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Colonialism, Elite Formation and Corruption

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Abstract

This paper argues that corruption in developing countries has deep historical roots; going all the way back to the characteristics of their colonial experience. The degree of European settlement during colonial times is used to differentiate between types of colonial experience, and is found to be a powerful explanatory factor of present-day corruption levels. The relationship is non-linear, as higher levels of European settlement resulted in more powerful elites (and more corruption) only as long as Europeans remained a minority group in the total population.

1 Introduction

This paper sits at the intersection of two empirical literatures that over the last fifteen years have greatly advanced our understanding of developing countries. We are talking about the literature on the determinants of corruption and the literature on the socioeconomic consequences of colonialism.[1]

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[1] Lambsdorff (2006) and Treisman (2007) provide useful surveys of the corruption literature. Important contributions are Mauro (1995), Ades and Di Tella (1997), La Porta et al. (1999) and Treisman (2000). Among the many contributions to the literature on the socio-economic consequences of colonialism we can mention La Porta et al. (1997, 1998), Acemoglu et al. (2001), Glaeser et al. (2004), Angeles (2007) and Angeles and Neanidis (2009). See also the survey by Nunn (2009).

The literature on the empirical determinants of corruption has grown exponentially since its beginnings in the mid-90s, when the first measures of the perception of corruption were made available and international aid donors like the World Bank named fighting corruption a policy priority.[2] Although much has been learned since then, the literature has always been challenged by the difficulty of establishing causality.

Causality is difficult to establish because many of the explanatory factors analyzed in the literature could plausibly be affected by corruption. To name but two examples, Brunetti and Weder (2003) argue that press freedom will deter corruption while Swamy et al. (2001) and Dollar et al. (2001) propose that a larger share of women in government will also lower corruption levels. In both cases one could well argue for the reverse effect, with corrupt governments constraining the press and limiting the access of women to government. Of course, these problems are well recognized in the literature; but convincing solutions are rare due to the difficulty of finding appropriate instruments.

The literature has also established a significant set of exogenous, historically determined variables, that have a potential effect on corruption. The most important variables in this set are the legal origins of the country, the religions professed by its population, the degree of ethnic fractionalization, and the identity of the colonial power formerly established in its territory (if the country was colonized). Since all of these variables are determined by events that took place in the distant past, they are credible sources of exogenous variation to explain current levels of corruption.

It is thus the case that colonial heritage is well established as a potential determinant of corruption. The most careful analysis of this link is probably found in Treisman (2000), who finds that former British colonies have

[2] The World Bank's World Development Report (1997) is devoted to how bureaucratic corruption leads to bad policies, while the relationship between corruption and aid is addressed in World Bank (1989, 1998).

significantly lower levels of corruption.[3] No similar effect is found for former colonies of other European nations and - perhaps surprisingly - the simple fact of having been colonized appears to be unrelated to current levels of corruption. Until now the literature has not analyzed the degree or intensity of the colonial experience; a point that will be developed below.

The most powerful explanatory factor of corruption measures is the level of economic development as measured by GDP per capita. Current levels of GDP per capita typically show correlation coefficients with measures of corruption in the region of 0.8 (Treisman 2007, p. 223) and explain much of the variation in the data. The problem with this relationship is that reverse causality is evidently suspect. We may note, however, that tests carried out instrumenting for GDP per capita with geographical or historical variables typically do not affect the results (Treisman 2000, 2007).

Turning to the literature on the socioeconomic consequences of colonialism, a large number of papers have stressed the long term effects of colonialism on institutional quality and economic development (Hall and Jones 1999, Acemoglu et al. 2001, 2002, Rodrik et al. 2004), on company law and the administration of justice (La Porta et al. 1997, 1998), on income inequality (Angeles 2007) and on aid effectiveness (Angeles and Neanidis 2009). It seems clear that the current situation of most developing nations is, if not historically determined, at least heavily path-dependent.

In much of this recent literature on the consequences of colonialism an important consideration is the type of colonial experience. While this can be potentially measured along different dimensions, an aspect that has attracted much attention is the degree of European settlement in their colonies. Some countries experienced very modest inflows of European settlers (most

[3] Treisman (2000) adds that "This is not due to greater openness to trade or democracy, and is probably not explained by Protestant or Anglican religious traditions. It may reflect greater protections against official abuse provided by common law legal systems. But slightly stronger evidence suggests that it is due to superior administration of justice in these countries" (p. 426-427).

of sub-saharan Africa, India), others experienced large inflows with Europeans becoming a sizeable share of the population (Latin America, South Africa) and others, finally, experienced large inflows with Europeans becoming the majority of the population (United States, Canada, Australia and New Zealand).

In Acemoglu et al. (2001, 2002) the degree of European settlement is considered a positive determinant of institutional quality. Where Europeans settled in large numbers, it is argued, they established institutions that protected property rights; while countries where Europeans were but a minority saw the creation of "extractive" institutions.

In Angeles (2007) and Angeles and Neanidis (2009) the relationship between European settlement and the variable of interest is non-linear. Angeles (2007) argues that the difference in income between European settlers and the rest of the population implies a positive relationship between the degree of European settlement and income inequality as long as Europeans remain a minority. Countries where Europeans became the majority of the population would be characterized by lower inequality. The point is taken forward by Angeles and Neanidis (2009), who argue for a non-linear relationship between European settlement and the power and attitudes of the local elite which is then reflected in the way that foreign aid flows are used.

This paper follows the same line as Angeles (2007) and Angeles and Neanidis (2009), and argues that a non-linear relationship exists between the degree of European settlement in colonial times and current levels of corruption around the world. As in Angeles and Neanidis (2009), we consider that the key element to understand this link is the characteristics of the local elite. A larger degree of European settlement implies a more powerful elite, as the control of these settlers over the country's resources increases and the capacity of the rest of the population to present a credible opposition diminishes. This, however, holds only as long as Europeans represent a minority of the population. For countries with a European majority a

credible force appears to counteract the power of the elite, namely those same European settlers who now constitute most of the population.

As an example of how elite power initially increases with the share of Europeans in the population, consider the difference in land policy between two British colonies in Africa: Nigeria and South Africa. In Nigeria, where European settlement was very limited and Britain's interest lay in the expansion of the production of cash crops such as cotton, cocoa, groundnuts and palm oil, a 1917 law forbid the acquisition of land by Europeans. In South Africa, where European settlers were a sizeable part of the population and had the means to impose their interests, a 1913 law forbid the acquisition of land by Africans outside some strictly delimited "reserves" constituting 8% of the country's territory. The difference was not due to the identity of the colonial power, which was Britain in both cases, but to the degree of European settlement.

An aspect of most colonial experiences that is sometimes overlooked is the fact that European governments had often a relatively benevolent approach towards their extra-European subjects and did not wish their ruin. Whether this was guided by self-interest or by loftier motives is difficult to establish; but self-interest was at least part of the story: taxes and cash crop production would be higher if the natives are allowed to progress. The reason why actual policies in the colonies were nevertheless highly detrimental to the native population is that the wishes of European governments were in opposition to those in charge of implementing them, namely the European settlers.

European settlers and the autochthonous population were typically in competition for the countries' best lands, mining resources and commercial concessions. This was an unequal contest which European settlers, provided that there was more than a handful of them, could easily win. European governments were often reticent to see these settlers becoming more powerful, taking a larger share of colonial production for their own use and potentially challenging the metropolis' authority. But their capacity to do

something about it was in inverse proportion to the number and strength of the settlers.

A clear example of this is the repeated attempts of the Spanish crown to eliminate the *encomienda* system in its American colonies. This system granted its beneficiaries the right to extract tribute - usually under the form of labor - from the Indian population of a given region. An *encomienda* was a highly-sought reward for the early conquistadors of the Aztec and Inca empires. The large abuses to which the system gave place lead the Crown to attempt its regulation and demise from the early days of the Spanish Empire. A first attempt, the Laws of Burgos (1512), regulated the treatment of Indian workers and was largely ignored. A second, more forceful attempt, came in 1542 with the approval of the New Laws of the Indies. These laws prohibited the enslavement of Indians, regulated tribute and declared that existing *encomiendas* would pass to the Crown at the death of the holder. The ensuing protests and revolts forced the Crown to retreat and pursue a less ambitious target. *Encomiendas* continued to operate for some time and eventually mutated into the large haciendas that characterize much of Latin America up to the present.[4]

But the degree of European settlement and the power of the local elite are positively related only as long as the European component of the population remains a minority. In the four cases were Europeans became the majority of the population, the so-called "New Europes" comprising the United States, Canada, Australia and New Zealand, the relationship breaks down. These colonies were characterized by a much less unequal distribution of land and political power and, correspondingly, by a less powerful elite. Overall then, the relationship between European settlement and elite power was non-linear.

The link between the above description of the colonial experience and current corruption levels is straightforward. Corruption will be highest in societies where the elite is powerful and has little regard for the well-being

[4]For more on the encomienda system see Keen and Wasserman (1988).

of the rest of the population. The first condition implies that members of the elite will be able to embezzle funds without much fear of punishment and the second condition implies that they will have little remorse in doing so. Both conditions are met in former colonial countries where European settlers constitute a large share of the population but still remain a minority. As we have argued above, these countries will be characterized by large inequalities in economic and political power between the European elite and the indigenous population. In addition to this, the ethnic differences between the elite and the rest of the population is usually accompanied by a mutual lack of concern for the well-being of the other[5]. This pattern perpetuated itself up to the present through institutional persistence given that change was not in the interest of those in power (Engerman and Sokoloff 1997, Acemoglu et al. 2001).

The central thesis that this paper advances is then that the type of colonial experience has an influence on present levels of corruption. The measurable aspect of the colonial experience that allow us to differentiate among them is the degree of European settlement. We hypothesize that a larger degree of European settlement will initially be positively related to corruption; with the relationship turning negative once European settlers represent a majority of the population. In econometric terms this hypothesis can be tested by estimating a quadratic relationship between corruption and degree of settlement.

Before turning to the actual testing of our hypothesis, a few additional comments are in order. First, our story may provide an explanation for the unsatisfactory result, mentioned above, that the simple fact of having been colonized is not related to corruption. As we have argued, only some types of colonial experiences are unequivocally linked to high corruption levels.

Second, we do not think that Europeans have a natural tendency towards corruption or that they are on average more corruptible than the rest of

[5] For evidence of the role of ethnic differences in the willingness to pay for (universally accesible) public services see Easterly and Levine (1997), Alesina et al. (1999) and Luttmer (2001).

humanity. What we do believe is that people, irrespective of their ethnic background, tend to enter into acts of corruption when they have the chance to do so without much fear of punishment and when the consequences of these acts are felt by groups other than their own. Because of historical reasons Europeans found themselves in such a position in several parts of the globe, while peoples of other nations rarely did so.[6]

A third and final remark concerns the type of corruption that our story relates to. Since we are talking about the corruption of the governing elites, our mechanism should apply to high-level corruption; the one that takes place in ministerial offices and where the amounts concerned are counted in millions. Petty corruption, the small payments made to police officers and traffic controllers, are not the object here. The point is of importance because it guides us in the selection of the corruption measures for this study.

The literature differentiates between measures of perceived corruption, based on the assessment of experts or business people, and measures of experienced corruption, based on surveys where people are asked if they have actually been forced to pay a bribe in the recent past. While perceived corruption suffers from the biases and priors of those asked for an opinion, they are the only valid option for our purposes. The reason is clear: most or all of what is captured by the measures of experienced corruption is what we have termed petty corruption. For the vast majority of people small bribes is all they will ever experience directly. Large corruption cases are much more rare in number and their actors have all the incentives to keep them secret. Despite their imperfections, perceived corruption measures ask about the overall level of corruption in a country; giving high-level corruption the preeminent place that it probably deserves. In the remainder of the paper

[6] We are of course aware that the high ethnic diversity in some developing nations, particularly in Africa, implies that the people in power will usually belong to a different group than the rest of the population. This governing group, however, will usually not enjoy a dominating position as marked as that enjoyed by European settlers or their descendants in the countries of high settlement.

all references to corruption measures will be understood to refer to perceived corruption measures.

This paper is organized as follows. The next section presents the data and the empirical methodology to be used. Sections 3 to 5 contain our econometric results and build up our case through a series of alternative tests and robustness checks. Section 6, finally, offers some concluding remarks.

2 Data and methodology

The econometric specification that we will employ throughout the paper is the following:

$$C_i = \alpha + \gamma logy_i + \beta_1 Settlers_i + \beta_2 (Settlers_i)^2 + \sum_j \delta_j X_{ji} + \varepsilon_i. \quad (1)$$

In equation (1) C_i is a measure of corruption for country i, y_i is GDP per capita and X_{ji} is a set of additional determinants of corruption. Our main variable of interest is $Settlers_i$, a measure of the degree of European settlement in colonial times. This variable is taken from Angeles (2007) and Angeles and Neanidis (2009) and measures the percentage of European settlers with respect to total population in colonial times. The variable takes a value of zero for non-colonized countries. As we described previously, we expect a non-linear relationship between this variable and corruption; which is why the econometric specification also includes its square[7].

GDP per capita is singled out from the set of variables X_{ji} since it is usually seen as the most powerful explanatory factor of corruption. GDP per capita will be present in all our regressions, while the composition of the X_{ji} set will change.

[7] The original sources of $Settlers_i$ are Etemad (2000) and McEvedy and Jones (1978). The variable measures European settlers in overseas colonies only (that is, it does not measure settlement in contiguous territorial conquests that may be classified as colonies such as the former Soviet Empire).

We will first consider as additional explanatory factors of corruption those variables that can be safely assumed as exogenous: the identity of the colonial power, the legal origins of the country, religion and ethnic fractionalization. After establishing our results with this set of variables we will continue the analysis incorporating additional variables that have figured in the literature but may suffer from endogeneity problems[8].

Our baseline measure of corruption is the World Bank's control of corruption index for the year 2005 constructed by Kaufmann et al. (2009). We will also use alternative measures such as the Transparency International (TI) corruption index and the International Country Risk Guide (ICRG) corruption index. All of these are measures of perceived corruption and they take higher values for better outcomes, i.e. they are actually measuring the absence of corruption. It follows that, according to our thesis, C_i should first decrease and then increase with the degree of European settlement. The expected signs of the coefficients of interest are then negative for β_1 and positive for β_2.

An initial assessment of the relationship between the percentage of European settlers in the population and corruption is given in Figure 1. The top panel of the figure shows a scatter plot of these two variables for all countries. Although much variation is observed among countries with a value of $Settlers_i$ equal or close to zero, a U relationship can be perceived for those countries where European settlement was of considerable magnitude[9]. In the lower panel of the figure we present only countries with a value of $Settlers_i$ at or below 30% and observe a fairly clear negative relationship. The figure provides visual support to our thesis before turning to a formal empirical analysis. A summary of statistics for the most important variables in our analysis is provided in Table 1.

[8] The dataset of these control variables has been put together by Treisman (2007) and is available at: http://www.sscnet.ucla.edu/polisci/faculty/treisman/Pages/publishedpapers.html

[9] This is a U shaped relationship between European settlement and control of corruption. It follows that the relationship between European settlement and corruption would be an inverted U. Both ways of stating the relationship are used in the rest of the paper.

Our empirical examination uses cross-sectional regressions and not panel methods since corruption measures are not directly comparable over time, even when produced by the same agency, due to changes in sources and methodology (Treisman 2007)[10]. Weighted least squares (WLS) and two-stage least squares (2SLS) are employed as alternative econometric methodologies.

3 Baseline results

Our baseline results are reported in Table 2. In this table we consider only historically determined variables and GDP per capita as explanatory factors of corruption. Our aim is to have a set of results that can be reasonably assumed to be free of endogeneity problems. As we have noted above, GDP per capita may well suffer from reverse causality but we will address this problem by means of instrumental variables regressions in the subsequent tables. Because of its importance, GDP per capita figures in all our regressions: estimated coefficients for other variables may suffer large changes if GDP per capita was to be omitted. We use weighted least squares and weight countries by the inverse of their standard errors. This allows us to place less emphasis on cases where perceived corruption is measured with less precision[11].

The first column of table 2 starts by using GDP per capita and our regressors of interest, *Settlers* and its square, as the sole explanatory factors. The results are supportive of our story. As expected, GDP per capita has a large, positive and statistically significant effect on the absence of corruption: richer countries are usually perceived as less corrupt. But the degree of European settlement from colonial times is also producing a statistically significant effect and this effect has the expected U pattern. As hypothesized,

[10] Kaufmann and Kraay (2002) show that for the World Bank index of control of corruption about half the variance over time results from changes in the sources used and their respective assigned weights.

[11] We have also run our regressions with ordinary least squares and, as expected, WLS produces more precise estimates.

a higher degree of European settlers is associated with more corruption but only up to a certain level. The turning point, which is given in the last line of the table, is reached when the percentage of Europeans in the population is around 35%.

It is important to note that our *Settlers* variable is not capturing the possibility that European settlement affects corruption through institutional quality and economic growth (Acemoglu et al. 2001). This is simply because the level of GDP per capita is controlled for, so our coefficients are capturing effects that take place independently of economic development[12].

Turning to the size of the effect, the coefficients from column 1 imply that a country with 35% of European settlers in its population during colonial times would be characterized by an effect on the control of corruption variable of -0.4375. Meanwhile, a country where European settlers became the totality of the population would enjoy a positive effect of 0.7. These are large effects, considering that the standard deviation of our dependent variable is 1.

This initial result may be caused by a bias due to the omission of other historical factors correlated with the degree of European settlement. We explore this possibility in the remaining columns of Table 2, where we control progressively for colonial experience, legal origin, religion and ethnolinguistic fractionalization.

Colonial experience is probably the first variable that would come to mind for correcting an omitted variable bias. Our settlers variable may just be picking up the fact of having been colonized, which could have consequences for corruption levels independently of settlement patterns. To test for this possibility we introduce four dummy variables that identify the former colonies of Britain, France, Spain or Portugal, and any other nation - the excluded category being the set of non-colonized countries. As the results

[12] Moreover, the thesis of Acemoglu et al. (2001) would imply a stricly positive effect of *Settlers* on absence of corruption instead of the U shaped relationship found here.

in column 2 show, the relationship between settlers and corruption is little affected while the identity of the colonial power does not have a statistically significant effect on corruption. In short, this result suggest that it is not just whether a country was colonized or not but the type of colonization as measured by European settlement that matters[13].

In a similar vein, column 3 of Table 2 adds the legal origin of the country as a control variable. The correlation between legal origin and the identity of the colonial power is positive but not too high, since many countries imitated the legal framework of a major European country without there being a colonial link. This time we find large positive effects on the control of corruption, particularly for countries associated with Scandinavian and German legal traditions (the excluded category being countries with a Socialist tradition). This does not, however, diminish in any way the existence of an inverted U pattern between corruption and European settlement: the coefficients of interest remain almost unchanged.

The last two columns of Table 2 also control for the percentage of the population professing the Catholic, Muslim and Protestant faith and for ethnolinguistic fractionalization. None of these variables presents a statistically significant effect on corruption and their coefficients are all very small. The effect of European settlement, on the other hand, remains large and significant. Overall, when we examine the results of the last column of Table 2 we notice that, besides European settlement and GDP per capita, the only variables with a statistically significant effect on corruption at the 5% level are the dummy for British colonies and the Scandinavian and German legal origins (all with a positive effect). The result for British colonies is in line with the findings in Treisman (2000), but comes in addition to the role of European settlement identified here.

[13] Throughout the paper we use the definition of "former colony of other countries" from Treisman (2007) which includes, notably, former republics of the Soviet Union. When we use an alternative variable that does not count such cases as colonies we obtain essentially the same results.

4 Baseline results: instrumentation

Our baseline results may be biased by the potential endogeneity of GDP per capita, a key determinant of corruption levels. To address this issue we run a series of regressions where current GDP per capita is instrumented by different geographical determinants of economic development or by past levels of GDP per capita. Table 3 reports both the first and the second stage results of these regressions. We include the full list of exogenous control variables (as in the last column of table 2), but report their coefficients only for the second stage regression.

The first three columns of table 3 present the results when the instrument for GDP per capita is, respectively, latitude, risk of malaria transmission and the fraction of land within 100 km. of the sea. A country's latitude is a good indicator of its climate and as a consequence of its suitability to import agricultural technologies (Diamond 1997, Sachs 2001). Regions affected by malaria present serious difficulties for productive work and economic progress. Proximity to the sea, finally, will improve the prospects of integration with the world economy and the gains from trade. These three geographical factors should have an influence on current levels of GDP per capita and no direct influence on corruption. The fourth column considers all three geographical instruments together while columns five and six use GDP per capita in 1700 and 1820 from Maddison (2003) as an alternative instrument for current GDP per capita.

The first stage results show that all the instruments have a statistically significant effect on GDP per capita and that their signs are as expected (positive for latitude and proximity to the sea, negative for risk of malaria). In addition, the diagnostic tests that appear immediately after the second-stage results indicate that the findings do not suffer from the problem of weak instruments.

In particular, the relatively large Shea partial R-square values and the rejection of the Anderson underidentification test (p-value<0.05) point to

the relevance of the instruments in explaining GDP per capita. To further check the validity of the instruments, the Stock-Yogo (2005) weak identification test statistic is reported. Except for the last two columns, where we instrument GDP per capita with its historical values, we can reject the null hypothesis that our instruments are weak[14]. Finally, when we use more than one instrument, as in column 4, we use the Hansen overidentification J-test to examine whether the instruments are orthogonal to the error process in the regression. The high p-value of the test suggests that the geographical instruments are indeed valid. Given their validity, we opt to use them jointly for the remainder of our analysis.

Turning to the second stage results, a first observation from table 3 is that the effect of GDP per capita is not smaller, and often somewhat larger, than what was estimated in Table 2 under WLS. As for the effects of settlers on corruption, all regressions paint a consistent picture of a statistically significant inverted U relationship between these two variables. With the exception of column 5, the coefficients on European settlers and its square are remarkably consistent across all regressions (between -0.027 and -0.029 for European settlers and between 0.0003 and 0.0004 for its square). Results for the remaining variables are equally in line with our previous estimates.

5 Robustness checks

Having found consistent support for our thesis in WLS and 2SLS regressions this section tests the robustness of these results by considering alternative measures of corruption and by including a large number of alternative determinants of corruption. All regressions include the set of control variables considered in Table 3 and instrument for GDP per capita using latitude, risk of malaria and the fraction of land within 100 km. of the sea.

We start by considering different measures of corruption. While all our previous results have used the World Bank control of corruption index for

[14] The 5% critical values of the Stock-Yogo weak identification test with 10% maximal IV relative bias are 16.38 and 9.08 respectively for one and three instruments.

2005, Table 4 considers this same index for the years 2004, 2002 and 1998; the Transparency International index of corruption for 2004, 2002 and 1998; and the International Country Risk Guide measure for 2003 and 1995. These additional corruption indicators are also popular in the literature, and all three of them are typically found to be highly correlated. This is indeed the case in our sample as their pairwise correlations vary between 0.71 and 0.99.

In all cases we find the result of a statistically significant inverted U relationship between settlers and measures of corruption. If we compare the estimated coefficients for the different years of the World Bank index we note that the magnitude of the effect is actually larger than in our previous tables, where the World Bank index for 2005 was used[15]. For the Transparency International and International Country Risk Guide indexes the effects are similarly large, with a change in corruption equal to more than half a standard deviation of the dependent variable when settlers are 35% of the population (based on columns 4 and 7 of table 4)[16].

As the literature on the determinants of corruption has become quite voluminous, a large number of additional control variables can be included in our regressions. In order to bring additional support to our story we take them into account in what follows[17].

Results are reported in tables 5 and 6, which roughly follow the different tests proposed by Treisman (2007). In Table 5 we consider variables that can be grouped under the heading of political institutions: an index of current political rights, the number of years under democracy, an index of freedom of the press, a measure of newspaper circulation, and different measures of the

[15] For instance, the coefficients for 1998 (-0.039 and 0.005) imply an effect on corruption of -0.7525 when settlers are 35% of the population.

[16] It is worth mentioning that results are also robust to the use of corruption indicators for the rest of the years in Treisman's (2007) dataset. These refer to the years 1996 and 2000 for the World Bank index and 2000, 2001, 2003 and 2005 for TI.

[17] Most of these variables are not obviously related to the degree of European settlement and their omission would therefore not create any bias, which is why we have not considered them so far. One more reason for not controlling for them up to this point is their potential endogeneity with corruption and the lack of good instruments to establish causality.

type of political and electoral system in place. Among the papers that have argued for the importance of some of these variables we can cite Montinola and Jackman (2002), Treisman (2000), Brunetti and Weder (2003), Adsera et al. (2003), Panizza (2001) and Persson et al. (2003) among many others.

As could be expected, political rights and freedom of the press are both consistently associated with lower corruption; though the direction of causality is open to discussion[18]. For all the other political variables we find effects that are not statistically significant. Our central result, though, proves to be exceptionally stable to the inclusion of these controls. Both European settlers and its square are statistically significant at the 1% level in all regressions and the estimated coefficients vary between -0.023 and -0.030 for the level and 0.0003 and 0.0004 for its square in most regressions.

A similar outcome is presented in Table 6, where we consider the roles of being a fuel-exporting country, openness to trade, a measure of state regulation (time required to open a firm), measures of the importance of women in the government, hyperinflation, income inequality and dummies for Latin America and sub-saharan Africa. The literature has analyzed the effects of these different factors on corruption in papers like Dollar et al. (2001), Swamy et al. (2001), Braun and Di Tella (2004), Van Rijckgehem and Weder (2001) or Ades and Di Tella (1999).

Once again, some of these variables present a statistically significant association with corruption, notably fuel exports, state regulation, the percentage of women at ministerial level and a dummy for hyperinflation. Regarding the effects of European settlement, these continue to be robust and clearly significant across all regressions. Worthy of notice are the results reported in column 9, where dummies for Latin America and the Caribbean and sub-saharan Africa are included. This controls for any omitted characteristic of these regions that could be behind corruption levels and European

[18] Table 5 does not consider political rights and freedom of the press simultaneously since both measures come from the same source (Freedom House) and are highly correlated. We have also used the Polity IV measure of political rights with similar results.

settlement. As it turns out, these dummies are not statistically significant while the effects of European settlement are unchanged. To put it in other words, Latin America and Africa are not outliers once the effects of European settlement (and all other included regressors) are taken into account. A similar result is obtained if we instead choose to exclude Latin American countries from the sample (column 10).

Overall, then, this section has clearly demonstrated the robustness of our results when controlling for a wealth of additional explanatory factors of corruption proposed in the literature. As a final exercice we have tested our thesis using experienced-based measures of corruption which, as discussed in the introduction, have no reason to be related to European settlement. As expected, we find that for two of these measures (the Global Corruption Barometer from Transparency International and the World Business Environment Survey from the World bank) there is no relationship between settlers and experienced corruption. Results are available upon request.

6 Concluding remarks

In this paper we have argued that corruption in developing countries has deep historical roots and that colonialism is of paramount importance to its understanding. While we are clearly not the first to associate colonialism with corruption, we do take the literature forward by differentiating colonial experiences by the degree of European settlement that they brought to the country. As emphasized by the growing literature on the socioeconomic effects of colonialism, the degree of European settlement is often of greater importance than the identity of the colonial power.

The link between European settlement and corruption works through the formation of local elites, their power and attitudes. More powerful elites are able to enter in acts of corruption with impunity and the ethnic differences between them and the rest of the population make a concern for the other's well-being all too unlikely. As we have argued, the power of this European elite and their capacity to impose measures that would favor them at the

expense of the native population can be related to their numbers. The relationship is non-linear: a larger number of European settlers can solidify their position of power with respect to the rest of the population, but this is no longer true if Europeans are so numerous that they become the majority of the population. We would therefore expect that corruption first increases and then decreases with the degree of European settlement.

Our results present convincing evidence that the above thesis holds in practice. Controlling for level of development and a set of exogenous determinants of corruption we find that the degree of European settlerment is a powerful explanatory factor of corruption and that the relationship is non-linear. The result continues to hold in a large number of robustness tests where we instrument for economic development, consider alternative measures of corruption, and add a large number of additional explanatory factors of corruption found in the literature.

Overall, then, this paper contributes to our understanding of why corruption is so pervasive in some societies and to our growing awareness of the implications of colonial experience on developing countries up to this day.

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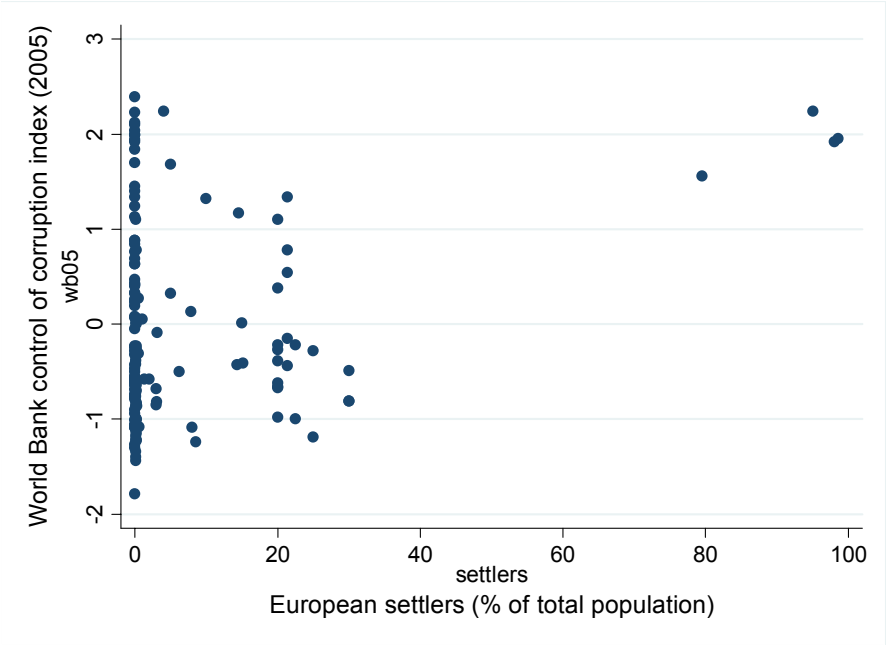
Figure 1
Control of Corruption and European Settlement

(a) All countries



(b) All countries excluding New Europes

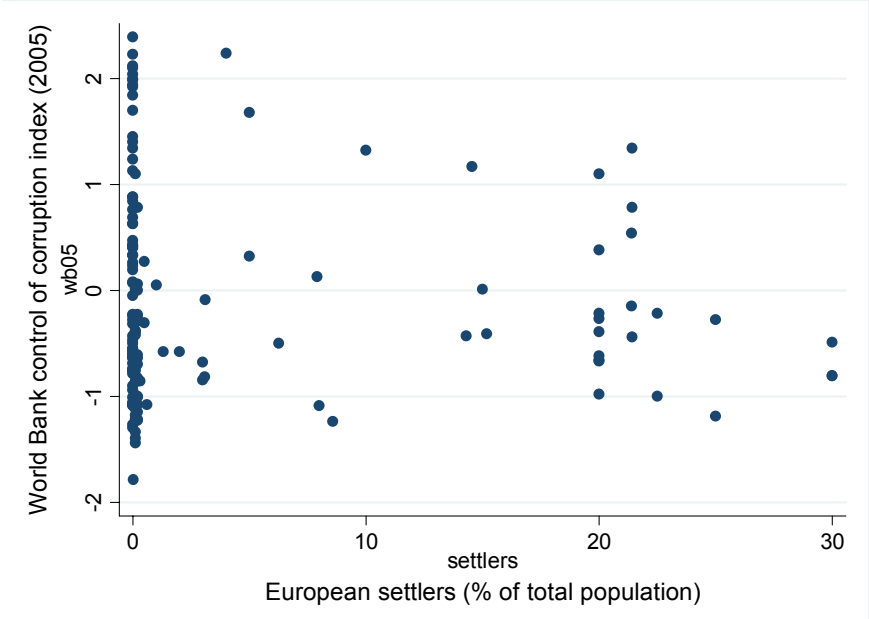


Table 1
Summary Statistics

	Mean	Std Dev	Min	Max	Obs
World Bank control of corruption index (2005)	-0.0003	0.999	-1.79	2.49	204
GDP per capita (log)	8.54	1.15	6.35	11.02	163
Former British colony	0.327	0.469	0	1	200
Former French colony	0.158	0.404	0	1	202
Former Spanish or Portuguese colony	0.155	0.362	0	1	200
Former colony of other countries	0.229	0.419	0	1	203
British legal origin	0.342	0.475	0	1	184
French legal origin	0.445	0.498	0	1	184
Scandinavian legal origin	0.027	0.163	0	1	184
German legal origin	0.027	0.163	0	1	184
Protestant	13.19	21.31	0	97.8	184
Catholic	31.13	35.67	0	99.1	187
Muslim	23.21	35.77	0	99.9	187
Ethnolingusitic fractionalization	0.458	0.272	0	0.98	171
European settlers	6.29	16.20	0	98.6	156

Note: The source of the dataset is Treisman (2007).

Table 2
Benchmark Findings

	Dependent variable: World Bank control of corruption index (2005)				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
	WLS	**WLS**	**WLS**	**WLS**	**WLS**
GDP per capita (log)	0.709	0.724	0.652	0.633	0.636
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Former British colony		0.158	0.308	0.294	0.362
		(0.383)	(0.045)	(0.070)	(0.019)
Former French colony		0.128	0.294	0.238	0.234
		(0.491)	(0.081)	(0.138)	(0.146)
Former Spanish or Portuguese		0.029	0.210	0.174	0.142
colony		(0.903)	(0.392)	(0.474)	(0.570)
Former colony of other countries		-0.213	0.188	0.114	0.104
		(0.212)	(0.291)	(0.555)	(0.588)
British legal origin			0.348	0.225	0.161
			(0.064)	(0.306)	(0.467)
French legal origin			0.303	0.310	0.309
			(0.021)	(0.065)	(0.076)
Scandinavian legal origin			1.53	1.00	1.01
			(0.000)	(0.006)	(0.006)
German legal origin			0.918	0.811	0.788
			(0.013)	(0.028)	(0.030)
Protestant				0.006	0.006
				(0.089)	(0.107)
Catholic				-0.001	0.001
				(0.911)	(0.908)
Muslim				-0.001	-0.001
				(0.689)	(0.619)
Ethnolingusitic fractionalization					0.002
					(0.989)
European settlers	-0.023	-0.027	-0.024	-0.025	-0.026
	(0.001)	(0.005)	(0.019)	(0.009)	(0.009)
European settlers squared	0.0003	0.0004	0.0003	0.0003	0.0004
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Countries	142	139	132	130	128
R-square	0.741	0.752	0.811	0.817	0.821
Implied settlement threshold (%)	*34.96*	*38.34*	*35.80*	*36.77*	*37.45*

Notes: Dependent variable is the World Bank control of corruption index (2005) which measures the *absence* of corruption. Regressions based on Weighted Least Squares (WLS). p-values in parentheses based on White-corrected standard errors, weighted by the inverse of the standard error. Constant term not reported.

Table 3
Benchmark Findings: Two-stage least squares

	Second stage results Dependent variable: World Bank control of corruption index (2005)					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
GDP per capita (log)	**0.840**	**0.737**	**0.601**	**0.721**	**1.19**	**0.894**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.001)**
Former British colony	0.390	0.395	0.375	0.393	0.734	0.450
	(0.020)	(0.009)	(0.008)	(0.009)	(0.042)	(0.064)
Former French colony	0.414	0.329	0.210	0.315	0.866	0.352
	(0.025)	(0.044)	(0.239)	(0.048)	(0.003)	(0.070)
Former Spanish or Portuguese	0.339	0.270	0.153	0.256	0.792	0.328
colony	(0.202)	(0.256)	(0.540)	(0.278)	(0.006)	(0.384)
Former colony of other power	0.182	0.135	0.069	0.127	0.316	-0.097
except Spain or Portugal	(0.323)	(0.465)	(0.728)	(0.492)	(0.075)	(0.654)
British legal origin	0.187	0.179	0.147	0.175	-0.371	0.318
	(0.402)	(0.408)	(0.498)	(0.415)	(0.496)	(0.428)
French legal origin	0.245	0.271	0.297	0.274	-0.517	0.178
	(0.208)	(0.123)	(0.066)	(0.113)	(0.142)	(0.606)
Scandinavian legal origin	0.854	0.897	0.993	0.908	0.298	1.00
	(0.004)	(0.004)	(0.005)	(0.004)	(0.364)	(0.056)
German legal origin	0.596	0.686	0.812	0.701	0.240	0.679
	(0.091)	(0.045)	(0.016)	(0.037)	(0.406)	(0.098)
Protestant	0.005	0.006	0.006	0.006	0.004	0.005
	(0.120)	(0.073)	(0.073)	(0.070)	(0.580)	(0.328)
Catholic	-0.001	-0.001	0.001	-0.001	-0.001	0.001
	(0.662)	(0.806)	(0.948)	(0.834)	(0.748)	(0.749)
Muslim	-0.001	-0.001	-0.001	-0.001	0.005	0.001
	(0.785)	(0.641)	(0.537)	(0.627)	(0.250)	(0.714)
Ethnolingusitic division	0.355	0.179	-0.051	0.152	0.597	0.336
	(0.161)	(0.379)	(0.834)	(0.438)	(0.141)	(0.464)
European settlers	-0.029	-0.028	-0.027	-0.028	-0.044	-0.028
	(0.002)	(0.001)	(0.004)	(0.001)	(0.002)	(0.042)
European settlers squared	0.0003	0.0004	0.0004	0.0003	0.0005	0.0003
	(0.001)	(0.000)	(0.000)	(0.000)	(0.008)	(0.024)
Countries	128	123	123	123	27	46
Number of Instruments	1	1	1	3	1	1
R-squared (centered)	0.796	0.815	0.821	0.816	0.947	0.877
Shea partial R-square	0.238	0.387	0.204	0.474	0.227	0.162
Anderson test (p-value)	0.000	0.000	0.000	0.000	0.000	0.101
Stock-Yogo F-statistic	27.06	47.34	25.60	32.04	3.49	4.12
Hansen J-test (p-value)	-	-	-	0.340	-	-
Implied settlement threshold (%)	*42.64*	*40.70*	*37.25*	*40.28*	*49.13*	*45.12*

	First stage results Dependent variable: GDP per capita (log)					
Latitude	0.036			0.019		
	(0.000)			(0.018)		
Risk of malaria transmission		-1.97		-1.09		
		(0.000)		(0.005)		
Fraction of land area within			1.15	0.789		
100km of sea cost			(0.000)	(0.000)		
GDP per capita in 1700					0.001	
					(0.089)	
GDP per capita in 1820						0.001
						(0.051)
All other exogenous regressors	included	included	included	included	included	included
R-squared (centered)	0.644	0.717	0.633	0.757	0.905	0.741

Notes: Dependent variable is the World Bank control of corruption index (2005) which measures the *absence* of corruption. Regressions based on 2SLS. p-values in parentheses based on White-corrected standard errors, weighted by the inverse of the standard error. Constant term not reported. Instrumented variables are in bold type. The lower panel of the table reports the coefficient estimates of the excluded instruments from the first-stage regressions.

Table 4
Alternative Measures of (Control of) Corruption

	Dependent variable: various corruption indicators							
	World Bank			**Transparency International**			**ICRG**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	2004	**2002**	**1998**	**2004**	**2002**	**1998**	**2003**	**1995**
GDP per capita (log)	**0.689**	**0.728**	**0.734**	**1.37**	**1.62**	**1.75**	**0.464**	**0.853**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.002)**	**(0.000)**
Former British colony	0.427	0.354	0.439	0.963	1.04	1.79	0.653	0.716
	(0.003)	(0.024)	(0.010)	(0.010)	(0.029)	(0.000)	(0.025)	(0.120)
Former French colony	0.313	0.380	0.161	0.688	0.602	1.38	0.528	0.546
	(0.041)	(0.026)	(0.367)	(0.028)	(0.116)	(0.000)	(0.090)	(0.077)
Former Spanish or Portuguese	0.217	0.333	0.199	0.977	0.670	1.32	0.904	1.00
colony	(0.384)	(0.209)	(0.499)	(0.149)	(0.406)	(0.044)	(0.037)	(0.034)
Former colony of other power	0.050	0.070	-0.216	-0.075	-0.206	-0.453	-0.058	-0.164
except Spain or Portugal	(0.810)	(0.740)	(0.316)	(0.872)	(0.643)	(0.258)	(0.837)	(0.511)
British legal origin	0.171	0.258	0.046	0.085	-0.153	-0.386	-0.229	-1.60
	(0.448)	(0.256)	(0.842)	(0.875)	(0.799)	(0.519)	(0.555)	(0.006)
French legal origin	0.323	0.317	0.003	0.180	-0.098	-0.772	-0.072	-1.33
	(0.090)	(0.134)	(0.986)	(0.707)	(0.868)	(0.160)	(0.818)	(0.009)
Scandinavian legal origin	1.02	1.00	0.839	2.22	1.63	1.10	2.33	-0.724
	(0.004)	(0.004)	(0.026)	(0.003)	(0.023)	(0.145)	(0.000)	(0.180)
German legal origin	0.671	0.603	0.308	1.49	0.740	0.089	1.10	-0.318
	(0.104)	(0.080)	(0.398)	(0.083)	(0.264)	(0.877)	(0.012)	(0.439)
Protestant	0.006	0.005	0.006	0.016	0.017	0.028	0.006	0.011
	(0.063)	(0.135)	(0.069)	(0.022)	(0.012)	(0.001)	(0.258)	(0.031)
Catholic	0.001	-0.001	0.001	-0.001	-0.001	0.007	0.002	-0.007
	(0.824)	(0.904)	(0.486)	(0.915)	(0.927)	(0.042)	(0.499)	(0.109)
Muslim	-0.001	-0.001	-0.001	-0.002	0.002	0.004	-0.001	-0.002
	(0.478)	(0.520)	(0.744)	(0.476)	(0.689)	(0.353)	(0.858)	(0.554)
Ethnolingusitic division	0.048	0.055	-0.012	0.260	0.670	0.371	0.319	0.548
	(0.816)	(0.793)	(0.949)	(0.620)	(0.218)	(0.530)	(0.415)	(0.324)
European settlers	-0.030	-0.039	-0.039	-0.072	-0.056	-0.082	-0.047	-0.042
	(0.001)	(0.000)	(0.000)	(0.003)	(0.054)	(0.002)	(0.012)	(0.011)
European settlers squared	0.0004	0.0005	0.0005	0.0009	0.0007	0.0009	0.0006	0.0005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.014)	(0.002)	(0.001)	(0.008)
Countries	123	124	123	112	88	73	108	98
R-square (centered)	0.811	0.793	0.818	0.815	0.837	0.843	0.650	0.574
Shea partial R-square	0.474	0.464	0.438	0.442	0.498	0.541	0.464	0.419
Anderson test (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000
Stock-Yogo F-statistic	32.04	31.66	26.94	22.87	24.77	20.40	22.28	13.56
Hansen J-test (p-value)	0.588	0.669	0.258	0.486	0.929	0.789	0.694	0.081
Implied settlement threshold (%)	*38.99*	*41.64*	*41.83*	*38.79*	*38.95*	*46.26*	*36.80*	*43.72*

Notes: Dependent variable is the World Bank (WB) control of corruption index, the Transparency International (TI) corruption perception index, and the International Country Risk Guide (ICRG) corruption index, all in various years. All indexes measure *absence* of corruption. p-values in parentheses based on White-corrected standard errors, weighted by the inverse of the

standard error. Constant term not reported. Instrumented variables are in bold type. Regressions based on 2SLS with all three instruments as in Table 2, column (8). The year of the initial GDP per capita is always lagged compared to the year of the dependent variable (for instance, for the corruption indices of the year 2002, the year of GDP refers to 1999).

Table 5
Accounting for Political Institutions

	Dependent variable: World Bank control of corruption index (2005)									
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
GDP per capita (log)	**0.561**	**0.550**	**0.511**	**0.528**	**0.541**	**0.474**	**0.554**	**0.749**	**0.529**	**0.764**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Former British colony	0.382	0.397	0.364	0.374	0.370	0.323	0.383	-0.223	0.364	0.400
	(0.015)	(0.011)	(0.024)	(0.017)	(0.019)	(0.037)	(0.016)	(0.352)	(0.019)	(0.017)
Former French colony	0.283	0.288	0.267	0.269	0.216	0.217	0.239	0.587	0.192	
	(0.039)	(0.035)	(0.044)	(0.053)	(0.128)	(0.137)	(0.088)	(0.000)	(0.174)	
Former Spanish or Portuguese colony	0.120	0.147	0.112	0.111	0.139	0.080	0.178	0.601	0.116	0.705
	(0.615)	(0.526)	(0.616)	(0.634)	(0.543)	(0.756)	(0.431)	(0.037)	(0.612)	(0.032)
Former colony of other power except Spain or Portugal	-0.020	0.002	-0.019	-0.019	0.010	-0.042	-0.005	0.008	-0.021	0.104
	(0.911)	(0.992)	(0.909)	(0.914)	(0.951)	(0.826)	(0.976)	(0.961)	(0.903)	(0.574)
British legal origin	0.002	0.032	-0.040	-0.022	0.043	0.042	0.013	0.550	0.021	-0.186
	(0.993)	(0.888)	(0.868)	(0.929)	(0.850)	(0.857)	(0.955)	(0.006)	(0.925)	(0.557)
French legal origin	0.152	0.180	0.130	0.144	0.200	0.153	0.156	-0.159	0.170	-0.212
	(0.384)	(0.289)	(0.438)	(0.401)	(0.230)	(0.369)	(0.369)	(0.411)	(0.298)	(0.482)
Scandinavian legal origin	0.873	0.912	0.728	0.798	0.822	0.527	0.804	0.451	0.818	0.787
	(0.007)	(0.004)	(0.042)	(0.018)	(0.014)	(0.168)	(0.015)	(0.069)	(0.017)	(0.006)
German legal origin	0.604	0.627	0.566	0.618	0.583	0.346	0.558	0.322	0.639	0.772
	(0.041)	(0.030)	(0.046)	(0.029)	(0.067)	(0.360)	(0.072)	(0.276)	(0.060)	(0.001)
Protestant	0.005	0.004	0.005	0.005	0.004	0.004	0.003	0.006	0.004	0.002
	(0.119)	(0.164)	(0.103)	(0.120)	(0.265)	(0.194)	(0.291)	(0.064)	(0.271)	(0.728)
Catholic	0.001	-0.001	-0.001	-0.001	-0.001	0.001	-0.001	0.001	-0.001	-0.001
	(0.934)	(0.920)	(0.984)	(0.993)	(0.638)	(0.952)	(0.575)	(0.902)	(0.841)	(0.675)
Muslim	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.003	0.001	0.002
	(0.385)	(0.425)	(0.303)	(0.370)	(0.574)	(0.196)	(0.523)	(0.055)	(0.435)	(0.470)
Ethnolingusitic division	0.014	0.039	-0.031	-0.016	-0.044	-0.047	0.007	0.680	-0.043	0.576
	(0.938)	(0.819)	(0.875)	(0.930)	(0.807)	(0.814)	(0.969)	(0.022)	(0.820)	(0.210)
European settlers	-0.028	-0.026	-0.027	-0.025	-0.025	-0.023	-0.024	-0.042	-0.025	-0.036
	(0.001)	(0.002)	(0.001)	(0.001)	(0.004)	(0.013)	(0.006)	(0.000)	(0.005)	(0.000)
European settlers squared	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0003	0.0004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.000)	(0.000)	(0.000)
Political rights	-0.112	-0.224	-0.106	-0.110						
	(0.000)	(0.115)	(0.001)	(0.000)						
Political rights squared		0.014								
		(0.363)								
Democratic since 1930 (number of years)			0.004							
			(0.376)							
Democratic since 1950 (dummy)				0.146						
				(0.387)						
Freedom of press					0.011	0.011	0.011	0.013	0.011	0.013
					(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.006)

Newspaper circulation 1996						0.001				
						(0.318)				
Presidential democracy							-0.011			
							(0.792)			
Pure plurality system								0.032		
								(0.799)		
Open-list system								-0.078		
								(0.449)		
District magnitude								-0.002		
								(0.317)		
Open-list * District magnitude								-0.003		
								(0.714)		
Federation									-0.136	
									(0.259)	
Fiscal decentralization										-0.001
										(0.797)
Countries	123	123	123	123	123	117	122	63	123	50
R-square (centered)	0.847	0.848	0.849	0.848	0.852	0.854	0.852	0.923	0.853	0.921
Shea partial R-square	0.382	0.375	0.298	0.335	0.365	0.266	0.342	0.318	0.379	0.251
Anderson test (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stock-Yogo F-statistic	17.88	17.29	13.92	15.53	17.57	10.68	15.96	3.97	17.65	3.74
Hansen J-test (p-value)	0.226	0.199	0.298	0.295	0.123	0.147	0.105	0.466	0.054	0.741
Implied settlement threshold (%)	*38.95*	*39.12*	*39.33*	*38.79*	*38.72*	*38.39*	*38.99*	*44.83*	*37.37*	*42.89*

Notes: Dependent variable is the World Bank control of corruption index (2005) which measures the *absence* of corruption. p-values in parentheses based on White-corrected standard errors, weighted by the inverse of the standard error. Constant term not reported. Instrumented variables are in bold type. Regressions based on 2SLS with all three instruments as in Table 2, column (8). In column (11) Former French colony is dropped due to collinearities.

Table 6
Controlling for Rents, State Regulation, Market Competition, Gender, Inflation, and Other Factors

	Dependent variable: World Bank control of corruption index (2005)									
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
GDP per capita (log)	**0.767**	**0.776**	**0.593**	**0.763**	**0.840**	**0.849**	**0.821**	**0.818**	**0.876**	**0.758**
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Former British colony	0.408	0.552	0.519	0.449	0.537	0.540	0.475	0.682	0.413	0.477
	(0.004)	(0.000)	(0.002)	(0.002)	(0.000)	(0.000)	(0.001)	(0.000)	(0.002)	(0.001)
Former French colony	0.342	0.518	0.427	0.358	0.480	0.502	0.452	0.478	0.405	0.373
	(0.051)	(0.004)	(0.005)	(0.048)	(0.006)	(0.005)	(0.011)	(0.004)	(0.026)	(0.034)
Former Spanish or Portuguese colony	0.291	0.418	0.159	0.250	0.450	0.499	0.384	0.315	0.427	0.273
	(0.324)	(0.137)	(0.651)	(0.375)	(0.096)	(0.088)	(0.177)	(0.291)	(0.145)	(0.385)
Former colony of other power except Spain or Portugal	-0.058	-0.035	-0.041	0.043	-0.035	-0.014	0.013	0.030	0.026	-0.015
	(0.687)	(0.812)	(0.793)	(0.758)	(0.764)	(0.918)	(0.929)	(0.848)	(0.866)	(0.918)
British legal origin	-0.213	-0.304	-0.268	-0.076	-0.183	-0.218	-0.135	-0.353	-0.185	-0.133
	(0.259)	(0.151)	(0.230)	(0.700)	(0.304)	(0.240)	(0.504)	(0.081)	(0.338)	(0.513)
French legal origin	-0.049	-0.183	0.229	0.058	-0.081	-0.101	-0.034	-0.040	-0.146	-0.033
	(0.794)	(0.378)	(0.234)	(0.768)	(0.676)	(0.604)	(0.860)	(0.837)	(0.446)	(0.855)
Scandinavian legal origin	0.818	0.738	0.813	0.706	0.533	0.574	0.849	0.920	0.780	0.665
	(0.002)	(0.014)	(0.055)	(0.004)	(0.021)	(0.034)	(0.001)	(0.001)	(0.001)	(0.009)
German legal origin	0.509	0.367	0.593	0.509	0.392	0.367	0.451	0.477	0.377	0.456
	(0.061)	(0.192)	(0.050)	(0.041)	(0.058)	(0.080)	(0.102)	(0.087)	(0.178)	(0.082)
Protestant	0.007	0.006	0.006	0.005	0.005	0.004	0.006	0.005	0.005	0.009
	(0.006)	(0.018)	(0.209)	(0.048)	(0.049)	(0.100)	(0.050)	(0.070)	(0.051)	(0.002)
Catholic	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(0.503)	(0.617)	(0.467)	(0.905)	(0.754)	(0.921)	(0.857)	(0.609)	(0.888)	(0.492)
Muslim	0.003	0.003	-0.001	0.003	0.004	0.003	0.003	0.002	0.004	0.003
	(0.028)	(0.109)	(0.487)	(0.085)	(0.045)	(0.152)	(0.153)	(0.252)	(0.022)	(0.067)
Ethnolingusitic division	0.464	0.485	0.364	0.394	0.578	0.613	0.460	0.574	0.455	0.320
	(0.041)	(0.056)	(0.184)	(0.083)	(0.011)	(0.011)	(0.042)	(0.019)	(0.055)	(0.153)
European settlers	-0.023	-0.024	-0.029	-0.022	-0.031	-0.033	-0.026	-0.027	-0.023	-0.028
	(0.028)	(0.037)	(0.045)	(0.023)	(0.001)	(0.000)	(0.014)	(0.029)	(0.058)	(0.018)
European settlers squared	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0003
	(0.004)	(0.014)	(0.042)	(0.006)	(0.000)	(0.000)	(0.004)	(0.009)	(0.017)	(0.003)
Fuel exports	-0.008	-0.008	-0.008	-0.008	-0.008	-0.008	-0.008	-0.008	-0.009	-0.008
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Imports (% of GDP)	0.002									
	(0.434)									
Year opened to trade		-0.003								
		(0.642)								
Time required to open firm (log)			-0.229							
			(0.020)							
Women in lower house of parliament (%)				0.010	0.001	-0.002				
				(0.098)	(0.852)	(0.795)				

Women in government at ministerial level (%)					0.010 (0.007)	0.012 (0.004)				
Government party's margin of victory						0.112 (0.720)				
Fractionalization of parties						0.253 (0.409)				
Hyperinflation dummy							-0.491 (0.000)			
Inequality (Gini, 2004)								0.002 (0.729)		
Dummy for Latin America									0.042 (0.907)	
Dummy for Sub-Saharan Africa									0.242 (0.233)	
Countries	104	96	72	105	88	86	102	96	105	87
R-square (centered)	0.861	0.859	0.870	0.857	0.885	0.888	0.854	0.857	0.849	0.880
Shea partial R-square	0.409	0.385	0.522	0.429	0.462	0.451	0.453	0.448	0.281	0.485
Anderson test (p-value)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stock-Yogo F-statistic	17.04	13.06	15.67	21.58	18.79	17.93	21.30	19.47	9.98	16.22
Hansen J-test (p-value)	0.087	0.824	0.500	0.803	0.932	0.981	0.618	0.912	0.676	0.139
Implied settlement threshold (%)	*37.95*	*40.67*	*45.91*	*39.98*	*45.02*	*44.80*	*41.00*	*41.44*	*39.72*	*41.36*

Notes: Dependent variable is the World Bank control of corruption index (2005) which measures the *absence* of corruption. p-values in parentheses based on White-corrected standard errors, weighted by the inverse of the standard error. Constant term not reported. Instrumented variables are in bold type. Regressions based on 2SLS with all three instruments as in Table 2, column (8).