

# INTERNATIONAL TRADE AND THE ROLE OF CORRUPTION\*

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## ABSTRACT

The purpose of this paper is to perform a detailed examination of corruption effects on trade based on a set of corruption characteristics that affects economic exchange in the corruption literature. These corruption characteristics are the level, prevalence, function, predictability and border location of corruption. The multifaceted corruption effect on trade is empirically examined using a corruption-augmented gravity equation. A variety of alternative corruption variables and estimation methodologies are used to identify the empirically verified impact of the corruption characteristics. The results are also compared to those obtained using aggregate corruption indicators to elucidate to what extent the use of overall corruption measures can bias the estimated trade impact of corruption.

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## 1. INTRODUCTION

Recently, international trade researchers have highlighted the key role played by institutional quality in shaping international trade and production patterns.<sup>1</sup> In this paper, our aim is to focus on the trade impact of one particular feature of institutional quality that has been shown to severely affect economic exchange, namely corruption. As previously noted by Anderson and Marcouiller (2002), corruption is one of the main obstacles to making business in world markets. This ranking is recurring in the few global firm surveys that are available on the topic and can be recognised in numerous case studies on corruption.<sup>2</sup> Furthermore, the corruption research field provides ample evidence of that corruption effects on economic transactions are systematic once divided into an underlying set of corruption characteristics. These results suggest that it is necessary to examine the multifaceted role of corruption to properly assess its impact on economic exchange in the form of international trade.

The purpose of this paper is to perform a detailed examination of corruption effects on trade based on a set of corruption characteristics that affects economic exchange in the corruption literature. These corruption characteristics are the level, prevalence, function, predictability and border location of corruption. Previous researchers that have examined trade effects of corruption have not provided a detailed investigation on these grounds.<sup>3</sup> In addition, most related research in the area is focused solely on the trade effects of border corruption. International trade transactions involve many activities such as partner search, contracting and goods transports that do not occur at the border but affects the trade outcome and may be subject to corruption. The impact of border corruption on trade is therefore unlikely to provide a complete assessment of the overall corruption effects on trade. As a result, we choose to include both border and non-border corruption activities that could impact on trade exchanges in our investigation.

The multifaceted corruption effect on trade is empirically examined using a corruption-augmented gravity equation. Our gravity equation is a modified version of that provided by Anderson and Marcouiller (2002), which is based on the standard gravity approach and includes multilateral resistance terms and institutional quality indicators. In this specification, we examine the direct and indirect trade impact of corruption, allowing for an indirect and

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<sup>1</sup> See e.g. Anderson and Marcouiller(2002) and Levchenko (2007).

<sup>2</sup> These surveys are provided by the World Bank.

<sup>3</sup> See Anderson and Marcouiller(2002) and Dutt and Traca (2009).

non-linear border corruption effect identified by Dutt and Traca (2009). With reference to previous research on the gravity equation estimation methodology provided by Anderson and Marcouiller (2002), Anderson and Wincoop (2003), Dutt and Traca (2009), Helpman, Melitz and Rubinstein (2008) and Silva and Tenreyro (2009), we combine different estimation techniques to identify the empirically verified impact of the investigated corruption characteristics. Furthermore, an instrumental variable approach is used to counteract estimation bias that may be present due to feedback effects of trade on corruption, interdependency between trade regulation and corruption and measurement error problems.

This study is based on a corruption definition incorporating the one used in a predominant part of the corruption literature, which refers to a misuse of public office for personal gain.<sup>4</sup> Since our focus is placed on the corruption impact on international trade exchanges, and thereby deals with outcomes of private sector activities, we use a broader definition that includes the misuse of organisational assets for personal gain. This way, we can provide a general examination of the trade effects of corruption in the private and public sector. Data on corruption characteristics are constructed from firm level data in the World Business Environment Survey provided by the World Bank. The survey captures local private sector experiences of corruption and is thereby recommended compared to other, aggregate corruption estimates that rely on the views of foreign business expertise.<sup>5</sup> The empirical examination is performed for a sample displaying a stark variation in country characteristics, in terms of national per capita incomes and geographical disposition, as well as in the level, structure and spread of corruption. These countries are Argentina, Belize, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Czech Republic, Ecuador, Georgia, Honduras, India, Indonesia, Mexico, Nicaragua, Nigeria, Peru, the Philippines, Poland, Portugal, Rumania, Slovenia, South Africa, Trinidad and Tobago, Turkey, Uruguay, USA, Venezuela and Zimbabwe.

The rest of the paper is organised as follows. Section 2 introduces corruption characteristics impacting on economic exchange in the corruption literature and describes their consequences from an international trade perspective. The empirical specification is presented in section 3 and section 4 contains a data description. The estimation results are provided in section 5. The last section concludes.

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<sup>4</sup> See, amongst others, Jain (2001) and Aidt (2003).

<sup>5</sup> See Bardhan (2000) and Svensson (2005) for critical discussions of corruption indicators.

## 2. THE MULTIFACETED ROLE OF CORRUPTION AND ECONOMIC EXCHANGE

The strand of corruption literature that deals with the interplay between corrupt behaviour and market transactions is foremost focused on the implications of corruption for economic performance. Whereas several theoretical contributions point to the use of “efficient corruption” to overcome (temporary or permanent) obstacles to economic exchange, there is little evidence of that corruption favours economic activity in practice.<sup>6</sup> Indeed, corruption is identified as the primary obstacle to the operation and growth of firms in developing countries according to the World Business Environment Survey.<sup>7</sup>

The view that malfunctioning economic institutions reduce international trade has recently been supported by formal and empirical evidence,<sup>8</sup> and since corruption is closely interlinked with institutional quality (for reasons that will be described further in the next section), the overall impact of corruption on international trade is expected to be negative. Of course, this is not equivalent to a general expectation of that corruption always restricts international economic transactions and one should keep in mind that there are a number of circumstances under which efficient corruption appears to prevail. From an international trade perspective, one of the most convincing examples of the beneficial effects of corruption is provided by Dutt and Traca (2009), who identify conditions under which border corruption can enhance trade. Nevertheless, as a general rule of thumb, there are no stark indications of that corruption spurs economic activity.

In the corruption literature, researchers have identified a number of characteristics that can matter for its impact on economic transactions.<sup>9</sup> First, the level of corruption provides an appropriate means to directly measure the impact severity of corruption. Second, the prevalence of corruption reveals the manifestation of corrupt behaviour in society. Third, the function of corruption matters because it can be used as a device to obstruct market competition. Fourth, the predictability of corruption impacts positively on the market prospects of firms. Since cross-border exchanges are made between parties on both sides of the border, national corruption faced by each of these parties can affect the outcome of the

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<sup>6</sup> See, amongst others, Aidt (2003), Bardhan (1997), Schleifer and Vishny (1993) and Svensson (2005)

<sup>7</sup> See Batra, Kaufman and Stone (2003), p. 4-5.

<sup>8</sup> See Anderson and Marcouiller (2002) and Levchenko (2007).

<sup>9</sup> These characteristics are described in numerous studies in the corruption literature and can, for instance, be found in main surveys on the topic.

exchange. Border corruption however refers to the corrupt behaviour of customs officials and is therefore applicable only for the importing side of the relationship. In the corruption literature, border corruption can have particularly trade restrictive implications compared to corruption in non-border locations.

The first corruption characteristic that has been shown to affect economic activity is the level of corruption. This ideal measurement of the impact severity of corruption can, broadly interpreted, be used to assess its direct costs. In international trade exchanges, the impact severity of corruption can limit the trade volumes and/or obstruct trade transactions altogether. Given the nature of corruption, these levels are however not the only corruption characteristic affecting the trade restrictive impact of corruption. While the level of corruption reveals the impact of corruption when it occurs, the prevalence of corruption indicates how often corrupt behaviour takes place. In addition, a given corruption level can be more restrictive if levied at the border since customs processing is a prerequisite for trade exchanges. Also, the corruption level does not capture whether corruption is used to restrict market competition and thereby impose indirect effects on overall economic activity. Lastly, the level of corruption does not take account of that, by reducing uncertainty, a predictable use of corruption improves the investment climate of producers.

The second corruption characteristic is its prevalence, which affects market transactions in depicting the social norm of making business.<sup>10</sup> Not only is the likelihood of encountering corruption in a randomly chosen economic transaction higher with increased corruption prevalence, but it also tends to enforce self-sustained corrupt behaviour.<sup>11</sup> Corrupt agents prefer to do business with corruptible agents, which works to the disadvantage of honest potential business partners. Similar behavioural patterns tend to be replicated and/or sustained by government officials, further exacerbating the corruption effects on private sector activities. A higher prevalence of corruption in a partner country implies that the search costs of finding an honest business partner increases, thereby raising the transaction costs of honest exchanges. Indeed, the appropriate indication of corruption is its prevalence when the national spread of corrupt behaviour is placed in focus.<sup>12</sup> Also, since both corrupt and honest partners are affected by the prevalence of corruption, it could be argued that a more precise

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<sup>10</sup> See, amongst others, Bardhan (1997) and Svensson (2005).

<sup>11</sup> See Miller (2006).

<sup>12</sup> See, for instance, Bardhan (1997).

measurement of the trade restrictive effect of corruption should be based on the combined impact of the level and prevalence of corruption.

The third corruption characteristic is its function, which indicates whether it is used to destruct market competition by obstructing the production opportunities of firms owned by honest agents. The effect of corruption on competition provides an indirect channel through which corruption can impact on economic exchange. This effect can be due to corrupt requirements in making business or state officials' misuse of private sector regulation (regulation that, in fact, may be implemented precisely because it provides corruption opportunities). For clarification purposes, we divide the function of corruption characteristic into two categories. The first category includes corruption that inhibits the market entry of honest firms but do not affect the competition between active firms and the second category includes corruption that affects the competitive conditions between active firms in the market. In any case, the obstruction of competition that results will reduce the domestic production opportunities and is likely to reduce the home countries exports and possibly its imports. Evidence from the corruption research field furthermore reveals that trade works against the use of corrupt practices by enhancing internal market competition.<sup>13</sup> This potential feedback effect of trade has not been accounted for in international trade research on the topic but should be considered to avoid misinterpretations of cross-section results. In this paper, instrumental variable estimation techniques are used to remedy the problem.

The fourth corruption characteristic is its predictability. Within the corruption literature, this characteristic is one of the key factors that are used to explain differences in economic performance between countries with high corruption levels.<sup>14</sup> The predictability can take many forms and functions as a centralised institutional system where economic agents know what to expect and confirm these expectations. In this type of corrupt system, which for example has been identified in Korea and China, the economic performance of firms is not regularly hindered by corruption uncertainties and irregularities. In contrast, systems infiltrated by unpredictable corruption (that can be found in, for instance, African countries) are likely to deter many business propositions and generate persistent coordination failures. A proper investigation of corruption effects on economic exchange therefore needs to take

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<sup>13</sup> See Ades and di Tella (1999).

<sup>14</sup> See e.g. Schleifer and Vishny (1993).

account of whether the observed corruption is predictable or not, with the aim of clarifying that a more trade restrictive impact can result from unpredictable corruption.

The fifth characteristic is the border location of corruption. Customs authorities tend to be more infiltrated with corruption problems than most other state organisations due to the strong discretionary power of its officials.<sup>15</sup> Since there is no opportunity to circumvent customs processing on import transactions, bribe collection can become very lucrative if levied by this authority.<sup>16</sup> In contrast, once passing customs, corruption costs can be reduced by importers who choose honest business partners and appropriate distribution channels for their goods. This implies that border corruption typically provides a starker obstacle to economic exchange compared to corruption encountered within country borders. Yet, another aspect of border corruption needs to be taken into account in examining the impact of border corruption on trade. Customs officials that use their power to collect bribes may create an opportunity to avoid the enforcement of trade regulation, which in principle can enhance trade compared to uncorrupt customs processing. Dutt and Traca (2009) shows that the trade-enhancing effect can prevail when tariffs are high and provide evidence of that it can be found for 7% of their observations. This non-linear effect of border corruption is taken into account as part of our investigation.

### 3. EMPIRICAL SPECIFICATION

The gravity model application to the prediction of trade flows is very popular due to its strong explanatory power, and our empirical specification relies on a vast literature covering the appropriate use of the gravity equation on the basis of trade theoretic underpinnings and econometric considerations. In particular, this paper's empirical approach has been influenced by the recent contributions by Anderson and Marcouiller (2002), Anderson and Wincoop (2003), Dutt and Traca (2009), Helpman, Melitz and Rubinstein (2008) and Silva and Tenreyro (2009). Anderson and Marcouiller (2002) and Anderson and Wincoop (2003) show that the trade impact of national price indices has to be accounted for to provide accurate predictions of bilateral import flows. Helpman, Melitz and Rubinstein (2008) show how formal trade theoretic developments on firm heterogeneity can be incorporated into the gravity model specification while Silva and Tenreyro (2009) investigate their empirical

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<sup>15</sup> See Miller (2006).

<sup>16</sup> For a detailed description of the impact of discretionary power on the corruptibility of state officials, see Aidt (2003).

specification in detail. As previously described, Dutt and Traca (2009) provide a gravity equation that incorporate border corruption effects on trade.

A major specification difference in this study compared to these and most other investigations of the gravity equation is that we use instrumental variables estimation methods to account for the possible feedback effect of trade on corruption and to remedy the potential problem that trade policy regulation and bureaucratic corruption may be interdependent. This instrumental variable estimation technique also has the benefit of counteracting measurement error bias, which is useful since any measurement of corruption is likely to be imperfect given its concealed and obscure nature. First, as previously described, corruption researchers have identified that trade can counteract corrupt behaviour.<sup>17</sup> Second, many authors in the same research field have noted that government policy and regulation can be based on the incentive to raise corruption opportunities for state officials. This result suggest that trade policy and bureaucratic corruption may be codetermined. Indeed, Dutt (2009) provide direct evidence of that trade policy and bureaucratic corruption can be jointly determined because more protectionism provides improved opportunities for corruption.

Our gravity equation is a modified version of that provided by Anderson and Marcouiller (2002), which is based on the standard gravity approach and includes multilateral resistance terms and institutional quality indicators. Our simple version of their base model equals:

$$\ln \frac{m_{ij}}{m_{kj}} = \beta_0 + \beta_1 \ln \frac{y_i}{y_k} + \beta_2 \frac{y_i / n_i}{y_k / n_k} + \beta_3 \ln \frac{1 + b_{ij}}{1 + b_{kj}} + \beta_4 \ln \frac{1 + l_{ij}}{1 + l_{kj}} + \beta_5 \ln \frac{d_{ij}}{d_{kj}} + \beta_6 \ln \frac{1 + (1 - a_{ij})t_i}{1 + (1 - a_{kj})t_k} + \beta_7 \sum_j w_j \ln \frac{1 + b_{ij}}{1 + b_{kj}} + \beta_8 \sum_j w_j \ln \frac{1 + l_{ij}}{1 + l_{kj}} + \beta_9 \sum_j w_j \ln \frac{d_{ij}}{d_{kj}} + \beta_{10} \sum_j w_j \ln \frac{1 + (1 - a_{ij})t_i}{1 + (1 - a_{kj})t_k} + v_i + \varepsilon_{ij}$$

where the subscripts denote the importing country  $i$ , the exporting country  $j$  and a reference exporting country  $k$ ,  $m$  is the bilateral import value,  $y$  is the national income,  $n$  is the population,  $b$  and  $l$  are border and language dummies that take the value one if the countries share a common border or language,  $d$  is the distance between the countries,  $t$  is the average tariff and  $a$  is an indicator variable that takes the value one if the bilateral relation is characterised by a preferential trade status. In addition,  $w_j$  is country  $i$ 's traded goods

<sup>17</sup> See Ades and di Tella (1999) and Persson and Tabellini (2003).



expenditure share on imports from country  $j$ . Lastly, the error terms  $v_i$  and  $\epsilon_{ij}$  are disturbances that affect country  $i$ 's imports relative to country  $k$  and country  $i$ 's imports from country  $j$ .

The standard gravity approach used to predict bilateral trade flows stems from Newton's gravity equation in physics, which predicts the gravitational force between two point masses.<sup>18</sup> Our base specification includes the economic masses of countries in form of their national incomes (in absolute and per capita terms) and the economic distances between countries as measured by physical distance and border dummies (which jointly provide a rough measure of transport costs), language barriers and tariffs. Two additional distance variables are included in our base specification. These are dummy variables measuring if a bilateral relationship is characterised by colonial linkages and a common legal origin. There is a large amount of research evidence showing that the function and quality of economic institutions vary systematically with colonial heritage, especially if legal institutions have been inherited. The two additional dummy variables can thereby be used to control for trade effects that are caused by parts of the national institutional quality that are not interlinked with corruption.<sup>19</sup>

Anderson and Marcouiller (2002) analyse the determination of relative import flows to eliminate exporter-specific price indices from the regression equation. The authors also incorporate importer-specific price indices into the equation by use of weighted economic distance equivalents.<sup>20</sup> Their empirical approach is not based on firm heterogeneity, as in Helpman, Melitz and Rubinstein (2008), implying that parameter estimates of the above regression equation could be biased. Trade outcomes are based on the profitability to export amongst firms, which implies that a lack of trade carries information that should be accounted for in predicting actual trade flows. The lack of trade reported for some observations is therefore due to the self-selection of exporters, and Helpman, Melitz and Rubinstein (2008) control for this effect using a Heckman estimation technique.

In our data, less than seven percent of all observations depict zero trade flows and the described selection mechanism is likely to impose a negligible effect on our estimation

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<sup>18</sup> Keith Head provides a nice introduction to the use of this equation as a predictor of trade flows on his homepage at <http://www.econ.ubc.ca/nmalhotra/490/Articles/KHead%20on%20gravity.pdf>.

<sup>19</sup> This way, we can also avoid the severe multicollinearity problems that often occur if different features of institutional quality are jointly examined empirically.

<sup>20</sup> See Anderson and Marcouiller(2002) for details.

results. Nevertheless, the estimation methodologies from Anderson and Marcouiller (2002) and Helpman, Melitz and Rubinstein (2009) are used in combination to control whether our estimation results are subject to the sample selection effect. This implies that probit, tobit and non-linear least squares techniques are used based on standard and/or Heckman two-stage estimation procedures. Furthermore, as previously described, all our estimations are based on instrumental variables techniques. However, since the firm heterogeneity incorporated into trade models is based on product differentiation, the Heckman estimation method is only used to investigate trade flows in differentiated product industries.

Our incorporation of corruption into the gravity model follows the work by Anderson and Marcouiller (2002) and Dutt and Traca (2009). In constituting a feature of institutional quality, corruption can be modelled as a hidden tax that has a direct effect on the prices of goods delivered to the purchasing party as in Anderson and Marcouiller (2002).<sup>21</sup> In a gravity equation, this corruption specification singles out corruption effects on trade exchanges while controlling for additional corruption effects on the domestic economy through the inclusion of national income levels. In our specification, we allow for all corruption characteristics that can affect the trade exchange and not only the corruption encountered at country borders. For instance, transport costs between the seller's and buyer's destination may be affected by the prevalence and predictability of corruption. As previously described, we also allow for border corruption in the importing country to affect trade indirectly through the tariff effect according to the specification by Dutt and Traca (2009).

Since no prior study has investigated the combined trade effect of the presented corruption characteristics, we combine them in various plausible ways to assess their empirically verified impact on trade. Border corruption and the two function categories of corruption are examined using individual and combined level and prevalence measures. The trade impact of the border and non-border corruption variables is considered with and without accounting for the contributing effect of corruption predictability. Lastly, the combined effect of corruption variables is assessed individually and in aggregated form to investigate whether an overall corruption measure can suffice to predict corruption effect on trade flows. Our corruption-augmented gravity equation equals:

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<sup>21</sup> This specification is based upon the work by Anderson and Marcouiller (1998) and Andersson and Young (1999).

$$\begin{aligned} \ln \frac{m_{ij}}{m_{kj}} = & \beta_0 + \beta_1 \ln \frac{y_i}{y_k} + \beta_2 \frac{y_i / n_i}{y_k / n_k} + \beta_3 \ln \frac{1 + b_{ij}}{1 + b_{kj}} + \beta_4 \ln \frac{1 + l_{ij}}{1 + l_{kj}} + \beta_5 \ln \frac{1 + c_{ij}}{1 + c_{kj}} + \beta_6 \ln \frac{1 + o_{ij}}{1 + o_{kj}} + \\ & \beta_7 \ln \frac{d_{ij}}{d_{kj}} + \beta_8 \ln \frac{1 + (1 - a_{ij})t_i}{1 + (1 - a_{kj})t_k} + \beta_9 \sum_j w_j \ln \frac{1 + b_{ij}}{1 + b_{kj}} + \beta_{10} \sum_j w_j \ln \frac{1 + l_{ij}}{1 + l_{kj}} + \beta_{11} \sum_j w_j \ln \frac{1 + d_{ij}}{1 + d_{kj}} + \\ & \beta_{12} \sum_j w_j \ln \frac{1 + o_{ij}}{1 + o_{kj}} + \beta_{13} \sum_j w_j \ln \frac{d_{ij}}{d_{kj}} + \beta_{14} \sum_j w_j \ln \frac{1 + (1 - a_{ij})t_i}{1 + (1 - a_{kj})t_k} + \Omega_{ik} + \Lambda_{ik} + v_i + \varepsilon_{ij}, \end{aligned}$$

$$\Omega_{ik} = \Omega_{ik} \left( \frac{C_i^B}{C_k^B}, \frac{C_i^{NB1}}{C_k^{NB1}}, \frac{C_i^{NB2}}{C_k^{NB2}} \right), \Lambda_{ik} = \Lambda_{ik} \left( \frac{(1 - a_{ij})t_i}{(1 - a_{kj})t_k}, \frac{C_i^B}{C_k^B}, \frac{(C_i^B)^2}{(C_k^B)^2} \right),$$

where  $\Omega_{ik}$  and  $\Lambda_{ik}$  are functions capturing the direct and indirect trade impact of corruption, with the *B* and *NB* superscripts depicting border and non-border corruption. The function of corruption is captured by the two non-border corruption variables, with the *NB1* superscript denoting corruption that is evenly distributed amongst the same type of agents and the *NB2* superscript denoting corruption that is used to favour some agents at the cost of their competitors. The  $\Omega_{ik}$  function contains a linear combination of corruption variables while the  $\Lambda_{ik}$  function captures the combined effect of tariff barrier protection and border corruption on trade with border corruption. Both functions contain unrestricted parameter coefficients.

#### 4. DATA

The empirical investigation in this study is subject to data availability restrictions for the corruption characteristics. As previously described, the World Business Environment Survey (WBES) provides detailed data on corruption characteristics for a country sample with a large variation in national characteristics with respect to development levels and geographical location. The data set is useful for our purpose of accounting for the multifaceted impact of corruption on international trade. However, the WBES data set is based on observations for one year only and we are therefore restricted to perform a cross-section analysis for 1999.<sup>22</sup> The national income levels, in absolute and per capita terms, are PPP-adjusted values measured in current US dollars. The national income figures come from the 2008 edition of the World Development Indicators (WDI) database. The trade data, which is reported in thousands of current US dollars, have been collected through the World Integrated Trade Systems (WITS) database. Average ad-valorem tariff equivalents of the encountered

<sup>22</sup> The data was collected between the end of 1998 and the beginning of 2000. See Batra et al. (2003) for details.

protectionist support have been obtained from the same database. The WITS database also provides information of the bilateral preferential trade status (in the form of reciprocal trade agreements or so-called trade preferences used to favour imports from poor trade partners) underlying the construction of our corresponding dummy variable. Dummy variables for neighbouring countries and colonial heritage links are supplied by CEPII while dummy variables for legal origin links come from La Porta and al. (1999). The WBES, WDI and WITS databases are all provided by the World Bank.

The instrumental variables used to support our corruption parameter estimates are proportion measures of the state interaction and legal organisation of firms in the WBES survey and 1998 corruption perception indices from Transparency International. State ownership is often closely interlinked with corrupt agreements between bureaucrats and private entrepreneurs and can constitute a well-founded predictor of corrupt firm behaviour.<sup>23</sup> The legal organisation of a firm can affect the corruption opportunities of its leaders, managers and employees. Lastly, insofar that the corruption perception index captures the corruption characteristics of this study, its 1998 values can provide an exogenous determinant of the corruption variables included in our investigation.

Corrupt behaviour is closely interlinked with malfunctioning economic institutions. As is evident from numerous case studies within the corruption literature, there are many explanations for the close connection between corruption and low institutional quality. In fact, as noted by corruption researchers,<sup>24</sup> malfunctioning institutions may be sustained precisely because they provide opportunities for the misuse of public office for personal gain. We include narrow as well as broad corruption indicators to take account of the fact that it is hard to disentangle corruption from some other features of low-quality institutions.

To be continued....

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<sup>23</sup> See, amongst others, Kaufmann (1997).

<sup>24</sup> See, amongst others, Aidt (2003), Bardhan (1997), Schleifer and Vishny (1993) and Svensson (2005).

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