





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 weak 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](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
<b>SARS</b>	1.0000						
<b>PD</b>	-0.5107	1.0000					
<b>IND</b>	0.5498	-0.6906	1.0000				
<b>MASC</b>	0.0529	0.1617	0.0440	1.0000			
<b>UA</b>	-0.2100	0.1678	-0.1286	0.0660	1.0000		
<b>LTO</b>	0.2919	-0.1112	0.2186	0.0834	0.0761	1.0000	
<b>INDG</b>	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 50<sup>th</sup> 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<sup>2</sup> 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**

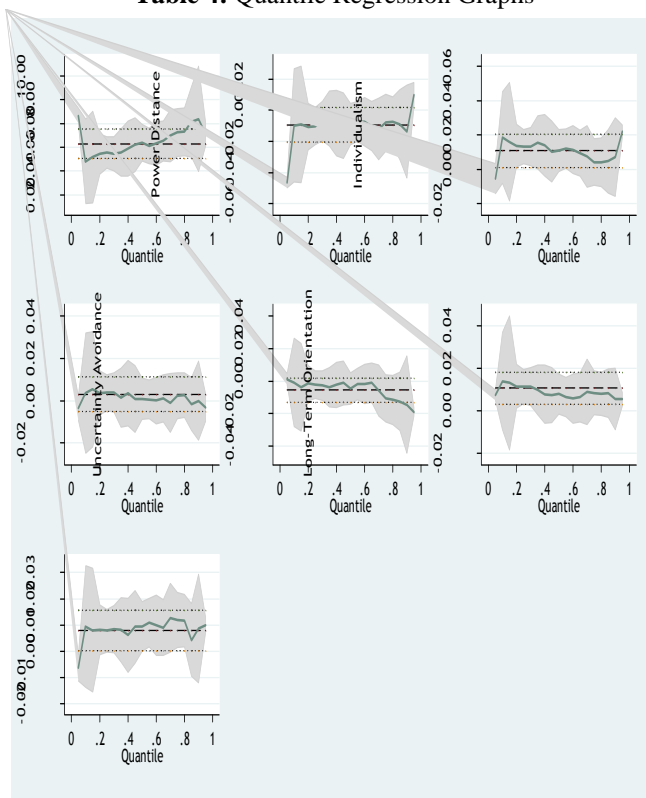
VARIABLES	(1) OLS	(2) Quantile10 <sup>th</sup>	(3) Quantile25 <sup>th</sup>	(4) Quantile50 <sup>th</sup>	(5) Quantile75 <sup>th</sup>	(6) Quantile90 <sup>th</sup>
PD	-0.00929 (0.00559)	-0.00981 (0.0131)	-0.0102 (0.00657)	-0.00879 (0.00633)	-0.00787 (0.00762)	-0.0138 (0.0108)
IND	<b>0.0108**</b> (0.00481)	<b>0.0186*</b> (0.0110)	<b>0.0131**</b> (0.00569)	<b>0.0109**</b> (0.00479)	0.00428 (0.00618)	0.00720 (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	<b>-0.0106*</b>	<b>-0.0145**</b>
	(0.00370)	(0.00734)	(0.00584)	(0.00536)	(0.00619)	(0.00611)
LTO	<b>0.0108***</b>	<b>0.0140*</b>	<b>0.0115**</b>	0.00801	<b>0.00851*</b>	0.00566
	(0.00374)	(0.00784)	(0.00507)	(0.00496)	(0.00467)	(0.00666)
INDG	<b>0.00783**</b>	0.00934	0.00786	<b>0.00935**</b>	<b>0.0119**</b>	0.00866
	(0.00391)	(0.0101)	(0.00486)	(0.00434)	(0.00524)	(0.00845)
Constant	<b>4.298***</b>	<b>2.817*</b>	<b>3.540***</b>	<b>4.369***</b>	<b>5.238***</b>	<b>6.387***</b>
	(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 75<sup>th</sup> quantile and less than 5% at the 90<sup>th</sup> quantile. Therefore we can conclude that in countries where the strength of auditing and reporting standards is high (75<sup>th</sup> and 90<sup>th</sup> 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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