

Does Religiosity affect Audit Fees and Corporate Tax Avoidance in an Inflationary Market?

Hossein Tarighi¹, Mahdi Moradi² and Malihe Rezanezhad³

¹(Corresponding author): Master of Science in Accounting, Attar Institute of Higher Education, Mashhad, Iran. Department of Economics and Administrative Sciences. Author' E-mail: hossein.tarighi@outlook.com

²Department of Accounting, Faculty of Economics and Administrative sciences, Ferdowsi University of Mashhad (FUM), Mashhad, Iran. Author' E-mail: mhd_moradi@um.ac.ir

³Master of Science in Accounting, Attar Institute of Higher Education, Mashhad, Iran. Department of Economics and Administrative Sciences. Author', E-mail: Rezanezhad5@yahoo.com

Received: 30 November 2020; Revised: 17 December 2020;

Accepted 20 December 2020; Publication: 10 February 2021

Abstract: The aim of the present study is to investigate the impact of religiosity on audit fees and tax avoidance behavior among the companies listed on the Tehran Stock Exchange (TSE) in a country that has struggled with economic sanctions. The study population consists of 720 observations and 90 listed companies on TSE during the years 2011-2018; moreover, the statistical model used is an OLS regression model. Our approach for measuring religiosity is the most comprehensive measure at the county level because we employed various variables for evaluating religious adherence. We actually by conducting a principal component analysis (PCA) to construct an index of religiosity for each county. The prior literature suggests that religiosity can reduce acceptance of unethical business practices. In line with our expectation, there is a negative association between religiosity and audit costs. In fact, in spite of the serious financial problems that companies had been struggled with, religious values were able to induce managers to behave more honestly when they provide financial statements. The results also witnessed a negative relationship between religious adherence and corporate tax avoidance. To put it another way, the firms headquartered in regions of high religious adherence are less likely to engage in tax avoidance behavior. This research will make aware investors and stakeholders of this fact that religiosity might be effective in reducing unethical corporate behavior in emerging markets, particularly those markets facing financial sanctions.

Keywords: Religiosity, Audit Fees, Corporate Tax Avoidance, Economic sanction, Unethical business practices, Tehran Stock Exchange.

1. Introduction

In today's modern world, the dominant influence of religion in shaping the economic behavior of individuals in society cannot be ignored (Weaver & Agle, 2002; Lehrer, 2004; Vitell, 2009; McGuire *et al.* 2011; Leventis *et al.* 2015). In this regards, Bloodgood *et al.* (2008) believe that religiosity can reduce cheating behavior. Besides, Walker *et al.* (2012) argue that spiritual people are more interested in honest approaches. It seems that a shift from rules of Generally Accepted Accounting Principles (GAAP) towards norms of behavior might improve the quality of accounting and corporate governance (Sunder, 2005). Leventis *et al.* (2015) also highlighted that religious adherence can decrease

the need for shareholders to bear the costs of monitoring agents. Thus, it is predictable that firms located in areas of high religious adherence are less likely to engage in tax sheltering and financial statement manipulating (Dyregang *et al.*, 2012).

With respect to Iran nation, it can be noted that Iran is famous for a civilized country with high social values due to its several thousand year's civilizations. On the other hand, Iran market was faced with severe economic sanctions during the study period between 2011 and 2018, and most Iranian companies had financial distress. In a country called Iran with high ethical values which was faced with severe economic sanctions, the question arises as to whether religious norms can motivate managers to behave more honestly, or that executives, because of the financial pressures on the company, ignore their beliefs and manipulate the financial statements so as to mask the poor financial performance. Similar to Leventis *et al.* (2015), we are of the opinion that when the quality of religious beliefs in a society is high, financial reporting irregularities and therefore audit fees will decrease. What really will set this study apart from others is that understanding the impact of religion on managers' decisions when the firms have severe economic problems. To put it another way, we are going to know if the effects of economic pressures have caused managers to violate ethical and religious principles and engage in financial reporting irregularities.

The rest of the aforementioned paper is organized as follows: the next section frames the study into a theoretical framework, hypotheses development, and literature. Part three presents the research design and outlines where data is obtained and the sample selection procedure. Section four then presents the main results and implications drawn from statistical analyses and. Finally, section five demonstrates the concluding remarks.

2. The theoretical framework, hypotheses development, and literature

According to social norm theory, since individuals tend to adapt themselves to their surroundings, social norms have an important effect on people's behavior (Kohlberg, 1984; Festre, 2010). This means that the religious norms in a geographic area affect managers' attitude (Cialdini & Goldstein, 2004). Weaver & Agle (2002) indicated that religious role expectations, internalized as a religious self-identity, can influence ethical behavior. Thus, when the firms are headquartered in provinces with strong religious social norms, the probability that executives are influenced by religious social norms will be increased strongly (Kennedy & Lawton, 1998; McGuire *et al.*, 2011; Callen & Fang, 2015). It should be noted that the business performs and accounting risk, incidences of financial reporting irregularities, and the occurrence of accounting restatements are influenced by the level of religious adherence that a firm in which is headquartered (Conroy and Emerson 2004; Longenecker *et al.* 2004; McGuire *et al.* 2011 Dyregang *et al.* 2012; Leventis *et al.* 2015). We can say that there are many studies that have shown the role of religious beliefs of individuals in business

ethics (Brammer *et al.* 2007; Vitell 2009; McGuire *et al.* 2011; Leventis *et al.* 2015). Diaz (2000), for example, showed that the frequency of gambling in Las Vegas is affected by religious denomination, the level of importance of religion in the life of the people, and the frequency of attendance at religious services. He also proved that the amount of money gambled was also influenced by the occurrence of attendance at religious services and the importance of religion in the life of the individuals, but not by religious denomination. Furthermore, Kumar *et al.* (2011) in provinces with higher Catholic-Protestant ratios, investors exhibit a stronger propensity to hold lottery-type stocks, broad-based employee stock option plans are more popular, the initial day return following an initial public offering is higher, and the magnitude of the negative lottery-stock premium is larger. Conroy & Emerson (2004) in U.S.A used church attendance as a proxy for religiosity and found that there is a negative relationship between the quality of religious beliefs and acceptance of the use of accounting manipulation. Callen & Fang (2015) studied whether religiosity at the county level is connected with future stock price crash risk. They found strong evidence that companies headquartered in regions with higher levels of religiosity show lower levels of future stock price crash risk. In addition, Grullon *et al.* (2009) provide evidence that religiosity prevents unethical corporate behavior. Companies located in highly religious regions are less likely to backdate options, grant excessive compensation packages to their managers, practice aggressive earnings management, and be the target of class action securities lawsuits. In another research, Hilary & Hui (2009) also realized that companies located in counties with higher levels of religiosity show lower grades of risk exposure. They also exhibit a lower investment rate and less growth, but generate a more positive market reaction, after they announce new investments. In addition, Dyreng *et al.* (2012) demonstrated that higher levels of religious adherence are connected with both a lower likelihood of financial restatement and less risk that financial statements are misrepresented.

This point should not be forgotten that the amount of audit fee is positively linked to the extent of audit firm' efforts and litigation risk (Simunic, 1980). Based on Jha & Chen (2014), auditors judge the honesty of their clients based on where the firm is headquartered. In other words, when auditors estimate the audit pricing, they will pay attention to the level of social norms in which the companies are located. Jha & Chen (2014) supposed that the likelihood of litigation involving the auditor is higher in counties with low social norms and therefore will increase audit fees. Akerlof (2007) also believes that there is a positive connection between corporate directors' decision-making processes and moral norms of a society. In the American context, Omer *et al.* (2015) indicated that audit offices in highly religious U.S. Metropolitan Statistical Areas are more likely to issue going-concern audit opinions. In addition, McGuire *et al.* (2011) surveyed the effect of religion on financial reporting irregularities. They understood that companies located in regions

with robust religious social norms usually experience lower incidences of financial reporting indiscretions. They also proved that directors in sacred provinces prefer real earnings management over accruals manipulation. Jaggi & Xin (2014) evaluated the association between religiosity and audit fees. They concluded that high religious environment in which audit firms operate have a significant impact on their behavior, resulting in lower audit risk and audit effort, and hence lower audit fees. Their outcomes displayed that there is a significantly negative association between audit fees and religiosity values of provinces in which audit firms' offices are located. Moreover, the results showed that the negative association between religiosity values and audit fees is stronger when auditors' offices are located in rural zones compared to urban regions. Besides, Leventis *et al.* (2015) came to the conclusion that increased religious adherence operates as an institutionalized monitoring tool that declines audit risk and audit costs. The results also showed that the influence of religiosity on auditors' pricing decisions is not differentiated by levels of audit firm expertise but that audit fees are determined by an audit firm's relative location in a market sector and religious adherence.

As previously mentioned, the Iranian market did not have favorable economic conditions due to economic sanction between 2011 and 2018, and most Iranian firms struggled with many financial problems. It is worth bearing in mind that Iran is known as a civilized country with high social values due to its several thousand year's civilizations in which the Declaration of Human Rights written by the emperor of Persia (Cyrus the Great) that has been hailed as the first charter of human rights origins in the ancient world (Crompton, 2008). In such a civilized society with admirable moral values from early ancient history to today, in spite of the serious financial problems that companies have been struggling with, we strongly expect that religious belief and ethical values induce managers to behave more honestly, which this will lead to decreasing audit risk and audit fee. Accordingly, it is not demanding to predict the first hypothesis of the paper as follows:

Hypothesis 1: The level of religious adherence in the location a company is located influences on the level of audit fees

Investment in tax-exempt assets is defined as tax avoidance behavior (Khan, Srinivasan and Tan, 2016). Besides, tax avoidance is a kind of tax evasion without breaking the rules. Based on the agency theory, executives using tax avoidance increases a firm's free cash flow to facilitate management's selfishness actions (Jensen, 1986; Jensen & Meckling, 1976; Xia *et al.* 2017). However, the companies which have high tax avoidance are not able to maximize shareholder wealth (Desai & Dharmapala, 2006; Hanlon & Heitzman, 2010; Kim *et al.* 2011; Xia *et al.* 2017). In the same vein, Kim *et al.* (2011) saw a positive relationship between tax avoidance and stock price crash risk using a large sample of U.S. firms for the period 1995 to 2008. Balakrishnan *et al.* (2012) also suggested that aggressive tax

planning is associated with lower corporate transparency. In this situation, the auditors will perceive a higher audit risk when the firms involved in more tax avoidance (Donohoe and Robert Knechel, 2014).

Apparently, managers' ethical behavior in an environment with high moral values will be affected (Guiso *et al.* 2004; Jha & Chen, 2015). Based on the results obtained from china, Xia *et al.* (2017) found that social trust can lower firm tax avoidance. It is because a high social trust environment might decrease agency conflict so that tax avoidance is less. In Turkey, Benk *et al.* (2016) realized that religiosity has a statistically positive impact on tax compliance. The results of Strielkowski & Čábelková (2015) in the Czech Republic showed religion plays the role of tax compliance, but only through a positive effect of visiting the church. National pride supports tax morality while trust in government institutions and attitudes towards government are not associated with tax compliance. Dyreng *et al.* (2012) realized that companies located in areas of high religious adherence are less likely to engage in tax shelters. In another study, Boone *et al.* (2012) indicated that companies headquartered in more religious U.S. regions are less likely to avoid taxes; moreover, religiosity is consistently associated with lower tax avoidance by individual taxpayers. According to the literature mentioned above, despite the serious financial problems of Iranian companies, we predict that the second hypothesis of this research is as follows:

Hypothesis 2: Firms located in a higher religious region have lower tax avoidance behavior

3. Research Methodology

Because the results can be used in the decision-making process, this study is an applied investigation. The statistical model used was an OLS regression; the time range of the study was (2011-2018) as long as eight years. The total data needed to test the hypotheses in this study are collected directly from the financial statements on the Tehran Stock Exchange website. To evaluate the quality of religious beliefs of individuals in each province, a number of variables have been used in this paper. We actually use various variables for religiosity and conduct a Principal Component Analysis (PCA) to construct an index for each county.

3.1. Population and statistical sample

The target population included all firms listed on TSE, during the period 2011 to 2018. Common features of the companies to determine the population are as follow:

1. The type of the company activity is productive and therefore investment companies, leasing, credit, and financial institutions and banks are not included in the sample because of their different natures. These firms have quite different natures in terms of reporting on TSE; therefore, such firms cannot be surveyed (Salehi *et al.* 2017).

2. According to the research time period (2011-2018), the firm is listed on the TSE before the year 2011 and its name is not removed from the companies mentioned by the end of 2018.
3. The activity of the selected firms has not stopped and their financial period from 2011 to 2018 has not changed.

Taking account of the above conditions, a sample size of 90 firms on TSE has been selected.

Table 1: Firm-year observations distributed across the industry sectors.

<i>Industry Name</i>	<i>Firm-year observation</i>	<i>% of sample</i>
Agriculture and Related Services	16	2.22
Automotive and the manufacture of Automotive Parts	128	17.77
Basic metals	24	3.33
Cement, lime, and plaster	88	12.22
Chemical products	40	5.55
Computer-related facilities and services	8	1.11
Food & Beverage products except for sugar	72	10
Machinery and appliances	48	6.66
Other non-metallic mineral products	112	15.55
Pharmacy	80	11.11
Production of metal products	32	4.44
Rubber and plastic	32	4.44
textiles	16	2.22
Transportation, warehousing, and communications	24	3.33
Total	720	≈ 100

Our sample includes 720 firm-year observations that represent 14 industries and spans the years 2011 to 2018.

3.2. Research models

In this study, we use OLS regression model to look at the relationship between religious adherence and audit fees. Similar to prior papers such as Jha & Chen (2014), and Bryan & Mason (2016), the natural logarithm of the audit fees charged by the external auditor is defined as a dependent variable. The independent variables include our test variable, RELIGIOSITY, as well as control variables that have been commonly utilized in prior audit fee research (e.g., Simunic, 1980; Francis *et al.*, 2005; Jha & Chen, 2014; Bryan & Mason, 2016). Thus, we test our first hypothesis using the following model.

$$\text{LN (AUDIT FEE)} = \beta_0 + \beta_1 \text{RELIGIOSITY} + \beta_2 \text{ROA} + \beta_3 \text{BIG1} + \beta_4 \text{LOSS} + \beta_5 \text{FISCAL YEAR END} + \beta_6 \text{TOBIN'S Q} + \beta_7 \text{AUDIT TENURE} + \beta_8 \text{FIRM SIZE} + \beta_9 \text{FIRM AGE} + \beta_{10} \text{DIVIDENDS} + \beta_{11} \text{DAYS TO SIGN} + \beta_{12} \text{UNQUALIFIED OPINION} + \beta_{13} \text{INHERENT RISK} + \beta_{14} \text{AUDITOR CHANGE} + \beta_{15} \text{SEGMENTS} + \beta_{16} \text{SPECIALIST} + \beta_{17} \text{COST OF LIVING} + \beta_{18} \text{RURAL} + \beta_{19} \text{POPG} + \beta_{20} \text{LNPOP} + \beta_{21} \text{GEOGRAPHICAL AREA} + \varepsilon. \text{ (Model 1)}$$

RELIGIOSITY is defined as an independent variable indicating the quality of religious adherence of people in a society. Finer insights into social capital can be gained by different religious traditions, beliefs, and norms (Deller *et al*, 2018). Religion actually is a moral phenomenon that can be effective in reducing the agency's problem (McGuire *et al*, 2011). Consequently, looking at financial literature, it can easily be deduced that religiosity is connected with a reduced acceptance of unethical business practices and financial reporting irregularities (Jaggi & Xin, 2014; Leventis *et al*, 2018; Omer *et al*, 2018; Harjoto & Rossi, 2019). For example, Leventis *et al*. (2018) proved that religiosity can decrease audit fees strikingly in the US. Omer *et al*. (2018) also witnessed a positive association between religiosity and issuance of Going Concern Opinions (GCO). Following this, we argue that the level of religious adherence the location a firm is headquartered affects the level of audit pricing. Without any exaggeration, our study is the most comprehensive and coherent research that has ever been able to measure the religion at the province level. That is because contrary to previous research, which used few variables to measure the quality of religiosity of individuals, in this research, various variables have been used to accurately reveal the true quality of Iranian religious beliefs. In this paper, to measure the quality of religious beliefs of individuals in each province, the following variables have been used: 1) Number of pilgrims of Hajj Umrah, 2) Number of pilgrims of Hajj al-Tamattu', 3) Number of religious places like mosques, 4) the amount of Zakat collected in Eid al-Fitr, 5) the amount of Atonement collected in Eid al-Fitr, 6) Money and Gifts Collected at Eid Sa'idQurban. We construct an index of social religiosity for each county by conducting a principal component analysis (PCA).

Following Jha & Chen (2014), control variables have been used in this study. In fact, ROA is the ratio of net income to total assets. BIG1 as an indicator variable equals one if the auditor is a member of the auditing organization in Iran and zero otherwise. LOSS is an indicator variable that equals one if the ROA is negative and zero otherwise. FISCAL-YEAR-END is defined as an indicator variable that is equal to one if the fiscal year ends in Esfand (It is the twelfth and final month of the Iranian calendar) and zero otherwise. Tobin's Q is the ratio of the market value of a company's assets (as measured by the market value of its outstanding stock and debt) divided by the replacement cost of the company's assets (book value). AUDIT TENURE is defined as the length of the auditor-client relationship, and FIRM SIZE variable is defined as the natural logarithm of total assets of the firm. FIRM AGE is the length of time that a company has existed. DIVIDENDS are the payments a corporation makes to its shareholders as a return of the company's profits. DAYS TO SIGN variable is the lag between the signature date of the audit opinion and the date of fiscal year-end. UNQUALIFIED OPINION is defined as an indicator variable and it equals one if the auditor issues an unqualified opinion without any additional language and zero otherwise. INHERENT RISK is the sum of

receivables and inventory and scaled by assets. AUDITOR CHANGE is an indicator variable and equals one if the auditor had changed in the fiscal year and zero otherwise. SEGMENTS is the square root of the number of geographic segments. The SPECIALIST variable is an indicator variable and equals to one if the ratio of the total fees collected by the auditor for the industry to the total fees collected is the highest and zero otherwise. COST OF LIVING variable measures the cost of living index of a county for each year. RURAL is an indicator variable that is equal to one if the county's population density is less than the median and zero otherwise. It should be mentioned that the population density is the ratio of the population to the land region. POPG variable is defined as the percentage of the population growth of the province from the prior year; in addition, LN POP is the natural log of the province's population. Lastly, GEOGRAPHICAL AREA shows the information about the amount of geographical area in each county.

$TAX\ AVOIDANCE = \beta_0 + \beta_1 REELIGIOSITY + \beta_2 ROA + \beta_3 BIG1 + \beta_4 LOSS + \beta_5 FISCAL\ YEAR\ END + \beta_6 TOBIN'S\ Q + \beta_7 AUDIT\ TENURE + \beta_8 FIRM\ SIZE + \beta_9 FIRM\ AGE + \beta_{10} DIVIDENDS + \beta_{11} DAYS\ TO\ SIGN + \beta_{12} UNQUALIFIED\ OPINION + \beta_{13} INHERENT\ RISK + \beta_{14} AUDITOR\ CHANGE + \beta_{15} SEGMENTS + \beta_{16} SPECIALIST + \beta_{17} COST\ OF\ LIVING + \beta_{18} RURAL + \beta_{19} POPG + \beta_{20} LNPOP + \beta_{21} GEOGRAPHICAL\ AREA + \varepsilon.$ (Model 2)

Various studies have shown that the religiosity quality in a county is connected with the firm's financial reporting quality (Grullon *et al.* 2009; McGuire *et al.* 2012, Jha and Chen, 2014). In the second research model, we are going to test whether corporations headquartered in a higher religious province have lower tax avoidance behavior. Tax avoidance is recognized as a dependent variable which is calculated by the following formula:

$$Tax\ Avoidance\ it = ETRit / STR\ it$$

Measuring tax avoidance seems to be a bit complicated (Hanlon and Heitzman, 2010), and so far different ways of measuring it have been used in various researches, each of which has its own features. For example, the ratio of Effective Tax Rate (ETR) equals total tax expense divided by Pre-tax income (Dyreng *et al.*, 2010). Furthermore, Cash ETR is the ratio of the cash tax paid to the pre-tax income of the firm (Chen *et al.*, 2010). Book-Tax-Difference (BTD) also recognized as another scale of tax avoidance, which equals the difference between pretax income according to the financial statement and the taxable income according to the tax return (Guenther, 2014). Another proxy for evaluating tax avoidance is Book-Tax-Difference (BTD) which is defined as the difference between pretax income according to the financial statement and the taxable income according to the tax return (Guenther, 2014). Moreover, used the difference between the Statutory Tax Rates (STR) and the ETR is recently used by Thomsen & Watrin (2018) as a proxy for tax avoidance. Thomsen & Watrin (2018) actually believed that higher values of $DIFF_{(STR)}$

ETR) show greater levels of tax avoidance. In this study, instead of their difference, we used the ratio of effective tax rates (ETR) to the Statutory Tax Rates (STR), which could be a new concept for measuring tax avoidance. This implies that when this ratio is lower, the level of tax avoidance is greater. It should be highlighted that Statutory Tax Rate (STR) or the legal rate of tax in Iran is determined by Article 6 of the Law for Development of New Financial Instruments and Institutions which were passed and approved in 2010. 22.5% tax rate (with 10% tax exemption for stock companies under Article 143 of Direct Tax Act) was in 2009, whereas in 2010 and beyond, 20% tax rate was for stock companies with free-floating shares above 20% and 22.5% tax rate for stock companies with free-floating shares below 20%.

4. Results

4.1. Descriptive statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. To analyze the data, the descriptive statistics including minimum, maximum, mean, median, and standard deviation are calculated and presented in the table below.

Table 2: Descriptive statistics

<i>Variable</i>	<i>OBSV</i>	<i>Mean</i>	<i>S.D</i>	<i>Minimum</i>	<i>Maximum</i>
AUDIT FEE	720	6.4262180	0.8864926	4.2484952	9.3026460
TAX AVOIDANCE	720	0.473952	0.4294995	0	1.4663
RELIGIOSITY	720	68.5210131	5.8697915	5.9375362	75.3903152
AUDITOR CHANGE	720	0.1864246	0.3635961	0	1
AUDIT TENURE	720	4.2717708	2.5083091	1	7
FIRM SIZE	720	12.9208598	1.5809107	8.2168986	18.5218625
FIRM AGE	720	16.1452514	7.2212723	5	49
DIVIDENDS	720	0.0171082	0.1210354	0	2.5645244
TOBIN'S Q	720	2246669.33	4326058.93	6232.79	47272481.77
FISCAL YEAR END	720	0.8659218	0.4410540	0	1
LOSS	720	0.1210428	0.4264812	0	1
ROA	720	0.0959657	0.1673603	-1.3226566	0.7458920
BIG1	720	0.2658101	0.5309679	0	1
DAYS TO SIGN	720	0.4860335	0.6002709	0	1
UNQUALIFIED OPN	720	0.4357542	0.5963176	0	1
SPECIALIST	720	0.4908566	0.5941569	0	1
INHERENT RISK	720	1.2237036	3.3629650	0	29.1420470
COST OF LIVING	720	4326000.12	1242661.73	2532774.00	5683884.00
LN POP	720	18.1428815	0.0230133	18.1103394	18.1773718
POPG	720	0.1125512	0.0458883	0.0120000	0.1420000
SEGMENTS	720	13.2885475	3.7771190	4.5800000	18.2700000
RURAL	720	0.3854749	0.5871611	0	1
GEOGRAFICAL AREA	720	28024.26	29630.67	5570.00	130458.00

According to the results of table 2, it can be described that the highest amount of audit fees is 9.3026460, while the lowest is 4.2484952, which indicates that the difference between the audit fees received by the auditors in Iran is very high. The outcomes also demonstrate that around 18% of Iranian corporations change their auditors by the end of each year. Besides, the results witnessed that the average length of the working relationship between the auditor and the clients is slightly longer than four years. Approximately one-quarter of Iranian companies had audited by well-known auditors, and half of the auditors are recognized as Industry Specialist Auditors.

4.2. Multicollinearity Diagnostics

Multicollinearity (also collinearity) is a phenomenon in which one predictor variable in multiple regression models can be linearly predicted from the others with a substantial degree of accuracy. In statistics, the variance inflation factor (VIF) evaluates the severity of multicollinearity in an OLS regression analysis. It provides an index that measures how much the variance of an estimated regression coefficient is augmented because of collinearity (Salehi *et al.* 2018).

Table 3: Collinearity Diagnostics

Variable	Collinearity Statistics	
	Tolerance	VIF
AUDITOR CHANGE	0.664	1.505
AUDIT TENURE	0.629	1.591
FIRM SIZE	0.621	1.610
FIRM AGE	0.800	1.250
DIVIDENDS	0.621	1.145
TOBIN'S Q	0.843	1.187
FISCAL YEAR END	0.833	1.200
LOSS	0.488	2.050
ROA	0.941	1.063
BIG1	0.911	1.098
DAYS TO SIGN	0.679	1.473
UNQUALIFIED OPN	0.821	1.219
SPECIALIST	0.792	1.262
INHERENT RISK	0.629	1.589
COST OF LIVING	0.476	2.102
LN POP	0.693	1.443
POPG	0.543	1.841
SEGMENTS	0.903	1.108
RURAL	0.897	1.116
GEOGRAFICAL AREA	0.246	4.057
RELIGIOSITY	0.192	5.203

As for the VIF, the VIF of the estimated model coefficients is less than 10 there would be no linearity problem. Accordingly, building on table 3, this

value is less than 10 for both research models, which means that there is no linearity in relation to the research hypotheses.

4.3. Results of the research models

The first model investigates the impact of religion on audit fees, whereas the purpose of the second model is understanding if there is a significant relationship between religiosity and corporate tax avoidance. Hence, the results of the parameter estimation for each model are as follows:

Table 4: The results of the research models

Variable	First Model		Second Model	
	Coefficient	P-value	Coefficient	P-value
RELIGIOSITY	-0.01078	0.0443*	-0.142	0.049*
AUDITOR CHANGE	-0.00231	0.9800	-0.081	0.093
AUDIT TENURE	-0.03978	0.0046***	-0.134	0.007***
FIRM SIZE	0.29602	0.0001***	0.033	0.512
FIRM AGE	-0.00957	0.0242*	0.186	0.000***
DIVIDENDS	0.01231	0.9592	0.043	0.308
TOBIN'S Q	2.289512e-9	0.7437	0.063	0.134
FISCAL YEAR END	-0.01977	0.8202	-0.071	0.101
LOSS	0.04022	0.6943	0.058	0.896
ROA	-0.31716	0.1246	0.092	0.024*
BIG1	0.36138	0.0001***	-0.045	0.271
DAYS TO SIGN	0.15415	0.0124**	-0.014	0.771
UNQUALIFIED OPN	-0.6704	0.2592	-0.304	0.000***
SPECIALIST	0.13568	0.0525	0.103	0.020**
INHERENT RISK	0.04566	0.0012***	-0.011	0.826
COST OF LIVING	-7.42139e-8	0.4527	-0.134	0.019**
LN POP	20.83289	0.0001***	0.026	0.589
POPG	-0.91331	0.3938	0.074	0.161
SEGMENTS	-0.01390	0.2999	-0.018	0.668
RURAL	-0.31024	0.0010***	-0.285	0.002***
GEOGRAFICAL AREA	0.00000373	0.0265*	0.217	0.004***

Analysis of Variance (ANOVA) for model One				
Source	Sum of Squares	Mean Square	F-value	Pr> F
Model One	218.98661	9.95394	25.30	<.0001
Error	202.23929	0.39346	R-Square	0.5199
Corrected Total	421.22581	Adj R-Sq	0.4993	

Analysis of Variance (ANOVA) for model Two				
Source	Sum of Squares	Mean Square	F-value	Pr> F
Model Two	18.600	0.979	6.285	<.0000
Error	81.936	0.156	R-Square	0.47650.4534
Corrected Total	100.536	Adj R-Sq		

What stands out from the analysis of variance (ANOVA) is that the results obtained from both research models are valid and trustworthy, and our models are quite a good fit. The outcomes demonstrated that there is a significant and negative association between religiosity and audit fees. This means that increased religious adherence works as a monitoring mechanism that decreases audit risk and audit costs. In addition, we find that there is a significant and negative connection between religiosity and corporate tax avoidance. In other words, Iranian companies located in a higher religious region have lower tax avoidance behavior.

Looking at the details, it can be concluded that audit tenure is negatively connected with audit costs as well as tax avoidance behavior. Besides, companies with more age pay fewer audit fees, while these firms have lower tax avoidance behavior. We also found that the firms located in provinces with low population density pay fewer audit costs and have lower tax avoidance behavior. Finally, the results witnessed that companies headquartered in bigger provinces pay more audit costs and are likely to engage in tax avoidance behavior.

5. Conclusion

The purpose of this research was to determine if religiosity can affect audit costs and corporate tax avoidance in market-facing financial problems due to pressures from economic sanctions. The results of the first hypothesis showed the level of religious adherence in the location a company is located has a negative effect on the level of audit fees. In line with our expectation, in spite of the serious financial problems that companies had been struggled with, religious values were able to induce managers to behave more honestly, which this resulted in decreasing audit risk and audit costs. Our finding is consistent with Kennedy & Lawton (1998), Conroy & Emerson (2004), McGuire *et al.* (2011), Dyreng *et al.* (2012), Jha & Chen (2014), Jaggi & Xin (2014), Callen & Fang (2015), and Leventis *et al.* (2015). Moreover, the results of the second hypotheses suggested that religiosity is negatively linked to corporate tax avoidance behavior. In fact, Iranian companies located in areas of high religious adherence are less likely to involve in tax avoidance behavior. Our result is similar to Boone *et al.* (2012), Dyreng *et al.* (2012), Strielkowski & Èábelková (2015), and Benk *et al.* (2016).

What really will set this our study apart from other studies is that the time period under study is distinctive because of the many financial problems experienced by Iranian firms. Due to Iran's dire economic situation during the period under consideration, this is the most comprehensive research among the countries of the Middle East that simultaneously surveys the impact of religiosity on audit costs and corporate tax avoidance in an emerging market namely Iran. Without any exaggeration, this research will make aware investors and stakeholders of this fact that religiosity might be effective in reducing

unethical corporate behavior in emerging markets, particularly those markets facing financial sanctions.

References

- Akerlof, G. A. (2007). The missing motivation in macroeconomics. *The American Economic Review*, 97(1), 5-36.
- Balakrishnan, K., Blouin, J. L., & Guay, W. R. (2012). Does tax aggressiveness reduce corporate transparency?.
- Benk, S., Budak, T., Yüzbaşı, B., & Mohdali, R. (2016). The Impact of Religiosity on Tax Compliance among Turkish Self-Employed Taxpayers. *Religions*, 7(4), 37.
- Bloodgood, J. M., Turnley, W. H., & Mudrack, P. (2008). The influence of ethics instruction, religiosity, and intelligence on cheating behavior. *Journal of business ethics*, 82(3), 557-571.
- Boone, J. P., Khurana, I. K., & Raman, K. K. (2012). Religiosity and tax avoidance. *The Journal of the American Taxation Association*, 35(1), 53-84.
- Brammer, S., Williams, G., & Zinkin, J. (2007). Religion and attitudes to corporate social responsibility in a large cross-country sample. *Journal of business ethics*, 71(3), 229-243.
- Bryan, D. B., & Mason, T. W. (2016). Extreme CEO pay cuts and audit fees. *Advances in Accounting*, 33, 1-10.
- Callen, J. L., & Fang, X. (2015). Religion and stock price crash risk. *Journal of Financial and Quantitative Analysis*, 50(1-2), 169-195.
- Chen, S., Chen, X., Cheng, Q. and Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms?. *Journal of Financial Economics*, 95(1), pp.41-61.
- Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, 55, 591-621.
- Conroy, S. J., & Emerson, T. L. (2004). Business ethics and religion: Religiosity as a predictor of ethical awareness among students. *Journal of business ethics*, 50(4), 383-396.
- Crompton, S. W. (2008). *Cyrus the Great*. Infobase Publishing.
- Deller, S. C., Conroy, T., & Markeson, B. (2018). Social capital, religion and small business activity. *Journal of Economic Behavior & Organization*, 155, 365-381.
- Desai, M. A., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. *Journal of Financial Economics*, 79(1), 145-179.
- Diaz, J. D. (2000). Religion and gambling in sin-city: A statistical analysis of the relationship between religion and gambling patterns in Las Vegas residents. *The Social Science Journal*, 37(3), 453-458.
- Donohoe, M. P., & Robert Knechel, W. (2014). Does corporate tax aggressiveness influence audit pricing?. *Contemporary Accounting Research*, 31(1), 284-308.
- Dyregang, S. D., Hanlon, M., & Maydew, E. L. (2010). The effects of executives on corporate tax avoidance. *The Accounting Review*, 85(4), 1163-1189.
- Dyregang, S. D., Mayew, W. J., & Williams, C. D. (2012). Religious social norms and corporate financial reporting. *Journal of Business Finance & Accounting*, 39(7 8), 845-875.

- Festre, A. (2010). Incentives and Social Norms: A Motivation Based Economic Analysis of Social Norms. *Journal of Economic Surveys*, 24(3), 511-538.
- Francis, J. R., & Wang, D. (2005). Impact of the SEC's public fee disclosure requirement on subsequent period fees and implications for market efficiency. *Auditing: A Journal of Practice & Theory*, 24(s-1), 145-160.
- Grullon, G., Kanatas, G., & Weston, J. (2009). Religion and corporate (mis) behavior.
- Guenther, D. A. (2014). Measuring corporate tax avoidance: Effective tax rates and book-tax differences. Available at SSRN 2478952.
- Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics*, 50(2-3), 127-178.
- Harjoto, M. A., & Rossi, F. (2019). Religiosity, female directors, and corporate social responsibility for Italian listed companies. *Journal of Business Research*, 95, 338-346.
- Hilary, G., & Hui, K. W. (2009). Does religion matter in corporate decision making in America?. *Journal of financial economics*, 93(3), 455-473.
- Jaggi, B., & Xin, H. (2014). Religiosity and audit fees.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Jha, A., & Chen, Y. (2014). Audit fees and social capital. *The Accounting Review*, 90(2), 611-639.
- Kennedy, E. J., & Lawton, L. (1998). Religiousness and business ethics. *Journal of business ethics*, 17(2), 163-175.
- Khan, M., Srinivasan, S., & Tan, L. (2016). Institutional ownership and corporate tax avoidance: New evidence. *The Accounting Review*.
- Kim, J. B., Li, Y., & Zhang, L. (2011). Corporate tax avoidance and stock price crash risk: Firm-level analysis. *Journal of Financial Economics*, 100(3), 639-662.
- Kohlberg, L. (1984). Essays on moral development: Vol. 2. The psychology of moral development: Moral stages, their nature and validity.
- Kohlberg, L. (1984). Essays on moral development: Vol. 2. The psychology of moral development: Moral stages, their nature and validity.
- Kumar, A., Page, J. K., & Spalt, O. G. (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics*, 102(3), 671-708.
- Lehrer, E. L. (2004). Religion as a determinant of economic and demographic behavior in the United States. *Population and development review*, 30(4), 707-726.
- Leventis, S., Dedoulis, E., & Abdelsalam, O. (2015). The impact of religiosity on audit pricing. *Journal of Business Ethics*, 1-26.
- Leventis, S., Dedoulis, E., & Abdelsalam, O. (2018). The impact of religiosity on audit pricing. *Journal of Business Ethics*, 148(1), 53-78.
- Longenecker, J. G., McKinney, J. A., & Moore, C. W. (2004). Religious intensity, evangelical Christianity, and business ethics: An empirical study. *Journal of business ethics*, 55(4), 371-384.
- McGuire, S. T., Omer, T. C., & Sharp, N. Y. (2011). The impact of religion on financial reporting irregularities. *The Accounting Review*, 87(2), 645-673.

- Omer, T. C., Sharp, N. Y., & Wang, D. (2015). The impact of religion on the going concern reporting decisions of local audit practice offices.
- Omer, T. C., Sharp, N. Y., & Wang, D. (2018). The impact of religion on the going concern reporting decisions of local audit offices. *Journal of Business Ethics*, 149(4), 811-831.
- Salehi, M., Tahervafaei, M., & Tarighi, H. (2018). The effect of characteristics of audit committee and board on corporate profitability in Iran. *Journal of Economic and Administrative Sciences*.
- Salehi, M., Tarighi, H., & Rezanezhad, M. (2017). The relationship between board of directors' structure and company ownership with corporate social responsibility disclosure: Iranian angle. *Humanomics*, 33(4), 398-418.
- Simunic, D. A. (1980). The pricing of audit services: Theory and evidence. *Journal of accounting research*, 161-190.
- Strielkowski, W., & Čábelková, I. (2015). Religion, Culture, and Tax Evasion: Evidence from the Czech Republic. *Religions*, 6(2), 657-669.
- Sunder, S. (2005). Minding our manners: Accounting as social norms. *The British accounting review*, 37(4), 367-387.
- Thomsen, M., & Watrin, C. (2018). Tax avoidance over time: A comparison of European and US firms. *Journal of International Accounting, Auditing and Taxation*, 33, 40-63.
- Vitell, S. J. (2009). The role of religiosity in business and consumer ethics: A review of the literature. *Journal of Business Ethics*, 90(2), 155-167.
- Vitell, S. J. (2009). The role of religiosity in business and consumer ethics: A review of the literature. *Journal of Business Ethics*, 90(2), 155-167.
- Walker, A. G., Smither, J. W., & DeBode, J. (2012). The effects of religiosity on ethical judgments. *Journal of Business Ethics*, 106(4), 437-452.
- Weaver, G. R., & Agle, B. R. (2002). Religiosity and ethical behavior in organizations: A symbolic interactionist perspective. *Academy of management review*, 27(1), 77-97.
- Weaver, G. R., & Agle, B. R. (2002). Religiosity and ethical behavior in organizations: A symbolic interactionist perspective. *Academy of management review*, 27(1), 77-97.
- Xia, C., Cao, C., & Chan, K. C. (2017). Social trust environment and firm tax avoidance: Evidence from China. *The North American Journal of Economics and Finance*, 42, 374-392.