Bureaucracy, Politics and Corruption

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Most comparative studies on corruption are geared towards the analysis of factors dealing with the selection and the incentives of actors taking policy decisions in a state. With few exceptions, such as Rauch & Evans (2000), the selection and incentives of actors within the state apparatus in charge of implementing policies have been neglected. In turn, the studies that take bureaucratic features into account do not control for political institutions. This paper aims at bridging the gap between these two institutionalist approaches by analyzing an original dataset from a survey answered by 520 experts from 52 countries. There are two main empirical findings. First, some bureaucratic factors, and especially meritocratic recruitment, reduce corruption, even when controlling for the impact of most standard political variables such as years of democracy, the number of veto players or the type of electoral system. Second, the analysis shows that other allegedly relevant features in the bureaucratic institutionalist literature, such as public employees’ competitive salaries, career stability or internal promotion, do not have a significant impact.
Introduction

A growing literature, mainly in economics and political science, has highlighted the importance of non-corrupt government institutions. Scholars and policy-makers agree that “good governance”, “state capacity”, and “quality of government” foster social and economic development, and economists have started to view dysfunctional government institutions as the most serious obstacle to economic development across the globe (e.g., Hall and Jones 1999; Acemoglu, Johnson, and Robinson 2001, 2002; Easterly and Levine 2003; Rodrik, Subramanian, and Trebbi 2004). Students of social capital, while originally viewing civil society as the main provider of interpersonal trust (Putnam 1993), have shifted their attention to administrative corruption and bad governance (Rothstein and Uslaner 2007; Rothstein and Stolle 2008; Rothstein and Eek 2009). Even scholars of international relations are paying increasing attention to the importance of governance institutions, either for the outbreak of interstate wars (Mansfield and Snyder 2005) or for the sustainability of civil peace in war-torn countries (Paris 2004).

Although the positive effects from non-corrupt government institutions seems fairly undisputed today, the unanswered question is still why some states have been able to establish non-corrupt institutions, while others can not get rid of corruption and bad government. In answering that question the literature is heavily geared towards what can be called the political side of the state. They examine the effect of democracy, electoral systems or veto players, factors dealing with the selection mechanisms and incentives of those who take policy decisions. Thus, while the few individuals at the top of the state apparatus – e.g. the President, the members of the
cabinet or the MPs – have been analyzed in the comparative literature on corruption, the bulk majority of members of the state apparatus – in many countries millions of individuals – have been overlooked. There are only a few examples in the literature, such as Rauch and Evans (2000), where the bureaucratic side of the state has been taken into account. Yet, in turn, these few studies neglect the political factors.

In sum, even though there are indications that both political and bureaucratic factors do seem to matter for controlling corruption, they have not been systematically tested together. This paper aims at bridging the gap between these two alternative institutional approaches by testing Rauch and Evans’ (2000) bureaucratic structure hypotheses together with the most prevailing factors in the political institutionalist literature. In order to do so the paper uses an original dataset based on a survey, answered by 520 experts from 52 countries, which to the best of our knowledge represents the hitherto most encompassing dataset on bureaucratic structures at the cross-country level.

This paper explores both which particular bureaucratic features do matter for corruption, and through which mechanisms they reduce corruption. While previous literature on bureaucracies (e.g. Rauch and Evans 2000) relies heavily on socialization – an esprit de corps – as the main causal mechanism, this paper suggests another mechanism, namely the existence of separation of interests between politicians and bureaucrats. This mechanism does not require any assumptions on higher competence, higher morals or in any other way “better” nature of professional, merit-recruited, bureaucrats vis-à-vis political appointees, but simply that professional bureaucrats are responsive to a different chain of accountability than politicians. Thus, it is not that professional bureaucrats are “better types”; they are just “different types”. And with politicians and professional bureaucrats, with known different interests, involved in
policy-making and implementation, collusion for taking bribes becomes a more strenuous collective action problem to solve, and thus less likely.

The remainder of the paper is organized as follows. The next section critically reviews the two literatures of corruption which hardly speak to each other: the politico-institutionalist, and the bureaucratic-institutionalist. The paper subsequently disentangles the concept most associated the bureaucratic-institutionalist literature: which of the multiple features traditionally associated to a so-called Weberian bureaucracy do matter for controlling corruption? And, more importantly, through which mechanisms do they act to curb corruption? A data and methods section presents how the original dataset on bureaucratic features has been built from a country expert survey launched by The Quality of Government Institute (Teorell et al. 2008b) and introduces the political and bureaucratic factors which will be tested in the posterior empirical section.

The two main findings of the empirical analysis are, first, that some bureaucratic factors such as the development of a professional bureaucracy exert a significant influence even when controlling for the impact of most standard political variables found as significant in the political institutionalist literature; and, second, that other allegedly relevant features for the bureaucratic literature, such as competitive salaries, career stability or formal exams for bureaucrats do not have an impact on their own.

**Politics and Bureaucracy**

One can distinguish between two types of institutionalist explanations of corruption: a majority of studies that stresses political institutions and a minority that emphasize bureaucratic institutions. What is theorized to matter for the former is who the rulers are, how we select them, which incentives they have and how they take policy
decisions, and what matters for the latter are the characteristics of the bureaucrats giving policy-advice and implementing decisions.

Generally speaking, most of the institutionalist literature – in theoretical, but especially in empirical terms – has focused on political factors as the main state-related factors for explaining corruption. To start with, there are numerous cross-country studies dealing with the impact of the type of political regime over corruption: are democratic states more or less corrupt than authoritarian ones? In particular, many authors have explored what Harris-White and White (1996, 3) and Sung (2004, 179) define as the “contradictory” relationship between democracy and corruption: there seems to be a significant relationship between democracy and corruption, but it is a non-linear one. This non-linearity has been defined as either a U-shaped (e.g., Montinola and Jackman 2002), a J-shaped (e.g., Bäck and Hadenius 2008), or an S-shaped (e.g., Sung 2004) relationship. In terms of control of corruption and quality of government, younger democracies perform worse than authoritarian regimes and much worse than older democracies (Keefer 2007). In consolidated democracies politicians may be capable of building reputations as providers of good public policies, but that may be too costly for politicians in younger democracies. The latter may prefer to rely on patrons and, as a result, younger democracies will tend to over-provide clientelistic policies and be more corrupt than older ones.

A second political factor that the institutionalist literature finds relevant for explaining cross-country differences in corruption levels is who composes the political elites of a country. In particular, a consistent finding in the literature is that the higher the number of women in the national parliament of a country, even after controlling for other relevant political factors, the lower the level of corruption (Treisman 2000; Dollar et al. 2001). Although the causal direction of this relationship
is unclear (Sung 2003), the significant effect of the number of women in parliament for the development of certain public policies is a reason to take this relationship seriously (Wängnerud 2008). Everything else being equal, having women in political positions may matter for reducing corruption.

A third political factor follows, in general, from the virtues associated to separation of powers and, in particular, from Tsebelis’ (1995) veto player theory. Along those lines, Andrews and Montinola (2004) understand corruption as a coordination game among the different relevant actors within a polity. The more veto players, the more difficult coordination among them will be and, thus, the lower the level of corruption a country will have. Andrews and Montinola (2004) find support for this hypothesis in an analysis of 35 emerging democracies for two decades. Using a similar argument, Persson, Roland and Tabellini (2000) consider that since in presidential systems elected officials cannot make credible commitments to each other, rent-seeking and corruption will be lower than in parliamentary regimes.

A fourth group of political factors traditionally seen as related to corruption are the characteristics of the electoral system. As comparative studies have shown, the impact of the classical distinction between majoritarian and PR systems over corruption must be qualified, and its different components must be analyzed separately. A feature linked to PR systems – the existence of large voting districts – has positive effect in controlling corruption. The mechanism behind that relationship would be that larger voting districts lower the barriers to entry. At the same time, a characteristic of majoritarian systems – a higher share of MPs elected in single-member districts – also leads to lower levels of corruption. The mechanism in this case would be that when candidates are elected from party lists have lower levels of individual accountability, and thus, more prone to engage in corrupt activities

All these political institutions have been found as having a significant impact on corruption in the literature and this paper will subject them to empirical testing. Nevertheless, we argue that these political arguments only offer us one side of the institutionalist story. There is a set of traditionally neglected factors in the most empirical institutionalist studies that may also have a relevant say for explaining the level of corruption of a country: the features of its bureaucracy.

From a mostly theoretical point of view, the latest decade has been a “time to rediscover bureaucracy” (Olsen 2005, 1) and numerous authors have provided a strong defence for and predicted a return to the Weberian bureaucratic organization (Suleiman 2003, Pollit and Bouckaert 2004, ch. 8). Contrary to the prediction of numerous scholars and international organizations in the 1980s and 1990s, Weberian bureaucracy does not seem nowadays an “organizational dinosaur helplessly involved in its death struggle” (Olsen 2005), but has been found to have positive effects in terms of good governance – specially in small-N studies (Wade 1990, Evans 1995). Nevertheless, the Weberian bureaucratic ideal-type of administration contains very diverse structural characteristics; e.g. a formalized, standardized, hierarchical and specialized bureau plus a professional administrative staff with merit-based lifelong employment and organized careers. The diverse components of Weberian bureaucracies may not necessarily occur together in practice (Hall 1963; Olsen 2008), and there is a lack of comparative data on bureaucratic features that may travel well from one country to another. We are thus left with the intriguing question of which characteristics of Weberian bureaucracies, if any, contribute to good government and the control of corruption.
Rauch and Evans (2000) address that question in a pioneering study of 35 developing countries. They test the impact of three structural components of the “Weberian state hypothesis” on corruption and bureaucratic performance: the level of meritocratic recruitment, the existence of competitive salaries and the degree of internal promotion and career stability. While the effect of the latter two could not be clearly established, the level of meritocratic recruitment seemed to reduce the level of corruption in the pool of countries analyzed. It is important to note here that Rauch and Evans understand merit recruitment in a formal way as the existence of competitive formal examinations and the possession of university degrees among the employees of core economic agencies.

Despite the innovative nature of Rauch and Evans’ analysis, obvious when taking into account the large number of studies which have used their dataset since (see for example Henderson et al 2007), there are several reasons which lead us to undertake a further study of the relationship between bureaucratic features and corruption.

Firstly, Rauch and Evans (2000) do not control for the standard political variables of the institutionalism literature. Hence, the relationships they find between merit-based bureaucracy and control of corruption could simply disappear once one includes variables regarding the nature of the political regime.

Secondly, the sample of 35 countries selected – 30 “semi-industrialized” countries in 1980 plus 5 poorer countries selected to increase the representation of other world regions – could be formed by countries at a critical stage of economic development, precisely when bureaucratic characteristics could be more necessary according to the ‘developmental state’ literature. In particular, the so-called East Asian tigers, the development of which has been more clearly connected to state
policies (Amsten 1989; Johnson 1982; Wade 1990), are overrepresented in the sample. One could cast doubts about the inferences of their results for non-semi-industrialized countries, such as in advanced industrial OECD countries, or for developing countries which have not followed the East Asian development path, such as the East European countries.

Thirdly, it is not obvious what their theoretical mechanisms are. Rauch and Evans (2000, 53) seem to mostly rely on a cultural mechanism, namely the “esprit de corps” as their main micro-foundation connecting Weberian bureaucracy and good governance. Yet they do not offer clear guidelines on how the different bureaucratic features they test are proxies for this or other alternative mechanisms. This motivates the theoretical contribution of this paper: to detect the particular bureaucratic features relevant for tackling corruption and identify the mechanisms through which they act.

How Does Bureaucratic Structure Affect Corruption?

Since Max Weber’s (1978) monumental essays, written nearly 100 years ago, the positive effects of his bureaucratic ideal-type have been discussed by numerous scholars in political science, public administration and sociology. There are several characteristics of the ideal Weberian bureaucracy with an un-theorized relationship with corruption. This paper focuses on the features that probably are especially important for explaining corruption – that is, the characteristics of staff policy: how public employees are selected and which incentives they face. Similar to Evans and Rauch (1999, 2000), we exclusively look at “the relevant determinants of recruitment and career patterns for bureaucrats” (1999, 749). The difficult question is thus to establish what these “relevant” bureaucratic features are.
Table 1 summarizes the alternative (unobservable) causal mechanisms and the partially overlapping (observable) bureaucratic features that should have a positive impact in the control of corruption according to each mechanism.

*** Table 1 around here ***

The first mechanism has to do with the levels of competence among the employees selected to join the public service. In order to improve bureaucratic performance and diminish corrupt practices, one should select “better types”. This can be done through two related procedures. These two should be distinguished, as to clarify the posterior empirical analysis and because the normative implications in terms of how public employees should be selected may be quite different. Using the principal-agent theory terminology, a first option would be to “screen” the potential pool of candidates and select the most competent among them. This could be done in a similar fashion as private-sector firms select employees – with a discretionary evaluation of the CV and through standard interviews – such as is common in many public agencies in countries like Sweden or New Zealand. Alternatively, one can ask candidates to “signal” their capabilities in a competitive formal examination or in a given educational degree – that is, the standard entry procedure to administrative Corps of functionaries in countries like France or Spain. These are thus two observable characteristics of this mechanism of “selecting better types” that do not need to go hand in hand. The first observable recruitment feature would thus be the extent to which the administration “screens” would-be public employees according to their merit as opposed to their acquaintance or loyalty to their political superiors.
Another observable recruitment feature would be the extent to which candidates must “signal” their merit through formal competitive exams.

The second mechanism would not deal with how to prevent adverse selection but how to reduce moral hazard. In simple words, this mechanism would consist of “creating better types” through socialization and thereby generate an *esprit de corps*. The driving force would be the development of a set of common norms within the bureaucracy for fostering impartial and non-corrupt behavior. Those norms would be the joint effect of many characteristics of what the literature defines as a *closed* civil service system (Bekke, Perry and Toonen 1996, 5; Lægreid and Wise 2007, 171). Later, in the empirical section we will use this term – the closedness of the bureaucracy – in order to capture the *esprit de corps* mechanism. Contrary to open bureaucratic systems, closed bureaucracies are characterized by the existence of career stability and lifelong tenure, the prevalence of internal promotions over lateral entries to the public service, and the development of special laws covering the terms of employment for public sector employees instead of the general labor laws prevailing in the country. The high number of interactions among the public servants within the same Corps would create a sense of common norms which would discourage corrupt behaviors. This would be the most decisive mechanism of a Weberian bureaucracy for Rauch and Evans. As they summarize, the formation of stronger ties among public employees reinforces the adherence to codified rules of behavior and, “ideally, a sense of commitment to corporate goals and ‘esprit de corps’ develop” (Rauch and Evans 2000, 52).

The third mechanism, in table 1 called the temptation mechanism, works against corruption mainly through wage policy. It is a classical premise in the literature on bureaucracies and corruption to assume that public servants maximize expected
Traditionally scholars have analyzed both bureaucrats’ wages and penalties for corruption within the framework of a cost-benefit analysis in which economic incentives – carrots and sticks – should be set so that public servants are not tempted to engage in corrupt behavior (Becker and Stigler 1974). Studies do not agree if it is the relative level of wages in comparison to private sector ones, or their perceived fairness that ultimately could deter corrupt behavior. The general idea, although it is inherently difficult to subject to empirical scrutiny, is that public servants incentives can be affected by, on the one hand, their wage and, on the other, the probability of detection and the penalty for corruption (Van Rijckeghem and Weder 2001, 308).

One major caveat of this bureaucratic literature is that it is not clear that these three mechanisms are backed empirically. The result from Rauch and Evans (2000) seminal article does in fact give a very mixed support for these standard mechanisms in the Weberian bureaucracy literature. Only their meritocratic recruitment variable seems to exhibit a systematic effect on the control of corruption. Nevertheless, their proxies for internal promotion and career stability, despite being linked to their main theoretical mechanism – the development of an *esprit de corps* – do not show a clear effect on reducing corruption. Also when it comes to the effect of competitive wages – the *temptation* mechanism – the empirical evidence is mixed. Rauch and Evans (2000) do not find empirical support for this mechanism, while other studies do (Van Rijckeghem and Weder 2001).

In addition to these mechanisms, we suggest another one which has been overlooked in the literature on bureaucracy and corruption, but can be compatible with the findings of Rauch and Evans (2000). We refer to this mechanism as the *separation of interests* mechanism.
The basic idea is that the existence of a professional bureaucracy reduces corruption not by virtue of selecting more competent agents, but by introducing agents with known different interests to those of politicians. A meritocratic recruitment of bureaucrats, which politicians do not influence, is probably the decisive way to create separation of interests between bureaucrats and politicians. With elected officials on one side and non-politically recruited bureaucrats on the other we have two groups with different chains of responsiveness and thus with different interests. Since Woodrow Wilson’s (1887) classic assessment, students of public administration have warned against the negative effects produced by merging the roles of politicians and bureaucrats (see for example Aberbach et al 1981; Peters and Pierre 2004; Simon 1958; Weber 1968).

Scholars from transaction-cost-economics have also observed the potential negative effects of a uniform provider of public goods. Miller and Hammond (1994) formally show that any provider of public goods has incentives to maximize the “residual” inherently generated by the supply of any public good at the expense of social efficiency. In other words, they have incentives to misuse public office for private gain or to be corrupt. Citizens therefore face the problem of how to “constrain the political leader from giving in to incentives for abuse and inefficiency” (Miller and Hammond 1994, 24). Miller and Falaschetti (2001) stress that there is no perfect solution to this dilemma, and there will always be some room of manoeuvre for dishonest behaviour, but a way to minimize it is to transform the residual-owner into a team of agents with “known different interests”, in our case professional bureaucrats on the one hand and politicians on the other hand. As a result of their heterogeneous nature, these agents will face a collective action problem in case they want to collude for undertaking a corrupt activity. As a most preferred example of a “residual-
minimizing” polity Miller and Hammond (1994, 23) propose the establishing of a “professional bureaucrat” who counterbalances the more homogeneous interests of elected politicians.

It is important to remark here that, unlike in the *competence* mechanism, what prevents corruption here is not that merit-recruited bureaucrats are “better types” than the political appointed ones, but that they are simply “different types.” Our main point is that involvement from both politicians and the professional bureaucracy is needed to curb corruption. If an administration was exclusively composed of merit-based bureaucrats without any political control, one could also expect relatively high levels of corruption. Autonomous merit-based bureaucrats also need to be counter-balanced by agents with a different (e.g. political) nature. For example, this could be illustrated by the numerous complaints about corruption and opacity in the most autonomous administrative *corps* of some bureaucratic authoritarian states such as Franco’s Spain (Lapuente 2007, 221-224).

Following this argument, we consider there are two reasons for why a professional bureaucracy could hamper corruption. First, introducing bureaucratic agents with separated interests to those of their principals creates coordination problems for opportunistic actions such as accepting bribes or organizing kick-backs. Either elected officials or professional bureaucrats may engage in corrupt behaviour, but this requires coordination with actors with different interests. Generally speaking, weakening the ties between politicians and bureaucrats diminishes the possibility of collusion and increases the chances for both types to reveal corrupt actions taken by the other type.

Second, since we have individuals who are recruited from two different constituencies, one political and one professional, two parallel hierarchies of
accountability are created. As Alesina and Tabellini point out, “the main difference between top-level politicians and top level bureaucrats lies in how they are held accountable. Politicians are held accountable, by voters, at election time. Top-level bureaucrats are accountable to their professional peers or to the public at large, for how they have fulfilled the goals of their organization” (Alesina and Tabellini 2007, 169-170). Consequently, the careers of professional civil servants become independent from the careers of political incumbents. The future prospects of civil servants – inside or outside the administration – will depend on their professional status and not on following politicians’ instructions.

Together, the two reasons just outlined give the micro-foundation of the separation of interest mechanism. Contrary to a political appointee, a professional bureaucrat will not have much to gain from playing along if she observes corrupt behaviour of politicians. She has for example no interest in rewarding the supporters of any particular politician, because her carrier is not dependent on the re-election of any political sponsor, but on the judgement of her professional peers. She has, however, much to loose if she doesn’t expose corrupt behaviour. If it is revealed that she has known about corruption without exposing it her career is damaged, and her professional peers – who has not gained from the corruption – has no interest in protecting her.

Data and methods

In order to test the theoretical arguments deployed in table 1, we need data on both corruption and the structure of the bureaucracy. For a measure of corruption we rely on the widely used World Bank Governance Indicator “Control of corruption” (Kaufmann et al. 2006). This is a perceptions-based measure of corruption, “including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and
private interests,” and draws on 19 different data sources (ibid., 4, 89).\(^1\) It is sometimes argued that both administrative and political corruption should not be collapsed into one composite measure. From our theoretical perspective, however, this might not be that much of a problem, since the separation of interest mechanism should be expected to reduce both forms of corruption.

The more daunting task is to find useful gauges of the structure of public administration. For this purpose we have collected original data on a cross-section of countries, the so-called “Quality of Government Institute Quality of Government Survey” based on a country-expert survey answered by 529 public administration experts worldwide (Teorell et al. 2008b). In this paper we present the first results from this data collection.\(^2\) Despite receiving responses by experts on 58 countries, to enhance data quality, this paper exclusively relies on the 52 countries for which at least 3 expert responses have been obtained. Western Europe and Northern America together with post-communist Eastern Europe and the former Soviet Union carry the weight of countries covered. Only seven non-Western and non-post-communist-countries are covered by at least three respondents: India, Brazil, South Africa, Japan, South Korea, Mexico, and Turkey, the last four of which are OECD members. By and large, then, our sample of countries is heavily geared towards the developed world.

The questionnaire items relevant for gauging the structure of the public administration are presented in Appendix B. For present purposes we have concentrated on the 8 items that tap into the features of public administration for

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\(^1\) All data on corruption, together with the control variables, are from the Quality of Government Dataset (Teorell et al. 2008a). We prefer the World Bank Institute measure over the ”Corruption perception index” (CPI) produced by Transparency International for the simple reason that it is based on a somewhat expanded sample of countries. The two indicators are however very strongly correlated (at around .95, depending on the year and sample selection), and mostly rely on the same underlying original sources. Robustness tests with the CPI measure do not indicate any substantial differences in our results.

\(^2\) Appendix A offers a detailed description of the design and implementation of the survey as well as the methods for country and expert selections.
which we developed the theoretical expectations in Table 1 above. These include the extent to which recruitment is based on merit (q2_a) and formal examinations (q2_c) rather than political criteria (q2_b, q2_d), as well as the extent to which promotion within the hierarchy is an internal affair (q2_e) and is based on lifelong career paths (q2_f). Competitive salaries (q2_k) and special protection from extraordinary labor laws (q8_1) are other components of this assemblage of features.

These questions are capturing different bureaucratic characteristics, and could be seen as indicators of different causal mechanisms discussed in the previous section. In order to make the hypothesised relationship between separation of interest and control of corruption testable, we create a bureaucratic professionalism index capturing the separation of interest mechanism. We also introduce a bureaucratic closedness index capturing the esprit de corps mechanism, as the main alternative from the literature on Weberian bureaucracy. Additionally, we include a question measuring to what extent the salaries in the bureaucracy are competitive in the analysis.

One obvious drawback from using the two indices is that the observable features of the so-called competence mechanism are captured by one question in the professionalism index (on meritocratic recruitment) and one question in the bureaucratic closedness index (on formal examinations). Trying to handle this and other overlapping observable implications, we also introduce one question at the time in a separate empirical analysis.

When creating the indices, we have performed a country-level principal components factor analysis of the above mentioned 8 items, the results of which are reported in Table 2. In a first dimension, meritocratic recruitment and internal promotion appear as strongly connected with a non-politicized bureaucracy tapping
into the degree of professionalism in the public administration. In the second dimension, the use of formal examination systems is intimately connected to having lifelong careers and protection through special employment regulations, capturing the distinction between open and closed civil service systems. The final component, competitive salaries, does not conclusively belong to either of these dimensions. As already mentioned, we will thus treat it as a separate indicator of the public administration structure in the analyses to come.

*** Table 2 around here ***

Based on these results, we construct the professionalism and the closedness factor indices. These scores are computed as an additive index, weighted by their respective factor loadings. By construction, the factor scores have zero means and unit standard deviation. The cross-country variations in these indices, together with the remaining competitive salaries indicator, are presented in Figure 1-3.

*** Figure 1-3 around here ***

In figure 1 we find mainly countries belonging to the Anglo-American tradition, such as Ireland, New Zealand and the UK, or to the Scandinavian administrative tradition, such as Norway, Denmark and Sweden, at the top of the Bureaucratic Professionalism continuum, which is not very surprising. However, here we also find countries belonging to the East Asian administrative tradition, like Japan and Korea, known for having a strong professional bureaucracy (Painter and Peters, forthcoming). Further down we find countries with known high levels of politicization
of the civil service, such as Spain, Italy and Mexico (Dahlström, 2008; Matheson et al 2007). Figure 2 captures how “closed” civil service systems are. Again, the ranking seems to correspond with established observations. The countries at the top are Brazil, India, Spain, France and Japan, where at least the tree later are often pointed out as the most clear examples of a closed bureaucratic structure (Silberman 1993, 12). When it comes to the competitive salaries, presented in figure 3, the admittedly few countries that are overlapping in our sample and the Evans and Rauch sample seems also to be matching. Mexico and Korea are two of the countries with the most competitive salaries in both samples, while Spain is ranked fairly low (Rauch and Evans 2000, 66).

Results

We start the empirical analysis by testing the traditional political institutional variables vis-à-vis a bureaucratic professionalization variable, which we interpret as mainly capturing the separation of interest mechanism, while leaving the other dimensions of Weberianism, as well as their constitutive components, aside for a moment. As a proxy for this mechanism we rely on the professionalism index uncovered by the principal components analysis developed in the previous section. Its different components (the first four listed in Table 2) refer neatly to the bureaucratic features through which the mechanism of separation of political and professional interests is assumed to work (5a-c in Table 1).

Table 3 reports a series of cross-country regressions with the “Control of corruption” indicator as our dependent variable, here reversed to enhance interpretability (so that higher scores means more corruption, and vice versa). In order to take cross-country variation in measurement error in the dependent variable into
account, we weigh observations in the cross-country regressions with the inverse of
the standard errors of the corruption indicator. We have however refrained from
trying to correct for random measurement error in the professionalism index, despite
the fact that within-country variation among experts strongly indicate its presence. By
implication, our estimates of the impact of professionalism (or any other measure
from the expert survey) are presumably downwardly biased.

*** Table 3 around here ***

Since there is no agreed upon standard set of economic and political
determinants of corruption to rely upon, we have tested several alternative
specifications. The first, and most restrictive, model is an exact replica of Rauch and
Evans’s (2000) specification, only including GDP per capita (logged), the level of
education and degree of ethnolinguistic fractionalization. The second model is instead
geread towards factors that, apart from economic development and education, should
help explain why certain countries introduce professional bureaucracies whereas
others do not. Drawing on New Political Economy explanations of merit adoption,
this means including proxies for what Lapuente and Nistotskaya (2009, 5) define as
“intra-temporal and inter-temporal political fragmentation”– that is, up to which
extent political power is fragmented today (i.e. the number of veto players or political
constraints on the current executive), or is fragmented across time (i.e. level and years
of democracy). In addition, we have also included the old Weberian cultural argument
that a professional bureaucracy should be particularly suitable to a “protestant ethics”.

Models (3) and (4) are more encompassing models of corruption. In one of the
broadest literature reviews to date, Treisman (2007) argues that “quite strong evidence
suggests that highly developed, long-established liberal democracies, with a free and widely read press, a high share of women in parliament, and a history of openness to trade, are perceived as less corrupt” (2007, 211). We have thus in model (3) included measures for all these correlates of corruption. Moreover, in model (4) we have replicated the model used in Persson, Tabellini and Trebbi’s (2003) much-cited work on electoral rules and corruption, including the Rauch and Evans (2000) variables together with the inverse of the average district magnitude, the proportion of legislative candidates elected by plurality votes for individuals, level and years of democracy, Protestantism, Confucianism, trade volume and a dummy for OECD members.

In model (5), finally, we have assembled a parsed control model where every determinant that comes out as statistically significant in any of models (1) through (4) is retained. In addition, regional dummies are introduced in order to wipe out the influence of some relatively extreme outliers.

As can be seen, our index of bureaucratic professionalism works as a statistically significant deterrent of corruption across all these specifications. In the final parsed model, the coefficient of –.19 can be interpreted as indicating that an increase of about one standard deviation in the level of professionalism leads to about a fifth standard deviation decrease in the level of corruption, all else being equal.

Thus, from the results of these different model specifications we can conclude that a cluster of bureaucratic features, in this analysis defined as bureaucratic professionalism (which is far from all the features considered as relevant in the literature on bureaucracies) significantly reduces corruption also when controlling for the effect of different political institutions.
Retaining the same parsed control model, we proceed now to test the different alternative mechanisms in Table 4. First, we tap our professionalism index against the second cluster of bureaucratic features emerging from the principal components analysis – the open vs. closed civil service dimension. The three highly correlated bureaucratic features of which it is formed correspond to two traditional theoretical mechanisms in the literature: the level of competence of employees (competitive formal examinations) and the *esprit de corps* (lifelong careers and special employment laws for public employees). We also compare the professionalism index vis-à-vis one of the most prevailing theoretical mechanisms in the literature of corruption: the competitiveness of public wages to deter temptations.

Interestingly, only professionalism comes out as significant (albeit marginally) in this contest. The index for closed civil service systems even has the “wrong” sign (indicating that more closed systems have higher levels of corruption).³ This implies that those bureaucratic features that through the traditionally praised long-term socialization process in an *esprit de corps* should curb corruption are not supported in our data. Neither does temptation seem to work. In other words, in order to reduce corruption, neither the bureaucratic features traditionally linked to the internalization of norms, nor what public employees earn, seem to matter.

In order to identify more precisely the mechanism/s creating the reduction in corruption, we take two additional steps. In model (2) we investigate the separate components of the professionalism index (here items q2_b and q2_d, both capturing politicization, have been averaged in order to reduce multicollinearity). Despite the fact that the components of the professionalism index are strongly interrelated, one of them clearly comes out as the strongest (albeit only marginally significant) deterrent.

³ Both closedness and salaries are significantly related to corruption if entered individually to the model, but closedness positively so, and both their coefficients (in the case of salaries taking the variance into account) are about half the size of the coefficient for professionalism.
to corruption: having a recruitment system based on skills and merit. This indicator also, in model (3), trumps the separate components of the ‘civil service closedness’ index, none of which by themselves are significantly related to corruption.

Regarding the theoretically deduced causal mechanisms, the implications from these three models are not perfectly conclusive. It is not clear if meritocratic recruitment is curbing corruption because “better types” have been selected as bureaucrats or because the interests of bureaucrats and politicians have been separated. Nevertheless, we interpret the results as speaking against both the ‘Esprit de Corps’ and the ‘temptation’ mechanisms. It should also be pointed out that one of the two indicators for the competence mechanism, namely formal examinations, does not have a statistically significant effect on the control of corruption. Again, although not conclusively, our interpretation is that this leaves us with the strongest support for one mechanism explaining why Weberian bureaucracies reduce corruption – selecting “different types” through meritocratic recruitment.

*** Table 4 around here ***

A potentially serious objection to these results concerns endogeneity bias. Having perceptions based measures at both side of the equation (albeit from different sources), how can we rule out the possibility that the administrations of the less corrupt countries are simply perceived as being more professional and merit-based? Unfortunately we cannot perfectly rule out this interpretation, but we can include one additional control that should at least ameliorate the problem: drawing on temporal variability in the corruption perceptions. Thus far we have solely relied on the latest cross-sectional measure of corruption available, from the year of 2007. In the last two
models of Table 4, however, we add controls for the *earliest* available measure, being from 1996. In effect this implies that we control for the lagged dependent variable, a potentially strong strategy for purging our estimates from endogeneity bias.

As model (4) makes clear, this strategy reduces the effect of the professionalism index below standard thresholds for statistical significance. The merit indicator in model (5) however survives this control. By interpretation, a standard deviation difference in the extent of meritocratic recruitment corresponds to about a sixth of a standard deviation reduction in the perceived level of corruption in a country between 1996 and 2005. In Figure 4 we display the partial regression plot for this final specification—that is, the relationship between meritocratic recruitment and corruption once the effects of all control variables, including the lagged dependent variable, have been taken into account. As the upper plot (a) indicates, Italy and Albania at first appear to be exerting undue influence on this result in terms of being relatively influential confirming outliers. On the other hand, Iceland pushes the result in the other direction by appearing as a disconfirming outlier. The lower plot (b) however demonstrates our result is robust to the exclusion of these three outliers (the partial correlation in both plots is –.38).

To this we may finally add some empirical illustrations from the history of nowadays established Western democracies pointing out that meritocratic recruitment did not happen *after* – or as a result of – administrative corruption was curbed. To start with, while the British meritocratic reform of the administration was imposed by the 1854 Northcote-Trevelyan report, which recommended strict merit selection procedures to join the Civil Service, the period known as the ‘Old Corruption’ would according to most historians’ accounts end in the 1860s (Harling 1995). The

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4 It should be noted, however, that without the regional dummies in the model, professionalism comes out as statistically significant even in model (4). This result however hinges on the inclusion of one extremely influential outlier: South Africa
introduction of merit was thus not a consequence of a less corrupted administration, but, inversely, meritocratic recruitment was an instrument used by reform-minded politicians to curb corruption by putting an end to “fringe emoluments received by the major office-holders and their relatives” (Rubinstein 1983, 62).

Similarly, the goal of the Progressive Era reformers who pushed for the adoption of merit recruitment systems (i.e. Civil Service Commissions) across US cities was mostly to disable the urban political machines in which corruption seemed to prosper (Van Riper 1958; Kelman 1987; Schultz and Maranto 1998). The US historical experience suggests that the extension of merit was the key for “righting the urban wrongs” of extensive corruption in US cities. This was due to the efforts of Progressive reformers who, by pushing for the establishment of merit recruitment systems, undertook “one of the great crusades of the age” (Teaford 1993, 30, 37).

Conclusions

In the literature on corruption, scholars have looked either to political explanations, or to bureaucratic explanations. Even though there are indications that both substantially affect corruption, they have not been tested together. The literature emphasizing political factors has a tendency to ignore the potential influence from the bureaucracy, while the bureaucracy literature, in turn, has not included insights regarding political factors.

In this paper we have tried to bridge this gap, as we have empirically tested both types of factors. The empirical results show that even when controlling for a very broad range of political and institutional factors, bureaucratic professionalism is a statistically significant deterrent of corruption. Thereby this paper underlines the
importance of including measures of bureaucratic professionalism in general models explaining cross-country variance in corruption.

The discussion about cross-country effects of Weberian bureaucracy has been fueled by the seminal work of Evans and Rauch (1999; 2000). However, as was recently pointed out by Olsen (2008), there are many different parts of a Weberian bureaucracy that do not necessarily go together empirically. Therefore, in the theoretical section of this paper we have disentangled the causal relationship between a Weberian bureaucracy and low levels of corruption. We identify three causal mechanisms from the literature and suggest one more, namely the separation of interest between bureaucrats and politicians. We argue that the interest of bureaucrats and politicians are separated when the bureaucracy is professionalized, and especially when bureaucrats are recruited according to skills and merit. We interpret the empirical results as supporting this notion and speaking against other, previously suggested Weberian mechanisms working through competitive salaries in the public sector, career stability, and formal examinations for bureaucrats.
APPENDIX A: Country and Expert Selection in the “Quality of Government Institute Quality of Government Survey

After an open pilot survey available on our website in the Winter of 2007-2008, the main study has been conducted between September 2008 and May 2009 as a web survey of public administration experts in a wide array of countries. Although the scope of the survey is global in principle, we soon realized that there would be a trade-off between the number of countries we could include in the study, particularly from the developing world, and the information we could acquire on potential public administration experts to select for the sample. The solution to this problem that we opted for was to select experts first, and then let the experts, by themselves choosing the country for which they wanted to provide their responses, determine the selection of countries. In practice, what we did was to assemble a list of persons registered with four international networks for public administration scholars: The Network of Institutes and Schools of Public Administration in Central and Eastern Europe (NISPACEE), The European Group of Public Administration Scholars (EGPA), the European Institute of Public Administration (EIPA), and the Structure and Organization of Government (SOG) Research Committee at IPSA. The homepages of these scholarly networks provided the bulk of names of public administration scholars that was sent the questionnaire, but we also did some complementary searches on the internet, drew from personal contacts of scholars at the QoG Institute, and used the list of experts recruited from the pilot survey.

All in all, this resulted in a sample of 1288 persons. We contacted these persons by email, including some background information on the survey, a request to take part, together with a clickable link inside the email leading to the web-based questionnaire in English. The only incentives presented to participants were access to
the data, a first-hand report, and the possibility of being invited to future conferences on the Quality of Government.

After three reminders, 499 or 38.7 percent of these experts had responded, providing responses for 54 countries. In order to cover some underrepresented small European states, and to enhance the coverage of countries with critically low response rates, we launched a second wave of the survey beginning in January this year. This fresh sample was based on extended internet searches and personal contacts, with the addition of a snowballing component through which one responding expert could suggest other experts on his or her country. On May 25, 30 additional valid responses (41.1 %) out of 73 sampled experts had been collected, covering 9 countries (4 of which were not covered in the original sample).

On the whole, this leaves us with 529 expert responses on 58 countries (see table below). The average respondent in this sample is a male (66 %), 47-year-old PhD (82 %). An overwhelming majority of respondents were either born (90 %) or live (92 %) in the country for which they have provided their responses. To enhance data quality, we have in this paper exclusively relied on the 52 countries for which at least 3 expert responses have been obtained. While the number of respondents even among this restricted set of countries varies substantially, from only 3 for Brazil and Uzbekistan to a maximum of 28 in the Czech Republic, on average 10 experts per country have taken the time to respond to our survey. As should be expected from the sampling frame, Western Europe and Northern America together with post-communist Eastern Europe and the former Soviet Union carry the weight of countries covered.
<table>
<thead>
<tr>
<th>Country</th>
<th>Respondents</th>
<th>Country</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
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<td>South Korea</td>
<td>7</td>
</tr>
<tr>
<td>Armenia</td>
<td>16</td>
<td>Kyrgyzstan</td>
<td>6</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
<td>Latvia</td>
<td>7</td>
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<tr>
<td>Austria</td>
<td>5</td>
<td>Lithuania</td>
<td>11</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>6</td>
<td>Luxembourg</td>
<td>1</td>
</tr>
<tr>
<td>Belarus</td>
<td>9</td>
<td>Macedonia</td>
<td>7</td>
</tr>
<tr>
<td>Belgium</td>
<td>7</td>
<td>Malta</td>
<td>4</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>7</td>
<td>Mauritius</td>
<td>1</td>
</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td>Mexico</td>
<td>11</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>22</td>
<td>Netherlands</td>
<td>14</td>
</tr>
<tr>
<td>Canada</td>
<td>13</td>
<td>New Zealand</td>
<td>12</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
<td>Nigeria</td>
<td>2</td>
</tr>
<tr>
<td>Croatia</td>
<td>6</td>
<td>Norway</td>
<td>12</td>
</tr>
<tr>
<td>Cyprus</td>
<td>2</td>
<td>Poland</td>
<td>11</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>28</td>
<td>Portugal</td>
<td>9</td>
</tr>
<tr>
<td>Denmark</td>
<td>13</td>
<td>Romania</td>
<td>17</td>
</tr>
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<td>Estonia</td>
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<td>Russian Federation</td>
<td>6</td>
</tr>
<tr>
<td>Finland</td>
<td>11</td>
<td>Serbia &amp; Montenegro</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>6</td>
<td>Slovakia</td>
<td>7</td>
</tr>
<tr>
<td>Georgia</td>
<td>8</td>
<td>Slovenia</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>12</td>
<td>South Africa</td>
<td>4</td>
</tr>
<tr>
<td>Greece</td>
<td>22</td>
<td>Spain</td>
<td>7</td>
</tr>
<tr>
<td>Hungary</td>
<td>15</td>
<td>Sweden</td>
<td>11</td>
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<td>Iceland</td>
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<td>Switzerland</td>
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</tr>
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<td>India</td>
<td>7</td>
<td>Turkey</td>
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</tr>
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<td>Ireland</td>
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<td>Ukraine</td>
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</tr>
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<td>Italy</td>
<td>7</td>
<td>United Kingdom</td>
<td>11</td>
</tr>
<tr>
<td>Japan</td>
<td>9</td>
<td>United States</td>
<td>19</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>7</td>
<td>Uzbekistan</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>529</td>
</tr>
</tbody>
</table>

*Note:* Countries in italics are not included in this paper due to too low response rate.
Appendix B: Survey Questionnaire (extract)

q2. Thinking about the country you have chosen, how often would you say the following occurs today? [Response scale from 1.“Hardly ever” to 7.“Almost always”]

a. When recruiting public sector employees, the skills and merits of the applicants decide who gets the job?

b. When recruiting public sector employees, the political connections of the applicants decide who gets the job?

c. Public sector employees are hired via a formal examination system?

d. The top political leadership hires and fires senior public officials?

e. Senior public officials are recruited from within the ranks of the public sector?

f. Once one is recruited as a public sector employee, one stays a public sector employee for the rest of one’s career?

g. Firms that provide the most favorable kickbacks to senior officials are awarded public procurement contracts in favor of firms making the lowest bid?

h. When deciding how to implement policies in individual cases, public sector employees treat some groups in society unfairly?

j. When granting licenses to start up private firms, public sector employees favor applicants with which they have strong personal contacts?

k. Senior officials have salaries that are comparable with the salaries of private sector managers with roughly similar training and responsibilities?

l. The salaries of public sector employees are linked to appraisals of their performance?

m. When found guilty of misconduct, public sector employees are reprimanded by proper bureaucratic mechanisms?
q8. To what extent would you say the following applies today to the country you have chosen to submit your answers for? [Response scale from 1. “Not at all” to 7. “To a very large extent”]

a. Public sector employees strive to be efficient?
b. Public sector employees strive to implement the policies decided upon by the top political leadership?
c. Public sector employees strive to help clients?
d. Public sector employees strive to follow rules?
e. Public sector employees strive to fulfil the ideology of the party/parties in government?
f. The terms of employment for public sector employees are regulated by special laws that do not apply to private sector employees?
g. The provision of public services is subject to competition from private sector companies, NGOs or other public agencies?
h. The provision of public services is funded by user fees and/or private insurances rather than taxes?
i. Women are proportionally represented among public sector employees?
### Table 1. Causal mechanisms to reduce corruption and their observable indicators.

<table>
<thead>
<tr>
<th>Causal Mechanisms</th>
<th>Observable Bureaucratic Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Competence</strong></td>
<td>1a. Meritocratic recruitment (candidates are “screened” according to their merit)</td>
</tr>
<tr>
<td>The key is to “select better types”</td>
<td>1b. Competitive Formal Examinations (candidates “signal” their merit)</td>
</tr>
<tr>
<td>The key is to “create better types” through socialization in certain values, strong ties among the members of the Corps and isolation from external influences</td>
<td>2b. Internal promotions (in opposition to lateral entries).</td>
</tr>
<tr>
<td>3. <strong>Temptation</strong></td>
<td>4a. Meritocratic recruitment (candidates are “screened” according to their merit)</td>
</tr>
<tr>
<td>The key is to pay bureaucrats enough, so as they do not engage in corrupt behavior to complement their salaries</td>
<td>4b. Non-politicization of public service posts.</td>
</tr>
<tr>
<td>4. <strong>Separation of interests</strong></td>
<td>4c. Internal promotions (in opposition to lateral entries).</td>
</tr>
</tbody>
</table>
Table 2. Two Dimensions of Weberianism.

<table>
<thead>
<tr>
<th></th>
<th>Professionalism</th>
<th>Closedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meritocratic recruitment (q2_a)</td>
<td>.90</td>
<td>-.07</td>
</tr>
<tr>
<td>Political recruitment (q2_b)</td>
<td>-.93</td>
<td>.10</td>
</tr>
<tr>
<td>Political elite recruits senior officials (q2_d)</td>
<td>-.82</td>
<td>-.17</td>
</tr>
<tr>
<td>Senior officials internally recruited (q2_e)</td>
<td>.81</td>
<td>.27</td>
</tr>
<tr>
<td>Formal examination system (q2_c)</td>
<td>.02</td>
<td>.80</td>
</tr>
<tr>
<td>Lifelong careers (q2_f)</td>
<td>.34</td>
<td>.80</td>
</tr>
<tr>
<td>Special employment laws (q8_f)</td>
<td>-.26</td>
<td>.72</td>
</tr>
<tr>
<td>Competitive salaries (q2_k)</td>
<td>.14</td>
<td>-.51</td>
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</table>

Note: Entries are varimax rotated factors loadings for the first factors retained from a principal components factor analysis at the country level (n=52). Loadings >.5 or <-.5 are highlighted in bold, questionnaire items (see Appendix B) within parentheses.
Table 3. Bureaucratic Professionalism and Corruption (WLS estimates).

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionalism</td>
<td>−0.36***</td>
<td>−0.27***</td>
<td>−0.30***</td>
<td>−0.32***</td>
<td>−0.19**</td>
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<tr>
<td></td>
<td>(0.09)</td>
<td>(0.08)</td>
<td>(0.09)</td>
<td>(0.09)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Log(GDP/cap)</td>
<td>−0.94***</td>
<td>−0.57***</td>
<td>−0.22</td>
<td>−0.57**</td>
<td>−0.20</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.13)</td>
<td>(0.20)</td>
<td>(0.26)</td>
<td>(0.12)</td>
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<tr>
<td>Education</td>
<td>0.00</td>
<td>−0.00</td>
<td>−0.00</td>
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<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.01)</td>
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<td>ELF</td>
<td>−0.31</td>
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<td>−0.09</td>
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<td></td>
<td>(0.38)</td>
<td></td>
<td>(0.38)</td>
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<tr>
<td>Level of democracy</td>
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<td>0.00</td>
<td></td>
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<tr>
<td>(Polity)</td>
<td>(0.02)</td>
<td>(0.02)</td>
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<tr>
<td>Level of democracy</td>
<td>−0.01*</td>
<td>−0.01*</td>
<td>−0.00</td>
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<tr>
<td>(Freedom House)</td>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
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</tr>
<tr>
<td>Years of democracy</td>
<td>−0.96**</td>
<td></td>
<td>−0.38</td>
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<td></td>
<td>(0.44)</td>
<td></td>
<td>(0.43)</td>
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<tr>
<td>Political constraints</td>
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<td>−0.01***</td>
<td>−0.01***</td>
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<tr>
<td>Freedom of the press</td>
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<td></td>
<td>(0.01)</td>
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<td>(0.01)</td>
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<tr>
<td>Years open to trade</td>
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<td>Inverse of district</td>
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<tr>
<td>magnitude</td>
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<td>Share of legislators</td>
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<td>elected by plurality vote</td>
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<td>OECD member</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.811</td>
<td>0.900</td>
<td>0.923</td>
<td>0.892</td>
<td>0.942</td>
</tr>
</tbody>
</table>

* significant at .10-level, ** significant at .05-level, *** significant at .01-level.

Note: Entries are Weighted Least Squares regression coefficients (standard errors within parentheses), with the inverse of the estimated error variance in the corruption perceptions measure used as weight. The dependent variable is the inverse of the WB “Control of corruption” indicator from 2007. Model (5) contains regional dummies for Western, Latin American, African and Asian countries. The Constant term has been suppressed from the table.
Table 4. Components, mechanisms, and endogeneity (WLS estimates).

<table>
<thead>
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* significant at.10-level, ** significant at.05-level, *** significant at.01-level.

Note: Entries are Weighted Least Squares regression coefficients, with standard errors within parentheses, and the inverse of the estimated error variance in the corruption perceptions measure used as weight. The dependent variable is the inverse of the WB “Control of corruption” indicator from 2007. All models include the same control variables as model (5) of Table 3: Years of democracy, Political constraints, Protestantism, Freedom of the press, Female representation and regional dummies. The Constant term has been suppressed from the table.
Figure 1. Bureaucratic Professionalism (country scores)
Figure 2. Bureaucratic Closedness (country scores)

Bureaucratic Closedness

-3 -2 -1 0 1 2

New Zealand
South Africa
Uzbekistan
Georgia
Australia
Denmark
Belarus
Slovakia
Czech Republic
Netherlands
Estonia
Switzerland
Kazakhstan
Latvia
Sweden
Iceland
Mexico
Ukraine
Russian Federation
Albania
Kyrgyzstan
United Kingdom
Bulgaria
Azerbaijan
Finland
Norway
United States
Malta
Bosnia and Herzegovina
Hungary
Poland
Portugal
Canada
Romania
Slovenia
Armenia
Lithuania
Macedonia
Italy
Germany
Croatia
Ireland
Austria
Korea, South
Belgium
Grèce
Turkey
Japan
France
Spain
India
Brazil
Figure 3. Competitive Salaries (country scores)
Figure 4a. Partial regression plot

Figure 4b. Partial regression plot, excluding Albania, Italy & Iceland
References


