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Corrupting activities and economic development

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Abstract

Purpose The purpose of the paper is to explore the relationships of different types of corruption and selected economic measures that appear to contribute to a country's sustainable economic development.

Methodology The research used selected data from the World Economic Forum Executive Opinion Survey on corruption activities (Irregular Payments and Bribes, the Diversion of Public Funds, Organised Crime, and Favouritism in Decisions of Government Officials) and Ethical Behaviour of Firms. The economic data (FDI, GDP, GDP Growth and Capital Formation among others) is from the World Bank database. A series of statistical models were developed to examine the relationships among different types of corruption and a country's economic development.

Research limitations The research is limited by the availability of data from reliable sources and the availability of data on a limited number of corruption activities. Only four aspects of corruption are examined in this paper. Only selected aspects of a country's economy were examined.

The variables analysed in the study were not available for each of the 179 countries.

Findings The findings are mixed, showing that some types of corruption have greater negative impact on specific aspects of economic development.

Originality/value This study builds on previous work by Anderson (2012 ,2013) that used Transparency International's Corruption Perception Index (CPI) as a global measure of corruption. This study, in contrast, uses the results of the World Economic Forum Executive Opinion Survey, to indicate the perceived level of different types of (components) corruption. By using more specific measures of corruption, there is a better understanding of the relationships between corruption and economic development.

Implications Corruption may have a beneficial as well as a negative impact on economic growth and development.

Paper type Research paper

Keywords Economic development, Corruption, Organised crime, Bribes, Firms' ethical behaviour

WORLD ASSOCIATION FOR SUSTAINABLE DEVELOPMENT

Introduction

This paper builds on previous research on corruption and economic development. "Corruption and Economic Development: A Puzzling Relationship" was presented at the 2012 WASD Conference (Anderson, 2012) and "Corruption and Economic Development: New Variables in the Mix" was presented at the 2013 WASD Conference and published in the International Journal of Innovation and Knowledge Management in Middle East and North Africa (IJIKM-MENA) (Anderson, 2013). The previous research focused on a selection of social and economic factors that were thought to have been related to corruption and/or economic development. In the two previous papers, the measure for corruption was the Corruption Perception Index (CPI) produced by Transparency International. This index ranges from 0 (highly corrupt) to 10 (very clean) and data are collected for 178 countries. These researches found that cultural dimensions as classified by Hofstede (2011, 2012) were not directly related to Transparency International's Corruption Perception Index. The Strength of Legal Rights was found to be associated with both the CPI and GINI Index 2008. None of the additional variables examined were found to be associated with Economic Development. This led to the conclusion that to uncover how these factors may work together and/or against each other, a different approach to studying corruption may yield better results.

In an attempt to better understand any relationship between corruption and economic development, the research reported here breaks down corruption into four unique dimensions and also looks at the Ethical Behaviour of Firms as reported by the World Economic Forum 2013–2014. The corruption dimensions selected to be investigated are: Irregular Payments and Bribes, the Diversion of Public Funds, Organised Crime and Favouritism in Decisions of Government Officials. The components related to economic development examined are: the World Economic Forum's Global Competitiveness Index 2013, GDP per capita 2011, Direct Foreign Investment 2010, Capital Formation and GDP Growth 2010. In addition, there is an examination of the relationship between the Strength of Legal Rights Index and corruption.

Literature review

Corruption is said to be "legally wrong, morally wrong and economically indecent" (Ertimi and Saeh, 2013). However, corruption has been around since the beginning of trade and there are differing views of the impact of corruption on economic development. The definition of corruption used by most writers is "The abuse of public office for private gain" which is the definition adopted by the United Nations in 2003. However, corruption may also involve many types of activities by individuals and agents for personal gain. The individual who illegally downloads software on his computer (Business Software Alliance, 2011) as well as pirated goods that are traded in the underground economy (Dreher and Schneider, 2010) are activities that tend to "corrupt" the legitimate economic activities. Corruption's role in economic growth, however, was not considered in the historical development of economic theories because corruption was "not perceived as an economic problem" according

to Volejníková (2009). It was not until later that corruption was considered relevant to economic growth.

Many articles examining different aspects of corruption and using different methods reported finding that some aspects of corruption adversely affect economic growth (Abed and Davoodi, 2000; Leite and Weideman, 1999; Harstad and Svensson, 2011). These types of articles are believed to have led to the "status of received wisdom" (Haggard and Tiede, 2011, p. 675) that corruption adversely affects economic growth. However, Osterfeld (1992) made a distinction between corrupt actions that were economically restrictive and those he considered to be economically expansionary. Houston (2007) makes the point that corruption can play an expansionary role when protections are weak and can play a restrictive role if protections are strong. He particularly points out that bad laws may yield more corruption in an attempt to by-pass failed governments.

The range of activities that may be included in an overall classification of corruption is quite large. Bribery (of public officials) is thought to be one of the most prevalent types of corruption (Cleveland et al., 2010). Preferential treatment by bureaucrats to select individuals, based on a variety of criteria is also a form of corruption. In addition, money laundering, drug trafficking and organised crime (Barone and Masciandaro, 2011) are also illegal activities that may have significant impacts on economies.

Methodology

Secondary data, primarily collected by the World Economic Forum, the World Bank and Transparency International serve as the basis for this research. Both of these organisations are recognised as collecting and disseminating relatively valid and reliable information. While not perfect, they appear to be the best sources of corruption and economic data currently available to researchers.

Measures of corruption

Transparency International (2011, 2012) collected data on the general public's views on and experiences of corruption. From these data the organisation creates a *Corruption Perception Index* (CPI) for 178 countries surveyed. The index ranges from a 0 (highly corrupt) to 10 (very clean). This is the most widely used measure of corruption and was the one used by the Anderson 2012 and 2013 studies. Dreher and Schneider (2010) report on three other measures of corruption: Corruption (ICRG), which measures corruption in the political system and is used by the International Country Risk Guide; the World Bank Corruption index was used by Kaufmann et al. in 2003; and Dreher et al. (2007) used an index created from structural modelling. In this index, a score of 10 is highly corrupt and a score of 0 indicates the least corruption. These metrics are excellent for measuring overall corruption, however they were not deemed appropriate for the current research, where the goal is to examine different dimensions of corruption. While not perfect measures, the World Economic Forum collects survey data on different aspects of corruption through its Executive Opinion Survey (World Economic Forum 2014, pp. 83-92). The decision was made to use these data, which include responses from almost 14,000 members of business communities from around the world.

In this exploratory study, four dimensions of corruption were selected for analysis along with a fifth measure being the ethical behaviour of firms. The five variables are described as follows:

Diversion of Public Funds: In your country, how common is diversion of public funds to companies, individuals, or groups due to corruption? [1 = very commonly occurs; 7 = never occurs] | 2012–13 weighted average.

Irregular Payments and Bribes: Average score across the five components of the following Executive Opinion Survey question: In your country, how common is it for firms to make undocumented extra payments or bribes connected with (a) imports and exports; (b) public utilities; (c) annual tax payments; (d) awarding of public contracts and licenses; (e) obtaining favourable judicial decisions? In each case, the answer ranges from 1 (very common) to 7 (never occurs). | 2012–13 weighted average.

Favouritism in Decisions by Government Officials: In your country, to what extent do government officials show favouritism to well-connected firms and individuals when deciding upon policies and contracts? [1 = always show favouritism; 7 = never show favouritism] | 2012–13 weighted average.

Organised Crime: In your country, to what extent does organised crime (mafia-oriented racketeering, extortion) impose costs on businesses? [1 = to a great extent; 7 = not at all] | 2012–13 weighted average.

Ethical Behaviour of Firms: In your country, how would you rate the corporate ethics of companies (ethical behaviour in interactions with public officials, politicians and other firms)? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2012–13 weighted average.

For each of these variables, a lower score indicates that a greater degree of corruption is perceived to exit.

Economic measures

In addition to the Global Competitiveness Index 2013–14 of the World Economic Forum, all economic data were from the World Bank's Data Bank (http://data.worldbank.org). The economic measures from the World Bank selected for analysis are Direct Foreign Investment 2010, Capital Formation 2010, GDP per capita 2011, and Growth in GDP.

Legal protection

To test Houston's (2007) statement that the strength of legal protection will determine whether corruption is more prevalent in countries with weak legal protection, the World Bank's (2011) Strength of Legal Rights Index was used. This measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and therefore facilitate lending.

Analysis and findings

Data were analysed using SPSS Correlation analysis and Stepwise Linear Regression. The correlation analyses were designed to show relationships among the dimensions of corruption, the relationships between dimensions of corruption and economic indicators and the relationship between the Strength of Legal Rights in a country and the perception of levels of corruption.

In the regression models, corruption variables were identified as the independent variables, with measures of the economy as dependent variables.

Correlation analyses

The correlation analyses produced the results as seen in Tables 1, 2 and 3.

Table 1. *Correlations among dimensions of corruption, Corruption Perception Index and ethical behaviour of firms*

Statement	Ethical behaviour of firms	Organised crime	Favouritism in decisions	Diversion of public funds	Irregular payments and bribes	Corruption Perception Index
Ethical behaviour of firms	1	.697**	.884**	.945**	.934**	.918**
Organised crime	.697**	1	.663**	.712**	.704**	.653**
Favouritism in decisions	.884**	.663**	1	.915**	.839**	.745**
Diversion of public funds	.934**	.712**	.915**	1	.929**	.888**
Irregular payments and bribes	..934**	.704**	.839**	.929**	1	.914**
Corruption Perception Index	.918**	.653**	.745**	.888**	.914**	1

** Correlations are significant at the 0.01 level (-2tailed)

Table 2. *Correlations among corruption variables and economic indicators*

Statement	Global Competitiveness Index	GDP per capita	Direct Foreign Investment	Capital formation	GDP growth
Ethical behaviour of firms	.829**	.783**	.194*	.195*	.075
Organised crime	.550**	.535**	.182*	.119	.137
Favouritism in decisions	.726**	.633**	.155	.206*	.090
Diversion of public funds	.798**	.750**	.226*	.183	.104
Irregular payments and bribes	.841**	.767**	.189*	.192*	.108

** Correlation is significant at the 0.01 level (-2tailed test)
* Correlation is significant at the 0.05 level (-2tailed test)

Table 3. *Correlations between dimensions of corruption and the Strength of Legal Rights Index*

Dimension of corruption	Strength of Legal Rights	Significance level
Ethical behaviour of firms	-.107	.221
Organised crime	-.077	.380
Favouritism in decisions of government officials	-.075	.399
Diversion of public funds	-.119	.175
Irregular payments and bribes	-.154	.079

The correlations in Table 1 show a very strong relationship among the individual dimensions of corruption examined and between the individual dimensions and the Corruption Perception Index. The interrelationship is significant at the $\alpha = 0.01$ level based on a two-tailed test. This high level of correlation indicates that in general, countries which are rated as high on corruption tend to exhibit all five types of corruption to one degree or another. It also shows that countries tend not to have just one type of prevalent corruption.

The results presented in Table 2, however, show that while all the selected dimensions of corruption are strongly associated with Global Competitiveness and GDP per capita, they tend to be less strongly associated with Direct Foreign Investment and Capital Formation. The analysis found no statistically significant relationships between GDP Growth and any of the selected dimensions of corruption studied.

The relationships between Strength of Legal Rights and dimensions of corruption show the direction postulated by Houston (2007), but not at a significant level (see Table 3). It does appear that the stronger the legal rights index, the less the perceived corruption in a country.

Regression analyses

The first regression analysis performed looked at the relationship between measures of corruption and Global Competitiveness (Table 4). Three of the five measures of corruption were found to contribute to the prediction of global competitiveness. Irregular payments and bribes was the first variable to enter and had an adjusted R Square of .700. When Ethical Behaviour of Firms and Organised Crime entered the equation, the R Square was .725. All three independent variables that entered the regression model were deemed statistically significant at the α -.000 level. The only two corruption variables that did not enter the model were Favouritism in Decisions of Government Officials and Diversion of Public Funds.

Table 4. *Regression models (stepwise) results*

Dependent variable	Independent variables entered	R	Adjusted R Square	Std. error of the estimate	Significance level
Global Competitive Index	1. Irregular payments & bribes	.838	.700	.36356	..000
	2. Ethical behaviour of firms	.850	.719	.35175	.000
	3. Organised crime	.855	.725	.34772	.000
GPD per capita 2011	1. Ethical behaviour of firms	.786	.614	$13,534.912	.000
	2. Favouritism in decisions of govt. officials	.795	.627	$13,306.807	.000
	3. Diversion of public funds	.804	.639	$13,090.862	.000
Direct Foreign Investments	1. Diversion of public funds	.228	.044	26.265	.011
Capital formation	1. Favouritism in decisions of govt. officials	.206	.033	7.435	.034
Growth in GDP	No variables entered the model	-	-	-	-

The second regression analysis had GDP per Capita 2011 as the dependent variables (Table 4). In this analysis, three variables entered: Ethical Behaviour of Firms, Favouritism in Decisions of Government Officials and Diversion of Public Funds. The commonality of predictor variables between this economic indicator and the Global Competitiveness Index was the Ethical Behaviour of Firms. The other two predictor variables that entered the model equation were not the same as found in the first analysis.

The models for Direct Foreign Investments and Capital Formation had only one predictor variable entering the equation (Table 4). For Director Foreign Investments, the Diversion of Public Funds was the only variable and for Capital Formation, Favouritism in

Decisions of Government Officials was the predictor variable. The adjusted R Square was rather low for both. In neither of these models was the significance level at the $\alpha=0.01$ level.

The final regression analysis looking at GDP Growth produced no results (Table 4). No variables entered the model.

Conclusion

When corruption is broken down into specific activities, there appears to be a strong relationship among specific activities and factors of economic development. Each dimension of corruption selected for study was found to be related to at least one aspect of economic development. This result is helpful in understanding which types of activities are related to which factors of economic development. In the future a more in-depth study of these relationships should prove useful. For example if the goal is to increase Direct Foreign Investments, it may be necessary to focus on decreasing the Diversion of Public Funds.

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