The Influence of Culture on The Strength of Auditing and Financial Reporting Standards

Mustafa Kenan Erkan[1], Ahmet Ağsakal[2]

[1]Sakarya University, Faculty of Management, 54187 Esentepe /Sakarya, Turkey

Abstract: *This article extends the previous literature on cultural influences over the strength of auditing and reporting standards (SARS) by applying quantile regression methods to examine cultural effects at different percentiles of the strength of auditing and financial reporting standards. We have used the cultural characteristics of countries as defined by Hofstede's culture model. Using data on 79 countries, this article provides empirical evidence that four out of Hofstede's six cultural dimensions have a significant effect on the strength of auditing and financial reporting standards. The findings suggest that individualism, uncertainty avoidance, long-term orientation and indulgence influence a country's strength of auditing and reporting standards.*

Keywords: Strength of auditing and financial reporting standards, culture.

1. Introduction

Cultural patterns affect country's social, economic and institutional structures including accounting and auditing practices as sub-cultural formations. Despite the fact that the relationship between culture and accounting has been increasingly drawing researcher's attention, analysis of cultural influence on accounting-auditing practices is a relatively new area of study since cultural studies have focused predominantly on understanding social differences among countries. Recent global banking crisis and its severe financial consequences have noted the importance of social implications of the strength of auditing and reporting and, in a broader sense, its spill-over effects onto other social structures.

Cultural characteristics influence countries' social and economic dimensions as well as institutional arrangements significantly. Accounting system is not immune from cultural influences and also affected by these forces. One of the main reasons of cultural influence on accounting and auditing practices is attributed to its nature of being an open system (Sevilengül, 1996). Global experience has shown that countries with strong economic structures also have strong auditing processes in place. Furthermore, recent financial turmoil worldwide has revived the importance of the efficacy and strength of auditing and reporting standards regardless of the development level of countries. Pre-crisis notion that accounting practices are subject to strong auditing and reporting standards and businesses disclose reliable accounting information has started to be questioned (Ünsal, 2010). Both after-crisis developments and changing economic conditions coupled with business growth and complexity increase the vitality of correct and reliable accounting information for all the stakeholders in society.

In light of these developments the overall picture of auditing and culture relationship suggest that culture is an indispensable sub-system for companies which affects their strategic decisions and responses to their environments and provides strategic advantage and if operationalized effectively culture as a sub-system improves organizational performance (Sayılar, 2003). Regarding the effective engagement of cultural characteristics into business operations, auditing and reporting play a vital role since these are the services that provide reliability to the form and manner of business activities. Strong and reliable auditing and reporting practices enable healthy decision making schemes for all related parties and creates positive externalities in society by providing confidence and trust primarily for businesses and for all social structures in large. The need for a sound culture of auditing and reporting in society culminated in the efforts to design, establish and internationalize financial reporting standards in order to ensure transparency in business operations. Financial reporting standards, in essence, try to enable various users who benefit from these reports understand and get the same information without being subject to broad subjective interpretation. Moreover, the International Accounting Standards Committee (IASC) founded in June 1973 states its goal as: to formulate in the public interest global accounting standards which is to present high quality, transparent, explicit and comparable information to be observed in the financial statements and other financial reports in order for the fulfillment of the needs and requirements of the participants in the world capital markets and of those who need information for economic decisions (Kaya, 2007). In this present study we have examined the relationship between the cultural characteristics of nations as defined by Hofstede's culture model and the strength of auditing and financial reporting standards.

2. Background Literature and Hypothesis Development

2.1 Background Literature

The relationship between culture and auditing and financial reporting has been increasingly attracting researchers' attention since Gray's (1988) theoretical study hypothesizing that accounting follows different patterns in different parts of the world. Quinn (2015) studied the "Big Four" international accounting firms' members and their auditing services in relation to specific socio-economic, political, geographical

and legal factors in the BRIC countries-Brazil, South Africa, and India. In light of the auditing services provided in these countries, evaluation of Hofstede's cultural dimensions identified particular risks and opportunities in each of these countries further emphasizing the importance of cultural characteristics for the Big Four firms to be aware of their implications as they affect work environment and audit teams.

Cardona et al. (2014) analyzed the impact of culture and economic factors on the implementation of the IFRS (International Financial Reporting Standards) by using a methodology that associates Hofstede's cultural dimensions and economic factors to an implementation score in different countries and found that certain cultural dimensions and economic factors may affect a country's IFRS implementation decision.

Tartaraj and Hoxha (2014) emphasized the impact of cultural differences on accounting systems. Based on the findings from the interviews and questionnaires with the preparers and users of financial statements they conclude that Albania's distinct cultural characteristics make it difficult to implement international accounting standards. Due to the hereditary nature of culture, in a broader sense, they draw attention to other factors such as education.

The findings of a recent study by Perera, et all (2012) investigating two culturally different countries-New Zealand and Samoa- suggested a high level of accounting professionalism in New Zealand and a low level of professionalism in Samoa and concluded that culture may have an impact on the major differences in the accounting professionalism in these two countries.
By investigating the relationship between Gray's accounting value of conservatism and Hofstede's cultural dimensions, Salter and Lewis (2011) analyzed the SEC Form 20-5 (1998-2004) data of 15 countries and suggested that the cultural variable individualism is significantly and positively related to differences in income measurement practices between countries.

Orij (2010) investigated the link between corporate social disclosure levels and national cultures by using a sample of 600 large companies from 22 countries and found that national cultures may influence corporate social disclosure levels. According to an experimental study conducted by Tsakumis (2007) to investigate the impact of national culture on accountants' recognition and disclosure decisions by using the Hofstede- Gray framework, Greek accountants are more secretive-less likely to disclose the existence of both contingent assets and liabilities than U.S. accountants.

Noravesh et al. (2007) examined the relationships between cultural values defined by Hofstede's and Gray's accounting values and showed the relationships among cultural and accounting values indicating meaningful positive relationships between power distance and conservatism and between masculinity and professionalism.

2.2 Hypotheses Development

The dependent variable in this study is strength of auditing and reporting standards (SARS). SARS is measured by the World Economic Forum based on executive opinion surveys and published by the report WEF Global Competitiveness Report 2014-2015. In this present study, we believe that cultural dimensions of nations as defined by Hofstede will affect SARS level in a given country. Cultural Dimensions as defined by Hofstede:

- **PD (Power Distance):** This dimension of culture describes how unequal distribution of power in a society is accepted and expected by the members of the society. High PD degree societies accept hierarchical order while low PD means people seek equal distribution of power.
- **IDV (Individualism):** High individualism indicates loosely connected social relations in which individuals are concerned only with themselves and their close families. On the other hand low individualism indicates collectivist social structure in which individuals care also for their relatives and groups they belong to.
- **MAS (Masculinity):** Masculinity dimension reflects the relationship of social roles with gender. High masculinity indicates that achievement, heroism, assertiveness and material rewards for success are preferred and society is more competitive. Low masculinity represent sincerity in relations, protecting the weak and indicates that society is more consensus-oriented.
- **UAI (Uncertainty Avoidance):** Indicates the extent to which people tolerate the uncertainty of their future lives. Uncertainty avoidance reflects how uncomfortable people feel under uncertain conditions.
- **LTO (Long-Term Orientation):** Societies who have high long-term orientation score encourage and look for the ways to prepare for the future. Societies who score low on this dimension tend to maintain traditions and regard social change with suspicion.
- **Indulgence (IND):** Indulgence shows the level of resistance people feel when encountered by unfavorable circumstances. Societies with high indulgence tend to be less affected by adverse situations while societies with low indulgence suppress satisfaction of needs.

This study proposes the following research hypotheses:

H1: There is a negative relationship between power distance in a country and the SARS level.
H2: There is a positive relationship between individualism and the SARS level.
H3: There is a negative relationship between uncertainty avoidance and the SARS level.
H4: There is a positive relationship between long-term orientation and the SARS level.
H5: There is a positive relationship between masculinity and the SARS level.
H6: There is a positive relationship between indulgence and the SARS level.

3. Data and Methodology

For the dependent variable SARS, we have used the dataset given by the Global Competitiveness Report 2014-2015

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published by the World Economic Forum. Strength of auditing and reporting standards (SARS) is a component of the first pillar in this report and indicates the ranking assigned to the assessment of financial auditing and reporting standards. SARS is measured by the World Economic Forum by conducting executive opinion surveys and responses to the survey questions are assessed on 7 point Likert scale, where the lowest possible score is 1 representing extremely week level of SARS and the highest possible score is 7 representing extremely strong level of SARS. Between 1968 and 1972 Hofstede developed a model to describe cultural dimensions consisting of power distance (PD), uncertainty avoidance (UA), individualism (IND), masculinity (MASC) in light of the analysis of the data on 100,000 individuals working at the IBM Corporation. In 1985 Hofstede added a fifth dimension: long-term orientation (LTO) and a sixth dimension indulgence vs. restraint in 2010. The data for these cultural characteristics of countries are drawn from the website: http:// geert-hofstede.com/cultural-dimensions.html.

Table 1: Descriptive Statistics of Variables

stats	SARS	PD	IND	MASC	UA	LTO	INDG
mean	4.820253	61.40506	42.31646	48.39241	64.67089	43.83544	48.12658
median	4.8	65	36	49	65	41	48
max	6.7	100	91	100	100	100	100
min	2.3	11	12	5	8	4	0
sd	.8580508	20.16949	22.93499	19.54116	21.11976	24.0733	23.01859
skewness	-.229274	-.3084095	.4821858	-.0522413	-.2425461	.3555871	.1135519
kurtosis	3.055941	2.494823	1.941368	3.16379	2.338182	2.141705	2.24057

Table 2: Correlation Matrix

	SARS	PD	IND	MASC	UA	LTO	INDG
SARS	1.0000						
PD	-0.5107	1.0000					
IND	0.5498	-0.6906	1.0000				
MASC	0.0529	0.1617	0.0440	1.0000			
UA	-0.2100	0.1678	-0.1286	0.0660	1.0000		
LTO	0.2919	-0.1112	0.2186	0.0834	0.0761	1.0000	
INDG	0.1719	-0.2269	0.1118	-0.0499	-0.1253	-0.4423	1.0000

Table-1 shows the descriptive statistics of all the variables. Table-2 displays the correlation matrix. The statistical validity of the hypotheses developed in the previous section is examined by applying multivariable regression with robust standard errors and quantile regression methods. Instead of estimating the mean regression line by employing OLS, quantile regression as developed by Koenker and Basset (1978) employs least absolute deviation estimate that is used to estimate a median regression line for the conditional distribution. Quantile regression method is also used to estimate percentiles of the conditional distribution other than the 50th percentile

4. Empirical Results

Empirical examination of our hypotheses is conducted by country level multivariable regressions with robust standard errors. Due to limited availability of Hofstede's cultural dimensions of countries, our sample consists of 79 countries. SARS levels are regressed on the scores of Hofstede's cultural dimensions. OLS and quantile regression results are provided in Table-3. Table-4 provides quantile graphs.

Graphs are made using 'grqreg' Stata module. For our entire sample, four of the variables are statistically significant. The R^2 of the model is 42%. Statistically significant variables are individualism (IND), uncertainty avoidance (UA), long-term orientation (LTO), and indulgence (INDG).

Individualism (IND) is significant at less than 5% level and supports hypothesis 2 which states that individualism level of a country is positively associated with its strength of auditing and reporting standards. Long –term orientation (LTO) is significant at less than 1% level and empirically supports hypothesis 4 which states that the level of long- term orientation (LTO) in a country is positively associated with the levels of SARS. Hypothesis 6 is also supported by the results since indulgence (INDG) is significant at less than 5% level.

**Table 3:** OLS and Quantile Regression Estimates

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	OLS	Quantile10[th]	Quantile25[th]	Quantile50[th]	Quantile75[th]	Quantile90[th]
PD	-0.00929	-0.00981	-0.0102	-0.00879	-0.00787	-0.0138
	(0.00559)	(0.0131)	(0.00657)	(0.00633)	(0.00762)	(0.0108)
IND	**0.0108****	**0.0186***	**0.0131****	**0.0109****	0.00428	0.00720
	(0.00481)	(0.0110)	(0.00569)	(0.00479)	(0.00618)	(0.00728)

MASC	0.00307	0.00351	0.00386	0.000942	0.00230	-6.00e-05
	(0.00408)	(0.00614)	(0.00414)	(0.00377)	(0.00532)	(0.00874)
UA	-0.00558	-0.000786	-0.00220	-0.00454	**-0.0106***	**-0.0145****
	(0.00370)	(0.00734)	(0.00584)	(0.00536)	(0.00619)	(0.00611)
LTO	**0.0108***	**0.0140***	**0.0115****	0.00801	**0.00851***	0.00566
	(0.00374)	(0.00784)	(0.00507)	(0.00496)	(0.00467)	(0.00666)
INDG	**0.00783****	0.00934	0.00786	**0.00935****	**0.0119****	0.00866
	(0.00391)	(0.0101)	(0.00486)	(0.00434)	(0.00524)	(0.00845)
Constant	**4.298***	**2.817***	**3.540***	**4.369***	**5.238***	**6.387***
	(0.630)	(1.435)	(0.692)	(0.634)	(0.883)	(1.182)
Observations	79	79	79	79	79	79
R-squared	0.427					

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4: Quantile Regression Graphs
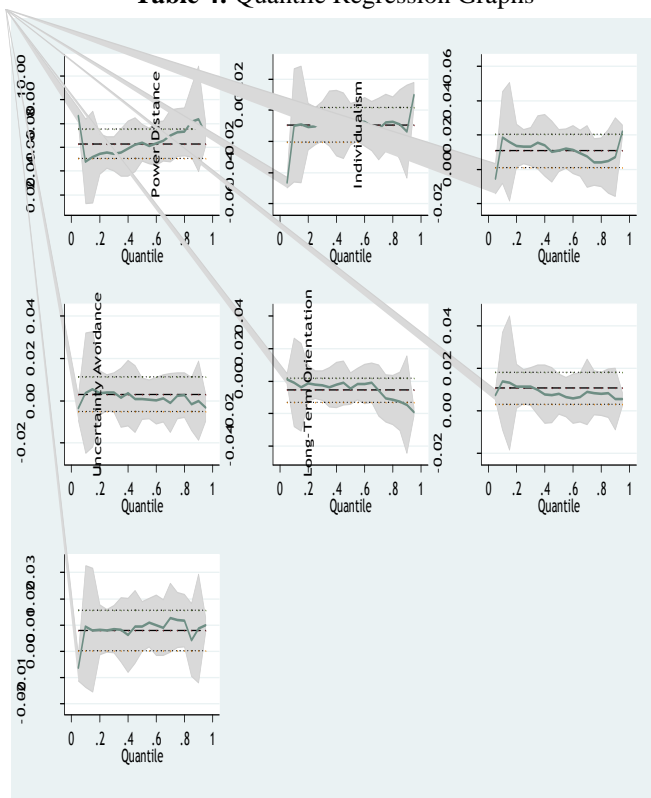
Therefore we can conclude that cultural characteristics - individualism, long term orientation and indulgence – in a country affect the strength of auditing and financial reporting standards. Quantile regression results show that hypothesis 3 which states that the level of uncertainty avoidance (UA) in a country is negatively associated with the level of SARS.

While not supported by the OLS regression results quantile regression results show that uncertainty avoidance (UA) is significant at less than 10% at the 75th quantile and less than 5% at the 90th quantile. Therefore we can conclude that in countries where the strength of auditing and reporting standards is high (75th and 90th quantiles) uncertainty avoidance is significant at less than 10% and less than 5% levels respectively. Quantile regression results give coefficients for uncertainty avoidance variable that are significantly different from the OLS coefficients that is outside the OLS confidence interval.

5. Conclusion

This paper attempts to extend the literature on cultural influences on the strength of auditing and reporting standards (SARS) by applying quantile regression method that goes beyond OLS. The focus of the paper is the role of cultural characteristics in affecting a country's strength of auditing and reporting standards. The empirical work is based on the data from two sources. For the SARS scores of countries, we have used the 2014-2015 Global Competitiveness Report published by the World Economic Forum. For the cultural characteristics of the countries we have used the cultural dimensions scores as defined by Hofstede. We confirm empirically that individualism, long-term orientation and indulgence influence a country's strength of auditing and reporting standards. We also found that at the high levels of the strength of auditing and reporting standards, uncertainty avoidance is significant and influence the SARS. The empirical results of this study emphasize the importance of cultural factors in standard setting process, and auditing and accounting professions' sensitivity to cultural characteristics.

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