# CAN CORRUPTION EVER IMPROVE AN ECONOMY?
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Many in the world of developmental economics believe that corruption, the circumvention of the rule of law for private gain, leads to nothing but woe for any nation's economy, under any circumstances. Transparency International makes the elimination of corruption their mission, and many large multinational firms today echo that goal by building ethical codes that prohibit employees from engaging in practices deemed corrupt, regardless of local attitudes and customs toward the practices. The World Bank makes curbing corruption a linchpin in their campaign to improve governance. Reasons given for blanket condemnation of corrupt behavior are often utilitarian: Corruption is expected to increase the economic costs of doing business by undermining the laws of the land; this, in turn, reduces productive activities and investments, with negative consequences unfolding for human development and economic growth.

When legal protection of personal and property rights is strong, this argument is reasonable, but does it hold for nations that have failed to establish and consistently enforce a sound rule of law? Leff (1964) and Huntington (1968) speculated that corruption may be considered a useful substitute for a weak rule of law. In other words, the value of behaving corruptly—the value of additional productive transactions that occur—can exceed the costs of engaging in corruption. This is most likely when the legal options for doing business are quite limited. Osterfeld (1992) makes a useful distinction in sorting out corrupt behaviors that is followed in this article. He divides corrupt actions into two categories: economically restrictive and economically expansionary. Corruption may often be restrictive, rent-seeking actions, such as firms' seeking government protection from competitors. But corruption also can expand economic activity, for example, by private

citizens bribing officials to evade bad law. An underground ("informal") economy is built precisely upon effective evasions.

There can be both indirect costs and benefits related to corrupt behaviors that are not captured directly in individual acts of corruption, such as the support given to inefficient producers and forced allocation of resources away from their most productive uses (Murphy, Shleifer, and Vishny 1993). Such costs might exceed micro-level expansionary gains from particular corruption acts, and therefore it could be that all corrupt acts are economically restrictive, even those that are seemingly expansionary. But there is a lack of compelling empirical evidence that this is so, and the counter proposition—that sometimes corruption assists a nation's economy—is feasible and testable. The primary purpose of this article is to examine a broad spectrum of country-level data to understand better whether corruption might under some circumstances be expansionary for a nation.

The primary results from this study are that corruption has significant restrictive as well as expansionary economic effects. The relative magnitude of the two forces depends on the degree to which laws protecting property are enforced in a nation. When protections are weak, corruption can play a significant expansionary role for a nation. When they are strong, the primary economic effects from corruption are restrictive. This article suggests that in most stable nations the negative effects of corruption outweigh the positive by 50- to 100-fold; most corrupt behaviors seem to be consistent with a rent-seeking model. In such cases, broad direct campaigns to eradicate corruption are more likely to be useful.

On the other hand, nations with weak governance show much larger positive effects from corruption: For about 20 percent of the nations analyzed, the expansionary economic effects from corruption were above 20 percent of the restrictive effects, and for 12 nations the expansionary effects from corruption exceed the restrictive. This evidence supports the proposition that many corrupt activities substitute for missing or misguided law. These results suggest that direct attacks on corruption can be costly battles that will be resisted when corruption plays an expansionary role in a nation. Improving fundamental governance structures is a more appropriate target in these circumstances.

## Corruption and Economic Welfare: Arguments and Findings

Corruption's effects on economic outcomes have been extensively studied. Many studies have been at the micro level, detailing the

outcomes from acts of corruption. Most of these studies are anecdotal or case-based and generally argue that systemic effects of corruption on economic well-being are adverse (De Soto 1989). These findings support the intuition that corruption's impacts are quite damaging to economic efficiency.

Choi and Thum (1998) argue that firms may be prompted to organize themselves in inefficient ways in order to diminish the risks due to future demands of corrupt officials (e.g., building fly-by-night production that can be shut down with ease). Svensson (2005) argues that firms might expend considerable effort in building organizations that are particularly accomplished at dealing with corrupt officials. Additionally, corrupt acts can damage prevailing legal institutions so that generalized public trust falls, further weakening frail institutions and pushing more production into the underground economy.

A smaller set of studies has examined economic outcomes from corruption at the nation-state (macro) level, which is the approach used in this article. Mauro's (1995) large cross-sectional study demonstrates that corruption reduces investment, and this, in turn, reduces national economic growth. However, the corruption index he uses only affects GDP growth at the 10 percent significance level, while a broader measure of bureaucratic efficiency (presumed to be inversely related to corruption) has a more statistically significant impact on investment than on GDP. Svensson (2005) updates Mauro with more recent data but is unable to find any statistically significant relationship between economic growth and corruption. Although his regression model points to corruption's negative relationship to economic growth, the variable is not statistically different from zero, a result that does not change as he inserts a number of explanatory variables suggested in the growth literature.

Three IMF working papers (Abed and Davoodi 2000, Leite and Weideman 1999, and Tanzi and Davoodi 1997) all argue for corruption's negative impact on GDP per capita growth. Akçay (2006) finds that a country-level dependent variable measuring human development (which contains a one-third weighting on GDP per capita in terms of purchasing power parity) is negatively affected by corruption. Akçay (2006: 46) concludes that his study "extends the list of negative consequences of corruption and argues that corruption in all its aspects retards human development." Such a broad conclusion does not appear to be warranted by either theory or evidence to date.

## Modeling Corruption's Influence on Economic Activity

The economically expansive view of corruption cannot be ruled out, and under some conditions can be compelling. Corruption could lubricate the flow of commerce when few legal (noncorrupt) options are viable for economic actors. Corruption would have value when it permits productive investments and trades that otherwise would not occur. For example, marketing boards in many African nations force farmers to sell produce at far below cost of production and external market prices; government officials can then resell crops for a sizeable profit. To survive under these conditions, farmers often bribe public officials to permit private sales or to smuggle product out of country. Such corruption permits the continuation of valuable economic activity that otherwise would decline precipitously (Osterfeld 1992).

As another example, licensing restrictions on many businesses are so draconian in many central and Latin American countries that many businesses operate illegally to avoid the endless restrictions and delays placed in front of a formally legal enterprise. Bribery is essential to sustain such businesses operating in the informal economy (De Soto 1989). The bribes paid by private parties generally are volitional (not forced extortions of funds), and presumably decisions to pay them are made on an economic benefit-cost analysis. Logically, bribes would not be paid unless the value of economic output from the enterprise exceeded these and all other costs of doing business.

Yet seemingly expansionary corruption still could be economically restrictive if external economic costs exceed the net direct gains. Some case studies speculate that corruption undermines a nation's political and social institutional development. These external costs from corruption seem to fall into two categories: (1) excessive investments in manipulating the political system rather than in the advancing the enterprise's output, and (2) fostering of disrespect for law that makes reform less probable because the informal economy preempts the formal.

No doubt corruption has some negative external consequences; still, the aggregation of such costs could be considerably less than the short-term economic gains realized by corruption's facilitation of production and trade. Another possibility is that corrupt behavior could yield some positive long-term externality effects for nations that do not rigorously defend personal and economic freedoms. In these cases, respect for bad law, observed as citizens' reluctance to use bribery and to engage in illegal markets, could reinforce government's failed role. Passivity in these circumstances could encourage

governments not to develop rule of law and support decentralized markets, but rather to continue to centralize authority in order to exploit citizens' wealth for the favored few. By contrast, some behaviors labeled as corrupt might act as catalysts for positive economic reform.

There is another positive aspect to corruption to consider: when a bribe is paid in the form of investment in public infrastructure that otherwise would not occur. Consider, for example, the case of a foreign corporation seeking to develop energy projects within an unstable nation lacking basic infrastructure and a rule of law. Many investments that the firm can make within this country to extract and transport energy will clearly be subject to expropriation—not only by the central governmental but also by local officials and quasi-governmental groups, each of which can damage or delay the foreign firm's operations. Thus, each can make (corrupt) demands upon the firm. In Angola, for example, Exxon responded to demands by various parties to deliver basic infrastructure services that the government had been unable or unwilling to provide (Ball 2006). Succumbing to pressure to provide these services, although perhaps not illegal, is corrupt in a broad definition of the term. Presumably, the transaction provided net value to Exxon and had a positive impact on Angola's economy.

In sum, what one views as a corrupt act can be difficult to place in the expansionary or restrictive category. Some judgment is always needed in individual cases. Without doubt, many nations that do not have sound legal systems suffer from the nasty, extractive forms of extortion and theft that clearly are restrictive. Nevertheless, the fragile underpinnings of many nations' economies in these circumstances also depend on the substitution of an informal economy for weak governance. Plausibly, acts of corruption can have positive, economically expansionary effect, both short- and long-term.

While theoretically we can argue that some economic consequences of corrupt activities are positive, especially in those countries with very weak legal institutions, empirically determining the magnitude of costs and benefits from particular corrupt acts is quite difficult. Most of our understanding here is anecdotal, coming from case studies and micro-level analyses. The preponderance of this literature appears to reinforce prior beliefs that corruption is economically damaging under any circumstances. From such sketchy evidence and reasoning, policies systematically against corruption have been derived. A macro (nation-state) empirical analysis, adequately considering the institutional context within which corruption occurs, can usefully help answer questions about broader economic effects and thus

provide a better foundation for considered policy. That is the purpose of the following empirical analysis.

## Modeling Corruption's Influence on the Economy

The anticipated effects of corruption can be entered into a model in two ways. First, a corruption measure can be entered as a direct independent variable. Second, corruption can be intermediated by the quality of the legal protection by incorporating a multiplicative variable. If corruption substitutes for poor governance as official protection of property weakens, then corruption should have a positive effect on output. In sum, both negative (restrictive) and positive (expansionary) effects can result from corruption and these are tested in the following linear multivariate regression model:

$$(1) \quad GDP = A_0 + b_1 MedianAge + b_2 Literacy + b_3 Reserve\$ + b_4 CPI + b_5 Rights + b_6 INDEX$$

where

$GDP$ = national per capita gross domestic product, the average of the years 2000 and 2005, at purchasing power parity (PPP);

$MedianAge$ = median age in nation in 2005;

$Literacy$ = percentage of a nation's population, age 15 and over, who can read and write in 2005;

$Reserve\$$ = proven natural gas and oil reserves of nation per capita, at 2005 market prices;

$CPI$ = Corruption Perceptions Index, 2005, scaled 1–10, with a higher number indicating less corruption;

$Rights$ = either EFW (version 1) or FHRIGHTS (version 2) are used for this variable;

$INDEX$ = measure of a nation's legal institutional protection relative to corruption as measured by CPI— INDEX1 is used in the version 1 estimation and INDEX2 in the version 2 estimation.

## Variables

The dependent variable for this analysis is GDP per capita adjusted for purchasing power parity. Many studies of corruption's effect on the economy have used change in economic output as the dependent variable. The cross-sectional study in this article, however, looks at GDP averaged across the years 2000 and 2005. Measuring GDP accurately in less developed nations of the world is an extraordinarily difficult task, and the data often amount to rough approximations made on an irregular basis. Problems with the quality of much of the

reported income data should make us hesitant to make finer distinction in the variable. An additional problem in gauging aggregate annual output in resource-rich countries with little economic diversification is that political decisions on extraction and sale of reserves often cause GDP to rise or fall dramatically from year to year for reasons unrelated to the underlying productivity of the economy. To provide some greater stability to the GDP variable, the average of GDP over two years, 2000 and 2005, is used.

Mauro (1995) and Svensson (2005) argue that corruption is subject to feedback with economic activity levels. For example, higher GDP might encourage more corruption since there is more to grab. By contrast, in this study corruption is treated as an independent structural variable. Evidence in transitional economies supports the contention that corruption levels are subject to very slow change. Over the six-year period 2000–2005, of 40 nations with the most severe problems providing sound legal support for property rights, the Corruption Perceptions Index (CPI) moved from 2.99 to 2.62. During a span in which corruption was a highly visible target for these developing countries to attack, corruption actually increased by 12 percent (a lower CPI means a higher level of corruption).[1]

For the purposes of this article, the CPI, produced by the University of Passau in Germany and Transparency International, is used in all estimations. The index is an ordinal ranking of corruption by nation taken from survey responses, presumably from knowledgeable participants. The CPI is probably the most widely cited corruption index and has received extensive media coverage in recent years. Other measures of corruption exist such as an indicator published in the *International Country Risk Guide*.[2] That index aside from being expensive to attain is a measure of the harm to business due to corruption, rather than a direct measure of the frequency of corrupt acts. These and other subjective measures of corruption are probably highly correlated, because evaluators read one another's estimates (Svensson 2005). This difficulty reduces the value of aggregating such measures. Using Transparency International's CPI also permits a larger set of nations to be examined than other indices. The expected

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[1]One of the few cases of dramatic change was Belarus, whose CPI moved from 4.1 in 2000 to 2.6 in 2005.

[2]The United Nations since 2003 has produced *The International Crime Victim Survey*, which focuses on individuals rather than firms. Also, the EBRD-World Bank *Business Environment and Enterprise Performance Survey* shows experiences of managers in 1999 and 2002, but has few data on developing nations.

direct effect of the CPI (a high CPI indicates a low level of corruption) on GDP is positive.

For the purposes of this study, two measures of institutional protection are used. One measure is the *Economic Freedom of the World* (EFW) index of legal structure and security of property rights (Gwartney, Lawson, and Gartzke 2005). This is the variable EFW, scaled from 1 to 10, with larger numbers indicating more legal protection offered. The second approach uses Freedom House's scores for civil and political freedoms by nation (Freedom House 2005). Subtracting the combined scores on these two measures from 14 gives us the variable FHRIGHTS. Because the two Freedom House indices increase from 1 to 7, with 7 indicating the least favorable environment, this transformation permits FHRIGHTS to be interpreted as an index with larger values signifying better protection (numbers run from a minimum of 2 to a maximum of 14). Thus, the transformed *Economic Freedom of the World* index FHRIGHTS has the same general interpretation as for the EFW variable, perhaps a more intuitive way of interpreting the results in the two regressions.

EFW enters the first version of the model and FHRIGHTS the second. The Freedom House's measure of civil and political freedoms is a broader measurement of a nation's social and political openness as well as its protection of economic freedoms, while EFW more directly addresses those legal institutions that directly effect market activity. Because it is unclear what aspects of institutional protections of personal freedoms matter most, two versions of the model are estimated. In both, greater institutional protection is expected to positively affect the GDP measure.

This article assumes that positive effects from corruption would be more probable at the lower extremes of the index values for institutional protection. Thus, the institutional variable enters the model linked with the corruption term in the two versions of the model as follows:

(2)   $\text{INDEX1} = (10 - \text{EFW})^2/\text{CPI}$

(3)   $\text{INDEX2} = (14 - \text{FHRIGHTS})^2/\text{CPI}$.

Both forms of this interactive variable expand exponentially with the deterioration of the rights measures: As the institutional environment variable (EFW or FHRIGHTS) declines, the index will expand for any given level of corruption. Thus, for example, if EFW were 8 (a relatively sound institutional environment) and the CPI were 5 (a mid-level of corruption on the 1–10 scale), the INDEX1 value is 0.8. If the EFW were 2 (a relatively unsound institutional environment)

and the CPI remains at 5, the INDEX1 value is 12.8. A similar interpretation can be made for INDEX2.[3] I expect that INDEX1 (used in version 1) and INDEX2 (used in version 2) will have positive effects on GDP, the dependent variable.

Several other independent variables are expected to affect economic activity in the following ways.[4] A higher median age generally reflects a more mature, better educated population that can work more productively; a young population, by contrast, will have more individuals who are unlikely to be educated or they will be insufficiently mature to be highly productive in the economy. Thus, a higher median age is expected to increase GDP. This, of course, might not hold if a higher proportion of elderly, nonworking individuals places a drag on an economy. But inserting a variable in this equation to represent the proportion of the population that is 65 and older does not affect the relationships in the equation materially and this formulation of the model was discarded.

The literacy of the adult population is expected to positively affect GDP per capita. More detailed demographic measures of human capital and investments in education are not available for many of the poorer nations examined in this study, and therefore I have limited the variable set in order to retain a broad population of nations in the study. Among the remaining variables, the quality of the data is always suspect for poor nations whose national income accounting and statistical records are far less complete and reliable than for developed nations.

In the model, greater natural gas and oil proven reserves are expected to increase GDP per capita. On the other hand, Sachs and Warner (1995) find evidence that natural resource endowments can work against a nation's economic growth. Individuals and organizations in nations with large, immobile resource bases may pay more attention to exploiting the endowment and less to developing human capital and other physical investments or to furthering government policies that stimulate a more diverse economy. This "resource curse" was initially tested by extending the model to include a multiplicative term between corruption and reserve holdings. This variable is neither statistically significant nor does it improve the overall fit of the estimated equation and subsequently was discarded.

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[3] A linear formulation of the numerator in these indices yields approximately similar results in estimation. These results are not reported. The exponential approach presumes the effects of corruption on an economy are most pronounced at the extremes of poor institutional environment.

[4] Data for these other variables come from the *USA CIA World Factbook* for 2000 and 2005.

## Empirical Findings

Two versions of the model are estimated. In version one, the variable constructed for the interaction of corruption and strength of legal institutions, INDEX1, is derived from the *inverse* of the *Economic Freedom of the World* index of legal structure and the security of property rights (EFW) and the CPI (see equation 2). EFW is also included as a stand-alone independent variable in the equation. EFW is available only for 119 of the 167 nations for which information was otherwise available. Thus, in restricting the observations to those having an EFW rating, many nations that probably are weak institutionally are eliminated from the estimation, weakening and perhaps biasing the regression. Nevertheless, EFW is perhaps the best indicator of protections to property that is available among nations.

The second version of the model employs INDEX2, the interaction term of CPI and FHRIGHTS (see equation 3). FHRIGHTS also is included as a stand-alone independent variable. As previously discussed, these variables INDEX1 or INDEX2 are anticipated to capture substitution between corruption and legal institutions. Thus, if substitution is observed, then the INDEX terms should be positively signed. CPI also enters both versions of the model to capture the rent-seeking aspects of much corruption on the economy. The estimates of coefficients on CPI and INDEX are useful in exploring the relative impact of restrictive versus expansionary consequences of corrupt behavior on GDP as discussed below.

Results from the OLS estimation of the two versions of the model are shown in Table 1. For version one, the adjusted $R^2$ is 0.862. For version two the $R^2$ is 0.867. The table shows coefficients of the regression variables with t values.

In version one, three variables are of direct interest to exploring questions about corruption and the quality of legal institutions relationships to GDP: CPI, EFW, and INDEX1. In version two, the three variables of direct interest to the questions of corruption and the quality of legal institutions relationships to GDP are CPI, FHRIGHTS, and INDEX2. In both versions the CPI term has a positive statistically significant impact on GDP per capita as expected: More corruption directly affects an economy adversely. This result will surprise few.

A positive coefficient on INDEX1 (in version 1) and INDEX2 (in version 2) would suggest that substitution from poor institutional protection to greater corruption positively affects GDP. In both estimations, INDEX1 and INDEX2 are positively signed and statistically significant at the 1 percent level. These results support the

TABLE 1

GDP PER CAPITA AND CORRUPTION

| | OLS | |
|---|---|---|
| Variables | Version 1 | Version 2 |
| Constant | −22,839.086*** | −16,792.365*** |
| | (6.72) | (9.99) |
| Median Age | 324.617*** | 231.598*** |
| | (4.50) | (3.928) |
| Literacy | 17.150 | 4.3338 |
| | (0.615) | (0.233) |
| Reserve $ | 0.006*** | 0.007*** |
| | (5.318) | (6.961) |
| CPI | 2,779.645*** | 3,143.454 |
| | (8.074) | (17.038) |
| FHRIGHTS | — | 558.162 |
| | | (3.196) |
| EFW | 1326.260*** | — |
| | (2.516) | |
| INDEX1 | 303.865*** | — |
| | (3.410) | |
| INDEX2 | — | 117.269*** |
| | | (3.653) |
| $R^2$ adjusted | 0.862 | 0.867 |
| Observations | 119 | 167 |

NOTES: * indicates significance at the 10 percent level, ** at the 5 percent level, and *** at the 1 percent level. Absolute t statistics are in parentheses.

proposition that corruption functions as a substitute for weak legal protections in a nation.

How large are the expansionary effects on income from corruption compared to the restrictive effects of corruption? Table 2 shows the ratio of estimated corruption gains to estimated corruption losses for the 121 nations in the version one regression. This ratio is constructed for each nation as the INDEX1 value multiplied by the unstandardized coefficient on that variable (303.9), divided by CPI multiplied by the unstandardized coefficient on that variable (2,779.6). This accounts for the estimated dollar magnitude of a nation's gains in GDP per capita from corruption divided by estimated magnitude of losses per capita from corruption.

As Table 2 indicates, for 12 nations (Haiti, Bangladesh, both Congos, Chad, Venezuela, Côte d'Ivoire, Pakistan, Burundi, Paraguay, Nigeria, and Georgia) the ratio is greater than one, indicating that net

TABLE 2

RANKING OF NATIONS BY RATIO OF EXPANSIONARY TO
RESTRICTIVE CORRUPTION

| | | | | | |
|---|---|---|---|---|---|
| 1 | Haiti | 2.11 | 42 | Guinea-Bissau | 0.37 |
| 2 | Bangladesh | 2.02 | 43 | Senegal | 0.35 |
| 3 | Congo (Kinshasa) | 1.96 | 44 | Guyana | 0.34 |
| 4 | Chad | 1.96 | 45 | Mexico | 0.33 |
| 5 | Venezuela | 1.53 | 46 | Zambia | 0.33 |
| 6 | Côte d'Ivoire | 1.53 | 47 | Peru | 0.32 |
| 7 | Pakistan | 1.47 | 48 | Colombia | 0.32 |
| 8 | Burundi | 1.46 | 49 | Tanzania | 0.29 |
| 9 | Paraguay | 1.43 | 50 | Romania | 0.28 |
| 10 | Congo (Brazzaville) | 1.36 | 51 | Panama | 0.27 |
| 11 | Nigeria | 1.32 | 52 | Malawi | 0.27 |
| 12 | Georgia | 1.13 | 53 | Egypt | 0.27 |
| 13 | Nepal | 0.98 | 54 | China | 0.24 |
| 14 | Ecuador | 0.93 | 55 | Syria | 0.23 |
| 15 | Rwanda | 0.92 | 56 | Ghana | 0.22 |
| 16 | Guatemala | 0.86 | 57 | Iran | 0.22 |
| 17 | Zimbabwe | 0.84 | 58 | Poland | 0.22 |
| 18 | Kenya | 0.83 | 59 | India | 0.21 |
| 19 | Bolivia | 0.83 | 60 | Brazil | 0.21 |
| 20 | Papua New Guinea | 0.82 | 61 | Jamaica | 0.20 |
| 21 | Nicaragua | 0.82 | 62 | El Salvador | 0.20 |
| 22 | Central African Republic | 0.80 | 63 | Turkey | 0.20 |
| 23 | Honduras | 0.77 | 64 | Bulgaria | 0.19 |
| 24 | Niger | 0.75 | 65 | Trinidad | 0.16 |
| 25 | Algeria | 0.74 | 66 | Morocco | 0.15 |
| 26 | Togo | 0.71 | 67 | Fiji | 0.14 |
| 27 | Indonesia | 0.68 | 68 | Thailand | 0.14 |
| 28 | Philippines | 0.67 | 69 | Latvia | 0.12 |
| 29 | Sierra Leone | 0.66 | 70 | Lithuania | 0.10 |
| 30 | Mozambique | 0.64 | 71 | Belize | 0.10 |
| 31 | Madagascar | 0.64 | 72 | Greece | 0.09 |
| 32 | Argentina | 0.63 | 73 | Mauritius | 0.09 |
| 33 | Vietnam | 0.54 | 74 | Italy | 0.08 |
| 34 | Russia | 0.53 | 75 | Czech Republic | 0.07 |
| 35 | Uganda | 0.53 | 76 | Costa Rica | 0.07 |
| 36 | Albania | 0.51 | 77 | Uruguay | 0.06 |
| 37 | Ukraine | 0.49 | 78 | South Korea | 0.06 |
| 38 | Gabon | 0.48 | 79 | Bahrain | 0.05 |
| 39 | Benin | 0.45 | 80 | Hungary | 0.05 |
| 40 | Mali | 0.39 | 81 | Malaysia | 0.05 |
| 41 | Sri Lanka | 0.37 | 82 | Tunisia | 0.05 |

*continued*

TABLE 2 (*continued*)

RANKING OF NATIONS BY RATIO OF EXPANSIONARY TO
RESTRICTIVE CORRUPTION

| 83 | South Africa | 0.05 | 102 | Belgium | 0.01 |
|-----|--------------|------|-----|----------------|------|
| 84 | Jordan | 0.04 | 103 | United States | 0.01 |
| 85 | Kuwait | 0.04 | 104 | Ireland | 0.01 |
| 86 | Taiwan | 0.04 | 105 | Singapore | 0.00 |
| 87 | Slovenia | 0.04 | 106 | Canada | 0.00 |
| 88 | Botswana | 0.03 | 107 | Switzerland | 0.00 |
| 89 | Cyprus | 0.03 | 108 | Austria | 0.00 |
| 90 | UAE | 0.03 | 109 | Germany | 0.00 |
| 91 | Israel | 0.03 | 110 | Luxembourg | 0.00 |
| 92 | Spain | 0.03 | 111 | Australia | 0.00 |
| 93 | Chile | 0.03 | 112 | New Zealand | 0.00 |
| 94 | Estonia | 0.02 | 113 | Netherlands | 0.00 |
| 95 | Malta | 0.02 | 114 | United Kingdom | 0.00 |
| 96 | Namibia | 0.02 | 115 | Norway | 0.00 |
| 97 | Bahamas | 0.02 | 116 | Iceland | 0.00 |
| 98 | Portugal | 0.02 | 117 | Sweden | 0.00 |
| 99 | Oman | 0.02 | 118 | Finland | 0.00 |
| 100 | France | 0.01 | 119 | Denmark | 0.00 |
| 101 | Japan | 0.01 | | | |

effects from corruption are positive. For all other nations, including many with not particularly strong property protection, the ratio is less than one but still of significant magnitude. For developed nations, the ratio generally is very small, indicating that corruption has little to offer in the way of substitution for bad law and much in its disfavor from damaging rent-seeking. For example, for 27 of the 30 OECD nations this ratio is less than 0.10.[5] Figure 1 shows the relationship between the ratio of corruption effects (expansionary to restrictive) and GDP per person, and suggests that the potential gains from types of corruption that substitute for legal failings are restricted to poorer nations.

Aspects of corruption that are expansionary and those that are restrictive are twined into the single measure of corruption, CPI. Therefore, one cannot tease out particular characteristics of corrupt behavior from these data. What can be said is that in many nations with poor property rights protection, the positive aspects of corruption on GDP outweigh the negative effects, as Osterfeld (1992)

[5]The exceptions are Mexico, Poland, and Turkey.

FIGURE 1

RATIO OF CORRUPTION EFFECTS (EXPANSIONARY TO RESTRICTIVE)
COMPARED TO GDP PER PERSON AT PPP
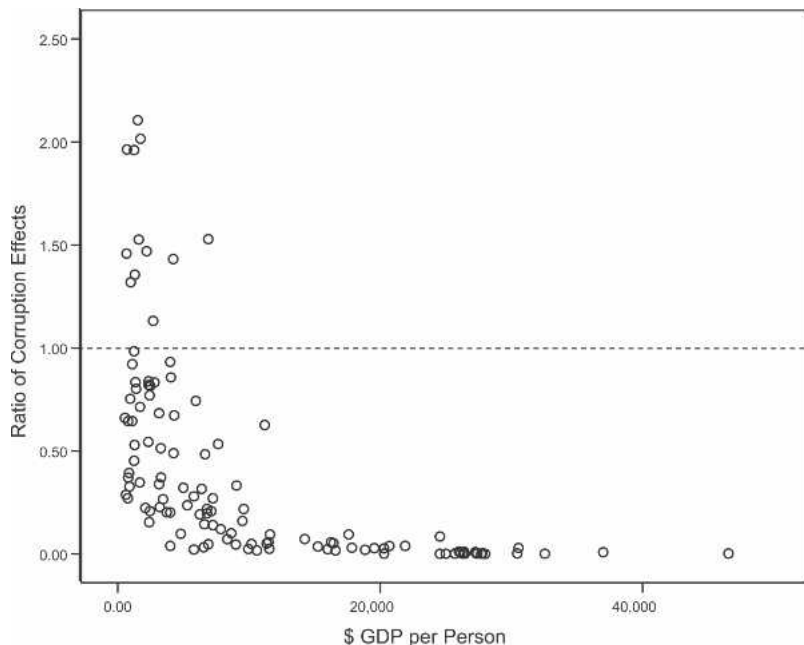


hypothesized. This inverse relationship is illustrated in the scatter diagram (Figure 2) of the EFW and the ratio of expansionary to restrictive corruption.

Among the other independent variables in the regression, Median Age plays the hypothesized positive role in both estimated versions of the model. With an aging population comes maturity and the chance to build human capital, features that appear to increase national productivity. Another possibility is that an older median population could be less productive, thus offsetting the positive aspects. That possibility, however, was not supported in formulations of this model that captured elderliness (via a variable for the percentage of the population 65 and older). Therefore, only a single median age variable is included. The percentage of the population that is literate (Literacy) does not play an expected positive statistically significant role. This may be partly due to the collineararity between literacy and the median age variable; the Pearson correlation coefficient between Literacy and MedianAge is 0.749.

FIGURE 2

RATIO OF CORRUPTION EFFECTS (EXPANSIONARY TO RESTRICTIVE)
AND EFW RATINGS
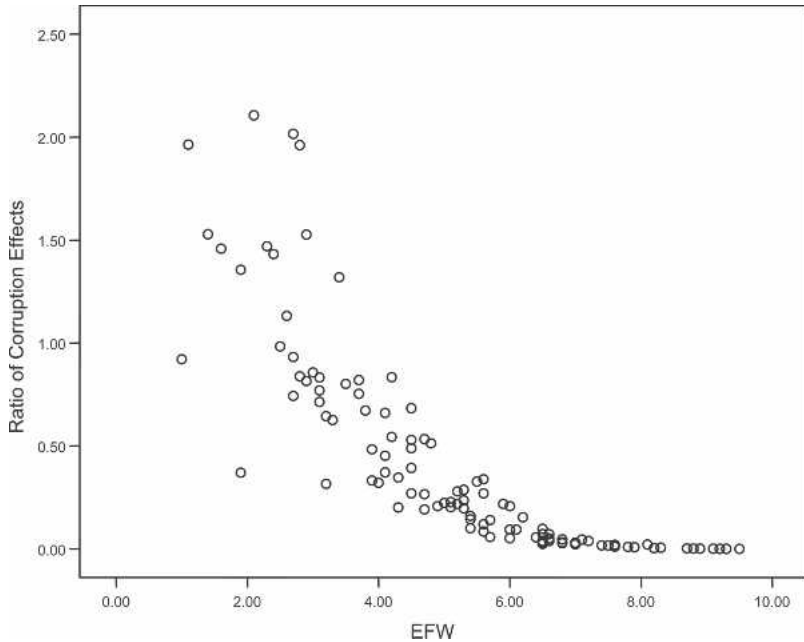


The variable for existing fossil fuel reserves expressed in dollar terms per capita, Reserve$, has a positive coefficient and is statistically significant in both versions of the model, as expected. The possibility of a resource curse was initially modeled by incorporating a multiplicative term of corruption and reserves. No relationship of this variable with GDP was found in preliminary estimation, and these results are not reported here. This model may not be well suited to uncovering such a relationship.[6]

In sum, the model treats corruption as affecting the economy (GDP per person) through two channels. First, nations that have

[6]Sachs and Warner (1995) looked for this relationship by exploring differences in economic growth rates (not the levels of GDP per capita) due to differences in investment efficacy. A cross-sectional study may not be well suited to exploring the dynamics from prior condition of large fixed resources, to consequent potential investment misallocations, to output effects. Additionally, although corruption can be activities directed at diverting resource wealth into the hands of particular government officials, some aspects of corruptions surrounding resource issues may have positive influences on GDP.

higher levels of measured corruption will have lower GDP per capita as a direct result of corruption; this is primarily due to the rent-seeking aspects of such behavior. This influence is clearly demonstrated in the estimations. Second, nations can receive positive influences from corruption if these activities substitute for weak or missing legal protection of exchange and property. In both estimated versions of the model, corrupt activities are shown to provide an alternative means to achieving investment and exchange when there is an unsound legal framework within a nation.

## Policy Discussion: Corruption and Governance

Most policy discussions about corruption proceed on the assumption that whenever public officials use their public authority for private gain the economy will be damaged. Often, corruption is treated as merely a manifestation of poor governance.[7] As explored in this article, corrupt behavior also can affect an economy positively, by substituting for bad governance. This perspective, to my knowledge, has not informed the World Bank, IMF, Transparency International, or most multinational business views on corruption. If you begin with a presumption that corruption is always inefficient then aggressively weeding it out is always a useful task.

Should one bother to make distinctions? Some might argue that aggressive attacks on corruption regardless of national circumstances effectively deal with the preponderances of cases; it is merely at the extremes that expansionary corruption is plausible. Thus, there is little reason to be swayed from a consistent assault on corruption. Indeed, leaving wiggle room on corruption might be viewed by the media and various interest groups as demonstrating a lack of commitment to a fundamental cause. However, it is precisely in these cases where institutional protection of property is so slight that the problems of poverty and misery are most pronounced. The gains from carefully identifying and treating these cases seem well worth the effort.

Abed and Davoodi (2000), perhaps reflecting a general consensus in developmental economics, argue that well-conceived and implemented structural economic reforms are an important means of rationalizing a market economy and rooting out corruption. However, they wonder, "Why have these reforms not been undertaken more

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[7]The World Bank includes control of corruption as one of six dimensions of its governance indicators. The other dimensions are: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, and rule of law.

vigorously in the transition and other economies even though great interest has been shown in the fight against corruption?" (Abed and Davoodi 2000: 40) Their answer is that entrenched rent seeking makes major reform difficult to implement, but that once these reforms get started the gains from behaving corruptly will lessen and the reforms can be sustained.

An answer consistent with the evidence reported in this article is different: A fight against corruption in nations with weak legal institutions is also a fight against many positive aspects of corruption in these economies. Indeed, the lack of grass-roots interest in beating down corruption in these circumstances need not be rent-seeking ploys but rather could be predicated on reasonable beliefs that eliminating corruption would damage the informal economy.

Although corruption can have positive economic impacts in poorly governed nations, this does not lead to a conclusion that corruption in these nations should be seen as unambiguously beneficial. Indeed, corruption, by its nature, is insidious, changeable, and opaque behavior: What cannot be openly managed and controlled can be turned to narrowly self-serving (rent-seeking) purposes. Thus, what might begin as bribery to keep trade flowing for a firm could be transformed into a mechanism for excluding competitors. Given the surreptitious nature of corruption, these problems will fester.

Still, corruption should not be indiscriminately attacked in poorly governed countries. It often is symptomatic of the poverty of legal protections. In such circumstances, policy that squeezes corruption (and the people who engage in it) is antithetical to the objectives of many individuals to expand market trade and investment. Anti-corruption policymakers, paradoxically, place themselves in conflict with citizens who strive to build a market economy using the means at hand.

Rather than attempt to increase the cost of corrupt behavior, the appropriate policy in these circumstances is to focus on reducing the cost of engaging in legal transactions. This means improving fundamental institutions that support markets and capitalism—with particular emphasis on property and contract law. This endeavor cannot be imposed top-down on the citizens of these nations. As William Easterly (2006: 90) puts it, "What determines property rights? . . . Property arises from a decentralized searching for solutions, just like the other complexities of markets." Those whose knowledge and actions are essential to finding these bridges to stable property rights and governance, also are likely to be the same people who engage in corruption in order to carry on economic activity. Any war on corruption not only will be fiercely opposed by many of these people, but

also will discard this essential knowledge for making progress in evolving sound governance.

## References

Abed, G. T., and Davoodi, H. R. (2000) "Corruption, Structural Reforms, and Economic Performance in the Transition Economies." IMF Working Paper No. 132. Washington: International Monetary Fund.

Akçay, S. (2006) "Corruption and Human Development." *Cato Journal* 26 (1): 29–46.

Ball, J. (2006) "Digging Deep." *Wall Street Journal* (10 January).

Choi, J. P., and Thum, M. (1998) "The Economics of Repeated Extortion." Columbia University Working Paper No. 9899-03.

De Soto, H. (1989) *The Other Path: The Economic Answer to Terrorism*. New York: Harper and Row.

Easterly, W. (2006) *The White Man's Burden*. New York: Penguin Press.

Freedom House (2005) "Freedom in the World 2005." Available at www.freedomhouse.org.

Gwartney, J.; Lawson, R.; and Gartzke, E. (2005) *Economic Freedom of the World: 2005 Annual Report*. Vancouver, B.C.: Fraser Institute.

Huntington, S. (1998) *Political Order in Changing Societies*. New Haven: Yale University Press.

Leff, N. H. (1964) "Economic Development through Bureaucratic Corruption." *American Behavioral Scientist* 82 (2): 337–41.

Leite, C., and Weidmann, J. (1999) "Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth." IMF Working Paper No. 85. Washington: International Monetary Fund.

Mauro, P. (1995) "Corruption and Growth." *Quarterly Journal of Economics* 110 (3): 681–712.

Murphy, K.; Shleifer, A.; and Vishny, R. (1993) "Why Is Rent-Seeking So Costly to Growth?" *American Economic Review* 83 (2): 409–14.

Osterfeld, D. (1992) *Prosperity versus Planning: How Government Stifles Economic Growth*. New York: Oxford University Press.

Sachs, J. D., and Warner, A. M. (1995) "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* 1: 1–118.

Svensson, J. (2005) "Eight Questions about Corruption." *Journal of Economic Perspectives* 19 (3): 19–42.

Tanzi, V., and Davoodi, H. (1997) "Corruption, Public Investment, and Growth." IMF Working Paper No. 139. Washington: International Monetary Fund.