The Investigation of the Relationship between Cultural Values and Agency Costs in Accepted Companies in Tehran Stock Exchange

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Abstract

This study investigates the relationship between cultural values and agency costs in companies accepted in Tehran Stock Exchange. The cultural values criteria in this study include Power Distance Index (PDI), Uncertainty Avoidance Index (UAI), Individualism (IDV) and Masculinity (MAS). For measuring the cultural values, the questionnaire of Hofstede (1991) and for measuring agency costs, the formula of "agency costs = FCF * Tobin's – Q" is used. Research findings indicate that indicators of, individualism and masculinity have a weak positive relationship with agency costs and the indicator of uncertainty avoidance and power distance have a weak negative relationship with agency costs. Among the variables of cultural value, power distance has the most impact on agency costs and these cultural values have the explanatory power of 8% in clarifying the variable of agency costs.

Keywords: Cultural values, Power Distance (PDI), Uncertainty Avoidance (UAI), Individualism (IDV), Masculinity (MAS), Agency Costs (AC).

1. Introduction

Culture of each country is the main factors influencing the values of national and international accounting which should be much of attention to accounting research. In recent years there has been a great orientation to the use of behavioral theories on accounting researches, all of which have approved the interaction of accounting and environmental with one another. Differences in the values of national culture can be a possible factor of difference in accounting procedures, so the expectation is that the cultural environment as a national or regional system, including language, customs, religion, law, education and social organizations, technology and material culture has a complex interaction with the accounting elements (KhoshTinat & Kazempour, 2006). According to Perera (1989), each accounting system is a product of its specific culture and environment. Mueller et al. (1994; p.1) have also noted, 'Accounting is shaped by the environment in which it operates'. In other words, different patterns of accounting are associated with a range of cultural factors such as societal values, religion, political

systems, and historical background. Culture is a powerful influence underlying human behavior and social values, and its impact on accounting practices can not be underestimated.

Many different definitions are offered on culture (Modarres et al, 2004). Here we state the definition of culture offered by Hofstede in 1991. Hofstede believes that culture is the collective programming that distinguishes members of one group from other groups (Hofstede, 1991). During the years 1980 to 1991 with a comprehensive research, he introduced 4 dimensions of cultural values and in the year 2001 he added the fifth dimension. This category includes power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. feminism and long term vs. short term orientation (De Mooij & Hofstede, 2010). On the other hand, Agency theory defines agency costs as the costs associated with divergent objectives between agents (managers) and owners (shareholders). The costs are inherently generated when managers attempt to use organizational resources for their own benefit rather than for maximizing shareholder wealth. Information asymmetry, where managers discriminately have better/more information than shareholders, is the main cause of these conflicts of interest. Agency costs also arise when shareholders try to mitigate the problems (Jensen and Meckling, 1976). Jonson et al. (2004) investigated interest conflicts between managers and owners and found that this interest conflict depend on their culture. Also, Fidermuc & Jacob (2010) provide evidence that culture values significantly change main nature of agency conflicts.

Considering the above discussion, this study because of the need for richness of the accounting literature in this field, this paper examines the relationship between Hofstede's cultural values and agency costs in accepted companies in Tehran Stock Exchange.

2. Literature Review

Hofstede (2008) has conducted a multi-year comprehensive study of how values in the workplace are influenced by culture. Specifically, from 1967 to 1973, while working at IBM as a psychologist, he collected and analyzed data from over 100,000 individuals from 50 countries and 3 regions. Subsequent studies validating the earlier results have included commercial airline pilots and students in 23 countries, civil service managers in 14 counties, 'upmarket' consumers in 15 countries and 'elites' in 19 countries. From the initial results, and later additions, Hofstede developed a model that identifies four primary Dimensions to assist in differentiating cultures: Power Distance– PDI, Individualism – IDV, Masculinity – MAS, and Uncertainty Avoidance – UAI. These four cultural dimensions have been utilized extensively in prior research efforts, both empirical and theoretical. For example, Rallapalli (1999) employs Hostede's cultural variables in the context of the development of a global marketing ethics code, while Williams and Zinkin (2008) use these cultural dimensions in a corporate social responsibility context. Other examples include the works of Arnold et al. (2006) and Vitell et al. (1993), who each employ Hofstede's cultural framework in an ethical decision making environment (Clements et al, 2010).

An agency relationship is present whenever one party (the principal) depends on another party (the agent) to undertake some action on the principal's behalf (Bergen, Dutta, & Walker, 1992). A central problem in agency theory is alignment of goals between agents and principals or, in the instant case, between employers (principals) and employees (agents) (Fama, 1980; Fama & Jensen, 1983). Employers and employees are assumed to have different objectives, with employees preferring leisure or shirking whenever possible (Gerhart & Rynes, 2003).

Agency theory provides theoretical underpinnings for many research efforts in the disciplines of economics, management, marketing, finance, accounting and information systems. It is one of the most influential theories that underlie the bulk of the corporate governance and management control research in the western world. Fundamental to agency theory is the assumption that agents are opportunistic and will always engage in self servicing behavior if opportunities arise. Accordingly, the role of control systems (e. g., structures, procedures, information systems, monitoring, performance

evaluation, rewards, penalties) is to help principals in curbing opportunistic behavior of agents by reducing opportunities and incentives for such behavior (Ekanayake, 2004).

Kulik (2005) in a research titled " Agency Theory, Reasoning and Culture at Enron: In Search of a Solution " found Enron's culture as one rooted in agency theory by asserting that Enron's members were predominantly agency-reasoning individuals. He identified conditions present at Enron's collapse: a strong agency culture with collectively noncompliant norms, a munificent rare-failure environment, and new hires with little business ethics training (Kulik, 2005).

Johnson and Droege (2004) argue that cultural differences may attenuate those assumptions and thereby temper agency theory predictions. Culture may align goals between employers and employees change a company's preference for behavior- versus outcome-based pay, require higher incentives before employees will accept outcome-based pay, and lower the moral hazard concerns associated with outcome based pay. The results from the research of Salter and sharp (2001) regarding the effect of an apparently small difference in national culture on the ability of agency theory to explain escalation of to failing projects in two countries USA and Canada found that the effect of adverse selection conditions was significantly stronger among managers from the more individualist USA and also, more experienced managers were less likely to escalate commitment (Salter and sharp, 2001).

HassabElnaby and Mosebach (2005) in a research titled "Culture's consequences in controlling agency costs: Egyptian evidence" examines the business environment of Egypt, a nation at the beginning of its transition to a market economy, to determine whether national culture is associated with the use of accounting based debt covenants in debt agreements. Results indicated that three of the four Hofstede's cultural dimensions are significant when regressed on the number of accounting-based debt covenants in debt agreements. And this indicates that as a country develops, national culture is associated with the control and understanding of the business process (HassabElnaby and Mosebach, 2005).

The results from the research of Jurkus et al. (2010) regarding gender diversity and agency costs indicates that Although increasing diversity does not reduce agency costs for all firms, the evidence shows that diversity is significantly negatively related to agency costs in firms in less competitive markets. Also, the results suggest that increasing diversity in management can have beneficial effects for firms where strong external governance is absent (Jurkus & et al., 2010).

Chui et al. (2002) argued that Culture does matter because it affects management perception of the cost and risk related to debt finance and agency problems in each country.

3. Research Hypotheses

Main Hypothesis

There is a significant relationship between cultural values and agency costs in companies accepted in Tehran Stock Exchange.

Sub-Hypotheses

1) There is a significant relationship between power distance and agency costs in companies accepted in Tehran Stock Exchange.
   There is a significant relationship between uncertainty avoidance and agency costs in companies accepted in Tehran Stock Exchange.
   There is a significant relationship between individualism and agency costs in companies accepted in Tehran Stock Exchange.
   There is a significant relationship between masculinity and agency costs in companies accepted in Tehran Stock Exchange.

4. Statistical Population & Sample

The statistical population in this study includes the companies accepted in Tehran Stock Exchange in the period of 2004-2010. Existence of some heterogeneousness among the companies accepted in Tehran Stock Exchange led to consider some special conditions for selection of studied companies as follows:

1) Companies selected must be accepted in Tehran Stock Exchange since the year 2004 in Tehran Stock Exchange is accepted.
   Companies cannot change the financial course in the study period.
   Companies should not be members of any financial investment and mediators.
   With regard to the above conditions, 112 companies were selected as the statistical sample.

5. Data Collecting Tools & Data Analysis Method

Hofstede's standard questionnaire was used for data collection purpose because of its high validity and reliability. The questionnaires were distributed among 530 workers in accounting and finance departments, 420 of which were recollected. The data from the questionnaires was analyzed using the econometrics software of EViews 6.

Also, for measuring agency costs, the formula of "agency costs = FCF1 * Tobin's – Q" is used. In this formula, Tobin's q is employed as a measure of firm value and is defined as the ratio of the market value to replacement values of a firm's assets.

6. Data Analysis

Descriptive statistics (Table 1) show that among between variables, AC is of the most coefficient of variation and IDV is of the less coefficient of variation. Findings show that AC & MAS have positive skewness but other variables are of normal distribution, too. Also, it should be mentioned that among the research independent variables, the variable of IDV index had the lowest coefficient of variation during the course of this research and this shows the relative stability of this cultural variable in the research period.

Table 1: Descriptive Statistics

Date: 05/31/10 Time: 05:26
Sample: 1 120

	AC	IDV	MAS	PDI	UAI
Mean	0.659335	0.603485	0.608272	2.460198	-0.735119
Median	0.336987	0.558600	0.555850	2.407950	-0.577350
Maximum	7.820585	1.080300	1.254700	3.296500	1.111100
Minimum	-6.399444	0.285800	0.283000	1.650000	-2.200000
Std. Dev.	1.692003	0.186467	0.206950	0.381264	0.706798
Skewness	0.483266	0.688546	0.890451	0.072916	-0.226599
Kurtosis	13.00831	2.869300	3.536739	2.635635	2.902971
Jarque-Bera	227.4759	4.305301	7.784335	0.346564	0.483306
Probability	0.000000	0.116176	0.020401	0.840900	0.785329
Sum	35.60410	32.58820	32.84670	132.8507	-39.69640
Sum Sq. Dev.	151.7323	1.842808	2.269899	7.704205	26.47685

Correlation between the studies variables are presented in Table 2. As it is clear, the variables of individualism, masculinity have a positive correlation with agency costs and power distance and of

[1] Free Cash Flow (FCF)

uncertainty avoidance index have a negative correlation with agency costs. Among the research independent variables, the highest correlation has been between variables of masculinity and individualism (88%) and individualism and uncertainty avoidance (45%) respectively.

Table 2: Correlation between Variables

	AC	IDV	MAS	PDI	UAI
AC	1.000000	0.118401	0.086448	-0.241931	-0.117737
IDV	0.118401	1.000000	0.889342	-0.246501	0.454605
MAS	0.086448	0.889342	1.000000	-0.132454	0.399156
PDI	-0.241931	-0.246501	-0.132454	1.000000	0.014177
UAI	-0.117737	0.454605	0.399156	0.014177	1.000000

Pairwise Granger Causality Tests (Table 3) show that among independent variables, only any of variables cannot cause of AC.

Table 3: Pairwise Granger Causality Tests

Pairwise Granger Causality Tests
Date: 05/31/10 Time: 05:27
Sample: 1 120
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
IDV does not Granger Cause AC	120	0.14201	0.86798
AC does not Granger Cause IDV		1.75137	0.18467
MAS does not Granger Cause AC	120	0.64843	0.52748
AC does not Granger Cause MAS		0.93758	0.39878
PDI does not Granger Cause AC	120	0.64668	0.52838
AC does not Granger Cause PDI		0.14405	0.86623
UAI does not Granger Cause AC	120	2.79559	0.07126
AC does not Granger Cause UAI		0.49382	0.61342

Regression models of the effects of cultural values of individualism, masculinity, power distance and uncertainty avoidance on agency costs of companies are presented in Table 4 to 7 respectively, and the total model of the effects of cultural values on agency costs is presented Table 8. Research findings in Table 4 show that there is a positive relationship between individualism and agency costs in companies accepted in Tehran Stock Exchange, but this relationship is not significant in terms of statistics. Also, about 1% of agency costs in companies is determined by the cultural value of individualism. Thus, it seems that other factors in addition to cultural values are affecting the agency costs in companies accepted in Tehran Stock Exchange. Other criteria such as the criteria of described Akaike and Schwartz are also offered in the charts 4. The results in Table 5 show that there was a non-significant positive relationship between cultural values of masculinity and agency costs in companies accepted in Tehran Stock Exchange, but according to the regression coefficients and coefficient of determination, it can be concluded masculinity has lower power to provide explanation for the agency costs in the companies studied compared with the individualism index.

Table 4: Regression Model of IDV on AC

Dependent Variable: AC
Method: Least Squares
Date: 05/31/10 Time: 05:27
Sample (adjusted): 1 120
Included observations: 120 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IDV	1.074370	1.249486	0.859849	0.3938
C	0.010969	0.788584	0.013909	0.9890

R-squared	0.014019	Mean dependent var	0.659335
Adjusted R-squared	-0.004942	S.D. dependent var	1.692003
S.E. of regression	1.696179	Akaike info criterion	3.930967
Sum squared resid	149.6052	Schwarz criterion	4.004633
Log likelihood	-104.1361	F-statistic	0.739341
Durbin-Watson stat	1.550267	Prob(F-statistic)	0.393819

Table 5: Regression Model of MAS on AC

Dependent Variable: AC
Method: Least Squares
Date: 05/31/10 Time: 05:27
Sample (adjusted): 1 120
Included observations: 120 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MAS	0.706793	1.129549	0.625730	0.5342
C	0.229413	0.725053	0.316409	0.7530

R-squared	0.007473	Mean dependent var	0.659335
Adjusted R-squared	-0.011614	S.D. dependent var	1.692003
S.E. of regression	1.701799	Akaike info criterion	3.937583
Sum squared resid	150.5983	Schwarz criterion	4.011249
Log likelihood	-104.3147	F-statistic	0.391538
Durbin-Watson stat	1.525924	Prob(F-statistic)	0.534229

Results of the regression model for the effect of cultural values of power distance and uncertainty avoidance on agency costs in companies presented in Table 6 and 7 indicate the existence of a non-significant negative relationship between these two variables and the coefficient of determination obtained showed that only %5 of changes in agency costs in companies studied were influenced reversely by power distance index and %1 by uncertainty avoidance. According to the regression coefficients and coefficient of determination, it can be concluded Uncertainty Avoidance has lower power to provide explanation for the agency costs in the companies studied compared with the power distance index.

Table 6: Regression Model of PDI on AC

Dependent Variable: AC
Method: Least Squares
Date: 05/31/10 Time: 05:27
Sample (adjusted): 1 120
Included observations: 120 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PDI	-1.073660	0.597140	-1.798003	0.0780
C	3.300752	1.486297	2.220789	0.0307

R-squared	0.058531	Mean dependent var	0.659335
Adjusted R-squared	0.040426	S.D. dependent var	1.692003
S.E. of regression	1.657450	Akaike info criterion	3.884771
Sum squared resid	142.8513	Schwarz criterion	3.958437
Log likelihood	-102.8888	F-statistic	3.232816
Durbin-Watson stat	1.648532	Prob(F-statistic)	0.077983

Table 7: Regression Model of UAI on AC

Dependent Variable: AC
Method: Least Squares
Date: 05/31/10 Time: 05:27
Sample (adjusted): 1 120
Included observations: 120 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UAI	-0.281850	0.329665	-0.854958	0.3965
C	0.452142	0.334689	1.350932	0.1826

R-squared	0.013862	Mean dependent var	0.659335
Adjusted R-squared	0.005102	S.D. dependent var	1.692003
S.E. of regression	1.696314	Akaike info criterion	3.931126
Sum squared resid	149.6290	Schwarz criterion	4.004792
Log likelihood	-104.1404	F-statistic	0.730953
Durbin-Watson stat	1.577093	Prob(F-statistic)	0.396496

Results of total regression model in Table 8 show that in general only %8 of the amount of agency costs in the studied companies was affected by Hofstede's cultural values and again the results show that some factors other than these factors affect the agency costs in the studied companies that should be reviewed in next researches. It should be mentioned that in the overall model, increasing individualism coefficient indicates that among Hofstede's cultural values, individualism is the most important factor in the rate of agency costs in the studied companies. The results also show that the sum of two variable regression coefficients of the variables of masculinity and individualism in single or overall model is almost equal (0.7 – 1.07) ~ (-0.9 – 1.47), but the variable of masculinity fades in the presence of the variable of individualism in determining the agency costs in studied companies and the regression coefficient is negative.

Table 8: Total Regression Model

Dependent Variable: AC
Method: Least Squares
Date: 05/31/10 Time: 05:27
Sample (adjusted): 1 120
Included observations: 120 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IDV	1.478311	2.932002	0.504198	0.6164
MAS	-0.093342	2.489068	-0.037501	0.9702
PDI	-0.890548	0.644311	-1.382170	0.1732
UAI	-0.441430	0.370878	-1.190229	0.2397
C	1.690395	2.132681	0.792615	0.4318

R-squared	0.088561	Mean dependent var	0.659335
Adjusted R-squared	0.014158	S.D. dependent var	1.692003
S.E. of regression	1.679982	Akaike info criterion	3.963465
Sum squared resid	138.2947	Schwarz criterion	4.147630
Log likelihood	-102.0135	F-statistic	1.190289
Durbin-Watson stat	1.741954	Prob(F-statistic)	0.326850

Vector Autoregressive Estimates in table 9 show that about 9% agency costs in companies are determined by the cultural values and two prior year's agency costs. The findings dictate the more than 2% agency costs in companies are affecting prior year's agency costs.

Table 9: Vector Autoregressive Estimates

Standard errors in ( ) & t-statistics in [ ]	
AC(-1)	-0.001386 (0.15251) [-0.00909]
AC(-2)	-0.018776 (0.12105) [-0.15511]
C	1.634087 (1.82208) [0.89682]
IDV	0.592473 (2.61774) [0.22633]
MAS	0.867593 (2.20629) [0.39324]
PDI	-0.677393 (0.55209) [-1.22697]
UAI	0.047220 (0.34326) [0.13756]
R-squared	0.093262
Adj. R-squared	-0.027636
Sum sq. resids	90.99922
S.E. equation	1.422043
F-statistic	0.771410
Log likelihood	-88.33459
Akaike AIC	3.666715
Schwarz SC	3.929382
Mean dependent	0.807359
S.D. dependent	1.402791

7. Conclusion

The aim of this research is to study the relationship between cultural values and agency costs in companies accepted in Tehran Stock Exchange. Findings of this research showed that Hofstede's cultural factors have only the explanation power of %8 for the agency costs in the studied companies and among the studied cultural variables, the power distance index has the highest effect on agency costs in the studied companies. It should be mentioned that the cultural criteria of individualism and masculinity and have a positive relation with agency costs and the criterion of uncertainty avoidance and power distance have a negative relationship with agency costs in the companies.. But these relationships are not statistically significant.

References

[1] **Arnold, D., Bernardi, R., Neidermeyer, P. & Schmee, J.** (2006), The Effect of Country and Culture on Perceptions of Appropriate Ethical Actions Prescribed by Codes of Conduct: A Western European Perspective among Accountants, *Journal of Business Ethics*, Vol. 70, No. 4, 327–340.

[2] **Bergen, M., Dutta, S., & Walker Jr., O. C.** (1992, July). "Agency Relationships in Marketing: A Review of the Implications of Agency and Related Theories", *Journal of Marketing*, Vol. 56, 1–24.

[3] **Clements, C. E., Neill, J. D. & Stovall, O. S.** (2010). The Impact of Cultural Differences on the Convergence of International Accounting Codes of Ethics, *Journal of Business Ethics*, Published Online.

[4] **Chui, A., Lloyd, A. & Kwok, C.** (2002). The Determination of Capital Structure: Is National Culture a Missing Pieced to the Puzzle?, *Journal of International Business Studies*, Vol. 33, 99–127.

[5] **De Mooij, M. & Hofstede, G.** (2010). The Hofstede Model Applications to Global Branding and Advertising Strategy and Research, *International Journal of Advertising*, Vol. 29, No. 1, 85–110.

[6] **Ekanayake, S.** (2004). Agency Theory, National Culture and Management Control Systems, Journal *of American Academy of Business*, Cambridge, 49-54.

[7] **Fama, E. F**. (1980). Agency Problems and the Theory of the Firm, *Journal of Political Economy*, Vol. 88, 288–307.

[8] **Fama, E. F., & Jensen, M. C.** (1983). Separation of ownership and control, *Journal of Law and Economics*, Vol. 26, 301–325.

[9] **Fidrmuc, J. P. & Jacob, M.** (2010). Culture, Agency Costs, and Dividends, *http://www.ssrn.com.*

[10] **Gerhart, B., & Rynes, S. L.** (2003). *Compensation: Theory, evidence, and strategic implications*. Thousand Oaks, CA: Sage Publications.

[11] **HassabElnaby, H. R. & Mosebach, M.** (2005). Culture's consequences in controlling agency costs: Egyptian evidence, *Journal of International Accounting, Auditing and Taxation*, Vol. 14, 19–32.

[12] **Hofstede, G. (1991).** *Culture and Organizations: Software of the Mind*. McGraw-Hill, New York.

[13] **Jensen M. C. & Meckling W. H.** (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Capital Structure", *J Financ Econ*; Vol. 3, No. 4, 305–60.

[14] **Johnson, N. B., Droege, S.** (2004). Reflections on the Generalization of Agency Theory: Cross-Cultural Considerations, *Human Resource Management Review*, Vol. 14, 325-335.

[15] **Jurkus, A. F., Park, J. C. & Woodard, L. S**. (2010). Women in top management and agency costs, *Journal of Business Research*, 7-14.

[16] **Khoshtinat, M. & Kazempour, E.** (2006). Professional Integration in Accounting: Cultural Perspective in Developing Countries, *Hesabdar*, No. 178, 46-56.

[17] **Kulik, B. W.** (2005). Agency Theory, Reasoning and Culture at Enron: In Search of a Solution, *Journal of Business Ethics*, Vol. 59, 347–360.

[18] **Kwok, C. & Tadesse, S**. (2006). National Culture and Financial Systems, *Journal of International Business Studies*, Vol. 37, 227–247.

[19] **Modarres, A. & Dianati Deylami, Z.** (2004). The Relation Between Culture and Accounting, *Hesabras*, No. 26, 34-43.

[20] **Mueller, G. G., Gernon, H. and Meek, G.** (1994). *Accounting: An International Perspectivee*, New York: Business One Irwin.

[21] **Perera, M. H. B.** (1989). Towards a framework to analyse the impact of culture on accounting, The *International Journal of Accounting*, Vol. 4, No. 1, 42–56.

[22] **Rallapalli, K.** (1999). A Paradigm for Development and Promulgation of a Global Code of Marketing Ethics, *Journal of Business Ethics*, Vol. 18, No. 1, 125–137.

[23] **Salter, S. & Sharp, D. J.** (2001). Agency Effects and Escalation of commitment do small national culture differences matter?, *The International Journal of Accounting*, Vol. 36, 33-45.

[24] **Vitell, S., Nwachukwu, S. & Barnes, J.** (1993). The Effects of Culture on Ethical Decision-Making: An Application of Hofstede's Typology, *Journal of Business Ethics*, Vol. 12, No. 10, 753–760.

[25] **Williams, G. & Zinkin, J.** (2008). The Effect of Culture on Consumers' Willingness to Punish Irresponsible Corporate Behaviour: Applying Hofstede's Typology to the Punishment Aspect of Corporate Social Responsibility, *Business Ethics: A European Review*, Vol. 17, No. 2, 210–226.