The Impact of Culture and Country-Level Infrastructure on Corporate
Governance Practices: Theory and Empirical Evidence

ABSTRACT

Using structural equation modeling, we provide empirical evidence that cultural practices influence the development of the institutional environment, which in turn influences corporate governance practices within countries. We utilize measures of national culture from Culture, Leadership, and Organizations: The Globe study of 62 Societies; measures of the institutional environment from the World Bank Worldwide Governance Indicators; and a measure of corporate governance practices from Governance Metrics International. Consistent with theory, we find strong relationships between national culture and the institutional environment and the institutional environment and corporate governance practices. We further find that the institutional environment mediates the relationship between national culture and corporate governance practices. As both culture and institutions are linked to corporate governance practices, efforts to change corporate governance practices around the world are best informed by an appreciation of cultural and institutional factors.

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The Impact of Culture and Country-Level Infrastructure on Corporate Governance Practices: Theory and Empirical Evidence

I.   INTRODUCTION AND MOTIVATION

With the globalization of financial markets there has been increasing movement towards convergence of corporate governance guidelines, particularly with regard to board independence, protection of minority shareholders, and transparency of executive and director compensation (Dahya, McConnell, & Travlos, 2002; Hansmann & Kraakman, 2000; Perotti & vonThadden, 2003; Shleifer & Vishny, 1997). However, the move towards convergence in corporate governance has often been imitation without consideration of the institutional environment required to properly ensure that the substance of these governance reforms are implemented.

The recent global financial crisis has brought to light questions about whether the U.S.' laissez faire approach to regulation is suitable in an international banking environment. European leaders are calling for increased regulation of banks and hedge funds and there is growing talk of the need for a global regulatory body to address the increasingly interdependent capital markets. Yet given the variation in legal and regulatory infrastructures, trading volumes and dispersion of ownership, one wonders whether a "one size fits all" approach to regulation and corporate governance is possible or even appropriate across all countries (Davies, 2008; Denis & McConnell, 2003; Mintz, 2005; Pedersen & Thomsen, 1997; Wharton, 2008). This is particularly the case in developing countries where the influence of controlling entities such as families, governments, and other prominent shareholders may overshadow the interests of other stakeholders such as consumers and workers, as well as the physical environment and community in which the entity operates.

Despite marked convergence in corporate governance models and codes (Ugeux, 2004; Witt, 2004), variation remains in approaches to, and the outcomes of, corporate governance around the globe. This variation may be explained by differences in country-level institutional environments, which arise from differing historical and cultural contexts.

In considering the institutional environment, we emphasize "the rules of the game" (North 1990) that are actually abided by. This agrees with Aoki (2001) and Amable (2003), which specify that only rules that are observed should properly be considered institutions. The World Bank's Worldwide Governance Indicators, which we utilize in our research, reflect measures of institutions or "rules" as they are actually followed within nations. We follow this same reasoning in our treatment of corporate governance in that we evaluate corporate governance *practices* as opposed to corporate governance codes. Corporate governance practices include measures of board accountability, financial disclosure and internal controls, shareholder rights, executive compensation, takeover defenses and ownership base, and corporate accountability.

Our source for national work culture data (House, Hanges, Javidan, Dorfman, & Gupta, 2004) was developed by sampling individuals and then aggregating results to the nation level. Our source for institutional environment data (Kaufmann, Kraay, & Mastruzzi, 2007) was developed through sampling individuals and organizations and aggregating results to the nation level. Our source for corporate governance practices (GMI, 2006) was developed through sampling firms and aggregating to the nation level. Our data sources are consistently at the nation level, our analysis is at the nation level, and our results apply at the nation level.

Our empirical results support several researchers who have theorized that culture influences the institutional environment. Our results also demonstrate that national work culture influences corporate governance practices through the mediation of the institutional environment. We utilized structural equation modeling in our analysis as it was best suited for our research questions. Our methodology called for factor analysis to develop constructs and path analysis to demonstrate linkages between constructs. Structural equation modeling is ideal for such an analysis.

The remainder of this paper is structured as follows. In Section II the prior literature is reviewed. Our theoretical model and hypotheses are developed in Section III. Section IV includes the methodology and analysis, followed by the discussion of results and conclusions in Section V. Limitations and suggestions for future research are expressed in Section VI.

II. RELEVANT LITERATURE AND THEORETICAL FRAMEWORK

Increased globalization of capital markets has called for increased movement towards convergence of corporate governance guidelines. This movement may in part be explained by efforts to gain legitimacy in the global environment (Aguilera & Cuervo-Cazurra, 2004). This movement to adopt best practices and corporate governance codes is paralleled by the movement to adopt International Financial Reporting Standards. With regards to adoption of these accounting standards, Meek and Thomas commented that:

> . . . strong investor protection laws and strong enforcement mechanisms are likely necessary conditions for high-quality accounting. Changing accounting standards (e.g., adoption of International Financial Reporting Standards) is unlikely to improve accounting information unless there is a corresponding strengthening of laws and enforcement. Standard setters should consider a country's institutional environment before prescribing a comprehensive set of accounting measurement and disclosure rules (2004: 32).

The authors do not suggest that standards should not be improved; rather, they call for a pragmatic assessment of the ability of firms to implement proposed standards. This assessment should include an evaluation of whether the underlying institutional environment is aligned with and can be expected to support the changes, as well as a consideration of whether the changes will agree with the relevant national work culture. Likewise, efforts to change corporate governance through mandates or through adoption of best practices without efforts to match such changes with corresponding supporting changes in the institutional environment are likely to have mixed results (Denis & McConnell, 2003; Tyrrall, Woodward, & Rakhimbekova, 2007; Zeghal & Mhedhbi, 2006). The same applies when changes are made to institutions without consideration of whether or not such changes will be supported by the national culture. The result may be a "decoupling" of stated intent and actual practice (Crooke, 2002; Fiss & Zajac, 2004; Westphal & Zajac, 2001).

Like laws of the natural environment determine whether or not crops will grow, the "rules of the game" in the institutional environment influences corporate governance within a nation. Accordingly, studying the institutional environment is essential to understanding corporate governance (Aguilera &

Jackson, 2003). Further, a consideration of national work culture assists in understanding the institutional environment as national work culture influences the institutional environment. Roth and Kostova, in their study of transitional economies, stressed the need to "consider cultural and contextual embeddedness in explaining how governance systems transform" (2003: 314). Our study speaks to these consequential relationships. We provide evidence that different national work cultures result in different institutional environments, which in turn result in support for different corporate government practices.

The Influence of National Work Culture on the Institutional Environment, and, through its Influence on the Institutional Environment, on Corporate Governance Practices

Some authors have argued for a "culture-free" approach to considering the institutional environment (see, for example, the writings in Maurice & Sorge, 2000). Others discuss certain concepts as institutions that are discussed by others as being cultural. For example, Whitley (1992 p. 26) speaks of collectivism (referred to as "inter-family cooperation and collective loyalty") and power distance (referred to as "differentiation of power") as institutions. Still other authors do not focus on culture, yet mention its influence on institutions. For example, Amable (2003 p. 37) refers to the influence of "a set of values" on institutions. Aoki (2001 p. 8, 68-73) discusses the role of "cultural beliefs" in the development of institutions.

In defining institutions, several scholars have referred to the role of culture in the development of institutions. North (1990) describes institutions as "the rules of the game" that define the incentives for the members of a society—individuals or organizations—to engage in economic activities that are either growth-enhancing or growth-degenerative (redistributive). North (1990 p. 37) discusses the role of culture in influencing institutions and defines culture by quoting Boyd and Richerson, (1985 p. 2) who expressed that culture is the "transmission from one generation to the next, via teaching and imitation, of knowledge, values, and other factors that influence behavior." North provides that culture has a long-term influence on institutions: "the cultural filter provides continuity so that the informal solution to exchange

problems in the past carries over into the present and makes those informal constraints important sources of continuity in long-run societal change" (1990 p. 37).

Hofstede described culture as the "collective programming of the mind which distinguishes the members of one human group from another" (1984: 21). He explained that this "collective programming" not only distinguishes "one human group from another," it also contributes to the differentiation of nations' institutional environments from each other. Hofstede explained this phenomenon:

> The societal norms [consisting of value systems or mental programs] have led to the development and pattern maintenance of institutions in society . . . . These include the family, education systems, politics, and legislation. These institutions, once they have become fact, reinforce the societal norms . . . (1984: 22).

Gray (1988) likewise theorized that societal values have institutional consequences. Guillen (2001) emphasized the role and effect of culture on institutions. There is strong theoretical reasoning behind our premise that culture influences the national institutional environment.

Our study contributes to this literature by providing evidence of the ties between: 1) national work culture and the institutional environment, 2) the institutional environment and corporate governance practices, and 3), the indirect influence of national work culture on corporate governance practices through its influence on the institutional environment. Recognition of these ties supports our argument that changing corporate governance practices requires more than recognizing or adopting corporate governance best practices or codes; it requires that adjustments be made to the institutional environment. These adjustments to the institutional environment should be made in consideration of culture.

Several previous studies have found particular relationships between specific aspects of culture, the institutional environment, and corporate governance. Tosi and Greckhamer (2004) found that very specific aspects of executive pay are related to specific national work culture dimensions. Licht Goldschmidt, and Schwartz (2007) demonstrated that institutional norms related to law, corruption, and democratic accountability correlate strongly with national cultural dimensions developed by Schwartz (Schwartz, 1994, Schwartz, 1999). This study relates to ours, but includes fewer institutional variables and does not incorporate a consideration of corporate governance. It also utilizes Schwartz's cultural

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dimensions, which reflect cultural values as sampled from school teachers. The current study emphasizes national work culture related more specifically to the management of corporations, which is reflected in *Culture, Leadership, and Organizations: The Globe study of 62 Societies* (House, Hanges, Javidan, Dorfman, & Gupta, 2004), the dataset we utilize because of its applicability to our research.

Others have grappled with the influence of aspects of national culture on institutions that shape corporate governance. For example, Stulz and Williamson (2003), using religion as a proxy for culture as opposed to a formal measure of culture, demonstrated that a nation's primary religion is related to the relative extent to which creditor rights are protected.

Mintz (2005) found that Germany, relative to the United States, ranks higher on the cultural dimension of uncertainty avoidance. This is reflected in the relative emphasis Germany places on creditor involvement in corporate governance. Kwok and Tadesse (2006) later also found a relationship between Hofstede's cultural dimension of uncertainty avoidance and whether financial systems are bank-based or market-based. The just-mentioned studies focused on the implications of specific dimensions of national culture (e.g., uncertainty avoidance) for specific elements of financial institutions (e.g., whether they are bank-based or market-based). Noticeably absent is the intermediary of the institutional environment, which is central to our theory and which our study includes. We also do not focus on specific cultural dimensions, but instead consider the influence of national work culture on the institutional environment on a more macro, more inclusive level, as will be explained. These particular studies also do not speak directly to corporate governance practices.

One case study authored by Buck and Shahrim (2005) speaks to the influence of culture on institutional environments, and, in turn, on corporate governance practices. In their case study comparing German, U.S. and U.K. firms, the authors found that stock-based executive pay innovations tend to be translated or adjusted to fit within a given nation's regulations and value systems. They suggested that as new corporate governance practices are adopted, "new institutional arrangements evolve in ways consistent with, and reflective of, a nation's value system." Our study is in keeping with this concept. However, our study is carried out at a more macro level, incorporating a broad array of corporate

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governance practices, a combination of national work culture dimensions, and a combination of measures of the institutional environment for several nations. This macro-consideration allows us to make conclusions at a more macro level which is in keeping with our theory. We now address prior research on the influence of the institutional environment on various aspects of corporate governance.

The Influence of the Institutional Environment on Corporate Governance Practices

The literature on comparative corporate governance has provided a context for how different national institutions, legal systems in particular, influence corporate governance. (See for example, Gospel et al., 2003; La Porta et al., 1998; Whitley, 1992; Whittington et al., 2000). La Porta, Lopez-de-Silanes, Schleifer, and Vishny (1998) examined laws related to the protection of creditors and shareholders as well as the strength of actual investor protection. They demonstrated that legal origin (e.g., French, Common Law, German Civil Law, or Scandinavian) is related to the quality of investor and creditor protection. The authors built a dataset based on reference to enacted laws related to investor and creditor protection.

Several studies have leveraged this investor and creditor protection dataset in examining relationships between investor protection and various other factors. Leuz, Nanda, and Wysocki (2003) found that economies with strong enforcement of investor protection experience lower levels of earnings management. Wright et al. (2006) found additional support for the work of Leuz et al. (2003). Licht, Goldschmidt, and Schwartz (2005) found relationships between the La Porta et al. (1998) dataset of investor and creditor protection and culture. As they utilize the La Porta et al. database described above, these studies tend to be limited to an investor and creditor protection perspective of corporate governance. This represents an important aspect of corporate governance, yet clearly does not constitute all facets of corporate governance. Two studies by Aguilera and Cuervo-Cazurra (2004, Forthcoming) include other measures of corporate governance in addition to the La Porta et al. measures of investor protection. These include dispersion of codes of corporate governance and efficiency proxies. Whereas these studies focus

on investor protection laws, the current study instead considers how the institutional environment impacts corporate governance *practices* within a country.

In regards to the relationship between the institutional environment and corporate governance practices, it may be helpful to imagine the state of corporate governance practices if all underlying institutions were removed. There would be no contract enforcement, no precedent for representation of stakeholders, no forum for arbitration, and no clear order in society, for example. Corporate governance practices are reliant upon the institutional environment.

III. MODEL DEVELOPMENT AND HYPOTHESES

In consideration of theory discussed above, we posit that cultural practices influence the institutional environment, which in turn influences corporate governance practices across the countries. The model in Figure 1 describes our theoretical model. Based on our theoretical model, we now operationalize our constructs and present our hypotheses.

FIGURE 1 - HERE

Operationalization of Culture

Boyd and Richerson (1985 p. 2) described culture as the "transmission from one generation to the next, via teaching and imitation, of knowledge, values, and other factors that influence behavior." Hofstede described culture as "the software of the mind" (Hofstede, 1997), referring both to the process through which people are socialized or "programmed" to function in a society as well as to the process through which culture influences people's behavior. These characteristics of culture make it difficult for institutions to escape the influence of culture. Clearly not all aspects of culture are relevant to a study on corporate governance practices. The suitability of the dataset should be considered, which we do below.

Data Source

Since Hofstede originally analyzed the data from IBM, literally thousands of studies have been undertaken in the area of culture as it pertains to business. Having been subjected to rigorous use, many criticisms have arisen (Baskerville-Morley, 2005; Baskerville, 2003; Kinnunen & Koskela, 2003; McSweeney, 2002; Myers & Tan, 2002). This has resulted in increased understanding of, and adjustments to, Hofstede's work. Studies that have come after Hostede's (1980) have enjoyed the benefits of hindsight.

One of the difficulties in using Hofstede's values is (in part) that the data they are based on has not been updated for over 30 years and may no longer be representative of cultural dimensions of countries (Kinnunen et al., 2003). House et al. (2004) developed the more recent GLOBE database of cultural values and practices, which incorporates nine cultural constructs in comparison to Hofstede's four (or five, if you consider the extension of his work done in collaboration with Bond (Hofstede & Bond, 1988)). House et al. designed their questions based on known cultural characteristics that were theoretically derived and involved 170 researchers in 62 nations collecting data from approximately 17,000 participants from 951 businesses. This dataset is appropriate for the current study because of its focus on national work culture and leadership in particular, as well as its sample size and recency.

Statistical Consideration of Construct

We evaluated the GLOBE cultural variables for their applicability to the institutional environment and corporate governance. Those variables that we identified as theoretically being most germane are included in Table 1. Beyond a theoretical consideration, we subjected the nine cultural practices variables to a principle components analysis. Based on the criteria of eigen values greater than 1 and on evaluation of the scree plot, three components resulted. Uncertainty avoidance, power distance, performance orientation, future orientation, and institutional collectivism loaded on the same component as we expected as detailed in Table 1. Gender egalitarianism, assertiveness, in-group collectivism (related to family loyalty), and humane orientation loaded on the other components. We are interested in the first component as it seems most pertinent to corporate governance as described in Table 1.

We then used AMOS to perform a confirmatory factor analysis of the five variables of interest. In the interest of parsimony, the institutional environment variable was dropped as its loading was the lowest and was below the .6 cut off recommended by Kline (2005). We refer to the resulting cultural construct, or latent variable, as "reporting culture." We evaluated the reliability of the measure with Cronbach's Alpha, which resulted in a statistic of .86.

TABLE 1 - HERE

Operationalization of Institutional Environment

The institutional environment imposes constraints on behavior through both formal mechanisms, such as laws and regulations, and informal processes, such as norms and conventions. Scott (1987, 2001) refers to the institutional environment as the relatively enduring systems of social beliefs and socially organized practices associated with varying functional areas of societal systems (e.g., religion, work, politics, laws, and regulations). Similar to Scott (2001), (DiMaggio & Powell, 1991) developed a three level model to study institutional environment within institutional theory. They describe the levels (factors) as coercive, imitative, and normative factors. As the current study is most concerned with corporate governance practices, we incorporated an operationalization of the institutional environment that is more directly related to corporate governance practices.

Data Source

One of the most well-known and comprehensive studies of the institutional infrastructures of countries is that of Kaufmann, Kraay, and Mastruzzi (2007), who have provided measures of national institutional environment through their work on the World Bank's Worldwide Governance Indicators (WGI). The Worldwide Governance Indicators project reports aggregate and individual governance

indicators for 212 countries and territories annually over the period 1996–2006, for six dimensions of national governance.

The aggregate indicators combine the views of a large number of enterprise, citizen, and expert survey respondents in industrial and developing countries. The individual data sources underlying the aggregate indicators are drawn from a diverse variety of survey institutes, think tanks, non-governmental organizations, and international organizations (See Kaufmann et al., 2007). The WGI variables are compiled from a variety of credible sources, and are rigorously reviewed by the developers for consistency across countries and over time. As a freely available source of data, the WGI factors have been subjected to scrutiny by academics and policy makers providing additional evidence of their reliability and validity. We selected this dataset because of its expected relationship with corporate governance practices, as expressed in Table 2. All six measures made available by the World Governance Indicators – regulatory quality, government effectiveness, rule of law, control of corruption, voice and accountability, and political stability – are predicted to have positive correlations with corporate governance practices as indicated in Table 2.

TABLE 2 - HERE

Statistical Consideration of Construct

We subjected the six World Bank Worldwide Governance Indicators to a principle components analysis. Based on the criteria of eigen values greater than 1 and on evaluation of the scree plot, there was just one component. We used AMOS to perform a confirmatory factor analysis of the six variables. The factor loadings all exceeded the .6 cut off recommended by Kline (2005), all being at least .85. We evaluated the reliability of the measure with Cronbach's Alpha, which resulted in a statistic of .97. Given these results, in later analyses we sum across the variables for each nation and utilize the resulting value to represent the institutional environment.

Operationalization of Corporate Governance Practices

Over the past two decades, many organizations have proposed ideal models of corporate governance for use by companies raising money from capital markets. Non-profit organizations such as the OECD and the NACD, and large institutional investors such as CALPERS, have proposed guidelines emphasizing transparency in corporate governance to protect minority shareholders and encourage adequate disclosure of accounting information. Most recently, private firms who provide support for institutional investors, such as Institutional Shareholder Services, Glass Lewis and Governance Metrics International, have encouraged reforms in corporate governance practices through their proxy advisory services and ratings of individual corporate practices. These organizations have focused attention on actual corporate practices regarding board independence, compensation policies, and financial transparency, often going beyond the legal requirements imposed on public companies and moving the discussion of corporate governance from that of general best practices guidelines and country codes of good governance to specific corporate behaviors and practices.

The corporate governance practices of individual firms may be influenced not only by the norms and rules of their home country, but also by norms in the countries in which they raise capital or operate their business. The variation of practices makes it difficult to develop a construct for corporate governance practices at the country level. One firm, Governance Metrics International, has rated the corporate governance practices of firms and created a country corporate governance index extrapolated from the practices of the firms within that country. It is these country-level corporate governance practice ratings that we have drawn upon for this study.

Statistical Consideration of Construct

The scores reflect the corporate governance practices of the universe of over 3,000 firms rated by Governance Metrics International (GMI) within 48 countries as compared to the overall global universe of rated firms. GMI calculates corporate governance ratings for individual companies by developing a highly-detailed governance profile incorporating hundreds of variables per company plus analyst insights.

In addition to reviewing board composition, board leadership, company documents and websites to identify stated policies and procedures, GMI also reviews regulatory actions, legal proceedings and other sources to gauge whether company behavior is consistent with its stated policies. Once database profiles are complete, GMI applies a scoring algorithm to generate company ratings on a scale of 1.0 to 10.0 (10.0 being the highest). The use of asymmetric geometric scoring is meant to magnify the impact of outliers. This includes both those with the very best practices – who are then rewarded more – or those with the worst – who are penalized. GMI scores are relative in that each company is scored against other companies in the GMI research universe. Corporate governance practices which are examined to develop the GMI ratings include board accountability, financial disclosure and internal controls, shareholder rights, executive compensation, takeover defenses and ownership base, and corporate accountability. The composite country scores reflect the corporate governance practices of the universe of firms rated by GMI within 48 countries as compared to the overall global universe of rated firms.

Discriminant Validity of Constructs

We conducted a factor analysis of the data using principal component analysis utilizing a varimax rotation. Problems with sphericity, sampling adequacy, and low communalities were not encountered (Tabachnick and Fidell, 2007). The four World Bank World Governance Indicators variables loaded on the first component, which accounted for 45.59% of the variance. The four variables from *Culture, Leadership, and Organizations: The Globe study of 62 Societies* loaded on the second component, which accounted for an additional 29.67 % of the variance. The country corporate governance practices rankings from Governance Metrics International loaded on the third component, which accounted for an additional 10.40% of the variance. The loading of the variables on to separate components indicates the constructs exhibit discriminant validity.

The data is contained in Table 3. Note that all of the data was aggregated to the nation level, all the analysis was done at the nation level, and the results apply at the nation level. The datasets have 42 nations in common which can be found in Table 3.

TABLE 3 HERE

Hypotheses

Based on prior literature and our theoretical model proposing that country-specific cultural

practices affect the institutional environment, which in turn, affects corporate governance, our formal

hypotheses as tested in the model linkages are as follows:

H1: National reporting culture has a direct influence on the country-specific institutional environment

H2: The country-specific institutional environment has a direct influence on the corporate governance practices within a given nation

H3: National reporting culture influences corporate governance practices through its influence on the nation's institutional environment

H4: National reporting culture directly influences corporate governance practices

Our full theoretical model is included in Figure 2. The hypothesized relationships are noted in the

model.

FIGURE 2 - HERE

IV. METHODOLOGY AND ANALYSIS

Drawing on the previous research for theory development, we now move to empirical validation

of the model by employing recently developed databases, specifically from the World Bank (Kaufmann et

al., 2007) and from Governance Metrics International (GMI, 2006), as well as the updated database for

culture, the GLOBE database of cultural practices (House et al., 2004), each of which is described above.

We utilized these data in operationalizing our three constructs of interest – reporting culture, institutional

environment, and corporate governance practices – as described in the preceding section. We now

empirically test the hypothesized relationships between culture, the institutional environment, and the

corporate governance practices in a number of countries. Amongst the three data sources, we have data in common for 42 countries. The data are included in Table 3.

We test the hypothesized relationships using structural equation modeling (SEM). SEM is an extension of the general linear model, which enables researchers to test a hybrid model which is a mixture of path analysis and confirmatory factor analysis. SEM is generally regarded as a large-sample technique because of its ability to handle multiple variables and relationships. However, this does not mean that the method cannot be used for simpler models with smaller datasets. Rather, sample size requirements are strongly subject to the complexity of models (Kline, 1998). In other words, feasible model estimation with small samples indicates that the estimation algorithm does not prevent researchers from testing their models. Indeed, Bentler and Chou (1987) state that researchers may go as low as five cases per parameter estimates in SEM analyses as long as the data are normally distributed without missing data and outliers. Given that our data is well-behaved (i.e. normality) and our proposed model is simple, we conclude that our sample size will not significantly affect the statistical results[1].

We used the AMOS 17.0 software program, with default maximum likelihood technique, to estimate the model presented in Figure 3. The results of the model estimation are displayed in Table 4. As mentioned earlier, the factor loadings for the institutional environment variables were all at least .85 with a Cronbach Alpha of .97. Given the high convergent validity and reliability, we elected to sum the variables instead of factor analyzing them in the model. While not as high as the WGI factor loadings, the factor loading estimates for the four observed GLOBE culture variables were all significant, indicating that they substantially construct one latent variable which implies country-specific reporting culture. The cultural variables were subjected to factor analysis in the model in Figure 3.

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[1] As mentioned, structural equation modeling is a combination of path analysis and confirmatory factor analysis. We reperformed our analyses using path analysis and confirmatory factor analysis and obtained consistent results as expected.

FIGURE 3 HERE

The model fit was evaluated using the following fit measures: the Chi-square divided by the model degrees of freedom (CMIN/DF), the goodness of fit index (GFI), the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). The Chi-square divided by the model degrees of freedom (CMIN/DF) adjusts for the sensitivity of the Chi-square to small sample sizes (Tabachnick & Fidell, 2007). An insignificant Chi-square (Joreskog, 1969) or a CMIN/DF ratio less than 3 (Kline, 1998) is considered evidence of a good fitting model. A GFI and CFI close to 1 (Arbuckle & Wothke, 1999; Bentler, 1990) are also evidence of good model fit. An RMSEA of less than 0.08 (Browne & Cudeck, 1993) is also considered to be an indication of a good fitting model; however, Hu and Bentler (1999) demonstrated that RMSEA tends to overreject the true model as excessively high values may at times occur with small samples.

TABLE 4 HERE

As evident in Table 4, the model fit is excellent, indicating strong support for our theoretical model. The chi-square divided by the df is less than 3, the GFI at .95 is close to 1.00. The CFI is 1.00, and the RMSEA is 0.00. The linkage between reporting culture and the institutional environment are positive and significant. The linkage between the institutional environment and corporate governance is also positive and significant. These results provide evidence to support both Hypotheses 1 and 2, as well as hypothesis 3 as the segments in the path between reporting culture, institutional environment, and corporate governance practices are all significant. This interpretation is consistent with path analysis, which is integral to structural equation modeling. The direct path between reporting culture and corporate governance practices is not significant. Further analysis indicated that of the four national work culture variables, only uncertainty avoidance had a direct, significant relationship with corporate governance practices.

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V. DISCUSSION AND CONCLUSIONS

The purpose of this study was to explore the relationship between national culture, the institutional environment, and corporate governance practices across countries worldwide. Our findings demonstrate that corporate governance practices in a given nation are related to the institutional environment of that nation. For policy makers, this suggests that corporate governance practices may be influenced through altering the institutional environment – by controlling corruption, strengthening the rule of law, or enhancing government effectiveness, for example. It is not sufficient to simply adopt a corporate governance code of best practice; it is also necessary to adjust the institutional environment to support improvements in corporate governance practices. However, this remedy itself is also subject to significant evaluation in light of the relationship between national work cultures and institutional environments. Changes to aspects of a nation's institutional environment to invite improvements in corporate governance practices may be ineffective if those changes are not aligned with the underlying national culture.

Institutional environments are the result of decisions made by people over time, and those decisions are impacted by the cultural values and practices of those people who make those decisions. This study provides empirical evidence of the relationship between national culture and institutional environments. Four cultural measures – performance orientation, power distance, future orientation, and uncertainty avoidance – were combined to comprise the latent variable "reporting culture" which was found to be significantly related to the institutional environment variable. Our results suggest that the impact of national culture on corporate governance practices is indirect, through its influence on the institutional environment.

Our findings of significant linkages between culture and the institutional environment, and in turn on corporate governance, support the need for careful consideration of global regulatory policies. The cultural expectations of investors and stakeholders within a country may vary significantly from those in another country, which will in turn impact the institutional environment created. One cannot assume that

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"working backward" from a desired uniform or model corporate governance model will result in uniform outcomes. Such efforts may only result in superficial changes since the underlying culture and institutional environment to support the new practices cannot be changed so easily. A ramification of our study is that it should not be assumed that there is one best corporate governance approach for all nations. Different national economies have found success with either bank-based or stock market-based financial systems, and we suggest it is possible to likewise have corporate governance approaches that are different from each other but still of comparable quality.

The recent global financial crisis has brought to light a number of weaknesses in regulatory and corporate governance practices even in the most sophisticated and developed countries/markets. Some of these problems have been attributed to an extreme capitalist culture and lack of regulation in the U.S. While many assumed that the banking and insurance industries were regulated, there were significant aspects of their financial services operations that were not regulated. It could be argued that the crisis was created by a lack of congruence between the cultural expectations of society and the regulatory infrastructures in the U.S. and other major markets. The crisis has also brought into question the responsibility of boards of directors to more closely examine and disclose risk management profiles above and beyond the technical regulatory requirements.

Even as the pendulum of stricter regulations moves to a more conservative approach, there is renewed debate about the appropriate role of government in business in the U.S. This debate reflects the need for congruence between culture and the institutional environments affecting business. Our study implies that corporate governance practices should reflect the cultural values of the society in which the entity operates. Additional empirical research addressing the link between culture, the institutional environment, and corporate governance practice is needed to better address the appropriate mechanisms needed to promote economic growth while protecting stakeholders.

VI.   LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH

One limitation of our study was the small sample size available for estimation of the model. While the World Bank data base used for the institutional environment contained over 200 countries (Kaufmann et al., 2007), the GLOBE cultural data base (House et al., 2004) contains data for 62 societies, and the Governance Metrics International (GMI, 2006) corporate governance practices country scores were available for only 48 countries. The three datasets had 42 nations in common. While smaller than we would have preferred, the number of countries included in the study is relatively large for international research due to the difficulty in obtaining international data from a large number of countries.

There has recently been increasing criticism of firm level corporate governance ratings. Although the link between corporate governance ratings and reported corporate profits or stock returns has been called into question, the accuracy of the ratings themselves to reflect board independence, oversight and other measures of corporate governance practices has not been criticized. Therefore, we believe the use of these measures to reflect corporate governance practices is valid. Nevertheless, as demonstrated by the methodological issues we encountered, there is a need for better data sources and more open access to data to move the field of corporate governance practices research forward. Progress is being made but primarily in the area of proprietary and often therefore expensive data sources. There is a need for government regulators to provide more readily accessible inexpensive data for international academic research.

If we are to adequately address the issues of corporate governance in diverse market environments worldwide, there is a need for the development of new theories to support this research. The corporate governance systems in many countries challenge the dominant grip of agency theory that has pervaded the past three decades of corporate governance research (Macharzina, 2007). The agency theory paradigm often fails in both developed and emerging markets because it is not clear whether the Board of Directors is management or agent or owner (Oxelheim, 2007). For example, the CEO often plays several roles, which may or may not include chairman but almost certainly a key board member, and is often also a significant shareholder. The nomination committee often represents the largest shareholders. There may also be issues of director independence when their compensation is high. These factors limit the

usefulness of agency theory to provide a meaningful explanation for the actual functioning of corporate governance mechanisms.

The work of Witt and Redding (2009a) confirm that differences exist in such basic concepts as the meaning of economic activity in different countries. While many academic studies of corporate governance start with the assumption that the purpose of the corporation is to maximize shareholder value, this view is not consistent with much of the strategy literature (Collins & Porras, 1996), with recent theoretical developments (Aguilera & Yip, 2004; Gillan, 2006), nor with recent empirical evidence (Witt & Redding, 2009b).

Therefore there is a need for theoretical pluralism to include a broader framework, such as a stakeholder theory approach (Aguilera et al., 2004; Gillan, 2006); a stewardship theory approach (Davis, Schoorman, & Donaldson, 1997), in which managers perceive that securing shareholders` interests is also in their own interests; and a resource dependence theory approach (Pfeffer, 1972; Pfeffer & Salancik, 1978), which focuses on the boundary-spanning role of directors and the access they provide to scarce resources.

Because of data availability and the size of their capital markets, most corporate governance research has focused on the US and Triad countries. With the globalization of capital markets and increasing investment in foreign firms and funds, there is a great need for corporate governance research to include emerging markets. As shown in our study and emphasized by other international business scholars (Aggarwal, 2007), such cross-border corporate governance research must account for national differences in cultural, social, political, and economic structures and values to be meaningful.

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FIGURE 1. Theoretical Model

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           ┌──────────────────────────────────────────────────────────┐
           │                                                          ▼
┌─────────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│                     │   │                     │   │  Corporate Governance │
│   National-level    │──▶│   Nation-specific   │──▶│      Practices        │
│     Culture         │   │Institutional Environment│  │ Within a Given Nation │
│                     │   │                     │   │                     │
└─────────────────────┘   └─────────────────────┘   └─────────────────────┘
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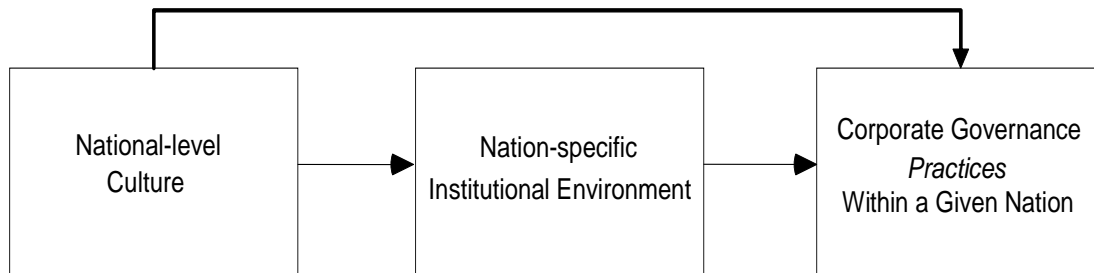
TABLE 1. Description of Reporting Culture measures and their theoretical relationships with the Institutional Environment

Description of Globe Cultural Measures (Reporting Culture)*	Expected Relationship with the Institutional Environment
Uncertainty Avoidance The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.	Uncertainty avoidance is reflected in the institutional environment in areas such as enforcement of rules and laws, regulation, and the orientation of the judicial system and civil service. A positive relationship is expected between uncertainty avoidance and these measures of the institutional environment.
Power Distance The extent to which a community accepts and endorses authority, power differences, and status privileges.	Power distance is expected to be inversely related to control of corruption, rule of law, voice and accountability, and the other institutional environment variables.
Performance Orientation The degree to which a collective encourages and rewards group members for performance improvement and excellence	A positive relationship between performance orientation and the institutional environment is expected as an institutional environment concerned with performance could only become such if the collective was oriented towards improvement.
Future Orientation The extent to which individuals engage in future-oriented behaviors such as delaying gratification, planning, and investing in the future	Future orientation is reflected in the degree to which an institutional environment favors circumstances that enable saving, investing, and planning. A positive relationship with the institutional environment is expected.
Institutional Collectivism The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action	The cultural dimension of institutional collectivism can be seen reflected in the degree to which the institutional environment emphasizes voice and accountability, control of corruption, political stability, rule of law, government effectiveness, and regulatory quality.

* The above cultural variables from the GLOBE study (House, Hanges, Javidan, Dorfman, & Gupta, 2004) seem most germane to corporate governance. A factor analysis of the nine cultural variables supports the grouping of these five variables and suggests they measure different aspects of a related construct. The other four variables load onto different components. The institutional collectivism variable was subsequently removed due to its relatively low loading as explained in the text.

TABLE 2. Description of Institutional Environment measures and their theoretical relationships with Corporate Governance

World Bank Governance (Institutional Environment) Measures (Kaufmann, Kraay, & Mastruzzi, 2007)	Expected Relationship with Corporate Governance (all relationships are expected to be positive)
Regulatory Quality measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	The regulatory quality variable relates to the competitive business environment, trade and labor policies and regulations, tax structures, and access to capital markets. The practice of corporate governance is directly concerned with each of these and is thus reliant upon regulatory quality.
Government Effectiveness measures the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	To administer enacted laws and regulations, a country needs consistent bureaucratic structures and a trained and stable civil service, which are reflected in the government effectiveness variable. Thus we expect government effectiveness to exhibit a positive relation with corporate governance practices.
Rule of Law measures the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.	Rule of law is an element of the institutional environment sometimes taken for granted in developed nations. It is important to corporate governance as it refers to the enforcement of contracts, property rights, and the trustworthiness of the judicial system in enforcing laws.
Control of Corruption measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	Widespread corruption and bribery will impact the development of corporate governance, its function, the degree to which it is trusted, and the parties whom corporate governance practices are caused to serve.
Voice and Accountability measures the extent to which individuals are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	This variable speaks to the "accountability" premise of corporate governance. It relates to the degree to which stakeholders expect to be represented, as well as which stakeholders do get represented. Also, corporate governance practices are influenced by the degree of free press.
Political Stability and Absence of Violence measures the perception of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.	The degree of political stability and absence of violence affect choice of corporate governance practices. At the extreme, political instability and violence may necessitate different forms of corporate governance.

TABLE 3. Data Sources

	National Work Culture Data from: Culture, Leadership, and Organizations: The Globe study of 62 Societies									Institutional Environment Data from: World Bank Worldwide Governance Indicators 2006						Corporate Governance Practices 2006 Data from: Governance Metrics International
	Uncertainty Avoidance	Societal Institutional Collectivism	Performance Orientation	Future Orientation	Power Distance	Humane Orientation	Gender Egalitarianism	Assertiveness	In-Group Collectivism	Regulatory Quality	Government Effectiveness	Rule of Law	Control of Corruption	Voice and Accountability	Political Stability	
ARGENTINA	3.65	3.66	3.65	3.08	5.64	3.99	3.49	4.22	5.51	-0.70	-0.09	-0.53	-0.40	0.33	0.05	6.00
AUSTRALIA	4.39	4.29	4.36	4.09	4.74	4.28	3.40	4.28	4.17	1.67	1.90	1.79	2.00	1.36	0.88	7.24
AUSTRIA	5.16	4.30	4.44	4.46	4.95	3.72	3.09	4.62	4.85	1.61	1.66	1.86	2.00	1.41	1.02	4.94
BRAZIL	3.60	3.83	4.04	3.81	5.33	3.66	3.31	4.20	5.18	-0.04	-0.10	-0.45	-0.20	0.43	-0.14	3.23
CANADA	4.58	4.38	4.49	4.44	4.82	4.49	3.70	4.05	4.26	1.55	2.09	1.83	1.95	1.40	1.02	7.33
CHINA	4.94	4.77	4.45	3.75	5.04	4.36	3.05	3.76	5.80	-0.33	0.04	-0.48	-0.58	-1.70	-0.33	2.94
COLOMBIA	3.57	3.81	3.94	3.27	5.56	3.72	3.67	4.20	5.73	0.12	0.01	-0.59	-0.21	-0.22	-1.67	2.50
DENMARK	5.22	4.80	4.22	4.44	3.89	4.44	3.93	3.80	3.53	1.86	2.32	1.94	2.40	1.62	0.83	4.63
EGYPT	4.06	4.50	4.27	3.86	4.92	4.73	2.81	3.91	5.64	-0.46	-0.51	-0.14	-0.54	-1.26	-0.94	1.25
FINLAND	5.02	4.63	3.81	4.24	4.89	3.96	3.35	3.81	4.07	1.75	2.14	1.93	2.58	1.55	1.47	6.00
FRANCE	4.43	3.93	4.11	3.48	5.28	3.40	3.64	4.13	4.37	1.11	1.33	1.35	1.46	1.23	0.48	4.47
GERMANY	5.22	3.79	4.25	4.27	5.25	3.18	3.10	4.55	4.02	1.48	1.66	1.77	1.84	1.42	0.90	5.66
GREECE	3.39	3.25	3.20	3.40	5.40	3.34	3.48	4.58	5.27	0.79	0.58	0.68	0.40	0.99	0.50	2.52
HONGKONG	4.32	4.13	4.80	4.03	4.96	3.90	3.47	4.67	5.32	1.90	1.80	1.46	1.77	0.66	1.12	5.08
HUNGARY	3.12	3.53	3.43	3.21	5.56	3.35	4.08	4.79	5.25	1.16	0.80	0.76	0.57	1.11	0.81	4.62
INDIA	4.15	4.38	4.25	4.19	5.47	4.57	2.90	3.73	5.92	-0.19	-0.06	0.16	-0.25	0.41	-0.94	4.67
INDONESIA	4.17	4.54	4.41	3.86	5.18	4.69	3.26	3.86	5.68	-0.31	-0.44	-0.77	-0.78	-0.20	-1.25	3.83
IRELAND	4.30	4.63	4.36	3.98	5.15	4.96	3.21	3.92	5.14	1.87	1.61	1.68	1.70	1.40	1.08	7.13
ISRAEL	4.01	4.46	4.08	3.85	4.73	4.10	3.19	4.23	4.70	0.98	1.26	0.79	0.93	0.78	-1.23	3.86
ITALY	3.79	3.68	3.58	3.25	5.43	3.63	3.24	4.07	4.94	0.85	0.41	0.36	0.41	1.09	0.40	5.64
JAPAN	4.07	5.19	4.22	4.29	5.11	4.30	3.19	3.59	4.63	1.19	1.46	1.42	1.35	0.90	1.08	4.01
MALAYSIA	4.78	4.61	4.34	4.58	5.17	4.87	3.51	3.87	5.51	0.51	0.99	0.55	0.30	-0.54	0.32	4.72
MEXICO	4.18	4.06	4.10	3.87	5.22	3.98	3.64	4.45	5.71	0.39	0.11	-0.53	-0.34	0.06	-0.48	5.10
MOROCCO	3.65	3.87	3.99	3.26	5.80	4.19	2.84	4.52	5.87	-0.15	-0.05	-0.13	-0.25	-0.61	-0.32	2.00
NETHERLANDS	4.70	4.46	4.32	4.61	4.11	3.86	3.50	4.32	3.70	1.72	1.89	1.74	2.06	1.57	0.77	6.51
NEW ZEALAND	4.75	4.81	4.72	3.47	4.89	4.32	3.22	3.42	3.67	1.73	1.88	1.87	2.34	1.52	1.27	6.67
PHILIPPINES	3.89	4.65	4.47	4.15	5.44	5.12	3.64	4.01	6.36	-0.12	-0.06	-0.48	-0.78	-0.11	-1.33	5.50
POLAND	3.62	4.53	3.89	3.11	5.10	3.61	4.02	4.06	5.52	0.68	0.49	0.25	0.19	0.81	0.31	6.17
PORTUGAL	3.91	3.92	3.60	3.71	5.44	3.91	3.66	3.65	5.51	1.04	0.85	0.94	1.09	1.25	0.90	4.86
RUSSIA	2.88	4.50	3.39	2.88	5.52	3.94	4.07	3.68	5.63	-0.57	-0.47	-0.96	-0.79	-0.97	-0.80	4.90
SINGAPORE	5.31	4.90	4.90	5.07	4.99	3.49	3.70	4.17	5.64	1.76	2.22	1.76	2.20	-0.37	1.23	5.65
SOUTH AFRICA	4.09	4.62	4.11	4.13	5.16	3.49	3.27	4.60	4.50	0.62	0.75	0.24	0.44	0.75	0.05	6.26
SOUTH KOREA	3.55	5.20	4.55	3.97	5.61	3.81	2.50	4.40	5.54	0.70	1.14	0.69	0.29	0.61	0.38	2.31
SPAIN	3.97	3.85	4.01	3.51	5.52	3.32	3.01	4.42	5.45	1.11	0.99	1.08	1.16	1.04	0.14	4.91
SWEDEN	5.32	5.22	3.72	4.39	4.85	4.10	3.84	3.38	3.66	1.53	2.06	1.87	2.22	1.45	1.15	5.45
SWITZERLAND	5.37	4.06	4.94	4.73	4.90	3.60	2.97	4.51	3.97	1.44	2.17	1.95	2.20	1.58	1.40	5.61
TAIWAN	4.34	4.59	4.56	3.96	5.18	4.11	3.18	3.92	5.59	0.92	1.12	0.69	0.58	0.70	0.57	4.53
THAILAND	3.93	4.03	3.93	3.43	5.63	4.81	3.35	3.64	5.70	0.23	0.25	0.00	-0.28	-0.60	-0.93	5.75
TURKEY	3.63	4.03	3.83	3.74	5.57	3.94	2.89	4.53	5.88	0.19	0.13	-0.01	0.02	-0.16	-0.62	5.15
UNITED KINGDOM	4.65	4.27	4.08	4.28	5.15	3.72	3.67	4.15	4.08	1.88	1.86	1.75	1.90	1.41	0.58	7.30
UNITED STATES	4.15	4.20	4.49	4.15	4.88	4.17	3.34	4.55	4.25	1.54	1.67	1.58	1.34	1.07	0.43	7.22
VENEZUELA	3.44	3.96	3.32	3.35	5.40	4.25	3.62	4.33	5.53	-1.26	-0.72	-1.36	-0.98	-0.47	-1.19	6.00

FIGURE 2: Full Theoretical Model - Reporting Culture, Institutional Environment, and Corporate Governance Practices
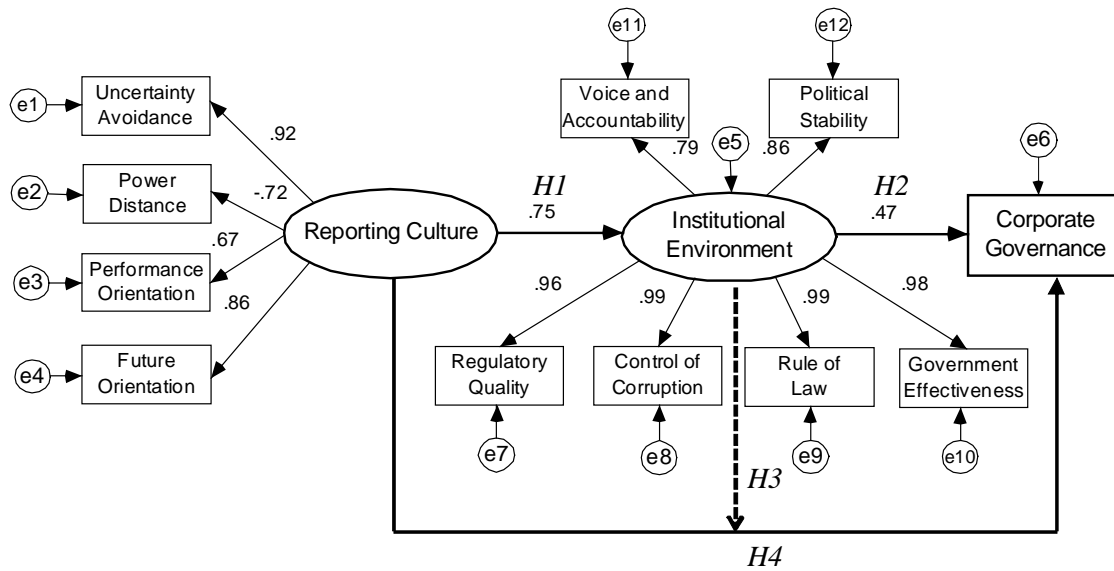
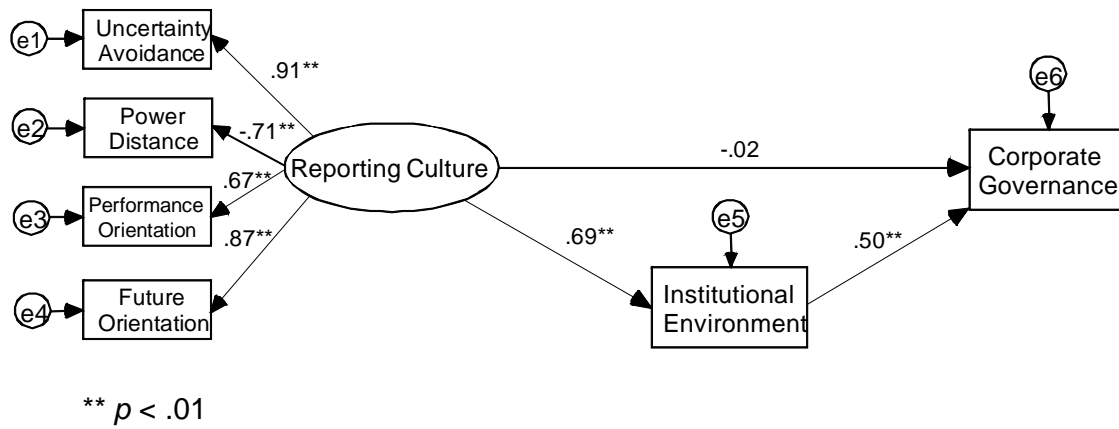FIGURE 3. Model Evaluating the Hypothesized Relationships

** *p* < .01

TABLE 4. Model estimates and goodness of fit results for the model including the Reporting Culture latent variable, the Institutional Environment composite, and Corporate Governance Practices

Overall Fit Summary *(n=42)*

Statistical Tests	Results	Acceptable Fit Standard
Chi-Square	5.43	NA
df	8	NA
Chi-Square/df	0.68	< 3.00
Fit Indices		
GFI	0.95	Close to 1
CFI	1	Close to 1
Residual Analysis		
RMSEA	.00	$< .08$