

Factors that Affect the Impact of Religiosity on Audit Pricing in the US

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ABSTRACT

A recent stream of literature studies the impact of religious adherence on economic decision making. One such study examined the effect of religiosity on the pricing of audit services, concluding that firms headquartered in locations within the United States with higher rates of religious adherence tend to experience lower prices for audit services. The United States is a heterogeneous culture with considerable diversity in religious expression. We extend this prior research by examining contextual factors that create differences in the effect of religiosity on the magnitude of audit fees. Our research design incorporates both the magnitude of religious adherence and its diversity, to create a richer picture of the impact of religion on audit pricing in the US. Given the globalization of the financial marketplace, it is believed that the finding could be of great importance for market participants and regulators.

Keywords: Audit, Audit fees, Religiosity, Religious geography

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INTRODUCTION

Since ancient times, religion in its various forms has had a major influence on human behaviour within society. The values that religion seeds, equality and compassion, can have profound implications for distribution of welfare in society. Hence, the scriptures and teachings of religions provide instruction for the management of human relations and exchanges in everyday affairs. Many religious instructions relate to the treatment of money and wealth, moral conduct in commercial exchange, ideology on greed, and risk-taking, as well as the undertaking of charity among others.

Within any society are certain values that help to guide how people behave. Religion is a common way to inculcate cultural values (Belzen, 1999, Mokhlis, 2006). Generations hand down these values through both formal and informal social interactions (Ferraro, 1994). As a result, the members of the society learn how to conform to the community's shared values and expected behaviour (Slowikowski and Jarratt, 1997 and Mokhlis, 2006). Mokhlis (2006: 16) states "Religion in its cultural context is credited with being the unified system of beliefs and practices that pervades the value structure of a society, which, in turn, forms a central part of the cognitive or ideological elements of a country's culture." The sacred nature of religion is a strong inducement to having the members of the community accept its values and norms in all aspects of private and public life (Berkman, Lindquist and Sirgy, 1997). Hence religion is seen as a subsystem of culture and a value in itself, and is regarded as a way of life that encourages people to strive for other values (Schwartz and Huismans, 1995). Although theorists differ with regard to the specific values they link to religion, almost all agree that religions exercise influence over its adherents' value systems through socialisation processes by promulgating religious creeds, norms, moral prescriptions, ritual requirements and taboos (Wulff, 1997 and Berkman et al., 1997). Such sacred values shape the behaviour and practises of institutions and members of cultures.

The present research examines the impact of U.S regional variations and heterogeneity of religious adherence on the relationship between religious adherence and the magnitude of audit fees.

THEORETICAL BACKGROUND

Krauss, et al. (2005: 140) argue that 'Most of the empirical studies trying to stipulate the components of religiosity have been within one culture, the United States; and are confined to the Christian community.' Religiosity indexes were either used and conceived as a uni-dimensional index that has a single number of dimension or as a multidimensional index that leads to number of dimensions.

Glock and Stark (1965) proposed a multidimensional definition of religiosity. Glock and Stark (1965: 19-20) argue that although individual religions may have very different approaches, they all share the same core dimensions, identified as Ideological, Ritualistic, Experiential, and Intellectual. (see also Rehman and Shabbir, 2010: 65, and Krauss, et al., 2005: 137). The five dimensions are defined as follows (Glock and Stark, 1965: 20-21):

- The 'Ideological' dimension or religious *belief*, encompasses beliefs that are expected to be held by the followers. For example, beliefs about God, Prophet, fate, etc.
- The 'Ritualistic' dimension or religious *practice* includes the specific actions and activities in which the adherents are expected to participate.

- The ‘Experiential’ dimension or religious *feeling*, perceptions and sensations of communicating with a divine being.
- The ‘Intellectual’ dimension or religious *knowledge* encompasses the basic information about the faith and its scriptures that the believers are expected to have.
- The ‘Consequential’ dimension or religious *effects*, includes the effects of the religion on the adherent’s everyday life.

As this paper is particularly focusing on the impact of U.S. regional variations and heterogeneity of religious adherence, we examine the relationship between adherence and the magnitude of audit fees. The audit practice has attracted public attention due to extraordinary high fees received by the auditors from the clients during the recent financial crisis. But what determines high fees for audit is a question that many have asked. Studies have proved the importance of client size, complexity, risk and auditor status in determination of audit fees (Alexeyeva, 2012) However, it is not clear how these differences impact the pricing of the audit service. Simunic (1980) determined that audit costs were a combination of resource costs (time expended on the audit) and expected loss (managing risk), as shown in Figure 1.

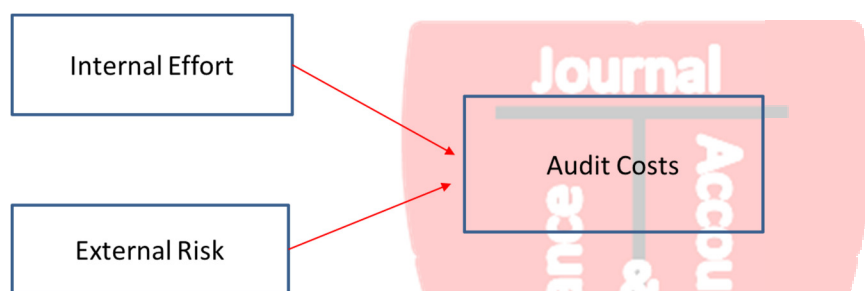


Figure 1. Determinants of Audit Cost (Simunic, 1980)

Religiosity has been found to have an influence on both of these factors. Dyreng et al (2012) found that higher religious adherence was associated with lower incidence of irregular accounting practices. Omer et al (2015) find that auditors in more religious contexts are more resistant to client pressure regarding the issuance of going concern opinions. Jaggi and Xin (2014) report that auditors in more religious environments tend to adopt risk-averse attitudes, which is then reflected in their audit pricing. Finally, Conroy and Emerson (2004) find that firms headquartered in religious areas are less likely to adopt accounting manipulations. In summary, and with regard to Simunic’s model, more religious contexts tend to create an environment where firms adhere to ethical and legal standards as well as process regulations, which then has an impact on audit costs, as seen in Figure 2.

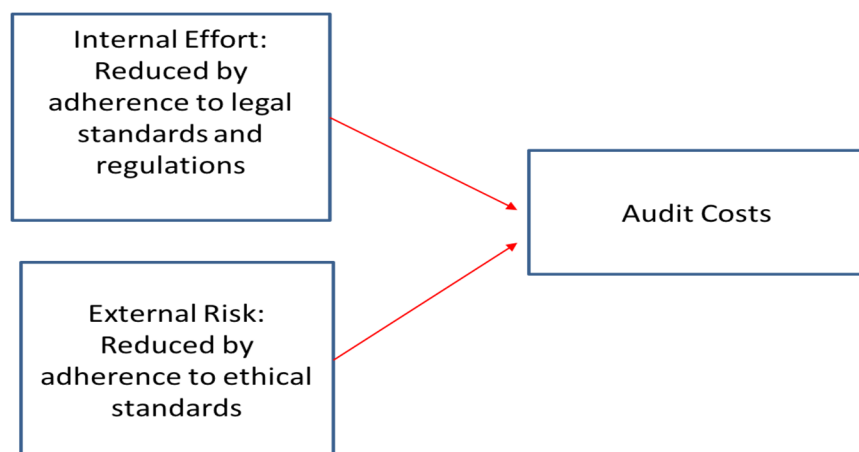


Figure 2. The impact of religiosity

LITERATURE REVIEW

Religion and Business Context

Since ancient times, religion in its various forms has had a major influence on human behaviour within society. The values that religion seeds, equality and compassion, can have profound implications for distribution of welfare in society. Hence, the scriptures and teachings of religions provide instruction for the management of human relations and exchanges in everyday affairs. Here we offer a summary of common themes in religion vs potential differences and how it applies to business context.

Mittelstaedt (2002: 6) suggests that ‘scholars need to understand the effects of religion on the kind of issues they face in business and, more important, how these issues are defined, informed, and regulated by religion’. Wilkes et al. (1986) called for more marketing and consumer research on religiosity thirty-five years ago. However, Yap (2011: 227) sadly states ‘[after Wilkes et al. call for more marketing and consumer research on religiosity] alas; undertakings in this area remain sparse’. Yap (2011) study is a first in addressing this knowledge gap. His aim was to review the marketing literature on Islamic banking and attempt to postulate some preliminary conceptual relationships for future evaluation by marketing scholars and managers. He also looks Profit and loss sharing (PLS) arrangements in Islamic banking and its counterparts. Yap (2011: 227) argues that ‘Consumer religiosity in the present discourse makes Islamic banking an appropriate vehicle to advance knowledge relating to the role of religion in marketing and consumer behaviour’. He (2011: 244) also states that ‘PLS arrangements adhere to Islamic ideals more closely but both banks and investors are risk-averse. The PLS arrangements in Islamic banking offer a true and attractive alternative to conventional financing and may even find a niche in the microfinance market’. Yap’s suggestion to the marketing scholars not to continue to avoid the ubiquitous presence, power and authority of religious teachings and their effects and described such research as ‘too important’ (Yap, 2011: 227).

A recent study by Amin (2012) addresses the previously mentioned gap empirically by purposing two objectives and this was the main aim of this research. Firstly, it attempts to examine the effects of attitude, subjective norm and amount of information on the intention to participate in Islamic insurance. Secondly, it attempts to examine the factors influencing the risk averse and risk taker nature in individuals through using the theory of reasoned action (TRA)

(Amin, 2012: 12). Amin (2012: 18) state that ‘Evidently, attitude and subjective norm are found to be the key antecedents in explaining one’s willingness to use Islamic insurance products’. Also ‘The theory of reasoned action (TRA) is found to be superb in determining one’s decision pertaining to the intention to participate in Islamic insurance products’.

A book edited by Hill, Lippy and Wilson (2005) is a publication provides a pool of articles in the field of Religion, namely religion in the southern region of the USA. One of the articles titled ‘Literature and Religion’ (2005: 461) explains that ‘Religion serves to connect ordinary events with an extraordinary or divine power and to provide significance, a pattern of meaning of life’. By which the article means that religion tries to establish or make an order for what otherwise appear to be illogical human actions and random natural occurrences. As it (2005: 461) continues to argue that ‘Religion and literature have both played conspicuous roles in the creation, reflection, and interpretation of that order’. The study particularly focuses on the effect of religion on the southern region of the USA. However, it very much agrees that this applies to all other regions. Also, it believes that through the power of story the germ of religious reflection and literature creation merge and is granted perspective. And an examination of both religion and literature together tells much about the region in the study research context was the southern region (2005: 468).

Emerson and Mckinney (2010) surveyed a random sample of 10,000 business leaders to study the relationship between religious beliefs and ethical attitudes. Their results provide evidence that the intensity of religion in a person’s life has a significant effect on ethical attitudes. Business professionals who rank the importance of religion to their life highly tend to be significantly less accepting of ethically questionable behaviour (Emerson and McKinney, 2010).

Levy and Razin (2012) in their study focus on religious beliefs that connect rewards and punishments to social behaviour. They (2012: 121) state that ‘Religious beliefs and religious practise are clearly two important and possibly inseparable features of religious organizations and the link between them is yet to be fully understood’. Levy and Razin have proposed a simple model of religious organizations which relies on the ability of such organizations to alter the beliefs of individuals about the relation between their social actions and shocks to their utility. The model ties together the three most observed aspects of religious organizations: beliefs, social behaviour, and rituals. They (2012: 123) state that ‘our model implies a positive relation between religious beliefs and cooperative behaviour, which may enhance economic growth’. In their paper, they show why rituals have to be costly, and therefore why religious participation might negatively affect growth.

In contrast, some empirical research has not found a significant relationship between religious belief and an increase in ethical attitudes. For example, (Clark and Dawson, 1996) find that the those who have high scores on the Gorsuch and Macpherson (1989) scale of religiousness have lower levels of ethical sensitivity. Kidwell, Stevens and Bethke (1987) detect no significant differences in the ethical judgments of respondents based on either frequency of church attendance or religious preference.

Religious Heterogeneity

Previous studies show religious heterogeneity has an impact on people's decisions and on economic development as a whole. Ethnic, linguistic, and religious factors have effect on economic growth (Alesina et al., 2000). For the purposes of this research, we follow the lead of Leventis (2016), where religiosity is defined as the proportion of a community that adheres to any religious denomination (Trawick and Howsen, 2006). Religiosity is a complex, multiply determined phenomenon that has a relationship with people's actions. Organized religion and religiosity are prevalent, with 85% of people reporting some form of religious belief (Zuckerman, 2005), and 82% report that religion constitutes an important part of their daily life (Crabtree, 2009). Gallup (2009) states:

'In the United States, 94% of respondents express a belief in God, 82% state that religion is at least fairly important to them, and 76% consider the Bible the actual or inspired word of God'.

The majority of the population of the United States supports a belief in God, 84% believe God can be reached through prayer, and 86% state that religion is important or very important to them (Gallup & Castelli, 1989). Zuckerman (2005) concurs, finding that only 15% of respondents worldwide describe themselves as nonreligious, agnostics, or atheists.

Sedikides (2010) focuses on process-oriented explanations of religiosity that use individual differences to strengthen the coherence of theory and research on religiosity. The aim is to investigate the phenomenon of religiosity, to contribute to psychology theories, and to bring social and personality psychology into the context of religiosity. This work bridges the social and personality psychology perspectives with other approaches to religiosity. Each article reviewed in Sedikides's (2010) paper proves generative, providing fodder for future research programs.

Alesina and La Ferrara (2000) study reasons that determine group formation and the degree of participation when the population is heterogeneous, both in terms of income and race or ethnicity. In their study, they show special interest in whether and how much the degree of heterogeneity in communities influences the amount of participation in different types of groups. Findings show participation in social activities is significantly lower in more unequal and in more racially or ethnically fragmented localities. Also, those individuals who express views against racial mixing are less prone to participate in groups the more racially heterogeneous their community is (2000).

In an attempt to measure ethnicity impact on economic development, Montalvo and Querol goes into analysing the role that different indices and dimensions of ethnicity play in the process of economic development (2004). They first discuss the advantages and disadvantages of alternative data sources for the construction of indices of religious and ethnic heterogeneity. Then they compare the index of fractionalization and the index of polarization. The authors find that ethnic (religious) polarization has a large and negative effect on economic development through the reduction of investment and the increase of government consumption and the probability of a civil conflict (2004).

Havlíček, et al. (2009) have attempted to generalize changes in the geographic distribution of religious heterogeneity or homogeneity in Czechia during the transformation period from 1991 to 2001. They found that more religiously homogeneous areas show smaller

declines in the level of homogeneity when compared with more heterogenous areas (2009). Havlíček, et al. (2009) work enhanced the regional differentiation of Czechia's religious landscape.

Lim, et al. (2010) shed light on a new dimension of the diversity by examining the stability of the 'no religion' preference in panel data. This paper examines the stability of the "nones" by using panel data collected in 2006 and 2007 as part of the Faith Matters Study, a nationwide study that focuses on religious life of American adults. In 2006, and interviewing sample of American adults over 18 years old (N=3,108), Lim, et al.'s findings suggest that the presence of liminal "nones" may account for this discrepancy. Because of their limited attachment to religion, liminal "nones" may or may not identify with a religious group depending on how the question is framed (2010).

Religious Diversity in the United States

An essential aspect of exploring the impact of religiosity in the United States is that the country is a melting pot of diversity. As Eck (2001) noted, every religion on the planet is practiced within the country. However, the distribution of these religious groups is not uniform. Starting with Zelinsky (1961), geographers have sought to identify and describe religious "regions" within the United States, associated with differences in the dominant religious groups within the regions.

Clearly, the dominant religious tradition in the United States is Christianity, but there is meaningful variation between Christian denominations. While some have focused on sorting denominations by their "liberal" vs. "conservative" leanings, Steensland et al (2001) propose that a more meaningful way to classify these denominations is to consider their underlying beliefs and practices. Their RELTRAD typology identifies three major groups within American Christianity: Catholics, mainline Protestants, and evangelical Protestants. While a division has existed between Catholics and Protestants since the 16th century, the distinction between evangelicals and mainline protestants is more recent. Scholars generally agree that evangelical Protestants share belief in a "born again" conversion experience, a literal interpretation of the Bible, and a desire to proselytize in order to bring others into their fold. Mainline Protestants generally do not stress "born-again" experiences or embrace proselytizing within their personal lives (Steensland et al. 2001, Reimer 2003).

In his 2012 study, Bauer used data to from the Religious Congregations and Membership Survey to study the distribution of religious groups throughout the country. These groups are not evenly dispersed, tending to cluster within geographical areas (Bauer 2012). These geographic denominational differences create diversity in the impact of religion within the daily lives of residents.

RESEARCH MODEL

The purpose of this study is to investigate the extent to which audit pricing in the United States can be explained by reference to both the magnitude and the diversity of religiosity of the region in which the firm is located. The significance of this research stems from the fact that, at present, no research has been carried out to investigate whether diversity of religiosity affects audit pricing. This study has a wider perspective than that of existing religiosity and audit pricing literature, which helps to build a more comprehensive model of

this phenomenon.

As result, this study contributes to the development and understanding of the differences between audit pricing in cross national context in a number of important ways. Firstly; examining existing religiosity models and frameworks, Secondly; providing a critical review of the implementation of audit pricing in US, Thirdly; investigating auditors actual reasons of audit fees and pricing and measure their level of religiosity.

Hence, the originality of the study is that it provides empirical evidence as a contribution to the literature by providing a different point of reference that the work of Leventis et al (2016), which can provide valuable results for audit industry providers and regulators, and, thus, serve as a feedback to evaluate the way accounting companies located in the US price their auditing services. Therefore, the findings of this research should be of interest not only to academic researchers interested in examining religiosity and audit pricing, but also to service providers that are located across regions of the US .

Leventis et al (2016) found that religiosity, defined as the religious adherence of the county of headquarters location, had a negative (lowering) effect on audit costs. Consequently, we formulate the following hypotheses:

H1₀: The impact of overall religious adherence on the magnitude of audit prices will not vary across regions of the US.

H2₀: The impact of diversity of religious adherence on the magnitude of audit pricing will not vary across regions of the US.

H3₀: The presence of a dominant religious group will not have an impact on the magnitude of audit pricing.

Research Design and Data Collection

Leventis et al (2015) explored the impact of religiosity on the magnitude of audit fees in the United States. The goal of this study is to extend this work, by evaluating the impact on audit fees of geographic region, overall rates of adherence, diversity of religious participation, and the presence or absence of a dominant religious group. The variables are listed in Table 1, and operationalized as follows:

Religious adherence, religious diversity, dominant religious group. Following the lead of Leventis (2016), we define religious adherence as the total number of individuals residing in a county that are registered as members in a religious group, as compared to the total number of individuals who reside in that county. The source of this data is the Religious Congregations and Membership Studies (RCMS), which can be found at the American Religion Data Archive (ARDA, 2011). Overall, religious expression in the US is overwhelmingly affiliated with Christianity. We operationalize diversity of religious participation by adding together the adherence rates for four major Christian groups (Mainline Protestant, Evangelical Protestant, Catholic, and Mormon), and dividing this total by the total adherence rate, thus generating a measure of the percent of the adherents who are members of a Christian congregation. We note that one potential issue with this number is that it does not include the congregations identified within RCMS as “African-American Denominations.” Unfortunately, the numbers reported in RCMS for these congregations are estimates rather than actual reports from the congregations. Finally, for each county, we determine whether any one religious tradition (Mainline Protestant, Evangelical Protestant, Catholic, Mormon) dominates that county, by representing more than forty-five percent of the total number of adherents in a particular county.

Geographic Region. The individual states that together comprise the USA have been grouped together in a variety of ways, depending on the purpose of the analysis. Historically, different groupings have been made based on cultural, historical, and economic factors. In this study, we identify six state groupings: New England, Mid Atlantic, Southeast, Midwest, Southwest, and West. These groupings were derived from the Audit Analytics database (Audit Analytics, 2017). Results of the regression analyses are reported by region.

Control Variables. The purpose of this study is to determine the impact of regional and religiosity factors on the magnitude of audit fees. However, audit fees can also be reasonably expected to depend on the magnitude of the task itself, the organization that performs the audit, and on the time at which the audit was conducted. Therefore we have included two control variables. The first, Revenue, is a proxy for firm size and audit complexity, and is operationalized as the natural logarithm of the firm's reported revenue. Firms selected for this study had a minimum of \$100,000 in revenue for the year in question, with no upper limit. The second control variable, Auditor, accounts for the organization that performed the audit. The sample frame used for this study included only firms that were audited by the "Big 4" auditors in the United States: Ernst & Young, PricewaterhouseCoopers, Deloitte, and KPMG. Together, these four firms account for over ninety percent of audits of publicly held companies. The third control variable, Time is operationalized as the year in which the audit occurred.

Sample Frame: The audit data used in this study was compiled and published by Audit Analytics. The frame included US firms listed in the Audit Analytics database that had audit fee information for the years 2003-2010. This information is gathered from the disclosure forms that public firms are legally required to submit to the Securities Exchange Commission. After filtering out those firms that did not have complete information, the sample contains 3240 firms. Table 1 lists variable and definitions, while Table 2 lists descriptive statistics for numerical variables.

Table 1. Variables included in the model.

Variable Name	Description
CTYADH	Rate of religious adherence for the county that houses the firm
CTYCHRIST	Percentage of the religious adherents within a county that are members of one of the following: Catholic, Mainline Protestant, Evangelical Protestant, Mormon
EVANG	Binary variable with a value of “1” if at least 45% of the county’s adherents are Evangelical Protestants, “0” otherwise
CATH	Binary variable with a value of “1” if at least 45% of the county’s adherents are Catholic, “0” otherwise
MAIN	Binary variable with a value of “1” if at least 45% of the county’s adherents are Mainline Protestants, “0” otherwise
MORMON	Binary variable with a value of “1” if at least 45% of the county’s adherents are Mormon, “0” otherwise
PWC	Binary variable with a value of “1” if the auditor was PricewaterhouseCoopers, “0” otherwise.
EY	Binary variable with a value of “1” if the auditor was Ernst & Young, “0” otherwise.
D	Binary variable with a value of “1” if the auditor was Deloitte, “0” otherwise.
LN REV	Natural logarithm of Revenue
YEAR	Reporting year

Final Regression Model (for each Region):

$$\text{Audit Fees} = \beta_1 * \text{CTYADH} + \beta_2 * \text{CTYCHRIST} + \beta_3 * \text{EVANG} + \beta_4 * \text{CATH} + \beta_5 * \text{MAIN} + \beta_6 * \text{MORMON} + \beta_7 * \text{PWC} + \beta_8 * \text{EY} + \beta_9 * \text{D} + \beta_{10} * \text{LNREV} + \beta_{11} * \text{YEAR}$$

RESULTS

To examine the regional differences, the regression model was run for each of the six regions. The results are summarized in Table 3. In general, we find that the model explains roughly similar proportions of the variance within the data, with R^2 values ranging from 0.216 to 0.347. The largest effect, as expected, is from the magnitude of firm revenue (LNREV). In this study we use firm revenue as a proxy for firm size, but it can also reflect the complexity of the audit task. The impact of revenue is positive and highly significant ($p < 0.000$) across all regions. Our second control variable in the model is time, defined as the year in which the audit fee is reported. It would be expected that over time, the magnitude of audit fees would rise, simply due to inflation. Within our results, TIME is a significant positive contributor to the magnitude of audit fees in three of the six regions. In the other three, the sign of the coefficient indicates a neutral or weak positive effect, not sufficient to be statistically significant.

Although the impact of the choice of auditing firm was not one of the variables of interest within our study of religiosity, it is interesting to note that it does have a significant impact on the magnitude of audit fees. Even for the same auditing firm, the effect is mixed, with a single auditing firm having higher audit fees than average in some regions but lower in others. Although they are referred to as the “Big 4” which bring to mind four centralized organizing structures, these firms are more accurately described networks of service providers, owned and managed independently. The findings of this research suggest that there is not a single monolithic pricing policy when it comes to setting audit fees, and that these fees do in fact reflect local conditions.

With regard to our research model, what we discover is that there are marked differences between the variables that have a significant contribution to the magnitude of Audit Fees, depending on what region of the country is studied. In terms of the stated hypotheses:

H1₀: The impact of overall religious adherence on the magnitude of audit prices will not vary across regions of the US.

The results presented in Table 3 lead us to REJECT this null hypothesis. The overall level of religious adherence at the county level (CTYADH) has a statistically significant impact only in two of the six regions, specifically, in the MidAtlantic and Southeast regions. Moreover, the impact of overall adherence is positive in one region (Southeast) but negative in the other (MidAtlantic). Religious adherence, by itself, does not seem to have a uniform impact on the magnitude of audit fees.

H2₀: The impact of diversity of religious adherence on the magnitude of audit pricing will not vary across regions of the US.

The results presented in Table 3 lead us to FAIL TO REJECT this null hypothesis. The percent of adherents that belong to a single faith tradition, in this case Christianity, has a significant negative impact on the magnitude of audit fees, i.e. an increase in homogeneity of religious adherence results in a decrease in audit fees. This impact is seen in every region. It is possible that the negative impact on audit fees reflects a characteristic of the population itself and its homogeneity, rather than the impact of religiosity per se.

H3₀: The presence of a dominant religious group will not have an impact on the magnitude of audit pricing.

The results presented in Table 3 lead us to REJECT this hypothesis. The presence of a dominant religious group, defined previously as a county where more than forty-five percent of adherents belong to the same classification (Evangelical Protestant, Mainline Protestant, Catholic, Mormon), has an impact on audit fees in three of the six regions. Interestingly, this effect is not consistent, being positive (i.e.—resulting in increased audit fees) in one combination (predominantly Catholic counties in the MidAtlantic region) but negative (i.e.—resulting in decreased audit fees) in others (predominantly Catholic counties in the Southeast, predominantly Evangelical counties in the Southeast and West regions). These mixed results suggest that once again, homogeneity of the population may be a factor in the magnitude of audit fees.

Table 2. Descriptive Statistics for Numerical Variables

	MID ATLANTIC				MIDWEST				NEW ENGLAND			
	Minimum	Maximum	Mean	Std. Deviation	Minimum	Maximum	Mean	Std. Deviation	Minimum	Maximum	Mean	Std. Deviation
Audit Fees	1000	162100000	2426140	6822669	3000	43700000	2201844	3998183	13130	94300000	1584874	5216972
CTYCHRIST	6411.48	9998.89	8508.26	993.98	7850.11	9999.37	9302.16	393.36	9093.96	9922.36	9279.51	155.10
CTYADH	227.98	920.66	509.12	96.60	276.67	826.34	523.01	89.39	171.30	646.73	586.95	71.99
	SOUTHEAST				SOUTHWEST				WEST			
	Minimum	Maximum	Mean	Std. Deviation	Minimum	Maximum	Mean	Std. Deviation	Minimum	Maximum	Mean	Std. Deviation
Audit Fees	6052	95600000	1987393	3924206	5000	51100000	1969202	3253391	2000	34432000	1656897	2624761
CTYCHRIST	8679.11	1000.00	9475.80	323.15	8745.30	9990.88	9297.39	205.59	8080.57	9983.33	9104.05	415.07
CTYADH	345.34	838.70	530.30	112.46	339.79	817.21	555.67	82.48	52.38	909.50	436.75	87.35

Table 3. Summary of regression analyses

	REGION 1 MidAtlantic R ² = 0.275		REGION 2 Southeast R ² = 0.232		REGION 3 New England R ² = 0.216		REGION 4 West R ² = 0.348		REGION 5 Midwest R ² = 0.362		REGION 6 Southwest R ² = 0.347	
	β (Std.)	p =	β (Std.)	p =	β (Std.)	p =	β (Std.)	p =	β (Std.)	p =	β (Std.)	p =
CTYCHRIST	-.159	.000	-.045	.019	-.056	.015	-.075	.000	-.169	.000	-.082	.000
CTYADH	-.042	.001	.052	.007	-.028	.237	-.026	.177	-.027	.052	-.027	.288
YEAR	.015	.140	.033	.030	.001	.944	.050	.000	.039	.001	.011	.470
EVANG	.002	.892	-.112	.000	N/A*	N/A*	-.025	.038	.018	.145	.042	.131
CATH	.058	.000	-.070	.000	N/A*	N/A*	.010	.561	-.028	.060	.005	.780
MAIN	.013	.322	N/A*	N/A*	-.012	.472	-.001	.928	-.005	.671	N/A*	N/A*
MORMON	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	.003	.886	N/A*	N/A*	N/A*	N/A*
LNREV	.509	.000	.455	.000	.455	.000	.572	.000	.570	.000	.578	.000
PWC	.037	.008	.056	.004	-.138	.000	.012	.405	.040	.014	.059	.002
EY	-.024	.080	.008	.669	-.115	.000	.041	.005	-.006	.703	-.019	.330
D	.038	.004	.011	.567	-.144	.000	-.059	.000	.025	.126	-.041	.031

* Some binary variables had no variance within a region, and were excluded from the analysis

DISCUSSION AND CONCLUSION

In this study, we have drawn on competing theories in the audit pricing and religiosity literature and investigate whether level and diversity of religiosity have a significant impact on how audit service is being priced in the US. The sample frame used for this study included US firms that had complete information for years 2003-2010, were audited by the Big 4, and had revenue of at least \$100,000. What we find is that once firm size (in the form of revenue), time (in the form of elapsed time), and auditor (which Big 4 accounting firm performs the audit) are taken into account, the overall level of religiosity does not have a consistent effect on the magnitude of audit fees. In this study, religiosity reduced audit fees in one region but increased them in another, and had no significant impact in four of the six regions. On the other hand, diversity of religiosity did have an impact, with increased homogeneity resulting in a decrease of audit fees. This suggests that the effect may not be in religiosity per se but in people sharing common experiences and social bonds.

It is interesting to note that the current analysis supports regional differences in religious variables, although the regions were not drawn based on any religious measure. The United States is a heterogeneous nation overall, but regional culture differences persist. This is an area of active study in a variety of fields, including geography, economics, and business.

The current study extends the work done by Leventis et al (2016) in demonstrating an impact of religious adherence on an economic phenomenon (audit fees). The current study incorporates regional and diversity elements of religiosity, whereas Leventis et al focused on adherence. Given the differences observed within the current study, future work should look further into: how to define regions/geographic clusters and what explains their differences, cultural (in addition to religious) factors that affect audit fees, and the interplay between regional factors and the overarching structure of the professional networks (i.e.—the “Big 4” accounting firms) in the determination of audit pricing.

As with all studies, there are limitations to this study. The first is that while the financial data is reported annually, the religious measures are collected periodically. Thus we are extrapolating on adherence based on a single data point. However, registering membership with a congregation does indicate a general level of adherence that is part of the characteristics of the population and would not be expected to change. So for example, we might see an adherent move from one congregation to another but rarely drop out of adherence altogether.

The second limitation is the possible absence of a correlated factor that has not been included within the model. It is impossible to include every possible source of explanation. However, links between religion and cultural values are strong, and therefore this connection warrants further study.

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