

## **CORRUPTION AND WELFARE: A SIMPLE ECONOMETRIC ACROSS COUNTRIES ANALYSIS**

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### **Abstract**

The objective of this study is to measure the impact of corruption on welfare, and to compare the magnitude of impact between high-income and low-income countries. Corruption perception index is used as a proxy of corruption level; human development index is used to represent welfare. Natural resource endowment and international trade are included in analysis to control robustness of corruption. The results show that corruption has negative impact on welfare. The impact in low-income countries is more destructive. Natural resource endowment and trade also have significant impacts, particularly for low-income countries. Since the corruption is destructive, government should eradicate corruption using preventive and repressive actions.

**Keywords:** Economic development, corruption, low income countries, human development index  
**JEL classification numbers:** D73, D31, I31

### **Abstrak**

Kajian ini bertujuan untuk mengukur dampak korupsi pada kesejahteraan, dan untuk membandingkan besarnya dampak antara negara-negara berpenghasilan tinggi dan berpenghasilan rendah. Indeks persepsi korupsi digunakan sebagai proksi tingkat korupsi; indeks pembangunan manusia digunakan sebagai pendekatan kesejahteraan. Sumber daya alam dan perdagangan internasional dimasukkan dalam analisis untuk mengontrol kekuatan variabel korupsi. Hasil kajian menunjukkan bahwa korupsi berdampak negatif pada kesejahteraan. Dampak korupsi di negara-negara miskin lebih buruk dari pada di negara-negara kaya. Sumber daya alam dan perdagangan juga memiliki dampak yang signifikan, terutama untuk negara-negara miskin. Karena korupsi bersifat merusak, pemerintah harus memberantas korupsi menggunakan tindakan preventif maupun represif.

**Kata kunci:** Pembangunan ekonomi, korupsi, negara berpenghasilan rendah, IPM  
**JEL classification numbers:** D73, D31, I31

### **INTRODUCTION**

Corruption is considered as a chronic and endemic institutional disease of countries in the world. Transparency International (2007a), a non-government organization focusing on the fight against corruption, defines corruption as 'the misuse of entrusted power for private gain'. Common forms of corruption include bribery, extortion, fraud, abuse of prudence, and nepotism (UNODC, 2004). It weakens a poverty-reducing pro-

gram as its fundamental mission by discouraging poor people from accessing many important services (World Bank, 2007).

Corruption is widespread in poor and transition countries. It is dependent on the culture (Barr and Serra, 2010), the institutional setting and the state of development (Baksi et al., 2009). Democratization and decentralization are the factors affecting corruption in the transition countries (Lessmann and Markwardt, 2010). As reported that economic liberalization is most successful

way in reducing perceived levels of corruption when it is accompanied by a simultaneous democratization process, while it might even increase corruption otherwise (Tavares, 2007). Decentralization increases corruption significantly in the immediate aftermath of decentralization. Simultaneously, the increase in corruption is reduced substantially, although the increase persists in the medium term (Asthana, 2012). Rock (2009) suggests that there exists an inverted U-shape relationship between democracy and corruption, which needs around 10 to 12 years democracy to have turning point. Lederman et al. (2005) demonstrates that process of democracies is associated with lower corruption levels.

The motivation to earn income is extremely strong, exacerbated by poverty and by low and declining civil service salaries. Furthermore, risks of all kinds (such as illness, accidents, and unemployment) are more prevalent in poor countries, and people generally lack the many risk-spreading mechanisms, including insurance and a well-developed labor market available in rich countries (Olken and Pande, 2011).

Monopoly rents can be very large in highly regulated economies, and, as noted previously, corruption breeds demand for more regulation. In transition economies, economic rents are particularly large because of the amount of formerly state-owned property that is essentially up for grabs. The preference of many public officials is also broad in these countries; and this systemic weakness is worsened by badly defined, ever-changing, and poorly disseminated rules and regulations.

The objective of this study is (1) to measure the impact of corruption on welfare, and (2) to compare the magnitude of impact between high-income and low-income countries. The next parts are literature review explaining why corruption is harmful to prosperity of human being, research methods justifying theoretical framework and model of analysis, followed by results and discussion

are provided. The paper concludes with major findings and policy implication.

Corruption can affect economic development via its impact on capital formation and the distribution of income. Discussion on impact of corruption on economic growth has been summarized by Schütte (2011) and on human development has been investigated by Salem (2003). Corruption leads to low level of welfare because of two reasons. First, a higher growth rate is associated with a higher rate of poverty reduction (Alesia and Weder, 2002), and that corruption slows the rate of poverty reduction by reducing growth. Second, corruption causes increased poverty level (Rahayu and Widodo, 2012). There is a bias social expenditure towards higher education and tertiary health, which tend to benefit high income groups. Corruption frequently generates an enormously discriminatory distribution as it favors those individuals and firms with political connections rather than those with the high advantage or efficient technology of production. Corruption can also amplify expenditure on tertiary health because bribes can be more easily pull out from the building of hospitals and purchasing of high-tech medical equipment than from expenditure on vaccinations (Gupta et al., 2002).

Finally, corruption leads to misallocation of resources, increase in the costs of doing business, and an endogenous system of red tape reduce the productivity of capital (Lambsdorff, 2003). This lowers the quality of education and health services and affects the ability of the state to improve educational attainment levels. Corruption led to lower level of education in Indonesia (Suryadarma, 2012) and caused problematic administration in Vietnamese health sector (Vian et al., 2012).

## METHODS

### Theoretical Framework

This study is inspired by a famous statement of “power tends to corrupts and absolute

power corrupts absolutely”, by Acton: 1834-1902 (Gronbacher, 2008). Power or dictatorship usually occurs in low-income countries as the democratization is lag-behind of high-income countries. There is a democracy-corruption relationship becomes negative (Parlementaria, 2012). A long exposure of 30 years to uninterrupted democracy is associated with lower corruption, which political instability tends to raise corruption. Evidences also show an association of higher wages in the public sector with lower corruption (Pellegrini and Gerlagh, 2008). More hierarchical cultures that focus more on loyalty towards one’s social group than the individual’s own responsibility are more susceptible to become corrupt compared with more individualist and egalitarian cultures (Bentzen, 2012).

The central of this analysis is to compare the effect of corruption on welfare in poor and rich countries. Corruption is a kind of everlasting developing countries’ problem. It is an extra ordinary crime, which is commonly defined as the misuse of public affair for private gain, including but not limited to: corruption, nepotism, bribery, extortion, influence peddling and fraud (Chetwynd et al., 2003).

It is difficult to calculate the amount and level of corruption exactly. Transparency International (2007b) points out, empirical data on corruption such as the number of corruptors arrested and sent to prison and the amount of corrupted money found by the authorities in many countries cannot be used as a measurement of corruption. The difficulty arises because the data reported are only a small portion of the actual corruption, likes iceberg phenomenon.

Another reason for this problem is due to the illegal and secret nature of corruption. As a result, drawing from the experience and perception of those who most faced the realities of bribery, fraud and other forms of corruption is one reasonable method of calculating the level of corruption. Transparency International (2004) ap-

plies this measurement in the corruption perception index (CPI). Other organizations such as the firm Political Risk Services produce the International Country Risk Guide (ICRG) and the World Bank releases the World Bank Government Indicators (WBGi) periodically to measure corruption levels. Although they appear to be subjective, these indices are highly correlated and they have been demonstrated that these measurements are a good predictor in calculating corruption levels (Kommerskollegium, 2005).

This paper follows a broad literature seeking the fundamental causes of long run development (Rodrik et al., 2002). According to neoclassical growth theory, cross-country income differences arise from a combination of differences in the rates of technological progress and physical and human capital investment. But, why some countries do not improve their technology, invest more in physical capital, and accumulate more human capital as questioned by Hall and Jones (1999). There must be other factors that inhibit countries from improving the proximate causes of economic development. One of the factors is corruption.

Recent study by Bentzen (2012) uses economic growth (growth in GDP per capita) as dependent variable of corruption. Instead of using economic growth, welfare of nation in this study was approached using a more comprehensive measure called human development index (*HDI*). Growth does represent economic development if it is equally distributed. In the concept of green economy, Salim (2012) mentions that we need to use *HDI* to measure prosperity, instead of GDP per capita that refers to a greed economy. Thus, impact of corruption on welfare is modeled as regression of corruption on *HDI*.

### Basic Model

Let us first construct a basic model as:

$$HDI = \beta_0 + \beta_1 CR + \varepsilon \quad (1)$$

Where  $CR$  is corruption, which is variable of interest in the present paper. In this case, corruption, which is defined by Transparency International as the misuse of public position for private gain, is measured with corruption perception index (CPI) reflecting the views of businesses in countries about corruption in public sector agencies. The index ranges from zero to ten, with higher values indicating less corruption. The weakness of perceptions data has been documented by Bertrand and Mullainathan (2001), but no objective country level data on corruption exist. There may also be concerns about using a measure of corruption collected from business practitioners as a proxy for corruption. But, under the assumption that there is no correlation between any measurement error and the observed CPI, the estimated coefficients of regression will still be consistent (Suryadarma, 2012). Another study using CPI as proxy of corruption is conducted by Rahayu and Widodo (2012) to investigate the relationship of corruption and poverty in Asean member countries.

Model 1 is just a simple representation of scatter plot of  $HDI$  and corruption planes. From model 1, intercept =  $\beta_0$  which represents average level of  $HDI$  without any corruption, and slope =  $\beta_1$  which represents impact of corruption in all countries can be identified. Since the level of  $HDI$  in low-income and high-income countries might be different, the intercept in low-income countries can be identified in Model 2 as follow:

$$HDI = \beta_0 + \beta_1 CR + \delta_0 L + \varepsilon \quad (2)$$

where  $L$  is dummy variable for low-income countries. Here,  $\beta_0$  is intercept in high income countries, and  $(\beta_0 + \delta_0)$  is intercept in low income countries. But, there is possibility that the impact of corruption in both groups of countries is different. It can be detected using Model 3 specified as:

$$HDI = \beta_0 + \beta_1 CR + \delta_0 L + \delta_1 (L \cdot CR) + \varepsilon \quad (3)$$

The impact of corruption on  $HDI$  in high-income and low-income countries is respectively  $\beta_1$ , and  $(\beta_1 + \delta_1)$ .

### Extended Model

It is too naïve for us to merely rely on corruption in explaining variation in  $HDI$ . Two additional explanatory variables: natural resource endowment and international trade were included to control the impact of corruption on  $HDI$ . Natural resource endowment and trade were selected in this study, because both variables are potential sources of national income. Both variables have been investigated as sources of variation in economic growth across countries. It has been argued that resource-rich countries have slower growth rate than resource-scarce countries (Sachs and Warner, 1997). Explanations of how increased trade promotes economic growth frequently draw on the standard neoclassical model of international trade. Dollar and Kraay (2003) shows that trade has a large and robust positive impact on income. Therefore, natural resource abundance and trade were included in the model to examine if those affect  $HDI$  because economic growth represents development if it is equally distributed. The extended model is specified as:

$$HDI = \beta_0 + \beta_1 CR + \beta_2 NR + \beta_3 TR + \varepsilon \quad (4)$$

Where  $NR$  is natural resource abundance,  $TR$  is international trade.

Similar to previous models, comparing  $HDI$  between low-income and high-income countries was modeled as:

$$HDI = \beta_0 + \beta_1 CR + \beta_2 NR + \beta_3 TR + \delta_0 L + \varepsilon \quad (5)$$

where  $L$  is dummy variable for low-income countries.

Marginal effect of natural resources and trade in low-income and high-income countries was identified using model below:

$$HDI = \beta_0 + \beta_1 CR + \beta_2 NR + \beta_3 TR + \delta_0 L + \delta_1(L \cdot CR) + \delta_2(L \cdot NR) + \delta_3(L \cdot CR) + \varepsilon \quad (6)$$

If natural resource endowment and trade transverse the entire set of strong determinants of economic prosperity, regressions of Model (6) will explain the entire variation in *HDI* across countries. Hence, in the perfect world, where we have perfect data, we would expect an  $R^2$  of 100%. This is obviously a rather innocent assumption, but in the empirical analysis an explanatory power of the model of at least 60% is expected. If the determinants framework is true, the deviation from 100% is due simply to other factors and measurement error.

There might be strong correlation between corruption and natural resource abundance because countries with abundance of natural resources usually have a lot monopoly practices in their economy. Natural resources are associated with rent-seeking activities. A country with natural resource abundance has been correlated with slow economic growth and also a high level of corruption (Leite and Weidman, 1999). There is a negative relationship between primary resource abundance, such as fuel and mining products, with economic growth (Kronenberg, 2003). As well, trade also relates to rent-seeking activities. Knack and Azfar (2003) suggests that greater openness to foreign trade will be associated with less corruption. Torrez (2002) finds that there is a negative relationship between trade liberalization and corruption. There are empirical links between corruption and trade and indicates that trade restrictions encourage rent-seeking activities and create welfare costs and inefficiency. Based on such literatures, there will be strong correlations between corruption and natural resource abundance; and corruption and trade. These create multicollinearity problem, leading to endogeneity of the corruption variable. Correlation matrix was used to check the strength of relationship among selected variables.

Standard null and alternative hypotheses of each model were established. A panel generalized least square (XTGLS) was employed to estimate the functional forms if problems with error terms in the OLS exist. This is an asymptotic estimation, such that there is no need of normality of error terms. A study by Druska and Horrace (2004: 196) argue that 'if T [time] is somewhat large, the usually time-invariant unobserved heterogeneity models (e.g., FE) may not be applicable, since it is widely held that heterogeneity may change in long run dynamic economic system ...'. A *Chow* test was constructed to investigate the significance of extended models. An econometric software was used for estimation the all models and testing for established hypotheses.

### Data and Variables

Following Salem (2003), the human development index (*HDI*) released annually by the United Nations and Development Program (UNDP) is used as a measurement of welfare. The *HDI* is a comparative measure of life expectancy, literacy, education, and standards of living of a country. This is a composite index that determines the average achievements in one country (UNDP 2006). This index ranges from 0 to 1, in which 0 point indicates lowest and 1 point indicates the highest welfare.

Data on corruption perception index (*CPI*) issued annually by Transparency International were used in this study. The *CPI* is a composite index that represents numerous expert opinion surveys. *CPI* scores of countries around the world scale from zero that indicates highest corruption to ten that indicates lowest corruption (Transparency International, 2007b). Transparency International uses the survey and polls from nine reliable independent institutions to calculate the *CPI*.

Natural resource endowment abundance is calculated using the share of fuel and mineral exports as a proportion of GDP

(Kronenberg, 2003). A country with high percentage indicates that the country has high level of natural resources abundance. Data of fuel and mineral exports come from the WTO database between 1995 and 2004, while GDP data come from WDI, released annually by the World Bank.

Trade is measured as the share of total trade as a percentage of gross domestic product (GDP). Total trade is the sum of total exports and imports. This definition follows Torres (2002) and is consistent to the empirical study by Damania et al. (2003). Data of exports and imports from the World Trade Organization (WTO) database were used. GDP data were obtained from World Development Indicators (WDI), issued by the World Bank. Data from 84 countries over 1995-2004 were examined.

For analytical purposes, the countries of observation will be classified into two groups. Following the World Bank (2007), the classification is based on Gross National Income (GNI) per capita, although the classification does not perfectly reflect development status. The first group is the high (and upper-middle) income countries with GNI per capita more than USD 3,466. The second group is categorized in the low- (and lower-middle) income countries with GNI per capita less than USD 3,465. Details of the variables in the model are summarized in Table 1.

The data used in this study capture 84 countries during period 1995-2004. However, variables needed in this study are not available every year. Thus the data are considered unbalanced panel data. Details of the statistical data are summarized in Table 2.

**Table 1:** Description of Variables (1995-2004)

Variable	Description	Source
HDI	HDI, range from 0 to 1, 0 indicates lowest, 1 indicates highest welfare.	UNDP, HDI 1995-2004
CPI Score	The CPI is an aggregate indicator that combines different sources of information about corruption, range from 0: corrupt to 10: clean	CPI: TI
Trade	Ratio total trade (export and import) to total GDP	Trade: WTO GDP: World Bank
Natural Resources	Share of total export of mining and oil product to total GDP.	Export: WTO GDP: World Bank

**Table 2:** Summary Statistic for Key Variables

Group	Variable	Obs	Mean	Std Dev	Min	Max
All countries	HDI	811	0.76	0.17	0.22	0.97
	CPI	705	5.14	2.46	1.00	10.00
	Nat. Resc.	798	0.06	0.10	0.00	0.80
	Trade	846	0.70	0.46	0.13	3.62
High income countries	HDI	493	0.82	0.13	0.34	0.97
	CPI	451	5.94	2.58	1.40	10.00
	Nat. Resc.	498	0.06	0.10	0.00	0.80
	Trade	516	0.72	0.51	0.13	3.62
Low-income countries	HDI	318	0.65	0.19	0.22	0.89
	CPI	254	3.72	1.36	1.00	7.94
	Nat. Resc.	300	0.06	0.09	0.00	0.62
	Trade	330	0.66	0.37	0.16	2.09

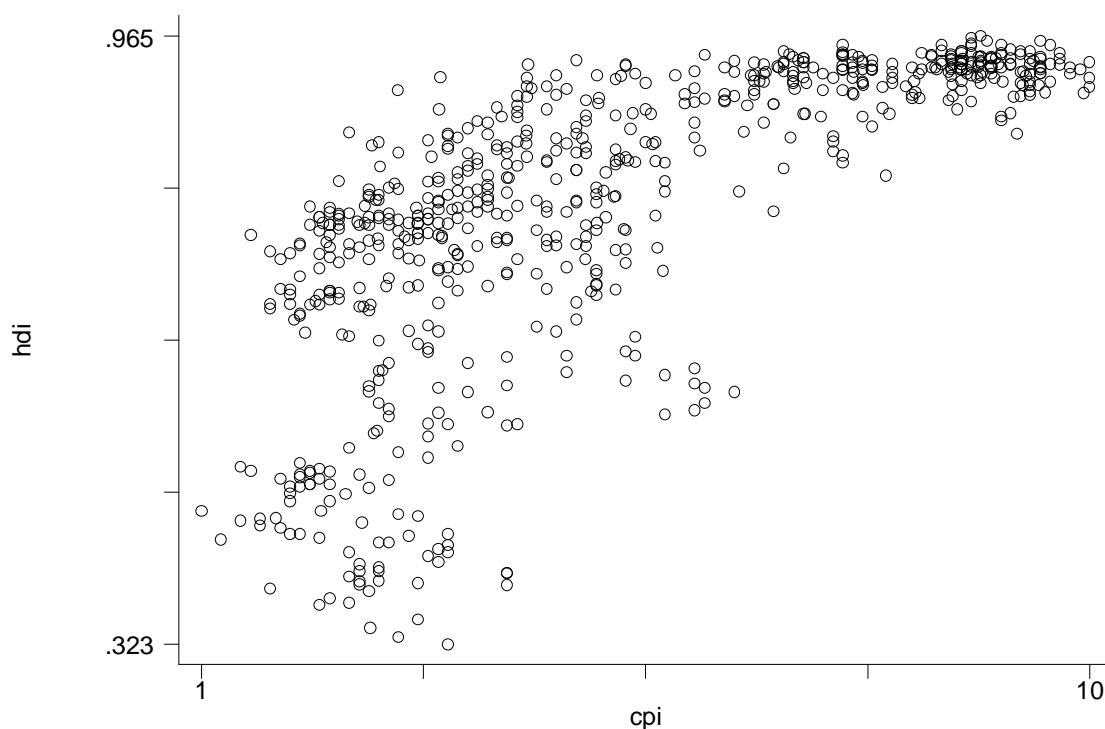
Source: UNDP, Transparency International, World Trade Organization, World Bank

Table 2 shows the summary of selected variables. The average level of *HDI* in high-income countries is obviously higher than that in low-income countries. But, it does not immediately mean that all high-income countries have high level of *HDI*. It is shown in Table 2 that the lowest *HDI* in high-income countries is 0.34, which is only 0.13 higher than that in low-income countries. Thus, high income does not guarantee high *HDI*. This is also the case with *CPI*, where the average level of *CPI* in high-income countries is higher than that in low-income countries. But the lowest *CPI* in both high and low income countries only differs 0.4, which is very low. This also implies that there is no guarantee that high-income countries always have high *CPI*. On average, level of natural resource abundance and trade in both groups of countries is almost similar. This is an indication that every country has specialization in either natural resource or trade as one of potential source of incomes of the country.

## RESULTS

Let us first to see Figure 1 showing the relationship between *HDI* and *CPI*. It is strongly indicated that improvement in *CPI* leads to higher *HDI*. This implies that achievement by a country in reducing corruption will improve the welfare of the country. In other words, corruption is destructive to welfare of nation because an increase in level of corruption (drop in *CPI*) causes worse-off condition.

Based on Table 2, the average of *HDI* in high-income countries is better than that in low-income countries, it seems that the magnitude of corruption effect on welfare in both groups is different. In low-income countries, the effect of increase in corruption seems to be more destructive than that in high-income countries. It could be the case since corruption in developing countries is more prevalent (Olken and Pande, 2011).



**Figure 1:** Relationship between *HDI* and *CPI*

Table 3 shows three econometric models explaining what described in Figure 1. Model 1 shows that a fall in level of *CPI* by one point leads to decrease in *HDI* by 0.04 point. This indicates that corruption is significantly destructive to welfare<sup>[1]</sup>. Let proceed to Model 2 where dummy variable low income countries is included. It is confirmed that *HDI* in low-income countries, on average, is significantly lower than that in high-income countries. The impact of *CPI* on *HDI* is still significant, and the magnitude is 0.04 for both groups of countries. Evidence that the effect of corruption is more destructive to *HDI* in low-income countries is provided in Model 3. It is shown in Model 3 that marginal effect of *CPI* on *HDI* in low-income countries is 0.02 higher than that in its opponents. In other words, one point fall in *CPI* leads to decreases in *HDI* by 0.04 and 0.06 in high-income and low-income countries respectively. Assuming the same amount of money corrupted, this phenomenon is understandable since the percentage of money corrupted by entrusted authorities in low-income countries might be higher than that in their opponents. This is also explainable if the law of diminishing marginal utility of *CPI* holds, as we can see that low-income countries have lower *CPI*, or more corrupt. It makes sense to say that multiplier effect of getting worse in corruption level in poor countries is larger than that in rich ones.

Table 4 shows extended models where two other selected variables were included in the basic models. Model 4 indicates that *CPI* still has significant impact on *HDI* with similar magnitude after inclusion of two additional variables. Natural resource abundance has negative impact on *HDI*. This make sense because low-income

countries relying mostly on natural resources as national income are commonly less developed, despite being rich. Furthermore, countries relying on natural resource abundance tend to be unequal in distributing the income. Major income from natural resource extraction is owned by a few groups of people.

Trade has positive impact on *HDI*, although it is insignificant. As trade represents openness of countries, countries that rely on international trade as one of main sources of national income can be considered as more developed. For example, Singapore whose national income is mainly from international trade (export and import) has been much more developed than neighboring countries where trade is not the main source of national income. Let us see Model 5 where a dummy variable for low-income countries is included. Trade has positive significant impact on *HDI*, meanwhile the impact of *CPI* on *HDI* is still robust.

The robustness of corruption impact on welfare still holds as it shown in Model 6. Marginal effect of *CPI* on *HDI* in low-income countries is still 0.02 higher than that in other countries. In the last model, impact of trade on *HDI* in high-income countries is no longer significant. This is an indication that trade in rich countries has reached a peak. Negative impact of natural resource abundance happens only in rich countries; in contrast that in poor countries. For the case of rich countries, this is sensible because they become more primitive when relying much on natural resources as the main source of national income. But, for poor countries, this is quite questionable. It could be case that the natural resource in low-income countries has been distributed more equally. Trade has significant positive impact on *HDI* in poor countries. As explained previously that higher level of openness represents more developed, then the poor that do more international trade will become more developed.

<sup>1</sup> If Model 1 is estimated using simple regression,  $R^2$  is around 0.50, meaning that the model is able to explain 50% of total variation in *HDI*, and the remaining variation is explainable by other factors. This study tried to add two other variables which were considered having contribution to *HDI*.



**Table 3:** Estimation of Basic Models

Explanatory variables	Model 1			Model 2			Model 3		
	Coef.	Std.Err.	z	Coef.	Std.Err.	z	Coef.	Std.Err.	z
Constant	0.5534	0.0098	56.46a	0.6069	0.0120	50.40a	0.6243	0.0126	49.43a
Corruption	0.0447	0.0017	26.18a	0.0391	0.0018	21.42a	0.0362	0.0019	18.67a
Low-income				-0.0670	0.0094	-7.16a	-0.1549	0.0234	-6.62a
Low-income*Corruption							0.0216	0.0053	4.09a
Number of observation:	672			672			672		
Number of groups:	84			84			84		
Wald $\chi^2$ (df):	685.49a			789.05a			825.43a		
Log likelihood:	535.03			559.73			568.00		

Note: dependent variable is IID1; a) significant at 1% error; b) significant at 5% error; c) significant at 10% error; n) not significant

**Table 4:** Estimations of Extended Models

Explanatory variables	Model 4			Model 5			Model 6		
	Coef.	Std. Err.	z	Coef.	Std. Err.	z	Coef.	Std. Err.	z
Constant	0.5659	0.0112	50.43a	0.6143	0.0130	47.41a	0.6481	0.0137	47.19a
Corruption	0.0429	0.0018	24.14a	0.0374	0.0019	19.65a	0.0343	0.0020	17.44a
Natural Resource	-0.1114	0.0532	-2.10b	-0.1280	0.0514	-2.49a	-0.1920	0.0665	-2.89a
Trade	0.0107	0.0088	1.22n	0.0158	0.0085	1.85c	-0.0014	0.0094	-0.15n
Low-income				-0.0631	0.0093	-6.82a	-0.2091	0.0256	-8.16a
Low-income*Corruption							0.0232	0.0060	3.88a
Low-income*Nat.Resource							0.2036	0.1014	2.01b
Low-income*Trade							0.0574	0.0205	2.79b
Number of observation:	649			649			649		
Number of groups:	83			83			83		
Wald $\chi^2$ (df):	714.07			811.7			904.53		
Log likelihood:	542.94			565.39			585.38		

Note: dependent variable is IID1; a) significant at 1% error; b) significant at 5% error; c) significant at 10% error; n) not significant

It has been proven that corruption is robustly destructive to human development in rich countries and even more severe in poor countries. It is important to check further the robustness by investigating correlation among variables, particularly the explanatory variables. If there is strong corre-

lation, or multi-collinearity, among explanatory variables, the magnitude of individual coefficients is weak and sensitive to omitting explanatory variable. Table 5 provides the correlation matrix showing correlation among variables selected in this study. It seems that high correlation is only

between dependent variables (*HDI*) and independent variable of interest (*CPI*), which accounts for around 0.72. This is no problem at all, since high correlation between both variables is expected to be high. Correlation among explanatory variables is low, which is less than 0.25. Thus, there is no indication of multi-collinearity problem, and thus the impact of corruption on human development, or human welfare is considered robust.

**Table 5:** Correlation among Selected Variables

	<i>HDI</i>	<i>CPI</i>	<i>Nat Res</i>	<i>Trade</i>
<i>HDI</i>	1.0000			
<i>CPI</i>	0.7212	1.0000		
<i>Nat. Res</i>	-0.2244	-0.2426	1.0000	
<i>Trade</i>	0.1789	0.2192	0.1495	1.0000

Based on the results that corruption is harmful to economic development, we must strongly agree to combat any kinds of corruption. In developing countries, where the economy is being improved, people should force the government to be clean. It is no wonder if there is a country punishes corruptors with heavy penalty, even death penalty for not only the corruptors but also their families who enjoy the corrupted gains in order to eradicate the roots of corruptors.

Corruption is a symptom of fundamental economic, political, and institutional causes. Addressing corruption effectively means tackling these underlying causes. The major emphasis must be put on both preventive and repressive actions by reforming economic policies, institutions, and incentives. Since doors of opportunity to take actions against corruption have recently opened up in many countries, reforming actors will want to move forward rapidly beyond the general first principles usually listed in the literature on corruption. After careful country assessments are ready, specific policy and institutional instructions will need to be provided. Practi-

tioners need to seek for the information gathering and dissemination methods that can have the fastest and most-direct impacts.

In Indonesia, one of the most corrupt developing countries, combating corruption at every level is a must. The *CPI* in 1995 released by the Transparency International poses Indonesia at the bottom out of 41 countries in the planet. Indonesian citizens must totally support and insists the Government of Indonesia (GoI) to take actions. Anti Corruption programs have been launched by the GoI in the reformation era, among others: Ratification of Law no 31/1999 or Anti Corruption Act, which then be amended in 2001 by Law no 20/2001; and Ratification of Law no 30/2002 mandating the creation of Corruption Eradication Committee (KPK) and the KPK has been fully operated since 2004<sup>[2]</sup>. Since then, a numbers of corruptors were arrested. At least there were 549 cases, which involved 831 defendants have been processed by Indonesian Court. There was a slight improvement that may not necessarily sufficient to show the improvement in Indonesia. In 2011, the *CPI* for Indonesia was 3.0, a small increase from *CPI* in 2010 that was 2.8. In 1999 the *CPI* of Indonesia was just 1.9.

It is clearly important for the current government to seriously deal with persistent corruption. However, it is more essential to handle the case with consistency and integrity. Hence, the public would recognize the seriousness and effectiveness of the corruption eradication efforts and not doubting it as political maneuvers which will obstruct the process of anti-corruption.

## CONCLUSIONS

Corruption is a chronic institutional disease in some countries. It has inhibited economic development of countries through vari-

<sup>2</sup> See: Pradiptyo (2012) for more comprehensive actions taken by Indonesian government for eradicating corruptions.

ous illegal processes that depress investments in productive sectors. Incident of corruption seems to be more chronic in developing countries, because of unstable institutional factors. The results of econometric analysis in this paper show that reduction in level of corruption leads to improvement of human welfare. The impact of decreased corruption in low-income countries is greater than that in high-income countries. It is no wonder for the government along with civil society to combat all practices of corruption at every level, particularly for developing countries. Both preventive and repressive actions

should be taken for eradicating any kind and types of corruptions. Especially for Indonesia, as it has been placed at the bottom of the most corrupt country in the world in 1995, government of Indonesia has taken actions to eradicate corruption. Repressive actions have been conducted by arresting corruptors and sending them to jail. The repressive actions are not cost-free, however. Preventive actions should be conducted because they are less costly than the repressive ones. Reducing opportunities for entrusted bodies to commit corruption is one of the best alternatives to reduce corruption.

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