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Corruption, Democracy, Economic Freedom, and State Strength

A Cross-national Analysis

Ce Shen* and John B. Williamson*

ABSTRACT

While it is widely acknowledged that corruption has negative effects on economic growth, investment, and social welfare, the structural causes of corruption have received very little quantitative country-level cross-national analysis. Our structural equation-based analysis of data for 91 nations includes several important determinants of cross-national variation in perceived levels of corruption. Our analyses yield four major findings: 1) democracy, as measured by indicators of political rights, civil liberties, and press freedom, has a positive effect on perceived level of corruption control; 2) state strength has a positive direct effect; 3) openness of the economy, as measured by economic freedom, has a positive effect; and 4) ethnolinguistic fractionalization has both direct and indirect negative effects.

Keywords: comparative, corruption, cross-national, democracy

Introduction

Corruption – the abuse of public power for private gains – undermines the legitimacy and effectiveness of government, discourages investment, reduces tax revenues, limits economic growth, and lowers the quality of infrastructure and public services (Ades and Di Tella, 1994; Knack and Keefer, 1995; Mauro, 1995, 1997; Wei, 1997; World Bank, 1997). Corruption reduces the effectiveness of foreign aid-funded projects (Doig and McIvor, 1999; IMF, 1995; Isham et al., 1995). Corruption is particularly problematic for developing and transition economies (Johnston, 1998). In recent years, the fight against corruption has been high on the policy agenda of many governments and international agencies. Despite the huge importance of the issue, the structural causes of corruption have received very little attention in the context of quantitative cross-national studies.

While there have been a few prior cross-national studies of corruption (e.g. Ades and Di Tella, 1997; Doig and McIvor, 1999; Mauro, 1995; Tanzi, 1998; Xin and Rudel, 2004), our study improves upon them in several ways. It is based on a larger sample and more recent data; but, more importantly, it is the first to
be based on structural equation modeling (SEM). SEM techniques have some important advantages over OLS regression for this analysis. In our SEM model, corruption – or more precisely the perceived level of corruption control – is measured as a latent variable based on two indicators. Similarly, democracy, a very important mediating latent variable, is measured by three indicators. Our exogenous predictors include measures of economic development level, ethnic diversity, degree of economic freedom, and state strength. Our SEM model also allows us to analyze the direct and the indirect effects of these exogenous predictors through the mediating latent variable, democracy.

Our goal is to investigate determinants of corruption. However, currently there is no objective measure of corruption available at the country level for enough countries to do quantitative cross-national analysis. Fortunately, we do have measures of the perceived level of corruption for a substantial number of countries. While an objective measure would be preferable, it is plausible to argue that the perceived level of corruption has many of the same consequences as does the objective level of corruption. When investment bankers are deciding which developing nation to invest in, perceptions about differences in corruption levels are likely to influence the choice made. When we refer to corruption control in this article, we always mean perceived level of corruption control.

Background

Most theories about the cause of corruption have focused on the institutions that harbor corrupt officials, emphasizing the importance of institutional reforms such as: increasing transparency and strengthening internal and external accountability; increasing salaries for public servants; expanding channels of appeal for ordinary citizens; and establishing anti-corruption agencies at various levels of government. In some countries institutional reforms have enhanced transparency and accountability in government. But in other countries where corruption is pervasive, including many developing and transition countries, such institutional reforms can be hard to enact and harder still to implement. Part of the problem is a lack of the normative consensus that would be needed for success (Johnston, 1998). If the goal is to sharply reduce corruption on a worldwide scale, it is crucial to identify the global, structural, and contextual factors that influence the level of corruption (Alam, 1995; Xin and Rudel, 2004). Cross-national research on corruption has been hampered because the precise form that corruption takes is related to the social norms and customs of individual countries (Gardiner, 2002). Based on their extensive review of the literature, LaFree and Morris (2004) define corruption as:

an abuse of public office that violates formal and informal norms, that brings direct or indirect gain to a public official, and provides a third party with
services or resources that would otherwise be more difficult or impossible to obtain. (pp. 602–3)

This definition fits the definition being used in our study. It does not include corrupt acts by those who are not government officials and it does not include those white collar crimes that do not meet this definition of corruption.

The level and patterns of corruption vary among countries, among institutions within those countries, and across historical periods. Prior studies of economic and political corruption (e.g. Ades and Di Tella, 1997, 1999; Ali and Isse, 2003; Broadman and Recanatini, 2000; Gray and Kaufmann, 1998; Husted, 1999; Mauro, 1997; Tanzi, 1998) suggest that factors leading to corruption generally fall into the following four categories.

**Political Factors**

Corruption negates the ‘common good’ and the ‘public interest.’ Worldwide evidence suggests that states with democratic government institutions tend to have low levels of corruption (Doig, 2000; Girling, 1997). Such countries generally have policies and legal institutions that are substantially more independent of elites. In addition, civil society and the media have an independent voice enhancing the accountability of government. Compared to non-democratic countries, countries with stable democratic political systems and genuine political competition tend to have a greater capacity to control corruption through the legal system, democratic elections, political rights, civil liberties, and freedom of the press. A democratic country grants its citizens political rights when it permits them to form political parties and to elect and monitor government officials. A country upholds its citizens’ civil liberties when it respects and protects their religious, ethnic, economic, linguistic, and other rights, including gender and family rights, personal freedoms, freedom of religious belief, freedom of the press, and freedom of association. Democratic theory suggests that countries with more political rights and civil liberties should have lower levels of corruption. Several quantitative studies suggest that many countries have experienced a reduction in perceived corruption level in response to the development of civil society and enhanced political competition (Johnston, 1998; Little, 1996). There is also evidence that political freedom, information flow, and ‘transparency’ have positive effects on corruption control (Ali and Isse, 2003; Islam, 2003).

However, democracy does not guarantee clean governance. Many new democratic states in Africa, Eastern Europe, and Latin America are characterized by high levels of corruption. Relatively weak democratic structures in these countries have proven ineffective in curbing corruption (Harriss-White and White, 1996; Little and Posada-Carlo, 1996; Robinson, 1998). Two of the largest democratic developing countries in the world are India and Nigeria. They are...
ranked 90th and 144th, respectively, out of 146 countries throughout the world, placing them among the most corrupt nations in the world as measured by the Corruption Perception Index (Transparency International, 2004).

Freedom of the press is one component of civil liberties. People in countries where there is no freedom of the press typically can only read, see, or listen to government-controlled media dominated by official propaganda. In combating corruption, freedom of the press plays a unique role because the mass media are crucial to creating and maintaining an atmosphere in public life that discourages and controls the level of corruption. It raises public awareness of corruption, its causes, consequences, and possible remedies (Ahrend, 2002; Stapenhurst, 2000; Waisbord, 2004). In the present study we consider several democracy-related political indicators: political rights, civil liberties, and freedom of the press.

**Economic Factors**

Industrialization is, in the view of many, a prerequisite for the restructuring of social existence on the basis of rational-legal principles. A number of analysts view poverty as the major contextual cause of corruption because it creates strong economic incentives for public officials to engage in corrupt acts (e.g. Xin and Rudel, 2004). Max Weber (1968) was the first of many who have argued that rationally organized bureaucracies governed by the rule of law emerge only when governments develop effective schemes for taxing market economies (Theobald, 1990).

There is evidence from both case studies and cross-national quantitative studies suggesting that states with honest and transparent government institutions tend to experience higher levels of income growth, national wealth, and social achievement (e.g. Cokgezen, 2004; Husted, 1999; Xin and Rudel, 2004). Higher income, investment, and growth are found in countries with effective and honest government institutions. Empirical cross-national research has repeatedly shown that the level of economic development is positively correlated with corruption control (e.g. Kaufmann and Kraay, 2001). Considering the wide range among the countries in our study with respect to level of economic development and industrialization, it is necessary to control for this difference in our models.

There are several indicators that have been used in prior studies to measure the level of economic development, the most common being various forms of GNP per capita and GDP per capita. Less common, but also frequently used, have been energy consumption per capita and percent of the labor force in non-agricultural occupations. We have elected to use energy consumption per capita as our measure because it yielded the most consistent results. This measure has been used for the same purpose in a number of other cross-national studies over the years (Hibbs, 1973; Shandra et al., 2003). In our study the
correlation between this measure and GDP per capita is .87. The correlations between our measures of corruption control (CCS and CPI) and energy consumption per capita in 2000, are .77 and .76, respectively.

There is international comparative and historical evidence suggesting that capable and clean government sometimes does evolve before a country becomes fully modernized and wealthy. Kaufmann and Kraay (2001) find that in the absence of other interventions, higher incomes do not necessarily guarantee improved governance. Corruption is in no way confined to developing countries; it is widespread in many developed countries as well. Our perceived corruption control data suggest that a number of countries, including Spain and Estonia, have much lower levels of perceived corruption than would be expected given their levels of economic development. Most African countries rank low with respect to corruption control; but some, such as Botswana, are ranked much higher than would be expected given their levels of economic development (Theobald and Williams, 2000; Transparency International, 2004).

This study includes an exogenous variable measuring economic freedom. The key ingredients of economic freedom are personal choice, freedom to compete, and protection of person and property (Gwartney and Lawson, 2003). Economic freedom is reduced when taxes, government restriction, and regulations are substituted for personal choice, voluntary exchanges, and market coordination. Government intervention via regulations and licenses creates large bureaucracies and increases the incidence of corruption (Ali and Isse, 2003; Cokgezen, 2004; Islam, 2003). There is a positive association between political freedom (liberal democracy) and economic freedom (market exchange) (Girling, 1997).

State Strength

A number of studies have observed that strength of state, usually measured by government expenditure over GDP, is associated with corruption. Furthermore, nations with high state strength scores often have larger government bureaucracies. There is also evidence of a positive association between the size of the government bureaucracy and the level of corruption (Ali and Isse, 2003). Large government sometimes leads to increased government intervention via regulations and licenses. This, in turn, tends to foster larger bureaucracies and to increase opportunities for various forms of corruption, large and small. One suggestion that has been made for reducing the prevalence of corruption is to decrease government size and reduce state power (LaPalombara, 1994; Riley, 1998). Most, but not all, of the evidence points to a positive association between state strength and corruption. Husted (1999) found that government size was not related to corruption level when a few key variables were controlled.
Juridical Factors

A poor legal system characterized by a lack of power to monitor the actions of high-ranking government officials and economic elites, incomplete laws, and a lack of transparency is easily exploited by corrupt government officials. Many case studies have found that efficient legal systems have a positive effect on the control of corruption (e.g. Ali and Isse, 2003; Theobald, 1990).

Transparency International has created an index measuring rule of law together with an index measuring corruption control, which is used as one of the two indicators of perceived level of corruption control. The correlation between the measure of corruption control 2002 and measure of rule of law 2002 is .96. If the measure of rule of law were included in the structural equation, the extremely high correlation with the dependent variable would make any other predictors seem irrelevant. For this technical reason we have decided not to include rule of law as a predictor of corruption.

Cultural and Social Structural Factors

Country specific cultural values and social structures affect the level and the pattern of corruption. A number of case studies have found that societies with strong extended family or clan-based loyalties tend to have high levels of corruption (Theobald, 1990). However, due to the lack of a reliable and internationally comparable quantitative measure for most countries, culture variables are not included in our study.

Ethnic conflict is an important determinant of political and economic decision-making in many nations and localities. A number of studies suggest that ethnolinguistic fractionalization (cleavages based on language and ethnicity) and conflict lead to political instability, badly designed economic policies, disappointing economic performance, and poor governance (Alesina et al., 2003; Easterly and Levine, 1997; Mauro, 1995). Easterly and Levine (1997) have shown that per capita GDP growth is inversely related to ethnolinguistic fractionalization in a large sample of countries. In a number of cross-national analyses of economic success, ethnolinguistic fractionalization has been included as a predictor or as a control (e.g. Brock and Durlauf, 2001; Doppelhofer et al., 2000). A cross-national study by Ali and Isse (2003) found that ethnic fractionalization has no impact on corruption when other key variables were controlled. The widespread corruption in most sub-Saharan African countries is often attributed to the extensive ethnic diversity in many of these countries. An index of ethnolinguistic fractionalization is included in our study to test for its direct effect on corruption and for any indirect effect on corruption via democracy.
Methods and Data

Structural Equation Modeling

Structural equation modeling is a useful technique when the goal is to assess a theoretical model that hypothesizes how sets of variables define constructs (latent variables) and how these constructs are related to one another (Jöreskog and Sörbom, 1996). In our case, we have three tasks. First, we will investigate the direct effects of four exogenous variables in Figure 1, the X variables: X1, X2, X3, and X4 (energy consumption per capita, ethnolinguistic fractionalization, economic freedom, and state strength), on the latent mediating variable (democracy) which has three indicators, the Y variables: Y1, Y2, and Y3 (political rights, civil liberties, and press freedom). Second, we will investigate the direct effects of the four exogenous variables on the latent dependent variable (perceived level of corruption control) which has two indicators, Y4 and Y5 (the two measures of perceived corruption control). Third, we will also examine the direct effect of the mediating latent variable (democracy) on the latent dependent variable (perceived level of corruption control). The structural equation model produces not only the estimates of the direct effects of each exogenous and mediating latent variable on the dependent variable (corruption control), but also the indirect effects of each of the exogenous variables on the dependent variable via the latent mediating variable (democracy).

Our cross-sectional SEM model presented in Figure 1 can be algebraically described as follows:

\[ \eta = \Gamma \xi + B\eta + \zeta \] (1)

where \( \eta \) is the latent dependent constructs (\( \eta_1 \) and \( \eta_2 \)); \( \xi \) refers to the four exogenous independent variables, each of which has one observed indicator (Xs in Figure 1); \( \Gamma \) is a 2 by 4 matrix representing the direct effects from the four exogenous variables on the two latent dependent variables; \( B \) refers to the direct effect from \( \eta_1 \) to \( \eta_2 \); and \( \zeta \) refers to the two disturbance terms, one for each of the latent variables.

Sample

In our analysis we use listwise deletion to deal with missing data. After excluding any country that is missing data on any variable, we ended up with a sample of 91 countries. We checked for outlier cases based on analysis of residuals, but did not find grounds for excluding any cases from our analysis. The 10 to 1 ratio between the sample size (91) and the number of observed variables (9) is within the acceptable range for this genre of research.
Indicators of the Latent Dependent Variable Corruption Control

In our analysis we use two measures of perceived corruption control taken from different sources.

Corruption Perception Index 2004 (or CPI04) data were compiled by Transparency International (2004). Transparency International defines corruption as the misuse of power entrusted in public officials for private gain. It includes corruption at both petty and grand levels. It is essentially the same as the definition offered by LaFree and Morris (2004) discussed earlier. The CPI rates countries with respect to the degree to which corruption is perceived to exist among public officials and politicians. It is a measure of perceived level of corruption control. It is a composite index, drawing on 14 different polls and surveys from seven independent institutions carried out among business people and country analysts, including surveys of residents, both local and expatriate. The surveys used in compiling the CPI indicator tend to ask questions about the misuse of public power for private benefits with a focus, for example, on bribe-taking by public officials in public procurement. Scores range from 0 to 10, with scores closer to zero indicating higher perceived corruption, and scores closer to 10 indicating lower levels of perceived corruption. For details of the data source, see Transparency International (2004). To ensure the normality of the distribution, we log this measure.

Corruption Control Score 2002 (or CCS02) data were compiled by the World Bank (Kaufmann et al., 2003). The definition of corruption control used
is basically the same as that used by Transparency International. In this case it is based on over 100 individual variables measuring perceptions of governance drawn from 25 separate data sources and constructed by 18 different organizations. Based on the survey results, each nation was assigned a corruption control score ranging from –2.50 to 2.50, where lower (closer to –2.50) scores indicate low control of corruption, and higher scores (closer to 2.50) indicate high corruption control. To increase the normality of the distribution, we log this variable.

Our two indicators of corruption control can be viewed as proxies for the ‘objective’ level of corruption in these countries. They are not objective measures, but it is likely that they provide a ranking of nations similar to that we would get based on an ‘objective’ measure were such a measure available. We say this because so many different sources have been combined to construct these perception measures.

**Exogenous Variables**

*Energy Consumption (per capita 2000)*: as an indicator of economic development and industrialization level of a country, we use energy consumption per capita in 2000 (World Bank, 2003). This indicator has been used in a number of prior studies (e.g. Hibbs, 1973; Shandra et al., 2003). Here it is included as a control variable. The energy data were originally compiled by the International Energy Agency. Energy consumption is strongly associated with the size of the modern sector of the economy – industry, motorized transport, urban development and so on. In recent years, commercial energy use has been growing rapidly in low- and middle-income countries. To improve upon the normality of the distribution, we log this variable.

*Ethnolinguistic Fractionalization*: we use the new measures of fractionalization developed by Alesina et al. (2003). It covers 650 distinct ethnic groups in 190 countries. They developed fractionalization measures based on ethnicity, linguistics, and religions. In this study, we use an index measuring ethnolinguistic fractionalization by averaging the scores of ethnic fractionalization and linguistic fractionalization for each country. The ethnic fractionalization measure is defined as the probability that two individuals selected at random from a country will be from different ethnic groups. The range of the measure is 0 to 1, with 0 for a perfectly homogeneous population. If the population share of ethnic groups in a country are denoted $p_1, p_2, p_3, \ldots$, then ethnic fractionalization is $F = 1 - \sum_{i=1}^{\infty} p_i^2$. Linguistic fractionalization is measured in the same way.

*Economic Freedom 2001*: Gwartney and Lawson (2003) provide a useful index measuring the degree of economic freedom present in five major areas: 1) government expenditures, taxes, and enterprises; 2) legal structure and security of property rights; 3) access to sound money; 4) freedom to exchange
with foreigners; and 5) regulation of credit, labor, and business. The scale for this index is from 1 to 10 with a high score reflecting more economic freedom. Hong Kong, Singapore, and the United States are near the top; Myanmar (Burma) is at the bottom.

State Strength: this variable is measured by general government final expenditure as percentage of GDP in 2001. We take our data from the database of World Development Indicators compiled by the World Bank (2003).

Indicators of Our Latent Mediating Variable Democracy

Political Rights and Civil Liberties 2000–1: the indices that measure political rights and civil liberties are taken from Freedom of the World 2003: The Annual Survey of Political Rights and Civil Liberties (Freedom House, 2003). This publication is an effort by Freedom House to monitor trends in political rights and civil liberties in 192 nations. The survey rates each country on a seven-point scale for both political rights and civil liberties. The survey derives its information from a wide range of sources. Most heavily weighted are the views of the human rights activists, journalists, editors and political figures around the world who keep up with the human rights situation in their countries. We have reversed the direction of the coding so that high scores refer to more political rights and civil liberties.

Press Freedom 2001: our measure of press freedom is taken from The Annual Survey of Press Freedom 2002 (Sussman and Karlekar, 2003) based on 2001 data. The ratings were originally provided by the Freedom House research team, but were then reviewed and modified by a group of regional and country experts. This variable measures the degree to which each country permits the free flow of information. This rating has three components: ‘A,’ ‘B,’ and ‘C.’ ‘A’ measures the structure of the news-delivery system under the country’s laws and administrative policy and the degree of influence on media content. The ‘B’ component evaluates the degree of political influence over the content of news media. Government officials, even in the most democratic nations, seek to manage the news. This component includes issues of access to information and sources, censorship, and the intimidation of journalists by the state and other actors. The ‘C’ component reflects an evaluation of the economic influences on media content, including pressure by government funding, corruption, bias in licensing, or quotas for newsprint or other material needs for the media. Each country’s rating is based on the total of the three components. We have reversed the direction of the coding so that high scores refer to more press freedom.

Results

Table 1 presents the means, standard deviations, and correlation matrix of the nine observed variables. All of the coefficients are significant at the 0.01 level.
### Table 1.
Mean, standard deviation, and correlation matrix for model variables (N = 91 countries)

|       | M   | SD  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
|-------|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 1. LgCPI04 | .565 | .214 | 1.000 |      |      |      |      |      |      |      |      |      |
| 2. LgCCS02 | .359 | .178 | .962** | 1.000 |      |      |      |      |      |      |      |      |
| 3. Political rights | 4.49 | 2.14 | .597** | .636** | 1.000 |      |      |      |      |      |      |      |
| 4. Civil liberties | 4.47 | 1.80 | .686** | .703** | .929** | 1.000 |      |      |      |      |      |      |
| 5. Press freedom | 54.49 | 25.26 | .672** | .699** | .927** | .932** | 1.000 |      |      |      |      |      |
| 6. LgEnergy | 3.12 | .434 | .770** | .764** | .519** | .555** | .581** | 1.000 |      |      |      |      |
| 7. Fractionalization | .418 | .251 | .415** | .422** | .340** | .387** | .347** | .395** | 1.000 |      |      |      |
| 8. Eco. freedom | 6.369 | 1.003 | .753** | .748** | .586** | .635** | .636** | .574** | -.289** | 1.000 |      |      |
| 9. State strength | 15.375 | 5.785 | .529** | .539** | .392** | .348** | .417** | .525** | -.168 | .318** | 1.000 |      |

**Notes:** ** Correlation is significant at the 0.01 level (two-tailed).

LgCCS02: Log of control of corruption score.
LgCPI04: Log of corruption perception index.
LgEnergy: Log of Energy consumption per capita.
Fractionalization: Ethnolinguistic fractionalization.
Eco. freedom: Economic freedom index.
(two-tailed) except for the correlation between state strength and ethnolinguistic fractionalization ($r = -.168$). The two indicators of the latent dependent variable, perceived corruption control (CCS02 and CPI04), are highly correlated with each other ($r = .962$). This table also reveals that the three indicators linked to the latent mediating construct of democracy (political rights, civil liberties, and press freedom) are highly correlated with each other. All but one of the exogenous predictors are positively correlated with the two corruption control variables (CCS02 and CPI04) and indicators of democracy. The one exception is ethnolinguistic fractionalization, which, as would be expected on the basis of prior research, is negatively correlated with all the indicators of the two latent variable constructs.

Figure 1 (presented earlier) presents results from the SEM model. The completely standardized maximum likelihood estimates (see Jöreskog and Sörbom, 1996) of the factor loadings from the confirmatory factor analysis model are given in the figure. As shown, all the factor loading estimates are high, indicating a strong association between each of the two latent variables (factors) and their respective indicators. The SEM model presented in Figure 1 assumes direct links between the four exogenous independent variables and each of the two latent variables (democracy and perceived corruption control). This model also assumes indirect effects through the mediating latent variable (democracy) to the latent dependent variable (perceived corruption control).

As shown in Figure 1, all the paths demonstrate effects in the expected direction. However, not all these coefficients are statistically significant. Table 2 presents the maximum likelihood estimates of the effects of all the exogenous variables and the mediating variable on perceived corruption control. This includes the direct, indirect, and the total effects. It also includes the relevant $t$-values for all these effects. It is of note that two of the coefficients are not significant: the indirect effects from ethnolinguistic fractionalization and state strength through democracy. However, their total effects are both significant and in the expected direction. The total effects presented in the last column of Table 2 indicate that economic freedom has the strongest positive effect on perceived corruption control followed by energy consumption per capita, state strength, democracy, and ethnolinguistic fractionalization.

**Model Fit**

LISREL produces a number of goodness of fit statistics. The $\chi^2 = 25.39$ with 16 degrees of freedom, $p = .063$. This tells us that there is a good fit. That is, the difference between the data and the theoretical model is not statistically significant. The root mean square error of approximation (RMSEA) = .081. An RMSEA smaller than .05 indicates a good fit, whereas a value between .05 to .08 shows a reasonable fit (Kline, 2005). Since RMSEA is at borderline, it is useful to report some of the other goodness of fit statistics as well. Both the
The comparative fit index (CFI) and incremental fit index (IFI) for our model are .99. A rule of thumb for the CFI and IFI is that values greater than .90 indicate a reasonably good fit of the model (Hu and Bentler, 1999). The goodness of fit index (GFI), a sample-based analogous to $R^2$, is .94. The adjusted GFI is .83 and the normed fit index (NFI) is .98. Based on all these statistics we conclude that there is a good fit between our model and our data.

**Discussion**

Our structural analyses suggest that nations that have institutionalized people’s political rights, civil liberties, and freedom of the press generally experience lower levels of corruption. But the existence of a constitutional democratic political system does not necessarily guarantee a low level of corruption. For example,
Kyrgyzstan is considered one of the most democratic countries in Central Asia with respect to its constitution, laws, civil society, freedom of expression, and governance, but it ranks 122nd out of 145 countries in the world with respect to corruption control (Transparency International, 2004). Many developing and transition nations have very different historical, cultural, and social backgrounds than do the western industrial nations. Some countries have had no prior history with democracy. Others have not yet had the opportunity to develop mature democratic structures. It can take decades to institutionalize democratic structures and to build popular support for and trust in those structures.

Our study attempts to assess the relevance of economic freedom to the control of corruption. It lends support to evidence from prior case study research suggesting that corruption often occurs in the process of government intervention in the economy. If government regulations are pervasive and officials have discretion in applying them, individuals are often willing to offer bribes to officials to circumvent the rules and regulations. Mauro (1997) mentions several such sources of corruption: government trade restrictions may promote corruption. In contrast, a very open economy – free of government restrictions – is generally associated with lower levels of corruption. Government subsidies sometimes contribute to corruption. Price controls, multiple exchange rate practices, and foreign exchange allocation schemes may all lead to corruption. Policies aimed at liberalization and deregulation, as well as those that attempt to guarantee genuine competition and civil participation, tend to reduce opportunities for corruption.

We find that ethnolinguistic fractionalization has both a detrimental direct and indirect effect on corruption control. Our findings are consistent with the argument that in an ethnically diverse society, a bureaucrat is likely to consider the interests of his close kin, next his ethnic group, and then maybe his country (Ali and Isse, 2003). The key for policy-makers is to take into account the level of ethnolinguistic fractionalization in a society because it increases the risk of certain forms of corruption, particularly those linked to favoritism towards one’s relatives, clan members, or ethnic group.

State strength has a positive effect on corruption control, but its indirect effect is not significant. This finding has potentially important implications for both developing and transition countries. But more research is needed to contextualize this finding. While it may be true that overall state strength has a positive effect on corruption control, it is at least possible that the strength of that effect may vary a great deal among different categories of countries. We would hesitate to argue, based on our findings, that increasing state strength or government expenditure will always reduce the level of corruption. The optimal size for a government and what makes for an effective state may differ enormously across countries at different levels of development.

The failure of state-dominated development strategies and the collapse of most of the state-socialist economies during the early 1990s have led many
analysts to conclude that the goal of current reforms should be to move as rapidly as possible to a minimalist state. However, there is evidence suggesting that weak states have not been able to respond well to humanitarian emergencies in many parts of the world (World Bank, 1997). While the government has often been the major source of corruption in many developing and transition countries, a strong and effective government is necessary to enforce the rule of law and to promote social development, including controlling corruption. The government needs to provide restraints to check arbitrary and corrupt behavior by public officials. In the former Soviet Union and in several Eastern European countries, the collapse of their centrally planned economies has resulted in weak governments which has led to widespread corruption (World Bank, 1997). Without an effective state, sustainable development – both economic and social – is going to be difficult, if not impossible. Because corruption is often embedded in the social, political, historical, and economic structure and the cultural fabric of a nation, a quick solution to the problem is unlikely.

Conclusions

Our most important finding is that democracy has a positive effect on corruption control. While we are not the first to come to this conclusion, because we use SEM-based techniques, our latent variables measuring democracy and corruption control are arguably superior to the single indicator measures used in prior studies. We find that state strength has the hypothesized positive effects on corruption control. This undercuts the argument that with less government spending there is likely to be less corruption. Ethnolinguistic fractionalization, our measure of the pervasiveness of ethnic cleavages, has negative effects, both direct and indirect, on corruption control. Its indirect effects through democracy suggest that it is a potentially important factor in the development of democratic institutions which, in turn, are important as determinants of corruption levels. We also find that our measure of economic freedom has both significant direct and indirect effects on corruption control pointing to the potential role of economic freedom in the development of democratic institutions. While some countries such as China seem intent on denying the inevitability of this link, for our sample of 91 nations does point to such an association.

When interpreting the results of our study, it is important to keep in mind some of the limitations of the research. One of the most important limitations is that we are dealing with perceptions about the level of corruption, not an objective measure of the actual level of corruption. Since most corrupt transactions are secretive, it would be exceedingly difficult to get a credible objective indicator of the level of corruption for even one country, let alone a comparable measure for a large number of countries.

Several of the independent variables involved in this study are also based, at least in part, on subjective data, including our measures of political
rights, civil liberties, freedom of press, and economic freedom. The primary reason for this is that it is hard to agree on what objective data would look like for some of these variables and, even if agreement could be reached on that issue, objective data would be all but impossible to obtain for the large sample of countries included in this study (Kaufmann et al., 2003).

Although a large scale quantitative study such as this is useful for testing hypotheses about a number of potentially important causes of corruption, hypotheses which it would be difficult or impossible to test using case study evidence, case studies cannot be replaced by cross-national quantitative studies such as ours. In this study, we have only examined a few of the potential determinants of corruption control due to the absence of certain theoretically relevant predictors and the limitation of our sample size. Future research is needed to explore other possible structural determinants of cross-national variation in the level of corruption, such as measures of the juridical system, geographic region, diverse cultural roots, and colonialist history.

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