

Corruption Primer: The role of culture, religion, wealth and governance

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The accounting literature on fraud prevention and investigation has identified corruption as one of the major types of occupational abuse against organizations (Albrecht et al. 2009, Wells 2010, 1997). The Association of Certified Fraud Examiners (ACFE) Reports to the Nations on Occupational Fraud and Abuse (2002, 2004, 2006, 2008 and 2010) summarize four types of corruption schemes: bribery schemes, conflict of interest schemes, economic extortion schemes and illegal gratuity schemes. SAS 99 or Statement on Auditing Standards No. 99: Consideration of Fraud in a Financial Statement Audit requires the auditor to gather information necessary to identify risks of material misstatement in financial statements. The SAS 99 standard considers and identifies two types of fraud: misstatements arising from fraudulent financial reporting (e.g. falsification of accounting records) and misstatements arising from misappropriation of assets (e.g. theft of assets or fraudulent expenditures). More recently in its “2010 Report to the Nations on Occupational Fraud and Abuse” the (ACFE) defined corruption as “a scheme that involves the employee’s use of his or her influence in business transactions in a way that violates his or her duty to the employer for the purpose of obtaining a benefit for him- or herself or someone else”. Examples of corruption schemes include bribery, extortion and a conflict of interest. Crumbley (2009) also emphasizes the role and responsibility of the auditor in fraud prevention and detection. So, there has been plenty of awareness and regulation as it relates to the role of the auditor in the identification and the prevention of fraud and corruption. However, research that examines the role of accounting in preventing corruption has been limited (Johnston 1999; Kimbro 2002; Siame 2002; Larson & Herz 2003; Everett *et al.* 2007) and there have very few attempts to empirically examine this relationship (Kimbro 2002).

Recently, some articles have emerged that criticize and unfortunately misinterpret the empirical literature on the role of accounting in preventing corruption. Specifically, Everett *et al.* 2007 explored the role of accounting in “fighting” corruption by drawing on a “governmentality” framing to contrast the “orthodox” versus the “radical” mentality and its interaction with accounting. They label the “orthodox” mentality as a programmatic or normative one which views accounting involvement in the “fight” against corruption as unproblematic and noble; while the

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“radical” mentality as deterministic and one that draws on race, and class-based commentaries by viewing the involvement of accounting in more ambivalent terms.

Recognizing the importance of understanding corruption and the role of accounting in preventing it, this article attempts to provide a more comprehensive view of corruption by summarizing and building on the macro and micro-economic literature in order to identify the factors associated with corruption and the theoretical arguments that attribute causality to these associations. This article replicates previous studies and integrates the empirical and theoretical studies to date on corruption in order to propose a new model that opens new avenues of research and inquiry.

In order to develop a comprehensive model that studies what factors might have a causal relationship -- and not just a mere association-- with corruption, this article discusses and examines the previous literature, replicates previous findings and attempts to answer the following questions:

- How has the definition of corruption evolved in the literature?
- Corruption, economic development and economic growth rates: Cause or effect?
- Is corruption associated with: religion, political stability, culture, governance & accounting and legal origin?
- What is the role of accounting in controlling corruption?

The empirical results confirm a strong negative relationship between wealth and corruption (La Porta *et al.* 1998). However, I also find evidence to suggest that this relationship might not be a direct one, but rather the inverse association between corruption and wealth could be mediated by measures of institutional development and specifically by measures of the efficiency of the rule of law as well as measures of governance and accounting. That is, countries with higher levels of economic development (as measured by GNI per capita) tend to have better institutional development, and this superior institutional development seems to be the factor that might be directly responsible for a reduction or control of corruption. Also, I find some evidence that fast economic growth -- as in transition economies -- could generate or exacerbate corruption. The theoretical argument that supports this argument is based on the notion that fast economic growth creates opportunities for appropriation of rents, since this rapid growth does not allow enough time for countries to adjust and develop the regulatory, institutional and control mechanisms necessary to deal with this new wealth.

The results also confirm previous literature that finds that individualistic (collective) countries have less (more) corruption (Kimbrow 2002, Husted 1999). However, this research finds

that this relationship is mediated by measures of economic development. That is, once economic and institutional development is controlled for, individualism (collectivism) correlates positively (negatively) with corruption, suggesting a more complex relationship than previous literature had suggested (see Husted 1999).

In line with previous research (La Porta *et al.* 1998) I find that religion and legal origin are associated with corruption. Specifically, like La Porta *et al.* (1998), the results indicate that Protestant countries have lower levels of corruption than Catholic and Muslim countries. However I can not corroborate La Porta's *et al.* (1998) findings that Common Law countries are less corrupt than Civil French or Civil German countries. Using a larger panel data sample of 75 countries, I find that countries with a Civil German legal tradition have better control of corruption than Common Law or Civil French countries.

This study investigates and summarizes many relationships and correlations that if examined separately would tend to indicate that corrupt countries tend to be poor, have collective values, low power distance, and are predominantly Catholic or Muslim. But a closer analysis reveals that these associations are indirect and must be interpreted with caution. Rather, the results in this article propose that corruption can best be explained by the countries' lack of institutional development and not by religion, values, culture, or wealth. Specifically I find that countries with more developed regulatory systems, efficient and effective rule of law and better governance and accounting have superior measures of corruption control.

2. Background

2.1 Corruption

Political economists have led the research in the study of corruption. The early work of Becker and Stigler 1974; Rose-Ackerman 1975, 1978; Banfield 1975, and Klitgaard 1988, 1991 set the tone for studies in this area and established a well developed literature that investigated the effects of corruption in government and society.

The definition of corruption within the political economic theory has been typically construed as the misuse of public office for private gain. This definition implies some sort of rent seeking and captures, for example, kickbacks in public procurement, bribery, and embezzlement of government funds. The prevailing view in the political economic literature is that corruption is harmful to countries and economic development, since corruption or high rent-seeking will adversely affect entrepreneurial innovation and investment (Murphy, Schleifer and Vishny 1991,

and Mauro 1993). The underlying theory is that corruption adversely distorts incentives and creates risk and uncertainty about the expected benefits, cash flows and returns of productive activities, forcing entrepreneurs to undertake costly loss-avoidance, effectively making corruption payments potentially more costly than legal taxes. Corruption, like taxes, creates a wedge between the actual and privately appropriated marginal product of capital. In some instances, corrupt payments could involve higher transaction costs than taxes, because of the uncertainty, secrecy, risk and information asymmetry that they produce (Fisman & Svensson 2007).

A few studies have tried to link the country specific level of corruption and asset pricing. Ciochini, *et al.* (2003) looked at bond spreads as a proxy for borrowing costs and found that after controlling for variables that affect bond spreads corruption increases borrowing costs for governments and firms in emerging markets. Similarly, Weitzel *et al.* (2006), find that corruption is a discount that is priced on local takeovers targets. In a comprehensive study, Lee and Ng (2006) specifically examine the effect of corruption and corporate equity values and find that firms from more corrupt countries trade at significantly lower market multiples (both price to book and Tobin's Q). They find that this relationship is due primarily through lower expected cash flows embedded in the firms' profitability forecasts (see also Ng, 2006).

Ades and Di Tella (1997) find that country variables that restrict markets, limit openness to external competition from imports and control political competition also are associated with high corruption. Schleifer and Vishny (1993) examined this argument by proposing that government regulations that increase barriers of entry effectively create opportunities for officials to demand bribes and thus, deregulation and private markets have the potential of controlling corruption by increasing competition and thus reducing the extent by which public officials can demand bribes.

Another much less common view of corruption, suggests that corruption might be beneficial in some circumstances and actually has the potential of enhancing efficiency. The proponents of "efficient" corruption, claim that bribes may facilitate corporate functioning by allowing firms to get things done (e.g., greasing the wheels) in an environment plagued by red tape, bureaucratic holdups and government inefficiency (Bardham 1997; Kaufman and Wei 1999). In the same vein, Tullock (1996) argues that illicit payments could be a substitute for higher wages, and thus corruption is an additional fee for under-priced services. Lui (1996) notes that corruption payments could help restore the price mechanism and improve the allocation of resources in markets that are too regulated. Regardless of the marginal logic of the "efficient" corruption argument, the current theoretical and empirical literature on corruption confirms its harmful effects on society. Also, the

notion of “efficient” corruption is based on a second-best reasoning given a set of unavoidable distortions. Thus, the mainstream literature has resolved that “efficient corruption” is a flawed proposition without empirical evidence and generalizable relevance.

In the accounting literature the study of corruption has been framed within the area of auditing, fraud detection, investigation and prevention. The ACFE Reports to the Nation on Occupational Fraud and Abuse of 2006, 2008 and 2010 define three types of fraud against organizations: asset misappropriation, corruption and fraudulent statements. These Reports as in the previous literature of Becker and Stigler (1974) Rose-Ackerman (1975, 1978) Banfield (1975) and Klitgaard (1988, 1991) describe corruption as the oldest white collar crime rooted in the tradition of “paying-off” public officials or company insiders for preferential treatment (See also Albrecht *et al.* (2009) and Wells (2010, 1997). In the fraud accounting literature, corruption is broken down into four scheme types: bribery, conflict of interest, economic extortion and illegal gratuities schemes. Bribery is defined as any scheme in which an individual offers or receives something of value to influence the outcome of an official act or a business decision without the knowledge of the principal. Conflict of interest is described as any scheme in which an employee or manager has undisclosed economic interest in a transaction that adversely affects his organization. Economic extortion is the coercion of another to enter into a transaction based on the use of actual or threatened force, fear or economic duress. Illegal gratuities are similar to bribery schemes except that there is not necessarily intent to influence the outcome of a particular business decision, but rather, the gratuity could be a payment to reward someone for making a favorable decision. Bribery and conflict of interest schemes account for the highest percentage of corruption cases as well as they account for the highest median losses (ACFE Reports to the Nations (2006,2008 and 2010), Albrecht *et al.* (2009), Wells (2010 and 1997).

Recently, some articles have expanded the definition of corruption beyond the areas of political, government or “public” corruption. Corruption has been broadened to include any organized system (public or private) in which an actor or part of the system performs its duties to the detriment of the organizational purpose by the misuse (or abuse) of power. This definitional expansion to include corruption between private parties is summarized by the abuse of power by those given power over private interests, who advance their own interests at the expense of the owners’ interests (Zimring and Johnson, 2005). A manager who backdates a stock option grant, or sells a firm’s property to a friend or family for less than the market price at the expense of shareholders, is also involved in a corrupt act.

Because of its secret nature, corruption is a variable that is difficult to measure directly. In recent years, global investment and interaction has increased the demand for information on country level corruption, since investors, banks, and multinational firms need to assess country, financial, operational and political risks in order to effectively attempt to price investment risk. Responding to this need, private organizations have created subjective indices that grade countries on their level of corruption. Most of these indices of corruption are based on the perceptions of a surveyed population. These indices cover a wide range of countries and qualitatively assess the pervasiveness of corruption in different countries. The most comprehensive indices on corruption are: Business International (BI), International Country Risk Guide (ICRG), Transparency International Corruption Index (TI)¹, Control of Corruption Index (CI) by Kaufman, Kray & Mastruzzi 2007 (KKM) and the World Bank Index on Corruption (WB). Most of these indices are highly correlated suggesting that these measures are fairly reliable estimates (see Svensson, 2005).

3. Theory

3.1 Corruption, economic development and economic growth rates: Cause or effect?

Almost all available evidence suggests that corruption varies inversely with economic development (See Mauro 1995; Keefer and Knack 1995; Kimbro 2002; and Svensson 2005). Countries with high levels of corruption tend to have low income levels. Empirical studies clearly show the negative impact of corruption on investment and consequently on growth (Mauro, 1995; Hines 1995; Henisz 2000; Wei 2000). Although, as mentioned before, there have been a few dissenting views on the impact of corruption on efficiency and economic growth (Leff 1964), the preponderance of empirical studies suggests that corruption negatively affects and/or retards economic development.

¹ Since 1995 the Transparency International Corruption Perceptions Index (CPI) ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians. It is a composite index, drawing on fourteen different polls and surveys from seven independent institutions carried out among business people and country analysts, including surveys of residents, both local and expatriate. TI defines corruption as the abuse of public office for private gain. The surveys used in compiling the CPI tend to ask questions with a focus, for example, on bribe-taking by public officials in public procurement. In the 2010 CPI Report the United States ranked twenty second among one hundred seventy eight countries, implying that there are twenty one countries with less corruption than the United States. See also Crumbley *et al.* 2009.

Statistically, the inverse relationship between wealth (as measured by GNP²) and corruption is significant. Most corrupt countries are poor. This relationship however, might not be a direct one. Poor countries are less likely to have effective legal systems, good education and public health, effective communication infrastructure, informative financial reporting systems and liquid capital markets. Thus because of lack institutional development, and not because of poverty *per se*, poor countries might have a reduced ability to prevent and control corruption. So, in order to understand the determinants of corruption we must be careful to look beyond economic development and emphasize the role of the political, legal, educational, and institutional infrastructure.

Table 1 shows the strong relationship between wealth, as measured by GNI per capita and levels of health, infrastructure development, education, communication, efficiency of the judiciary, rule of law and governance. These relationships are significant.

The results show that lack of institutional development is usually the result of lack of economic resources. However the inverse is not necessarily true, since it is conceivable that a newly developed economy (by GNI standards) might still have immature institutional development and therefore could still have high levels of corruption since their institutional development has not evolved to the levels necessary in order to effectively prevent and combat corruption. Evidence supports the argument that countries that have been able to control corruption are wealthier, but not all rich countries are free of corruption. Corruption can exist in developed as well as in undeveloped countries.

In the case of economic growth rates, there is less evidence that faster economic growth leads to a reduction or control of corruption. On the contrary, using the example of the post-communism Russian experience, Mauro 1993 hinted that corruption tends to increase after a period of fast economic development and modernization. Countries with high levels of corruption tend to be developing, “in transition” economies (many of which are evolving from a different regime) strengthening the argument that they might lack the institutional development to combat corruption. Kimbro (2002) finds some empirical evidence to suggest that countries “in transition” that grew more than the average between 1974 and 1999 --or grew too fast-- have higher corruption rates than countries with more moderate economic growth rate. The theoretical argument of this finding is that fast economic growth transforms labor, social and family structures and this transformation creates opportunities for the appropriation of excessive rents. Economic growth can occur at very fast rates, but societies need time to develop the institutions that can manage the changes associated with this

² GNI (Gross National Income per capita) Atlas Method, and it is also called: GNP (Gross National Product per capita).

“new” wealth. Societies need time to learn, react and adapt by creating an institutional environment that can help support and manage this change. Abed and Davoodi (2000) show that in the case of transition economies, structural reforms could be more important than corruption in explaining a country’s macroeconomic performance; although this lack of structural and institutional reform could give rise to more corruption.

Unfortunately, the empirical studies on the effect of corruption on economic growth are besieged by endogeneity problems. Most studies use corruption as an independent variable and economic growth as a dependent variable in order to establish that corruption is a cause or determinant of poor economic growth. This argument is supported by an economic view of corruption as a cause of sub-optimal economic development because it reduces the incentive for investment and entrepreneurial development. Additionally, this stream of literature empirically demonstrates that corrupt practices affect the quality of public services, distorting the fiscal revenue and tax collection by government that subsequently affects its allocation of resources. It is important to note that the causal or directionary relationship between corruption and economic development is sometimes conflicting. What is causing what? Is corruption a force adversely affecting foreign direct investment, cost of capital and economic development? Or rather, does the lack of economic and institutional development facilitate corruption? Is corruption the cause or the effect of a bad economy? Political economic theory supports both views. Corruption and economic growth are synergistic and endogenous phenomena that influence and affect each other in a constant and dynamic way. If a country is poor, there will be fewer resources to set up and enforce mechanisms to prevent and fight corruption. On the other hand, if a country has a corruption problem, there will be less trust, more uncertainty, less investment, less economic development and therefore a perpetuation of poverty. What we can conclude is that there is a strong association between high corruption and poverty, but we can’t establish causality. A plausible argument is that lower economic growth could lead to higher corruption levels or that more corruption could lead to less development and less economic growth.

3.2 Is corruption associated with: religion, values, culture, legal origin and governance & accounting?

3.2.1 Corruption and values

Everett *et al.* (2007) mention a stream of literature that has found an association between cultural values, religion, and economic development with corruption and labels it “radical” because this literature explains corruption by “drawing on race, gender and class based commentaries.”

Indeed, there is a growing literature that has tried to explore and empirically test the cultural factors or “values” associated with corruption. This examination of moral or cultural dimensions and its association with corruption, elaborate on the early theoretical economic literature on corruption which is based on incentives, optimizing behavior, values and preferences. Klitgaard (1991), Rose-Ackerman (1998), and Becker and Stigler’s (1974) analysis portray corruption as a rational economic choice.³ At a micro level, individuals consciously or unconsciously consider the moral cost of becoming involved in corrupt activity. This consideration arises because of the reputation costs of detection and is related to personal, internal and social costs associated with participating in a corrupt act. It is perfectly valid, and not radical, to conclude that private morality aspect of engaging or not in corruption is related to the value system of society.

Confirming the impact of values and culture, Hauk and Saez-Marti (2002) perhaps go farther than any other study in examining the role of culture and values to corruption, and provide a cultural explanation of corruption using a framework of “overlapping generations model” with intergenerational transmission of values. The model finds two steady states with different levels of corruption in an otherwise identical economy, showing the strength of cultural values in determining corruption. Hauk and Saez-Marti (2002) find that the driving force in the equilibrium selection process is the education effort exerted by the parents’ values, the distribution of ethics in the population and the expectations about future policies.

Ali and Isse (2003) investigate the role of ethnicity and find that highly fragmented societies are likely to be more corrupt than more homogeneous ones

To capture the impact of values, some studies have attempted to investigate how “cultural values” (using Hofstede’s dimensions)⁴ relate to corruption (see Husted 1999, Kimbro 2003 and DiRienzo *et al.* 2007). These studies find that countries that are more individualistic (collective) and have lower (higher) power distance tend to be less (more) corrupt.

³ Becker and Stigler (1974): “A person commits an offense if the expected utility is higher than the one he could receive by using his time and other resources for other activities.”

⁴ Geert Hofstede developed an enormous database based on an extensive questionnaire that he administered to employees around the world while working for IBM at the Human Resource department. Hofstede’s Cultural Dimensions are among the most widely used paradigms in cross-cultural psychology. See Hofstede 2001.

Power distance measures the response of people to inequality, to attitudes and tolerance toward hierarchy and to the extent to which the less powerful expect, accept or even prefer the fact that power is distributed hierarchically and unequally. Corruption is facilitated in highly hierarchical societies with high power distance. On the other hand, people in countries with low power distance have less fear of fighting and denouncing corruption. So it is reasonable to expect that countries that have higher power distance could be more corrupt than in countries with low power distance. Hofstede's two dimensional construct of individualism-collectivism describes the degree by which the people are primarily concerned with their own welfare and self interest versus that of society. People with individualistic values tend to see themselves as independent of others (me), whereas people with collectivist values see themselves as interdependent with others and behave within the accepted social norms and structure (we). Individualism promotes investment, entrepreneurship and economic development. Individualism also promotes greater independence of the judiciary, and could also affect the behavior of accountants or auditors who will be more likely to report corrupt acts. On the other hand, high individualism could also lead to excessive greed that could create more incentives for corruption. Similarly, in highly individualistic countries the detection reputation costs associated with being caught in a corrupt practice would be much less than in a collective country. So, individualism has positive aspects that might help reduce corruption, but very high individualism also has the potential of creating excessive greed, lack of collective conscience and lower reputation costs of detection and therefore more corruption (Triandis 1995).

In order to test this, Figures 2 and 3 show the relationship of Individualism and Power distance with corruption. I use Kaufman *et al.* (2007) measure of Control of Corruption. This measure is an aggregate measure that uses various sources of corruption measures and averages them over 1996-2006. Also, this measure is a continuous variable therefore providing meaningful statistical interpretation.

Figure 2 and Figure 3 confirm previous studies that find a strong association between individualism, power distance and corruption. Figure 2 shows that higher (lower) levels of power distance are associated with less (more) control of corruption. Figure 3 also shows a strong positive (negative) correlation between individualism (collectivism) and control of corruption. That is, more individualistic countries control corruption better, while collective countries suffer more corruption.

Everett *et al.* (2007) criticism on the "radical" literature that draws on "race" to explain corruption is probably unjustifiable and less easily understood. Parker (2000) introduced the concept of the *equatorial paradox* to try to explain the strong empirical evidence of the fact that

incomes per capita systematically increase with absolute latitude. Specifically, economists had long observed the systematic differences in income using the simple metric of a country's geographical latitude or distance from the equator [See Hall and Jones (1999), Landes (1998), Norrhaus (1994), Theirl; and Galvez (1995), among others] suggesting a link between geography, physiology and economic growth. Galbraith (1951, p. 693) noted: "If one marks off a belt a couple of thousand miles in width encircling the earth at the equator, one finds within in no developed countries". Parker argues that certain physical laws and physiological concepts may prove useful in explaining microeconomic and macroeconomic behavior and ultimately long run economic growth and behavior across countries. Even though Parker warns of the importance of avoiding over simplification, he argues that the fact that the country's absolute geographic latitude explains up to 70 percent of the cross country variances in income per capita deserved some investigation. One can make the inference that if latitude is associated with poverty and poverty is associated with corruption, latitude could be associated with corruption. However, the *equatorial paradox* literature does not infer or theorize any relationship between race, physiology and crime or corruption.

3.2.2 Religion and legal origin

In what they labeled the "race-based fight" Everett *et al.* (2007), also discuss that the corruption literature seldom mentions the historic and colonial context in which corruption occurs. This is not the case. There is a rich and very well documented literature that has examined the role of colonial and legal origins and corruption (See for example Rose-Ackerman 1978, 1999; La Porta *et al.* (1998).

La Porta, *et al.* (1998) empirically explore the role of religion and legal origin and provide evidence to suggest that: less developed countries, countries with higher Catholic and Muslim populations, and countries with French or code law legal systems, tend to have inferior measures of government performance and more corruption, as compared to Protestant, common-law countries. These studies point towards the identity of the colonizer: Spanish-French and Socialist versus English as the basis of the institutional development that is the precursor of economic development and control of corruption. Treisman, (2000) further examined this relationship, and corroborated that countries with lower corruption levels tend to be largely Protestant, former British colonies, with a Common Law legal system, and a unitary form of government. Treisman (2000) argues that since the Protestant church was created to oppose state-sponsored religious authority, these Protestant countries might be more inclined to monitor the state.

Institutions and human capital develop in response to the country's income level and economic development (Lipset, 1960; Demsetz, 1967) and institutions and human capital in turn are necessary to control corruption. So, even though previous studies find some evidence that common-law, Protestant, former British colonies have less corruption, causality can not be established directly. These association studies could suggest that the common law system might help in the economic development of countries and this in turn could be enhancing the institutional infrastructure needed to control corruption.

In order to investigate the role of religion, legal systems and corruption further, I expanded La Porta *et al.* 1998 data using the CIA Factbook of 2008. A sample of 75 countries was examined. The results do not show that Common Law countries have less corruption those countries with Civil German or Civil French legal system. The results in Table 2 show that countries with a Civil German legal tradition have better control of corruption measures than Common Law and Civil French law origin countries. Also, consistent with previous studies (La Porta *et al.* 1998), I find that Protestant countries have better control of corruption than Catholic and Muslim countries.

4. Research Design and Results

In order to develop a more comprehensive model I examined the effect of values, economic development and institutional development on control of corruption using a panel data of 75 countries. To measure control of corruption I use Kaufman *et al.* 2007 (KKM) index of control of corruption 1996-2006.⁵ Economic development or wealth is measured with the average of GNI per capita for 2000-2006. I include the measures of Individualism and Collectivism as measured by Hofstede 2001. The effectiveness of the legal system is measured using the International Country Risk Guide of 2006 measure of the Rule of Law.⁶ To measure Governance and Accounting, I use an aggregate measure of governance Kaufman *et al.* (2007) and a composite measure of accounting quality.⁷ The effect of the speed of economic growth is measured by a dummy variable, which captures if the speed of growth is above the median during the period of fastest economic growth: 1970-1980. In order to capture if the Protestant religion reduces corruption, I use a dummy variable. Similarly, I use a dummy variable to capture if the country has a common law tradition:

$$CONTROL\ OF\ CORRUPTION = \beta_0 + \beta_1 POWER\ DISTANCE + \beta_2 INDIVIDUALISM + \varepsilon \quad (1)$$

⁵ Robustness tests using the CPI (Corruption Perception Index) of Transparency International confirmed all results.

⁶ Robustness tests using Kaufman 2004 construct of the effectiveness of the judiciary confirmed all results.

⁷ Accounting quality is measured using CIFAR and the log of accountants per 100,000 inhabitants.

$$\text{CONTROL OF CORRUPTION} = \beta_0 + \beta_1 \text{POWER DISTANCE} + \beta_2 \text{INDIVIDUALISM} + \beta_3 \text{LOG AVERAGE (2000-2006) GNI} + \varepsilon \quad (2)$$

$$\text{CONTROL OF CORRUPTION} = \beta_0 + \beta_1 \text{POWER DISTANCE} + \beta_2 \text{INDIVIDUALISM} + \beta_3 \text{GOVERNANCE \& ACCOUNTING} + \beta_4 \text{RULE OF LAW} + \beta_5 \text{LOG AVERAGE (2000-2006) GNI} + \beta_6 \text{GNP GROWTH (1970-1980)} + \varepsilon \quad (3)$$

$$\text{CONTROL OF CORRUPTION} = \beta_0 + \beta_1 \text{POWER DISTANCE} + \beta_2 \text{INDIVIDUALISM} + \beta_3 \text{GOVERNANCE \& ACCOUNTING} + \beta_4 \text{RULE OF LAW} + \beta_5 \text{LOG AVER (2000-2006) GNI} + \beta_6 \text{D_GNP GROWTH (1970-1980)} + \beta_7 \text{D_PROTESTANT} + \beta_8 \text{D_COMMON LAW} + \varepsilon \quad (4)$$

$$\text{CONTROL OF CORRUPTION} = \beta_0 + \beta_1 \text{GOVERNANCE \& ACCOUNTING} + \beta_2 \text{RULE OF LAW} + \beta_3 \text{GNP GROWTH (1970-1980)} + \varepsilon \quad (5)$$

Where:

CONTROL _ CORRUPTION = From KKM 2007, this index is a composite of different rating agencies measures of corruption. On a scale of -2.5 to 2.5, higher numbers indicate better control of corruption.

POWER DISTANCE = From Hofstede 2001. It measures the response of people to inequality and power structures. Higher numbers indicate a higher power distance.

INDIVIDUALISM = From Hofstede 2001. It measures the degree to which people are primarily concerned with their self-interest (me) rather than by the collective interest (we). Low numbers indicate collective countries and high numbers indicate individualistic countries.

LOG AVERAGE GNI = From the World Bank (Atlas Method). Calculated as the log of the average of the GNI per capita from 2000 till 2006.

GOVERNANCE & ACCOUNTING = Aggregate of KKM Governance Index, and Kimbro's 2001, Accounting Quality Index (CIFAR's accounting index weighted by the log of the number of accountants' per 100,000 inhabitants).

RULE OF LAW = From the International Country Risk Guide (ICRG), 2006. The

index evaluates the quality of the rule of law and the country's tradition of order in a scale of 1 to 10. A higher index indicates better rule of law.

D_GNP GROWTH = Dummy variable 0/1, where 1 represents a GNP growth rate that is higher than the mean and median of the average growth rate from 1970 till 1980 for the sample.

D_PROTESTANT = Dummy 0/1, where 1 represents a country which predominantly has a protestant religion or 0 otherwise. From the CIA World Factbook.

<https://www.cia.gov/library/publications/the-world-factbook/>

D_COMMON LAW = Dummy 0/1, where 1 represents a country with a common law legal tradition and 0 otherwise. From the CIA World Factbook.

<https://www.cia.gov/library/publications/the-world-factbook/>

The results of the regressions in Table 3 show that the coefficient and significance of Individualism changes from positive to negative when GNI per capita, governance & accounting, rule of law and GNI growth rate are included in the regression. These results suggest that the positive relationship between individualism and control corruption could be an indirect one. In other words, once the effect of wealth and institutional development is controlled for, individualism (collectivism) becomes negatively (positively) associated with control of corruption suggesting that this relationship might be mediated by the level of wealth, institutional development and law-governance mechanisms.

Economically developed countries with high levels of individualism or hyper individualistic tend to have higher corruption levels, suggesting that the strength of the association between individualistic versus collective countries and corruption, depends on the level of economic development.

The results in Table 3 also show the strong and significant effect of governance and accounting, rule of law and GNI growth rate as variables associated with corruption. In fact, once these variables are included in the regression, power distance, individualism and even GNI per capita become insignificant. The institutional variables that measure the efficiency of the Rule of Law and the degree of Governance and Accounting are not only statistically very significant but also capture 84% of the variation in control of corruption. I don't find any significance in the variables that capture countries that have a protestant religion, nor countries that have a common

law tradition. The results are robust to changes in measures of corruption, since when the Corruption Perception Index is used as dependent variable all the results remain basically the same.

Figure 4 shows how the relationship of economic, cultural and institutional values to corruption. This model illustrates the indirect effect of wealth, religion and values.

5. Summary and Conclusion

The expansion of the traditional definition of corruption to include the “private” corporate function, has inspired much interest and study as it relates to its impact in the development of the equity global markets. In particular, since corruption usually involves an asset exchange with monetary value, where parties to a transaction gain from the unauthorized use of power, it is not surprising that the role of accounting in preventing, and detecting corruption has been emphasized.

Accounting is an information system that communicates financial and economic data essential to the control and prevention of corrupt activities. Accountants are often in a good position to discover organizational wrongdoing because of their involvement in companies' planning, control and auditing processes. Accounting serves a dual role: financial statements provide information about economic transactions and auditing serves as a monitoring mechanism to check on the accuracy of this information and to prevent and discourage financial misappropriation. In particular, the function of the auditor has been extended to the prevention, as well as detection, of corruption and fraud. SAS 99 is viewed as the cornerstone of the AICPA's comprehensive antifraud and corporate responsibility program. To many the goal of SAS 99 when it was issued in 2002 was to rebuild the confidence of investors in our capital markets after the accounting scandals of Cendant, Waste Management, MicroStrategy, Computer Associates, Xerox, Enron, WorldCom, Adelphia, and Tyco among others, and reestablish the role of *audited* financial statements. It is undeniable that auditors and accountants are inherently closer and in a better position to detect financial fraud and corruption. In fact, one of the main objectives of the Sarbanes Oxley legislation was to control “corporate corruption”: as its name implies: the Corporate Corruption Bill (Public Company Accounting Reform and Investor Protection Act of 2002). In fact one of the provisions of Sarbanes Oxley is designed to protect whistleblowers like Sherron Watkins and Cynthia Cooper (both accountants) from retribution.

In this article, I have tried to re-examine and summarize the current research on corruption. I have replicated previous studies with newer data, more explanatory variables as well as examined

new angles. Some of the answers are intuitive and clear, while others leave ample opportunity for further research.

Since the appearance of corruption metrics, the empirical literature has evolved dramatically. We know much more, but there are still a lot of questions left unanswered.

What we know and is indisputable is that corruption and fraud are costly and harm economic development. The argument of “efficient” corruption is a flawed proposition without any empirical evidence and at best is a “second best solution” given unavoidable market distortions. We also know that the definition of corruption is expanding to include public and private agents, thus opening the door for research on fraud and asset misappropriation between private parties. We know that poor countries have high corruption levels, but some wealthy countries are corrupt as well; so we cannot establish that poverty or need is a cause for corruption. The relationship between wealth (GNI per capita) and corruption seems to be mediated by the level of institutional development and in particular, the development of regulatory type institutions as measured by two constructs: efficiency of the rule of law and the level of governance and accounting. That is, evidence shows that wealthier countries with higher GNI per capita tend to have better education, better communication infrastructure, more efficient judicial systems, better enforceability of laws, better governance and accountability, and these last two in turn, help control corruption.

It is still unresolved how cultural values, religion and legal origin affect corruption. In this study I do not find evidence to suggest that religion or legal traditions (common or civil) are determinants of corruption. In general, countries with a Civil German legal origin are less corrupt and have better measures of governance as compared to countries with Common Law and French Civil legal origins. Also, consistent with la Porta *et al.* 1998, I find that Protestant countries have less corruption and better governance scores than Catholic and Muslim countries.

This article summarizes many relationships and correlations that if examined separately would tend to indicate that corrupt countries tend to be poor, have collective values, low power distance and are Catholic or Muslim. But a closer analysis reveals that these correlations are indirect and must be interpreted with caution. Rather, the results in this article suggest that corruption can best be explained by the lack of institutional development and not by religion, cultural or economic variables. Specifically, I find that countries with efficient and effective rule of law and better governance & accounting have superior measures of control of corruption regardless of wealth, religion, or legal tradition.

The study of corruption draws on the macro economic literature on economic growth and institutional development. However, the fact that within the same country there can be corrupt and not corrupt agents is a significantly important aspect that must be examined. Thus, the microeconomic literature needs to evolve to study and quantify the levels of corruption within a specific context.

The role of accounting in fighting corruption cannot and should not be labeled as radical or orthodox. This simplification is primitive and should be discouraged. Corruption is an outcome – a reflection of a country’s legal, cultural, economic, social, religious institutional and political environment and it draws from macro and microeconomic level effects. And as such it is a very complex phenomenon. Regressions can help us understand it better, but we need to be careful as to how we interpret these results.

The theoretical arguments that can be concluded by the current literature on corruption are fascinating and should inspire future thought and reflection. The intuitive simplicity of the theories discussed in this article, although appealing and tempting for those trying to find the “formula or model” of the determinants of corruption, should be interpreted with a complete understanding of its limitations. Rather, this article should help continue the conversation and the exploration of the many dimensions and interrelationships between human behavior and its environment and the role of the accountant in society.

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Table 1
Gross National Income (GNI) and Institutional Development

Independent Variables	Dependent variables						
	Health: Life Expectancy	Infrastructure	Education	Communication	Rule of Law	Judicial & Legal Effectiveness	Governance & Accounting
<i>Intercept</i>	28.396 (5.737)	-2.978 (-4.840)	-71.746 (-5.228)	-1216.801 (-10.631)	-3.295 (-3.217)	-47.194 (-3.616)	28.947 (2.537)
<i>Log Average GNI 1995-2000</i>	11.877 (9.092)	0.415 (5.989)	30.252 (8.376)	480.519 (15.827)	2.769 (10.456)	28.092 (8.103)	8.332 (2.886)
Adj. R ²	0.589	0.332	0.571	0.811	0.693	0.583	0.140
N	58	71	53	59	49	58	46

All coefficients are statistically different from zero at two-tailed p<0.01

The t-value is shown in parenthesis

Variables Definitions:

<i>Log of GNI per capita</i> ,	Average of GNI per capita, Atlas Method
<i>Health</i>	Life expectancy at birth in years, 1995-2005. <i>World Bank</i> .
<i>Infrastructure</i>	Average of: Power Generating Capacity, Length of the total road network, railroad network, Share of Paved Roads in Total Roads per 1000 workers average 1997-2003
<i>Education</i>	School enrollment, tertiary (% of gross). 1995-2005, <i>World Bank</i> .
<i>Communication</i>	Average of: fixed lines, mobile phone subscribers and internet users per 1,00 people 2000-2006.
<i>Rule of law</i>	Source: Assessment of the law and order tradition. Scale of 0-10. International Country Risk Guide, 1982-2000
<i>Judicial & Legal Effectiveness</i>	Source: <i>Kaufmann, 2004</i> . World Bank Institute. Assessment of judicial independence, quality of legal framework, property protection, and police effectiveness. Source: <i>Kaufman et al. 2007 (KKM)</i> , <i>World Bank</i> ; <i>CIFAR, 3rd edition</i> . Aggregate index using <i>Kaufmann et al. 2007</i> Governance percentage index 2000-2006 and <i>Kimbro, 2001</i> Accounting Index using <i>CIFAR's</i> Accounting quality index weighted by the log of accountants' concentration per 100,000 inhabitants
<i>Governance & Accounting</i>	

**Table 2: Corruption, Legal Origin and Religion
Means (medians)**

<i>Legal Origin</i>	n	Control of Corruption	Corruption Perception Index (TI)	Governance Score (-2.5 to +2.5)
Common Law	23	0.350 (-0.14)	5.030 ^a (3.70)	0.357 (0.17)
Civil French Law	27	0.365 ^c (-0.05)	4.715 ^a (3.90)	0.275 (0.37)
Civil German	7	0.609 (0.81)	6.186 ^a (5.90)	0.933 ^b (0.77)
Other legal systems	18	0.499 ^c (0.33)	5.143 ^a (4.35)	0.527 ^c (0.43)
Total	75			

<i>Religion</i>	n	Control of Corruption	Corruption Perception Index (TI)	Governance Score (-2.5 to +2.5)
Protestant	12	1.255 ^a (1.91)	7.525 ^a (8.60)	1.235 ^a (1.77)
Catholic	24	0.595 ^a (0.79)	5.167 ^a (4.50)	0.416 ^b (.565)
Muslim	12	-0.323 (-0.33)	3.308 ^a (3.25)	-0.147 (-.015)
Budhist	5	0.804 (0.81)	5.920 ^b (5.90)	0.806 ^c (0.77)
Other religions	19	-0.173 (-0.350)	3.935 ^a (3.30)	-0.106 (-0.285)
Total	72			

Two tailed t value:
a= significant at 1% level
b= significant at 5% level
c= significant at 10% level

Control of Corruption Source: Kaufman et al. 2007. Measures the extent to which public power is exercised for private gain. Higher numbers indicate better control of corruption.

Corruption Perception Index (CPI) Source: Transparency International. Average of 1996-06

Governance Score Source: Kaufman et al. 2007. Higher numbers indicate better governance.

Legal Origin La Porta et al. 1998 and the CIA Factbook.

Religion La Porta et al. 1998 and the CIA Factbook.

Other legal systems Includes Civil Scandinavian and Civil Muslim

Other religions Includes orthodox, Greek Orthodox, Jewish, Christian and mixed religions.

Table 3
Corruption, Monitoring, Economic and Cultural Variables

Dependent variable	Adj. R2	P value	Independent Variables											
			Constant	Sign PD	Power Distance PD	Sign IND	Individualism IND	Governance & Accounting	Rule of law	Log Average GNI (2000-2006)	GNP Growth 70-80	Protestant religion	Common law origin	
Control of Corruption	0.57	0.0001	0.497 -1.026	Negative	-0.018 (-3.332) ^a	Positive	0.024 (5.047) ^a							
Control of Corruption	0.776	0.0001	-3.223 (-5.548) ^a	Negative	-0.01 (-2.422) ^b	Positive	0.009 (2.237) ^b			0.44 (7.873) ^a				
Control of Corruption	0.854	0.0001	-2.439 (-2.654)	Negative	-0.007 (-1.509)	Negative	-0.004 (-0.713)	0.013 (2.476) ^a	0.314 (4.220) ^a	0.106 -0.926	-0.431 (-2.205) ^b			
Control of Corruption	0.878	0.0001	-2.803 (-2.879)	Negative	-0.008 (-1.631)	Negative	-0.005 (-1.046)	0.014 (2.751) ^a	0.252 (3.478) ^a	0.200 (1.571)	-0.282 (-1.475)	-0.043 (-0.207)	-0.048 (-0.315)	
Control of Corruption	0.849	0.0001	-2.583 (-9.497)					0.015 (2.937) ^a	0.378 (7.439) ^a		-0.361 (-2.094) ^b			

The t-value is shown in parenthesis

a= significant at 0.01; b= significant at 0.05 and c=significant at 0.10

Variable Definitions

<i>Control of Corruption</i>	Source: Kaufman et al. 2007. Measures the extent to which public power is exercised for private gain. Higher numbers indicate better control of corruption. Average of 1996-2006.
<i>Corruption Perception Index (CPI)</i>	Source: Transparency International 2007. High numbers indicate better control of corruption.
<i>Power Distance</i>	Source: Hofstede, 2001. Measures the response of people to inequality and power inequality. Higher numbers indicate higher power distance.
<i>Individualism</i>	Source: Hofstede, 2001. Measures the degree to which people are primarily concerned with their self interest versus the collective self interest. Low numbers indicate collective countries and higher numbers indicate high individualism.
<i>Governance & Accounting</i>	Source: Kaufman et al. 2007(KKM), World Bank; CIFAR, 3rd edition. Aggregate index using Kaufman et al 2007 Governance percentage index 1996-2006 and Kimbro, 2001 Accounting Index using CIFAR's Accounting quality index weighted by the log of accountant's concentration per 100,000 inhabitants.
<i>Rule of law</i>	Source: Assessment of the law and order tradition. Scale of 0-10. International Country Risk Guide, 1982-2000
<i>Log Average GNI 2000-2006</i>	Source; World Bank. Log of the Average of GNI per capita from 2000 till 2006. Atlas method.
<i>GNP Growth</i>	Dummy variable 0/1, where 1 represents a greater GNP growth rate (between 1970 till 1980) than the mean of the sample
<i>Protestant religion</i>	Dummy Variable 0/1, where 1 represents protestant religion and 0 otherwise.
<i>Common Law tradition</i>	Dummy Variable 0/1, where 1 represents common law legal tradition and 0 otherwise.

Figure 1
GNI and Control of Corruption

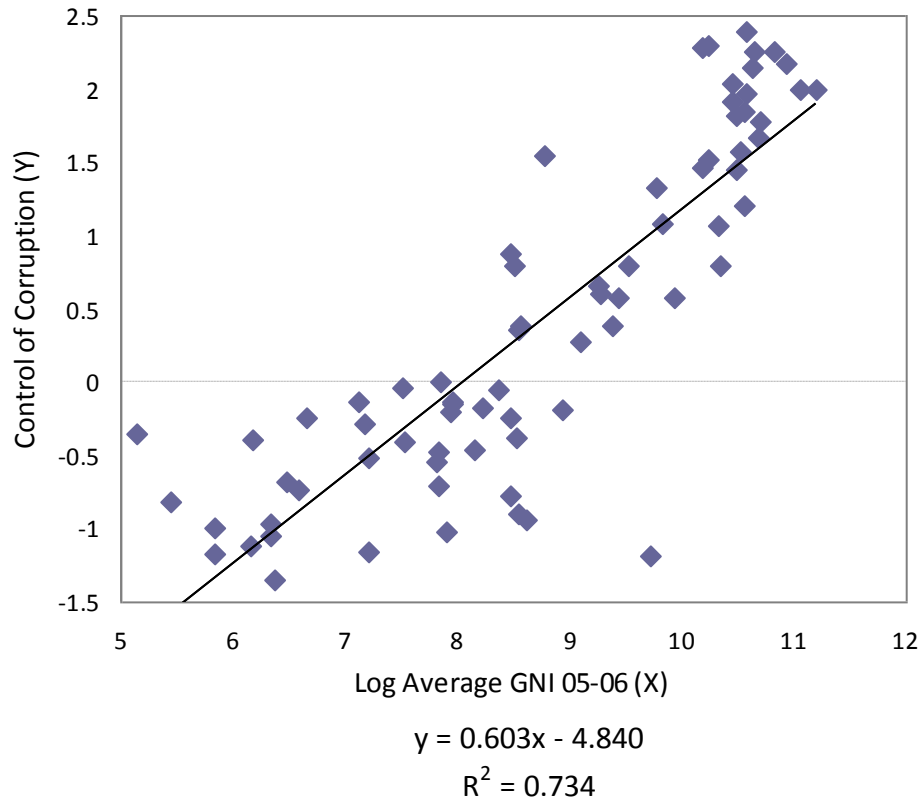


Figure 2
Corruption and Power Distance

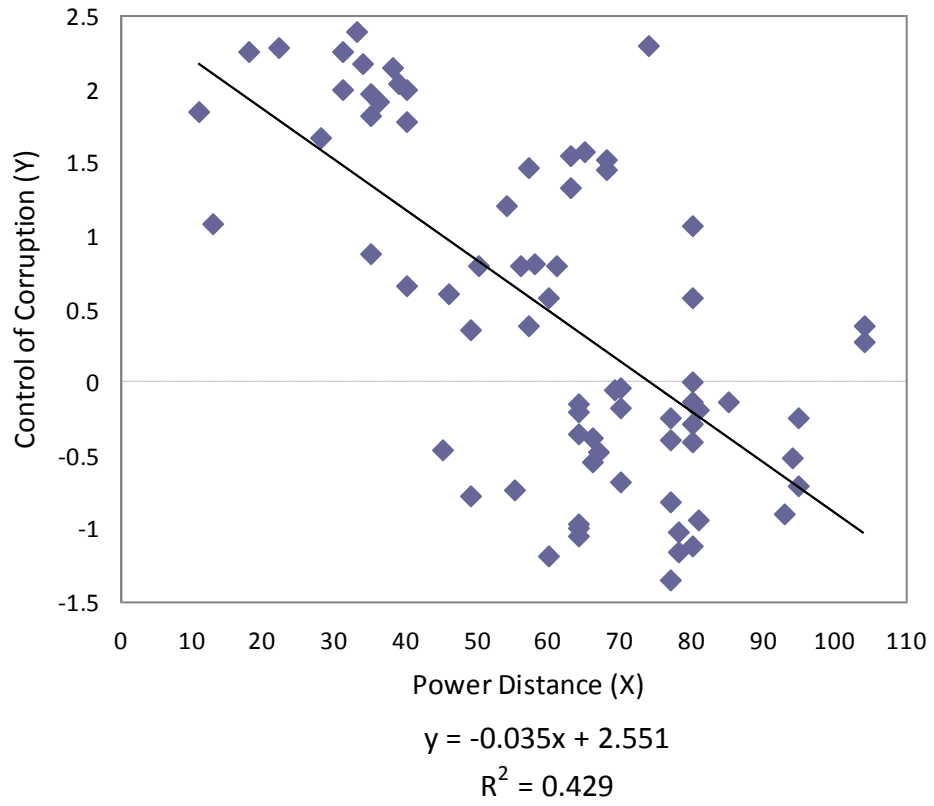


Figure 3
Corruption and Individualism

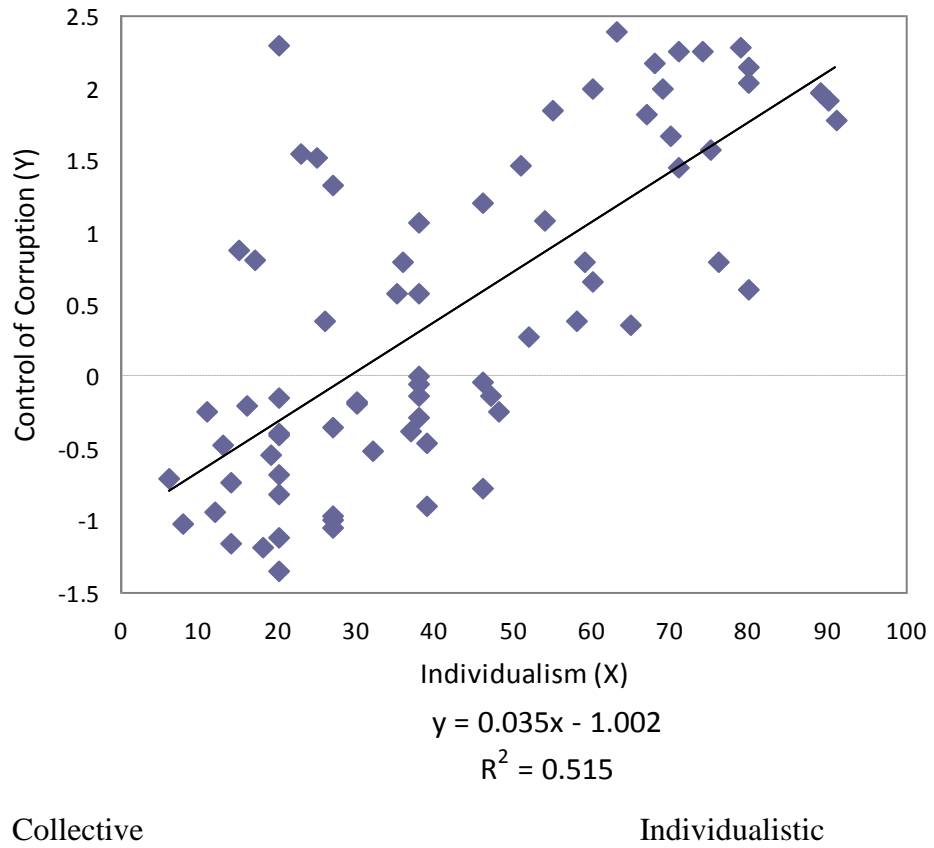


Figure 4
Relationship of the environment, values and
institutional development with corruption

