.371*	-.242	.305*	.127								
LEGAL	.232	.164	-.120	.064	-.483**							
PROT_PCT	.477**	.587**	-.671**	-.517**	-.510**	.091						
BUDDH_PCT	-.021	-.334*	.219	.270	-.194	.401**	-.209					
ISLAM_PCT	-.412**	-.428**	.354*	.606**	.004	-.039	-.309*	-.078				
HINDU_PCT	-.152	-.036	.189	.167	-.212	.277	-.110	-.016	.009			
RELG_OTH	.397**	.379*	-.228	-.401**	-.002	.007	.077	.079	-.444**	-.171		
RELIGION IMPORTANT	-.554**	-.592**	.501**	.636**	.208	.083	-.500**	.043	.608**	.143	-.721**	
MARKET LIQUIDITY	.505**	.455**	-.357*	-.219	-.420**	.280	.489**	.062	-.142	-.005	.224	-.350*

**two-sided significance below 1% level * two-sided significance below 5% level

Table 5 Principal Component Analysis
Panel A Total Variance Explained

Component	Initial Eigenvalues			Extraction Sum of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.449	37.076	37.076	4.449	37.076	37.076
2	2.047	17.057	54.133	2.047	17.057	54.133
3	1.480	12.33	66.463	1.480	12.33	66.463
4	1.021	8.507	74.970			
5	0.753	6.276	81.246			

Panel A Total Variance Explained (Cont'd)

Component	Rotated Sum of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.365	28.038	28.038
2	2.578	21.485	49.523
3	2.033	16.940	66.463

Panel B Rotated Component Matrix[a]

	Component		
	1	2	3
PROT_PCT	-.852	-.107	.165
PD	.809	.258	-.027
IND	-.777	-.351	.041
Factionalizedelites	.628	.534	.188
MarketLiquidity	-.500	-.174	.460
RELG_OTH	-.050	-.855	-.012
ReligionImportant	.453	.786	.018
ISLAM_PCT	.234	.748	.005
LEGAL	-.041	-.009	.834
UA	.438	-.064	-.722
BUDDH_PCT	.528	-.298	.620
HINDU_PCT	.050	.247	.395

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 6 Regression Results

ENFORCE2008= b1(FractiousPD) + b2(ReligImport) +b3(LawandUA) + e

	ENFORCE2008	
	Coefficient	t-value
(Constant)	12.881	17.737***
FractiousPD	-.517	-4.520***
ReligImport	-.428	-3.738***
LawandUA	.229	2.001*
F	12.802***	
Adjusted R^2	0.463	
R-Squared	0.503	

***p<.01   **p<.05   *p<.10

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Appendix A

This appendix describes how we addressed the methodological issues presented by having a limited data set—although a respectably-sized one for international research using nation states as the observation units, and highly correlated variables (see Ali and Hwang, 2000). The number of variables in our data set, even in the absence of multicollinearity, may result in overfitting of the model. Babyak (2004; p. 411) defines overfitting as "asking too much from the data." He goes on to say that, "Given a certain number of observations in a data set, there is an upper limit to the complexity of the model that can be derived with any acceptable degree of uncertainty. Complexity arises as a function of the number of degrees of freedom expended (the number of predictors including complex terms such as interactions and nonlinear terms) against the same data set during any stage of the data analysis." The problem with this, he notes, is that "findings" that appear in an overfitted model don't really exist in the population and hence will not replicate." Given, as Babyak (2004) notes, that if "you put enough predictors in a model you will get a result that is impressive, but lacks substance", we chose to use a data reduction routine. Absent that routine, our initial results showed an adjusted r-squared of .40, with only the constant term in the model showing significance. Given that we only have 42 cases with 12 independent variables, our output statistics might be suspect.

Draper and Smith (1998; see also Babyak, 2004) state that there should be 10 observations for each independent variable, something that may also be true in principal

components analysis.[16] In this regression, that is not possible since we only have a complete set of data on 42 nations, thus we only have 3.5 observations per independent variable. In addition, an inspection of the correlation matrix (see Table 4) reveals a pattern of high correlations amongst study variables. While a formal multicollinearity statistic might not demonstrate a problem, such high correlations are a concern since some regression coefficients might have their significance levels altered due to the high correlations. Accordingly, we employed data reduction techniques to explore whether the variables reflected underlying latent variables that in themselves are meaningful in terms of our research objectives. Our use of data reduction techniques is consistent with Ali and Hwang (2000) who also employed it in their study of government versus private standard setting in 16 countries. Ali and Hwang (2000) noted that variables within a country tend to be very highly correlated, rendering the use of individual variables in a regression problematic. Preliminary analyses of our data indicate that Ali and Hwang's (2000) concerns hold true here as well.

Di Stefano, Zhu and Mindrila (2009, page 1) note that exploratory factor analysis may be used "for a variety of purposes such as reducing a large number of items to a smaller number of components, uncovering latent dimensions underlying a data set, or examining which items have the strongest association with a given factor." Rummel (1970) sees several uses for factor analysis. These include (a) interdependency and pattern identification; (b) parsimony or data reduction; (c) uncovering the basic structure

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[16] For example, please see statistics.ats.ucla.edu/stat/spss/output/principal_components.htm..

of a domain; (d) scaling; (d) data transformation; (e) mapping and (f) hypothesis testing. We clearly are interested in data reduction, as noted above. Given the high intercorrelation of many of our variables, it is also important to use factor analysis to uncover the underlying structure of the domain we explore. Uncovering the basic structure of the domain(s) involved is also important to provide greater insight into the environments that give rise to greater or lesser regulation. Thus the use of factor analysis helps generate rich insight into, and resources to derive from, the varied environments within which regulation may occur. Further, given that the process of generating the factor structure also gives rise to the ability to generate factor loadings, the output of the factor analysis enables us to see how different countries load on the different factors found if we wish. We also can, and will, use the resultant factor scores to test the hypotheses developed earlier in the paper. While the variables do not exist in isolation, as presented in the hypotheses, the loadings of each variable on the factors enable us to see which factor the variables are most highly correlated with. The different facets that describe a nation are more like syndromes than individual symptoms and the value of exploratory factor analysis to the researcher is that he/she can explore how collections of symptoms (a.k.a., syndromes) affect the research questions of interest. In a way, then, the use of factor scores provides a more realistic look at the forces that affect regulatory effort than does the use of variables in a regression alone.

The data reduction technique that we used was Factor Analysis with a principal components extraction. The scree plot indicated that we had three factors or components. Using all the variables listed, we found that we had a Kaiser-Meyer-Olkin (KMO)

Measure of Sampling Adequacy of .49. We dropped the CHRST_OTH variable from the factor analysis and found that the KMO measure increased to .78. This measure varies between 0 and 1, and values closer to 1 are better. We chose CHRST_OTH to drop first because our earlier attempts to conduct a regression analysis of the data showed that, of the religion variables, its presence in the regression equation alone triggered a VIF score much greater than 10, a typically-cited threshold for multicollinearity (Kennedy, 2000). A KMO measure of .6 is considered the minimal threshold (see http://statistics.ats.ucla.edu/stat/spss/output/principal_components.htm), therefore the results of the factor analysis that included the other variables but not CHRST_OTH was deemed acceptable. The three extracted components accounted for 66.5% of total variance. The first component accounted for 37.1% of total variance, the second component accounted for an additional 17.1% of total variance, and the third component accounted for 12.3% of total variance. In addition, Bartlett's test of sphericity rejects the null hypothesis that the correlation matrix is an identity matrix ($p < .01$). Rejection of Bartlett's test of sphericity is important in accepting the results of the factor analysis threshold (see http://statistics.ats.ucla.edu/stat/spss/output/principal_components.htm). These results indicate the validity of the three factors, and related factor scores, generated.