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A Spatial Dynamic Panel Analysis of Corruption

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Abstract

Previous works on the determinants of corruption seldom addressed cross-border spillover of corruption in cross-country panel studies. In this paper, we report evidence of spatial spillover of corruption by means of spatial dynamic panel model. The results confirm that perceived levels of corruption at the country level are statistically and positively related to those in neighbouring countries. Furthermore, the findings also suggest that the parameters estimates derived from the spatial dynamic panel are more precise compared to the system GMM.

Keywords: Corruption; spatial dynamic panel.

JEL classification: C21, C23, K42, O11.

1. Introduction

There is a current debate on the importance of good governance for economic development. Good institution is a crucial factor for development (Acemoglu et al., 2005; Rodrik et al., 2004). However, over the past decades, many developing countries have exhibited poor governance and this seems to affect their economic development.

Corruption is a universal phenomenon which is present in both developed and developing nations. From low-level to high ranking government officials, no sector of society is excluded from this social plague. Corruption is detrimental to economic and social development since it reduces the effectiveness of public administration and spurs inequality, and it seems that inclusive growth is impossible if the issue of corruption is not tackled. Corruption is most commonly defined as "the misuse or the abuse of public office for private gain" (Amundsen, 2000; Kurer, 2005). On his part, Heidenheimer (1989, p.6) defines it as a "transaction between private and public sector actors through which collective goods are illegitimately converted into private-regarding payoffs".

Past studies on the determinants of corruption reveal some stylized facts. With regards to economic growth, the results of these studies present varying viewpoints. Leff (1964) and Huntington (1968) argued that corruption can foster growth since it can be used to bypass the bureaucratic red tape and encourage employees to work hard. Liu (1985) showed that corruption can reduce the costs associated of time waiting in queuing. Wedeman (1997) found that corrupt countries have rapid growth rates. Nevertheless, several studies have consistently proven a strong negative correlation between corruption and development, meaning that low-income countries are associated with high corruption levels (Ades and Di Tella, 1999; La Porta et al., 1997; Mauro, 1995; Serra, 2006; Treisman, 2000).

Some authors have explored the effect of the composition of government expenditure such as education spending and found that education spending is adversely affected by corruption (De

La Croix and Delavallad, 2007; Mauro, 1995). Furthermore, Rajkumar and Swaroop (2008) found that public spending on primary education has no effect on education outcomes in poorly governed countries whereas it is likely to be more effective in increasing primary education attainment in countries with good governance. Another variable that has drawn attention to other researchers is military spending. Empirical studies report that corruption is associated with higher military spending (Gupta et al., 2001; Hudson and Jones, 2008).

Recent research has also investigated the effect of some non-economic variables such as economic freedom and found that countries with higher scores of economic freedom are associated with low levels of corruption (Ortega et al., 2011; Park, 2003). With regards to the effects of gender on corruption, the results are also mixed. Swamy et al. (2000) used various indicators of gender differences such as the percentage of women in parliament, the share of female ministers, high-ranking government officials and found that a higher percentage of female involvement leads to a decrease in corruption. The same conclusion was found in the study of Cheung and Hernandez-Julian (2006). However, Shukralla and Allan (2011) found that the percentage of women in parliament does not affect the perceived levels of corruption.

However, spatial interdependence of corruption is seldom addressed in previous literature. There are many reasons which prove that the level of corruption in a particular country is linked with the level of corruption in adjacent countries. Firstly, nowadays, many people can move freely into neighboring countries and interact with others. It seems very plausible that these social interactions could lead to corrupt practices. Secondly, in some countries such as Nigeria, Togo, and Cameroon, the government seems less severe in the fight against corruption. This could encourage some people to embezzle money and illegally transfer it to neighboring countries where there are less stringent rules against corruption. Thirdly, there could also be some educational aspects that are propagated from a given country to neighboring countries. As stated by Goel and Nelson (2007, p.840): "potential bribe takers and bribe givers might become more “bold” and engage in corrupt acts when they observe others also engaging in similar activities”. Thus, it seems evident to analyze the contagious effect of corruption using spatial econometrics tools. Ignoring spatial interdependence in the determinants of corruption could lead to biased estimates and affect policy recommendations.

Most studies in the existing small but growing stream of works which integrate spatial interdependence in the determinants of corruption use cross-sectional data. These studies have consistently found that the level of corruption is positively and statistically related to the level of corruption in neighboring countries (Becker et al., 2009; Ortega et al., 2011; Seldadyo et al., 2010). This study adds to the literature by shedding new light on the causes of corruption and accounting for spatial interdependence in a spatial dynamic panel model.

Over the past decades, spatial econometrics tools have been used mostly in cross-sectional data. This could be explained by the complexity of estimation techniques. However, recently, special attention has been given to spatio-temporal data (Anselin et al., 2008; Baltagi et al., 2007; Debarsy and Ertur, 2010; Elhorst, 2003; Ertur and Koch, 2007; Lee and Yu, 2009; Yu et al., 2008). Thus, the overall objective of this study is to investigate the determinants of corruption using time-space simultaneous models. This is the first study which attempts to study the spatial dynamic of corruption. Our analysis suggests a persistent effect of corruption over time and that the perceived levels of corruption at the country level are statistically and positively related to those in nearby countries. Furthermore, the findings also suggest that the parameters estimates derived from the spatial dynamic panel are more precise compared to the system generalized method of moments (GMM).

The study is organized as follows: Section 2 presents the methods and data; Section 3 discusses the findings and Section 4 concludes the paper with some policy recommendations.

2. Methods and data

Data on corruption is difficult to obtain since this social plague is for the most part hidden. There are two approaches to measuring corruption. The first uses objective measuring techniques such as the number of public officials convicted in a state or city for crimes related to corruption. However, this data is not available for many countries. The second approach is the subjective one which uses corruption indices gathered by various investment risk services, expert assessments. The second approach consists of bodies such as the Worldwide Governance Indicators, the Transparency International's Corruption Perception Index (CPI) and the corruption index of the International Country Risk Guide. The second approach is mostly used in literature since the data are available. In this study, we use the CPI on a large number of countries over the period 2000-2010. The CPI ranges from 0 to 10 with lower values indicating higher levels of corruption (poor performance) and higher values signaling low levels of corruption (good performance). We first study the determinants of corruption without spatial interdependence and latter we integrate it in the study.

The estimated model without spatial interdependence is:

$$C_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 Women_{it} + \beta_3 Education_{it} + \beta_4 Military_{it} + \beta_5 EF_{it} + e_{it} \qquad (1)$$

where countries are indicated by *i* and years by *t*. The variable *C* stands for the CPI, *GDP* is the income per capita, *Women* is the women in parliaments (percentage of parliamentary seats in a single or lower chamber held by women), *Education* is the public expenditures on education expressed as a percentage of the gross domestic product (GDP), *Military* is the military expenditures expressed as a percentage of GDP, *EF* is the index of economic freedom which measures the degree of economic freedom in the nations of the world such as the business freedom, trade freedom, fiscal freedom, government size, monetary freedom, investment freedom, financial freedom and property rights . Index scores range from 0 (no economic freedom) to 100 (complete economic freedom), e_{it} is a stochastic error term. β_0, β_1, β_2, β_3, β_4, β_5 are parameters to be estimated.

A fixed-effects estimator cannot be used here since some variables do not vary over time. Therefore, the coefficients estimates will be biased toward zero since the standard errors could be larger. We thus prefer the generalized least squared estimator (GLS).

However, corruption could be persistent over time. Past levels of corruption could affect the current level of corruption. Therefore, a second model is used by transforming equation (1) into a matrix form:

$$\begin{aligned} C_{it} &= \phi C_{i,t-1} + X_{it}\beta + e_{it} \\ e_{it} &= \lambda_i + u_{it} \end{aligned} \tag{2}$$

Where $C_{i,t-1}$, C_{it} are the past and present levels of corruption respectively. X_{it} is a vector of independent variables as defined in equation (1). λ_i is the idiosyncratic individual and time invariant country effect and u_{it} is the usual error term.

The estimation of equation (2) is done using a GMM that allows for the instrumentation of endogenous variables by their lagged values. This allows controlling for the endogeneity of the lagged dependent variable and the endogeneity issues that can be driven by some independent variables. Hence, to estimate equation (2), one strategy consists of using the Bond difference GMM estimator (Arellano and Bond, 1991) for the first-differenced model by relying on a greater number of internal instruments. However, the Bond difference GMM estimator may suffer from small sample bias due to weak instruments. Thus, the estimation of equation (2) is done by a Bond system GMM estimator (Blundell and Bond, 1998) which uses the first-differenced instruments for the equation in levels and instrument in levels for the first-differenced equation.

Two tests are commonly used in the literature to test the consistency of the Bond system GMM estimator. These two tests help to investigate whether the lagged values of explanatory variables are valid instruments. The first is the Hansen-J overidentification test which checks whether the instruments are uncorrelated with the error term, and that the excluded instruments are correctly excluded from the estimated equation. A rejection of the null hypothesis implies that the instruments are valid. The second test is Arellano and Bond error autocorrelation test. This test checks whether the first and second-serial order of the differenced error term are correlated. By default, the first-serial order correlation of the disturbance term is expected whereas the null hypothesis of the absence of the second-serial order correlation of the disturbance term must not be rejected.

We further integrate spatial interdependence into the analysis and estimate a spatial dynamic panel model. The model is a time-space simultaneous model (Anselin et al., 2008):

$$C_{it} = \phi C_{i,t-1} + \rho W C_{it} + X_{it}\beta + e_{it} \qquad (3)$$

W is the spatial weight matrix, defined as the five-nearest neighbors of every country in the sample[1] and implemented in Stata by the user-written command « spwmatrix » (Jeanty, 2010). ρ is the spatial interdependence parameter and we hypothesize that this parameter will be positive and significant at conventional levels. ϕ and β are parameters to be estimated.

The estimation of equation (3) is done by means of spatial dynamic panel estimator as described by Bouayad-agha and Vedrine (2010).

The list of the countries used in the study (see appendix) and the variables were obtained from the World Bank Development Indicator (WDI). However, the corruption

[1] We row-standardized the spatial weight matrix.

variable was taken from the Transparency International and the economic freedom from the Heritage Foundation.

Table 1 presents the different variables used in the study.

[Insert Table 1 about here]

3. Results and discussion

3.1. Preliminary analysis

We first scrutinize the raw data before undertaking the analysis of the econometric models. The figures (Figures 1, 2, 4, 5) confirm a negative association between corruption and income per capita (coefficient of the partial correlation=0.87, p-value=0.00) corruption and education spending (coefficient of the partial correlation=0.45, p-value=0.00), corruption and the percentage of women in the parliaments (coefficient of the partial correlation=0.61, p-value=0.00), corruption and economic freedom (coefficient of the partial correlation=0.78, p-value=0.00). In other words, a higher income per capita, education spending, percentage of women in the parliaments, index of economic freedom are all negatively related to corruption. On the other hand, Figure 3 shows that there is positive relationship between corruption and military expenditures (coefficient of the partial correlation=-0.30, p-value=0.00), implying that a higher level of military expenditures is positively related to corruption.

Furthermore, we plot the perceived levels of corruption with the weighted corruption in the closest countries (Moran I plot). As shown by Figure 6, it is worth noting that there is a positive relationship between the perceived levels of corruption and those in the neighboring countries. We further gauge if this positive correlation is significant. The p-value (0.00) of the coefficient of the partial correlation between the perceived levels of corruption and those in the contiguous countries (0.96) suggests that this positive association is significant at 1%

level. Thus, it seems relevant that corruption is indeed contagious. However, we will gauge this by means of rigorous econometric modeling.

[Insert Figures 1, 2, 3, 4, 5 and 6 about here]

3.2. Baseline results

With regards to the naive ordinary least square (OLS) and GLS models (see Table 2). There is a statistical evidence of negative correlation between corruption and development, implying that low-income countries are associated with high corruption levels[2]. This result is consistent with previous studies. Furthermore, the presence of women in parliament is statistically and negatively associated with perceived levels of corruption. Education spending is adversely affected by perceived levels of corruption. There is also statistical evidence that countries with higher scores of economic freedom are associated with low perceived levels of corruption.

[Insert Table 2 about here]

The results reported above could be biased and inconsistent if plagued by spatial interdependence. Thus, we enrich the study by exploring for the persistence effect of corruption and cross-border spillover effect of corruption. As can be seen in Table 3, the lagged values of the coefficient of corruption (0.43, 0.35 for the system GMM and spatial dynamic panel respectively) are statistically significant at 10% level both in the system GMM and spatial dynamic panel, justifying the use of the dynamic panel model. Therefore, it seems that government official's choice to be corrupt is positively related by the past incidence of corruption. Results also confirm that countries with higher scores of economic freedom depict

[2] The way that the CPI is defined requires a care with the interpretation of regression coefficients. A positive (negative) coefficient of the independent variable means that the independent variable reduces (increases) corruption.

low levels of corruption both for the system GMM and spatial dynamic panel. Furthermore, it is found in the two models that the level of development is statistically and negatively related to the perceived levels of corruption. Of greater interest is the significance (5% level) of the coefficient of spatial interdependence $(\rho = 0.29)$ in the spatial dynamic panel. The results therefore indicate that there is positive cross-border spillover effect of perceived levels of corruption. Thus, a higher level of corruption in a nearby country leads to a domestic increase in perceived levels of corruption. Most importantly, overall, the estimation of the spatial dynamic panel reveals that the parameters estimates derived are more precise compared to the system GMM. In the spatial dynamic panel, the findings also substantiate the effect of gender difference in perceived levels of corruption. In other words, the proportion of seats held by women in the national parliament is associated with lower perceived levels of corruption. The results provided at the bottom of Table 3 also point out that the two models are moderately satisfactory. The Hansen-J overidentification test is satisfactory as is the test for Arellano-Bond test for autocorrelation in residuals AR(2). We usually expect to reject the test for AR(1).

[Insert Table 3 about here]

3.3. Sensitivity analysis

In the results reported in Table 3, we assume that neighborhood is strictly determined by the five-nearest neighbors. We now examine how reliable are our results if we change the meaning of neighborhood. Such changing could affect the results. However, the results reported in Table 4 confirm that our results are robust irrespective of the definition of the spatial weight matrix except for the distance binary spatial weight matrix[3]. There is spatial interdependence in corruption perception if the spatial weight matrix is defined as the six-

[3] This is a row-standardized binary spatial weights matrix assuming spherical coordinates and a distance cut-off of 100 miles.

nearest neighbors, 10-nearest neighbors and social network spatial weight matrix[4]. However, the strength of the spatial externality of corruption for the social network spatial weight matrix (0.08) is lower than that of the six-nearest neighbors (0.26), 10-nearest neighbors (0.21). The findings of the last column of Table 4 suggest that higher military spending is significantly related to higher perceived levels of corruption.

[Insert Table 4 about here]

We also check the robustness of our findings by using the KI as a measure of corruption. The data are for the same reference period as the CPI. The KI ranges from -2.5 (poor performance or poor governance) to +2.5 (good performance or good governance). Normally, the two indices are correlated. In fact, there is a positive and significant correlation between the CPI and KI (coefficient of the partial correlation=0.98, p-value=0.00). Furthermore, before embarking to the spatial dynamic panel, we first look at the relevance of neighborhood effects when the KI is used. The partial correlation coefficient between the KI and the spatially weighted corruption is 0.12 and it is significant at 5% level (p-value=0.02)[5]. We then report the findings of the spatial dynamic panel in Table 5.

As can be seen in Table 5, corruption is persistent over time and it is contagious except when we use 10-nearest neighbors as the reference point of the spatial weight matrix. Other empirical estimates in Table 5 provide a few robust results across the five specifications of neighborhood. Nevertheless, contrary to our expectations, in columns 4 and 5, spending on education is positive and significantly related to corruption.

[Insert Table 5 about here]

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[4] The spatial weights matrix is constructed based on the fact that countries are neighbors if they belong to the same continent.

[5] The spatial weight matrix is defined as the five-nearest neighbors.

Lastly, some standard variables in the literature are included in the analysis to avoid omitted variables bias namely trade openness (sum of exports and imports of goods and services measured as a share of gross domestic product) and natural resource abundance (sum of ores and metals exports and fuel exports as a percentage of merchandise exports).The results (Table A1 and Table A2) are reported in the supplementary appendix available online[6]. With regards to the CPI and KI, the results are quite similar to those reported above. There is statistical evidence that the levels of corruption in a country vary on average in the same direction as its neighbors except for the distance binary spatial weight matrix (for the CPI), the 10-nearest neighbor (for the KI). We also find that trade openness lead to lower levels of corruption (for the five-nearest neighbors and six-nearest neighbors) while natural resource abundance does not have any effect on corruption (see Table A1). However, the effect of trade openness on corruption is not more confirmed when the KI is used (see Table A2).

4. Conclusions

Good governance is important for economic development. However, many countries still depict poor governance which seems to have negative effect on country ability to develop.

Several papers had examined the determinants of corruption stemming from cross-section to cross-sectional time series studies. Nevertheless, exploring spatial spillover of corruption in cross-country panel studies is seldom addressed in previous works. To the best

[6]This will be posted on a permanent website upon acceptance of the paper. The supplementary appendix is available at http://tinyurl.com/q3avcl9

of our knowledge, this is the first paper which uses a spatial dynamic panel model to account for spatial externalities of corruption. The results indicate that government official's choice to be corrupt is positively related by the past incidence of corruption. Most importantly, higher level of corruption in a nearby country leads to a domestic increase in perceived levels of corruption. The findings also suggest that the parameters estimates derived from the spatial dynamic panel are more precise as compared to the system GMM. Lastly, we have found overall, that there is spatial spillover of corruption irrespective of the definition of neighborhood. Thus, the results are robust, quite pertinent and could contribute significantly to existing knowledge of the field. Therefore, giving the fact there is clear evidence of cross-border spillover of corruption, fighting corruption needs to be done at the regional and international levels by defining more binding rules and strict punishments.

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Figure 1: Corruption and income per capita

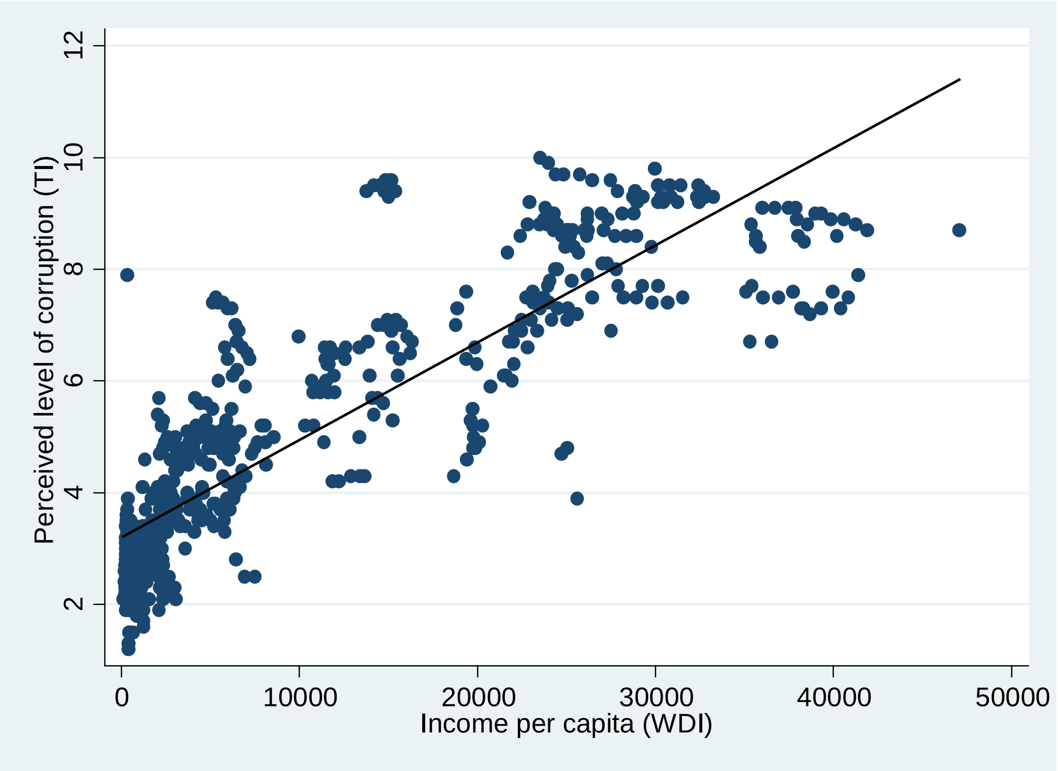

Figure 2: Corruption and public expenditures on education

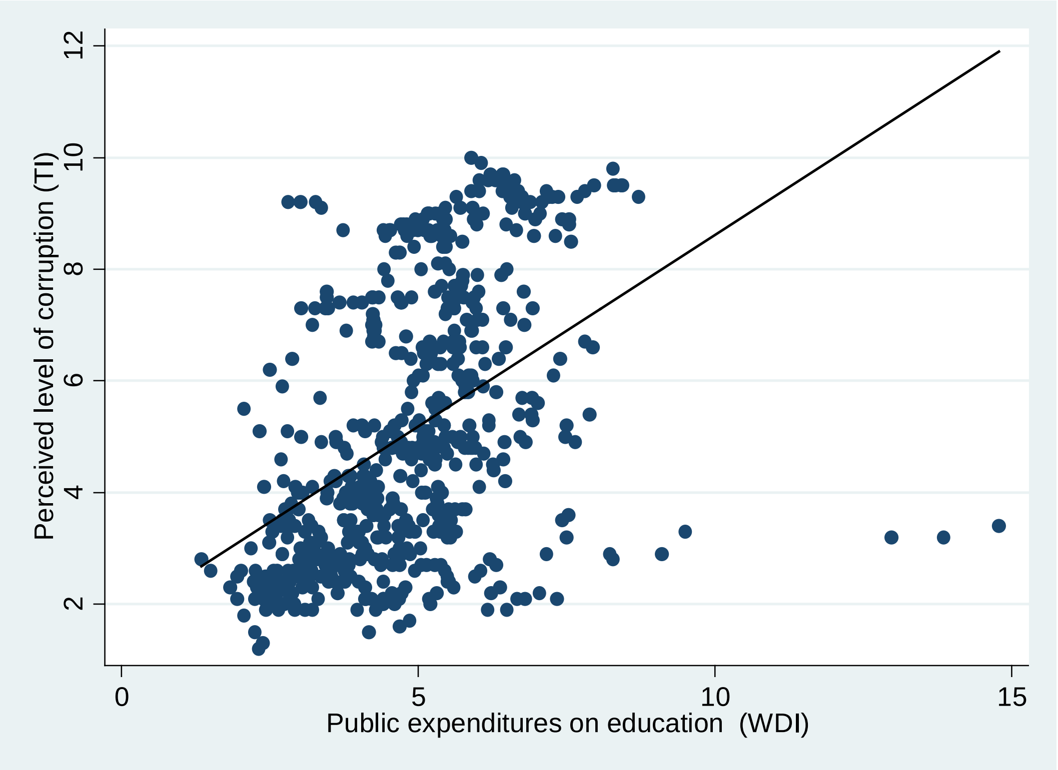

Figure 3: Corruption and military expenditures

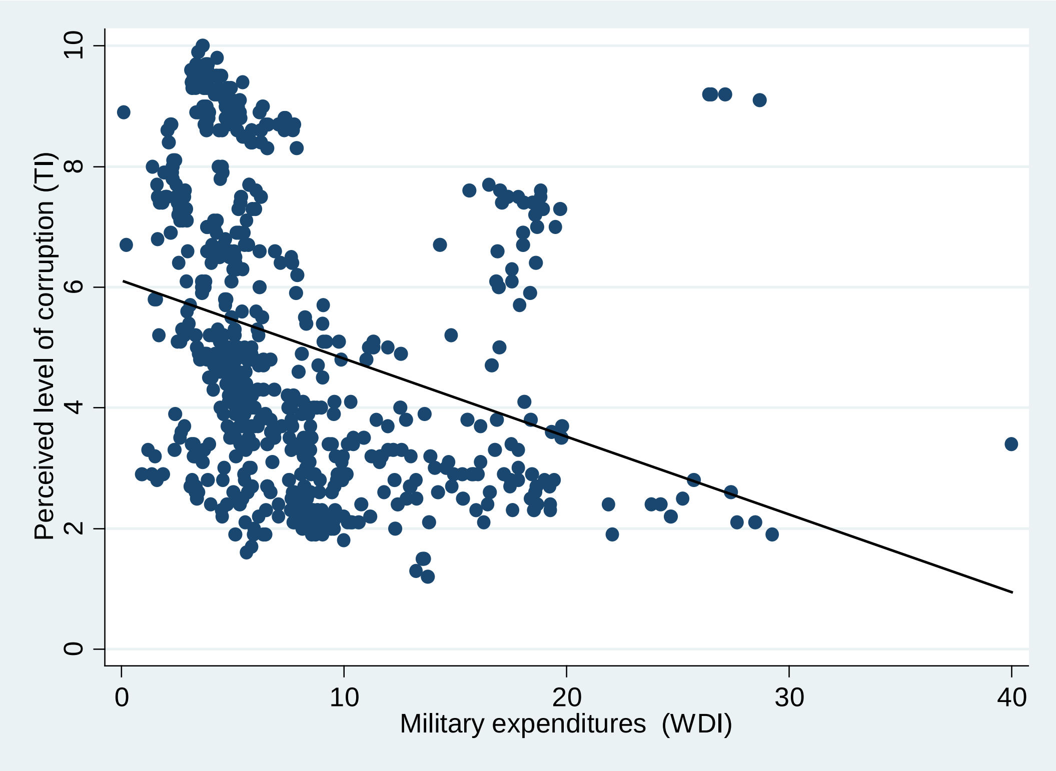

Figure 4: Corruption and gender

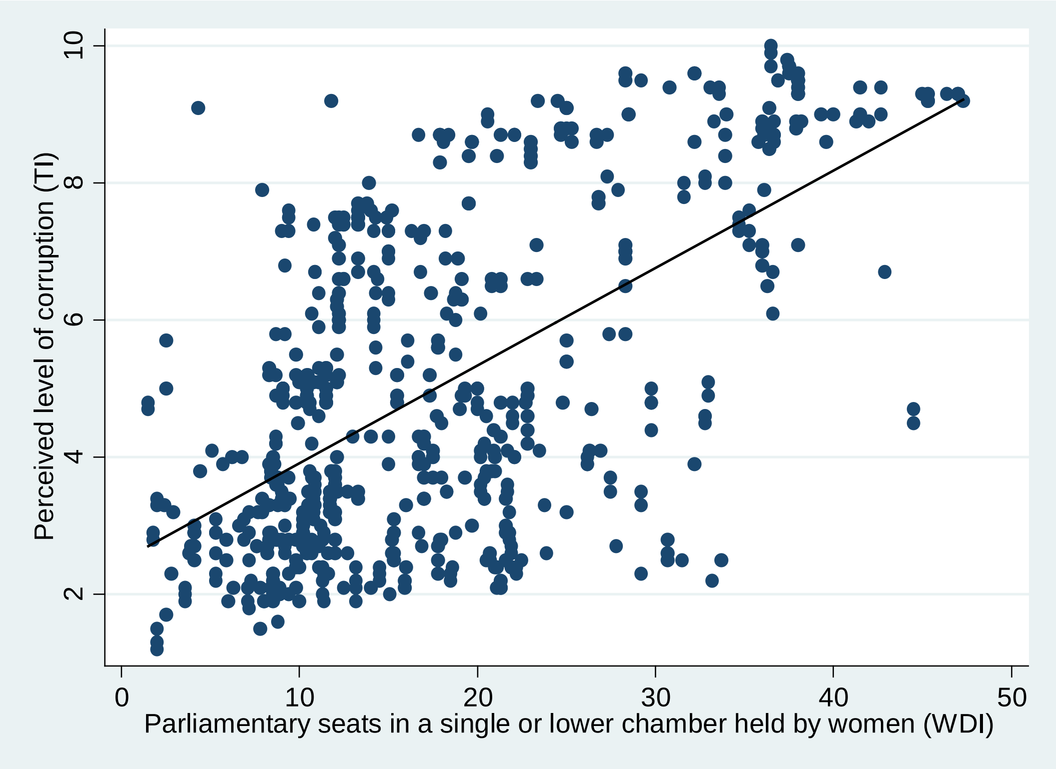

Figure 5: Corruption and index of economic freedom

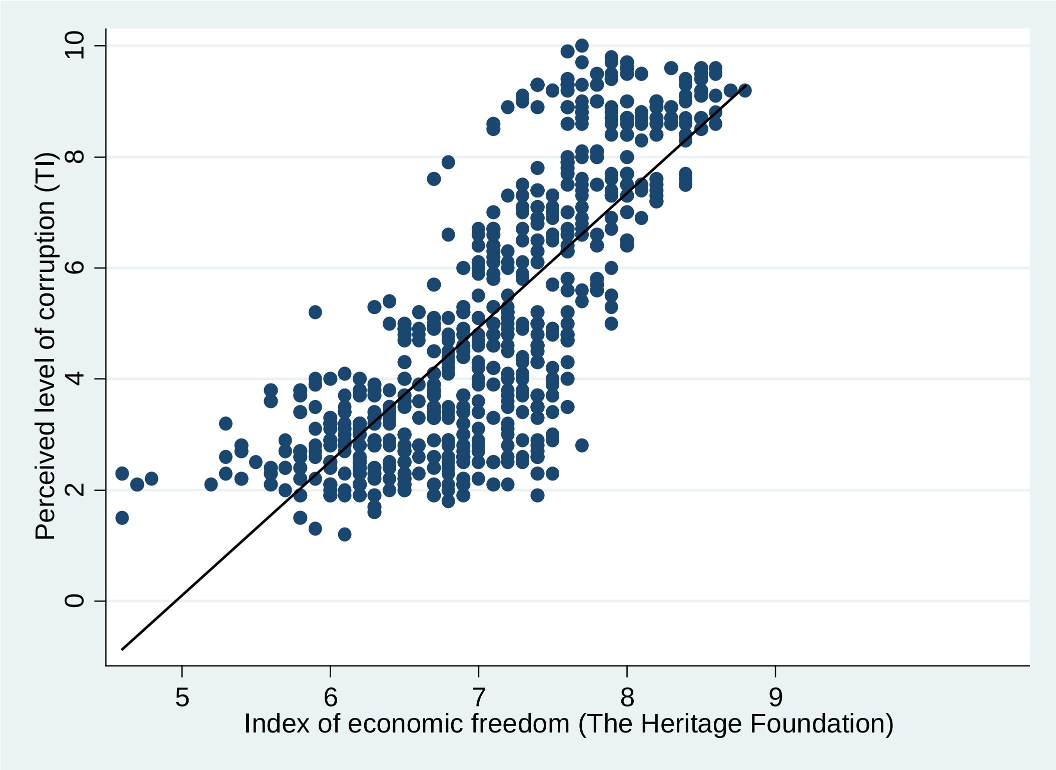

Figure 6: Corruption and weighted corruption of adjacent countries

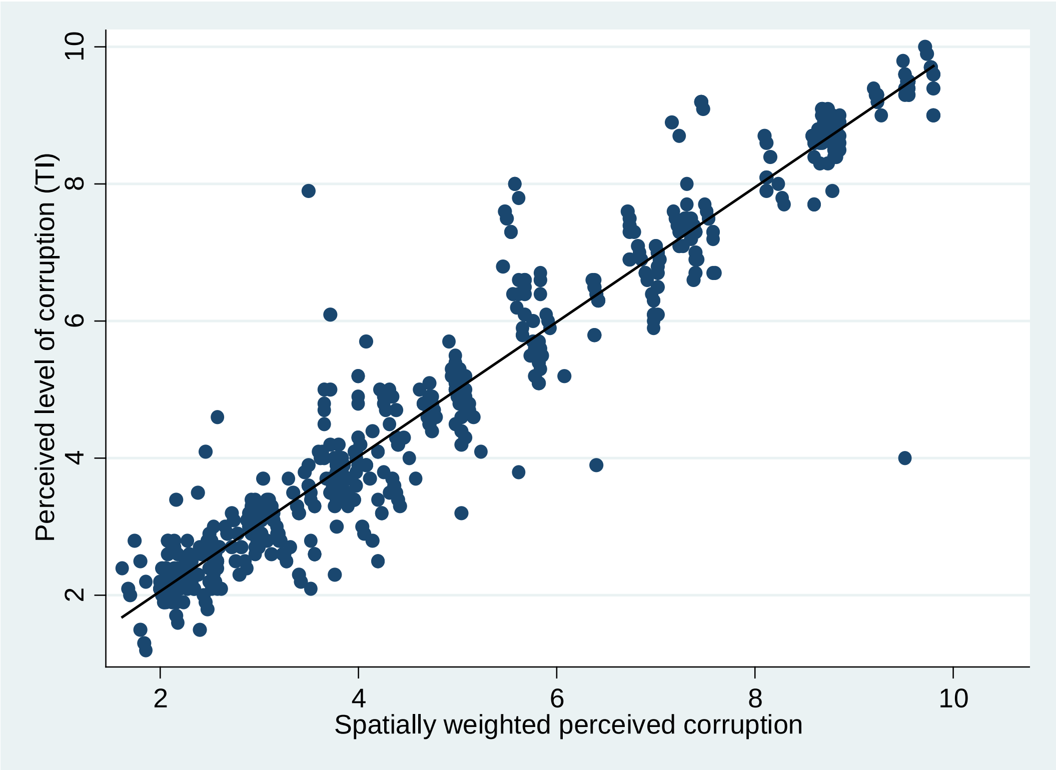

Table 1: Description of variables

Variables	Description	Mean	SD	Min	Max
CPI	Corruption perception index	5.06	2.390	1.2	10
GDP	Income per capita	10.68	11.87	0.11	47.06
Women	Percentage of parliamentary seats in a single or lower chamber held by women	18.1	10.22	1.5	47.3
Education	Public expenditures on education expressed as a percentage of the gross domestic product	4.82	1.57	1.35	4.79
Military	Military expenditures expressed as a percentage of the gross domestic product	8.08	5.59	0.10	40
EF	Index of the economic freedom	7.06	0.77	4.6 8.8	

Notes: SD means standard deviation. EF is divided by 10. GDP and Military are expressed in thousands.

Table 2: Econometrics results of the OLS and GLS

Variables	OLS	GLS
GDP	0.10***	0.11***
	(0.01)	(0.03)
Women	0.03***	0.03***
	(0.01)	(0.003)
Education	0.20***	0.26***
	(0.07)	(0.02)
Military	4.95	5.14
	(20.98)	(5.45)
EF	1.04***	0.91***
	(0.20)	(0.05)
Intercept	-4.99***	-4.37***
	(1.51)	(0.36)

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Econometrics results of the system GMM versus spatial dynamic panel

Variables	**System GMM**	**Spatial dynamic panel**
C PI (-1)	0.43^{*}	0.35^{*}
	(0.22)	(0.18)
GDP	0.08^{*}	0.04^{**}
	(0.04)	(0.02)
Women	0.02	0.01^{*}
	(0.02)	(0.01)
Education	0.01	0.04
	(0.10)	(0.04)
Military	-20.80	-12.49
	(37.52)	(8.71)
EF	0.26^{**}	0.14^{***}
	(0.12)	(0.05)
ρ		0.29^{**}
		(0.11)
AR(1)	-3.15	-2.88
P-value of AR(1)	0.00	0.00
AR(2)	-0.08	-0.02
P-value of AR(2)	0.93	0.98
Hansen-J statistic	38.69	53.83
P-value of Hansen-J statistic	0.48	0.59

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. CPI (-1) is the lagged value of CPI.

Table 4: Econometrics results of the spatial dynamic panel based on the definition of the spatial weight matrix

Variables	W1	W2	W3	W4
C PI (-1)	0.39**	0.50***	0.75***	0.65***
	(0.19)	(0.17)	(0.12)	(0.15)
GDP	0.04**	0.04**	0.03*	0.05
	(0.02)	(0.02)	(0.02)	(0.03)
Women	0.01*	0.02**	0.004	0.002
	(0.01)	(0.01)	(0.003)	(0.01)
Education	0.03	0.02	0.03	0.21*
	(0.04)	(0.04)	(0.03)	(0.13)
Military	-12.02	-6.16	-3.49	-25.13*
	(9.17)	(10.16)	(6.18)	(14.90)
EF	0.14**	0.10**	0.05	0.04
	(0.05)	(0.05)	(0.04)	(0.07)
ρ	0.26**	0.21**	0.08***	0.004
	(0.10)	(0.08)	(0.03)	(0.003)
AR(1)	-2.96	-2.85	-2.62	-2.88
P-value of AR(1)	0.00	0.00	0.00	0.00
AR(2)	-0.02	0.02	0.03	0.74
P-value of AR(2)	0.98	0.98	0.98	0.46
Hansen-J statistic	55.69	51.13	54.09	46.42
P-value of Hansen-J statistic	0.52	0.69	0.58	0.76

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. CPI (-1) is the lagged value of CPI. W1, W2, W3, W4 are the spatial weight matrices defined as the six-nearest neighbors, 10-nearest neighbors, social network spatial weights matrix based on the fact that countries are neighbors if they belong to the same continent, distance binary spatial weight matrix respectively. All these matrices are row-standardized.

Table 5: Econometrics results of the spatial dynamic panel based on Kaufman index

Variables	**W1**	**W2**	**W3**	**W4**	**W5**
KI (-1)	0.84***	0.86***	0.95***	0.98***	0.96***
	(0.05)	(0.05)	(0.03)	(0.02)	(0.04)
GDP	0.003	0.003	0.0002	0.001	0.004
	(0.003)	(0.003)	(0.002)	(0.001)	(0.01)
Women	0.0004	0.0006	0.001	-0.001	-0.005
	(0.003)	(0.001)	(0.001)	(0.001)	(0.003)
Education	-0.01	-0.01	-0.01*	-0.01*	0.03
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Military	-4.11**	-4.25**	-1.82	-2.29**	4.95
	(1.93)	(2.01)	(1.70)	(1.09)	(3.32)
EF	0.01	0.01	0.01	0.01	-0.02
	(0.01)	(0.01)	(0.00)	(0.01)	(0.02)
ρ	0.10**	0.08**	0.03	0.03**	0.005*
	(0.05)	(0.04)	(0.03)	(0.02)	(0.003)
AR(1)	-4.82	-4.87	-4.79	-4.85	-4.75
P-value of AR(1)	0.00	0.00	0.00	0.00	0.00
AR(2)	-0.10	-0.08	-0.09	-0.10	-0.31
P-value of AR(2)	0.92	0.93	0.93	0.92	0.76
Hansen-J statistic	54.98	55.41	54.59	56.33	43.66
P-value of Hansen-J statistic	0.51	0.50	0.53	0.46	0.82

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. KI (-1) is the lagged value of KI. W1, W2, W3, W4, W5 are the spatial weight matrices defined as the five-nearest neighbors, six-nearest neighbors, 10- nearest neighbors, social network spatial weights matrix based on the fact that countries are neighbors if they belong to the same continent, distance binary spatial weight matrix respectively. All these matrices are row-standardized.

Appendix: List of the countries

Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belgium, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Cambodia, Canada, Chile, Colombia, Congo. Dem. Rep., Congo. Rep., Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, Egypt. Arab Rep., El Salvador, Estonia, Ethiopia, Fiji, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Hungary, Iceland, India, Indonesia, Iran. Islamic Rep., Ireland, Israel, Italy, Japan, Kazakhstan, Kenya, Kuwait, Latvia, Lesotho, Lithuania, Luxembourg, Madagascar, Malaysia, Mali, Malta, Mexico, Moldova, Mongolia, Morocco, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Senegal, Serbia, Sierra Leone, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Togo, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States, Uruguay, Zambia.