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Part 1

Political Environment

1

Electoral Rules and Constitutional Structures as Constraints on Corruption

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1 Introduction

Elections serve two functions in representative democracies. First, they select political actors who enact public policies in the light of constituents' preferences. Second, they permit citizens to hold their representatives accountable and to punish them if they enrich themselves in corrupt or self-serving ways. In other words, elections provide both *incentives* for politicians to enact certain kinds of policies and *constraints* on politicians' malfeasance. In this chapter, we focus on the second of these two functions and investigate how different electoral systems constrain corrupt rent-seeking, holding constant other political, economic and social factors.

We study three stylized categories of electoral rules: plurality/majoritarian systems with single-member districts (PLURALITY), and two kinds of proportional representation (PR) systems: closed- and open-list (CLPR and OLPR). Under a closed-list system, party leaders rank candidates, and voters only cast votes for parties. Under an open list, voters both select a party and rank candidates given the party's selection of candidates. In contrast to PR systems, voters under PLURALITY rule both cast their ballots for specific candidates and elect a single representative from their district of residence.

The control of corrupt political rent-seeking depends both on the locus of rents and on whether any actors have both the incentives and the ability to monitor those politicians with access to rents. We argue that PLURALITY and PR systems differ in two ways. First, the locus of corrupt opportunities differs. Under PR, the party leadership can more effectively concentrate corrupt opportunities in its own hands, so individual legislators have relatively fewer rent-seeking opportunities. Under PLURALITY rule, party leadership does not have as much power over the individual legislators as in PR systems, so the

* This chapter is a shortened version of Kunicová and Rose-Ackerman (2005). Readers are referred to that paper for more extensive citations to the literature and more details on the results reported here.

locus of rents in PLURALITY is more evenly divided between the party leadership and individual legislators. Second, under PLURALITY, the monitoring of rent seekers is likely to be more stringent than the monitoring of rent seekers under PR.

Although our primary focus is on the methods by which the legislature is chosen, we also recognize that a complete model should include other institutional features of a political system such as the level of individual freedom, presidentialism/parliamentarism, federalism, bicameralism, and the strength of parties. We examine the interaction between presidentialism and electoral rules and include other institutional variables, most notably federalism and individual freedom and rights, as controls in our empirical work.

Our research stands at the intersection of two broad literatures: one examining electoral rules and their effects, and the other attempting to explain political corruption. Electoral rules have been shown to affect the incentives of political actors to organize and hence the number of political parties, as well as the way in which parties and politicians compete for votes, producing individualistic personalistic versus party-centered systems. Theoretical arguments conclude that, in established democracies with national parties, PLURALITY rule tends to produce two major parties; in contrast, PR produces several competing parties. In addition, electoral rules are believed to affect party discipline: where politicians have incentives to cultivate a personal vote, party discipline will be low. We build on these stepping stones. We argue that electoral rules help determine the interaction between voters and organized political actors as well as the dynamic among and within political parties. As a result, electoral rules affect the incentives and ability of voters and opposition politicians to organize and to monitor the corruption of incumbents.

The chapter is organized as follows. Section 2 clarifies what we mean by corrupt political rent-seeking and distinguishes between this type of corruption and pork-barrel spending. Then in Section 3 we present our basic theoretical argument about the link between electoral rules and corrupt rent-seeking followed by Section 4 where we add presidentialism to this framework. We state our hypotheses in Section 5, describe the data and methods used to test them in Section 6, and in Section 7 present the results of the regression analysis. We conclude in Section 8 with a discussion placing our results in the context of recent contributions to the literature.

2 Defining corruption

Corruption is an elusive phenomenon that is difficult to capture in a single crisp definition. Researchers have made numerous attempts to do so, but each has its own problems (Lancaster and Montinola 1997). Our own approach views corruption as both a moral and a legal category. We emphasize the institutional roots of corruption under the presumption that changes in institutional structures will change the incentives for self-dealing. We focus on

the corrupt rent-seeking of elected officials (as opposed to appointed bureaucrats) in systems that hold periodic elections with a reasonable amount of political competition and uncertainty of electoral outcome. We define such corruption as *the misuse of public office for private financial gain by an elected official*, a formulation which is now standard in systematic comparative studies (Rose-Ackerman, 1999). Thus, our topic covers activities that lead to the personal financial enrichment of politicians, not cases in which politicians themselves make pay-offs to get political support. Our normative view of representative democracy holds that elected officials should act as the agents of those who have elected them. Thus, by ‘misuse’ we mean deviation from the public official’s role as an agent of voters. Voters and politicians participate in a principal–agent relationship in which voters entrust their elected politicians with various control rights over public resources. Politicians are expected to act on behalf of voters and in their best interests in exchange for political support. Corrupt rent-seeking occurs if politicians deviate from this ideal and renege on these obligations in favour of their personal financial interest. An important corollary here is that a corrupt politician, if exposed, will be punished by voters in the next poll – precisely because of having reneged on his or her implicit principal–agent agreement with voters. Corrupt rent-seeking is an illicit and covert activity. Furthering the interests of one’s constituents is not corrupt under this definition although it may have undesirable consequences for the system as a whole.

An important complication arises if corrupt rent-seeking goes hand-in-hand with actions that favour one’s constituents. One could imagine a scenario in which a politician accepts secret kickbacks from a company that, in turn, promises to build a factory in the politician’s home district, or that is selected as a contractor on a public works project in the district. These actions might be in the interest of the politician’s electoral base compared with the case of no factory or no public works project. Notice that this example fuses two different acts with electoral implications that go in opposite directions. ‘Bringing home the bacon’ in the form of job creation and public works in one’s district surely carries an electoral premium, but illicit payments may reduce the constituency benefits of the project. We assume that if a representative’s corrupt rent-seeking becomes publicly known, it decreases his or her popularity and chances for re-election. The acceptance of kickbacks and bribes is considered corruption under our definition; engaging in pork-barrel politics is an analytically distinct form of activity that is rewarded rather than punished by the electorate.

3 Theoretical framework: monitoring corrupt political rent-seeking

Electoral rules affect the probability of detection by shaping the incentives and ability of political actors to monitor corrupt political rent-seeking.

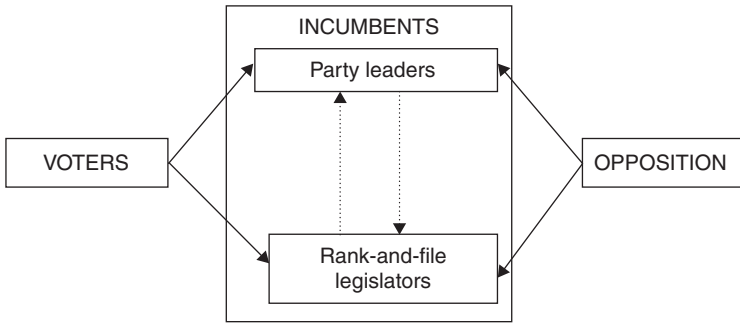


Figure 1.1 Monitoring corrupt political rent-seeking

Figure 1.1 depicts the oversight relations that are shaped by the electoral rules. It includes four types of actors. The first are the incumbent party leaders; the second are the individual rank-and-file legislators who are not in the leadership; the third are political opponents, either individuals or parties; and the fourth are the voters themselves. The incumbents – party leaders and/or individual legislators – have opportunities to extract corrupt rents. However, they are monitored by the political opposition and by voters, and perhaps, by each other.

We specify the objective functions of these political actors as follows. First, incumbent politicians, both leaders and rank-and-file, care about individual wealth and re-election. They would like to maximize rents without being detected, because detection is associated with costs, both monetary (such as legal fees or even a prison term) and political (decrease in probability of re-election). Second, opposition candidates care about winning office. Their chances of winning increase as the chance of the incumbents' re-election decreases, so the opposition benefits from revelations of corruption involving incumbents. Finally, voters prefer honest elected officials to those who enrich themselves through pay-offs. Voters' utility decreases when public resources are diverted for private gain. This is, of course, the reason why we assume that a corruption scandal lowers the incumbent's chance of re-election. We posit that even if bribes are paid in connection with projects that benefit voters, voters do not view corruption as a necessary cost of such projects; they prefer honestly provided 'pork' to projects whose costs have been inflated by corruption. Thus, corrupt pay-offs to politicians are not, in our framework, passed through to voters.

The first salient difference between voting systems is the locus of control over corrupt rents, that is, the *opportunities* for private gain. Under CLPR the party leaders are very powerful vis-à-vis the rank and file because they determine a candidate's ranking on the list. Thus the leadership faces most of the opportunities for private gain and can determine how the spoils are divided.

The rank-and-file party members in the legislature face few individualized corrupt opportunities. The situation is similar under OLPR, except that the leadership itself may be more divided and unstable. Individual members can challenge the leadership by threatening to campaign against them through direct appeals to voters.

Compare the situation under PLURALITY rule. Here, individual incumbents may gain power within the party because of the strength of their local power base or their strategic position within the legislature. Such incumbents may be able to demand a share of the rents of political power in the form of corrupt pay-offs and/or in 'pork-barrel' projects for their districts. Of course, under some conditions individual members have little bargaining power because the leadership can replace them with other members in its efforts to form a majority coalition. However, at other times the majority party may have a slim margin overall or face difficulties getting sufficient votes on a particular issue. A member might also be a pivotal vote on a key committee or have enough of an independent following to launch an attack on the leadership. Individual members can then use their bargaining power vis-à-vis the leadership to get benefits so long as the threat to defect is credible. The legislators' own preferences for pay-offs or pork will be a function of the oversight by voters, the media, and citizens groups, on the one hand, and challengers, on the other.

This discussion suggests that in terms of uncovering corrupt rent-seeking, monitoring the leadership is relatively more important under PR, and monitoring the rank and file is relatively more important under PLURALITY rule. Of course, leaders may be able to garner corrupt rents under PLURALITY rule as well. Our claim is only that individual legislators have more opportunities for rent extraction under PLURALITY than under CLPR. Thus, in PR systems, especially closed-list ones, the opportunities for rent extraction are vested mainly in party leaders. In PLURALITY they are divided between the party leaders and individual representatives.

Monitoring incentives and abilities

Now consider the *incentives* and *ability* of political actors to engage in monitoring. The oversight relations that interest us are mainly voters' and political opponents' monitoring of both party leaders and individual politicians. We are not concerned with the overall level of oversight, but with the way the electoral system affects monitoring at the margin. In addition, we assume both that monitoring is costly and that hiding one's malfeasance is a difficult and imperfect process.

Monitoring by voters

As a normative matter, rank-and-file politicians need to be more closely monitored by voters under PLURALITY rule than under CLPR because the rank-and-file incumbents have more control over rents under PLURALITY

rule. As a positive matter, we argue that this is what we would expect to happen.

Voters' ability to monitor the relevant actors depends on the voters' ability, first, to observe malfeasance if it occurs and, second, to organize for oversight. Assume that corrupt rent-seeking imposes costs on citizens in terms of inflated budgets, low-value public projects, etc. Hence, if voters can identify corrupt politicians, they will punish them by voting against them at the next election. Persson and Tabellini (2000) argue that voting over individual candidates, as in a PLURALITY rule system, creates a direct link between individual performance and re-election. This, in turn, gives incumbents an incentive to avoid corruption (Persson, Tabellini and Trebbi, 2003).

However, so far, this argument does not distinguish well between voting systems. In CLPR systems, the leadership is also known to the voters. Because it is precisely the leadership that needs to be monitored under CLPR, voters can identify those politicians most subject to corrupt incentives for personal enrichment. Of course, it is not sufficient to identify those who might be corrupt. In addition, voters must be able to assess whether the politicians are actually engaging in malfeasance. They need to monitor the rank and file under PLURALITY and the leadership under CLPR.

Such monitoring should be easier in 'small' districts. By 'small' we do not mean district magnitude (the number of representatives elected per district), but rather the voting population of the district. Correcting for other factors, such as geographical size, voters in a district with a small population are more likely to have direct contact with their representative and hence more information about the candidates they elect. In addition, as we argue below, they will have more incentives to organize for oversight. Yet it is not obvious that electoral systems are systematically related to the geographic size of districts. Many PR systems have nation-wide districts, whereas PLURALITY systems are usually partitioned into geographically compact districts. However, the total population size of the country surely plays a role as well in determining the size of districts: Large countries such as USA or India are likely to have more populous districts than Luxembourg or Slovenia. To test the relative impact of these factors, we regressed the average district size in a country on the PLURALITY dummy and national population. The coefficients on both the PLURALITY dummy and population are highly significant with the expected signs: PLURALITY systems are indeed associated with the size of the district, controlling for the effect of the total population of the country. Given this empirical regularity and holding the freedom of press constant, we would expect that information about individual kickbacks to politicians would be less readily available to voters in CLPR systems with large districts than in PLURALITY systems with smaller districts.

The second argument concerns the incentives of voters to organize to provide oversight. Free-rider problems are ubiquitous in political life, and the monitoring of corruption is no exception. In general, collective action

problems among voters should be less severe in small groups than they are in large groups. This suggests that citizens in smaller districts, measured by number of voters, ought to find it easier to overcome free-rider problems than those in larger districts. Holding other factors constant, PLURALITY rule produces districts with smaller numbers of voters than PR. Thus, overcoming free-rider problems may be easier in such systems.

Our discussion of monitoring by voters has so far left out OLPR systems. There, as with CLPR, the leadership controls the rents. Yet OLPR shares one feature with PLURALITY rule: voters can cast their votes for particular candidates, albeit within a party. However, the first feature of PLURALITY systems – relatively small single-member districts – is absent in OLPR systems. This disables grass-root monitoring by voters who, in addition, are likely to face considerable collective action problems. Furthermore, individual candidates are likely to have little say over their party's rent-extraction activities. On balance, then, OLPR systems fall in between CLPR and PLURALITY systems.

However, under any electoral system, one may doubt the importance of monitoring by voters in constraining politicians' corrupt behaviour. After all, even relatively small districts might be large enough for collective action problems to arise. However, although this type of monitoring is neither a sufficient nor a perfectly efficient constraint on corrupt political rent-seeking, we believe that at the margin it will affect whether or not politicians engage in malfeasance. We claim that information about a politician's lifestyle is likely to be more easily accessible in smaller districts. Of course, in addition to direct contact with their representative, voters are informed through media and active anti-corruption law enforcement. Although these factors account for many uncovered corruption cases, we have no reason to believe that the type of electoral system affects the freedom of press or of the effectiveness of the prosecutorial system. In this sense, media freedom and judicial/prosecutorial competence are outside of our theoretical framework although in our empirical specifications we do control for these alternative revelation mechanisms.

Monitoring by political opponents

Because voters face collective action problems even in 'small' districts, the second piece of the puzzle is particularly important. This is the competitiveness of the political system and its impact on the monitoring of incumbents by their political opponents. As we noted above, challengers have a direct incentive to uncover the malfeasance of incumbents because they increase their probability of winning office once the incumbent is discredited. They can do this under PR systems by investigating the integrity of party leaders and under PLURALITY rule at the district level as well. We argue, however, that it is less likely that the opposition will effectively monitor incumbents under PR. Our claim concerns the adverse effects of multiple parties and coalition politics on monitoring.

Under PLURALITY rule, coalition governments are unlikely unless many regional parties exist. Because the election is an all-or-nothing affair, the stakes are high for the challenger. This gives the party out of power an incentive to undermine the incumbent's integrity. Under PR, coalitions are common, and in many countries parties do not sort themselves into two stable blocs. Instead, a party currently in opposition may expect to form a coalition with one or more of the incumbent parties sometime in the future. If this is so, opposition politicians may want to form a coalition with a party currently in power. If so, they have little incentive to expose the corruption of politicians whom they might need to collaborate with in the future.

The lack of a clear alternation between fixed groups of parties deters inter-party monitoring. Furthermore, if a politician uncovers a scandal under PLURALITY rule with two parties, the benefits flow to him and his party. Under PR, even if the party that uncovers the scandal is especially rewarded at the polls for its vigilance and integrity, the scandal provides marginal benefits for all opposition parties. This could produce a race in which opposition parties compete to reveal a scandal, but under plausible conditions, everyone may keep quiet if the cost of uncovering malfeasance is high and/or if the scandalmonger is punished by being excluded from future coalitions.

In short, the impact of competitive politics on the monitoring of corrupt rent-seekers may actually fall as the number of parties increases. The number of parties is a poor proxy for the intensity of competition, at least with respect to the control of corrupt self-enrichment by politicians.

Comparison of electoral systems

Table 1.1 summarizes our arguments about the oversight relations under three types of electoral system, holding other factors constant. The table presents our claims about the *relative* incentives and ability of political actors to monitor rent-extraction by politicians. Thus an entry that reads 'strong' means stronger relative to the other electoral systems listed.

PLURALITY rule scores the highest of the three stylized electoral systems on both incentives and the ability of political actors to monitor rent-extraction. Districts with small numbers of voters somewhat mitigate the collective-action problems of voters and make it easier for them to observe the behaviour of individual legislators – likely participants in most corrupt deals in such systems. At the opposite extreme, under CLPR, collective action problems are likely to be more serious, and voters find it difficult to observe the behaviour of party leaders – the primary locus of corrupt deals in CLPR. Furthermore, PLURALITY rule will produce opposition parties with higher incentives to unveil the corrupt rent-seeking of incumbents than in multiple party regimes. Because OLPR systems share features of both CLPR and PLURALITY systems, they occupy an 'intermediate' category in monitoring corrupt self-enrichment.

Table 1.1 Relative incentives and the ability to monitor corrupt political rent-seeking

| | <i>Voters → Incumbents</i> <i>Mechanism: Accountability;</i> <i>Collective action</i> | | <i>Opposition → Incumbents</i> <i>Mechanisms: Duverger's Law,</i> <i>Coalition formation</i> | |
|---|---|----------------|--|----------------|
| | <i>Incentives</i> | <i>Ability</i> | <i>Incentives</i> | <i>Ability</i> |
| PLURALITY | | | | |
| <i>Main locus of rents:</i> individual reps.& party leaders | STRONG | STRONG | STRONG | STRONG |
| OLPR | | | | |
| <i>Main locus of rents:</i> Party leaders | INTERMEDIATE | INTERMEDIATE | WEAK | WEAK |
| CLPR | | | | |
| <i>Main locus of rents:</i> Party leaders | WEAK | WEAK | WEAK | WEAK |

The table omits one monitoring possibility included in Figure 1.1 – intra-party oversight. This can involve both rank-and-file monitoring of leaders and leadership monitoring of the rank and file. Such monitoring is unlikely to be a sufficient constraint on corrupt rent-seeking under any electoral system. The basic problem is collusion. If there is little outside monitoring by voters, opponents, or other aspects of civil society, leaders can collude with the rank and file to share corrupt rents. Internal party whistle-blowers can arise, but without external monitors, this is likely to be a risky role to play even under PLURALITY rule.

To conclude, we predict that PLURALITY rule voting will do a better job at controlling corrupt political rent-seeking than PR, especially CLPR. The cost of PLURALITY rule may be a political system that focuses on providing benefits to narrow ranges of constituents in key districts, but that is simply the consequence of the more individualized nature of politics. Under PLURALITY rule, corrupt opportunities for personal gain will be concentrated in just those political actors who are best able to be monitored by voters, and the two-party system that frequently results will give opponents an incentive to uncover scandals at any level.

4 Presidential and parliamentary systems

Opportunities for corruption are enhanced by centralized control over government. Then those with power can, if they wish, create rent-seeking opportunities with little oversight inside government. In particular, a president who controls the executive branch has rent-creating possibilities that can be

used for personal gain. In a presidential system, the leaders of the legislative parties are less powerful than under a parliamentary system (Shugart, 1998; Mainwaring, 1995). They must negotiate with the president to pass legislation and do not control the rents that arise within the executive.

Because of the president's undivided power over many sources of rents, diverting them for personal gain is likely to be easier than in a more collegial system of cabinet government. The president can also create additional rents through executive action. In spite of the legislature's incentive to monitor the president, his fixed-term office gives him considerable leeway subject only to the threat of impeachment. The legislature has no instrument similar to the vote of no confidence in parliamentary systems. Of course, legislatures do try to restrict presidential freedom, but their control is less direct than that exercised by a parliament over the Cabinet in a parliamentary system. In addition, in most presidential systems, US-style checks and balances are absent, and presidents tend to have extensive legislative and non-legislative powers. This is not inherent in the nature of presidential systems but is an empirical reality. Using a large cross-section of countries, Kunicová (2005) shows not only that presidentialism *per se* is associated with higher corruption, but also that the more extensive the president's powers, the greater the corruption. Thus, monitoring of the executive by the legislature is, in principle and in practice, more difficult in presidential systems than in parliamentary ones.

Presidents frequently need to cooperate with the legislature to get policy initiatives passed. A corrupt president may seek to enact statutes that incorporate rent-generating opportunities that can be exploited for personal gain. To pass such laws, however, the president needs to bargain with the legislature. In such cases, electoral rules affect the strength of legislative parties and their bargaining power in dealings with the President.

Theoretical claims about electoral rules and party strength have two prongs. First, as discussed above, parties are stronger under CLPR than under PLURALITY rule. Second, parties are weaker in presidential systems than in parliamentary systems because in the former they do not need to organize themselves to form a government (Mainwaring, 1995; Shugart, 1998). Taken together, these arguments imply that parties will be weakest in presidential systems with PLURALITY-rule legislatures and strongest in parliamentary systems operating under CLPR. The other two possibilities fall somewhere between the extremes.

The relation to the expected level of corrupt rent-seeking is complex. On the one hand, we expect presidential systems to generate more opportunities for corrupt enrichment than parliamentary systems that use similar voting rules for the legislature. On the other hand, we expect that CLPR systems will have greater levels of corrupt rent-seeking than PLURALITY systems. The combination of CLPR and presidentialism is likely to create unfortunate synergies.

Under CLPR, the president can form an alliance with the party leaders to share rents at relatively low transaction costs because the rank and file does not have to be included. Even if the parties are somewhat weaker than under a parliamentary system, they still control their members. In contrast, if a president faces a PLURALITY-rule legislature whose parties are weak, he may have to bargain with a multitude of individual members in order to form an alliance. Any alliance will be difficult to form in the first place because of the number of legislators involved. Furthermore, it may be difficult to sustain if marginal members threaten to defect. Even rank-and-file members of a party that is nominally allied with the president have an incentive to be 'integrity entrepreneurs' to enhance their own reputations. This discussion suggests that the greater opportunities for corrupt rent-seeking created by presidentialism should be especially evident in CLPR systems. OLPR ought to be an intermediate case.

To complete the argument, consider the possibility of monitoring by voters and opposition politicians. These groups have an incentive to monitor the president, but their ability is limited. For voters, the situation is similar to that of their monitoring of party leaders – the collective action problems are large in nation-wide districts and evidence of corruption is hidden in public contracts and individualized decisions that are hard to monitor. In contrast, legislators from parties different from the president's do have an incentive to monitor, and if they control the legislature, they may have the power to enact laws that constrain the president. The issue is then whether the role of opposition parties ought to differ between PR and PLURALITY systems. The problem for a corrupt president is not simply to get a majority behind the corrupt initiative, but also to ensure that minority legislators do not blow the whistle to enhance their own political standing with the voters. It appears that what matters in presidential bargaining with the legislature is not the number of parties that the president needs to work with, but the extent to which these parties are capable of voting as unified blocs. In this sense, CLPR seems to be most conducive to corrupt deals.

5 Hypotheses

From our discussion above, we derive the following two hypotheses:

H1 *Existence of a relationship between electoral rules and corruption.* *Ceteris paribus*, we expect CLPR systems to be the most corrupt, followed by OLPR, and then PLURALITY systems.

H2 *Interaction effects.* *Ceteris paribus*, presidential PR systems are expected to be more corrupt than their parliamentary counterparts. We predict that CLPR presidential systems will be especially corrupt relative to other types of government structures.

6 Data, measurement and econometric methods

Our empirical tests use cross-country data that characterize countries in terms of the level of corruption and the legislative selection mechanism. To this basic data we add information on whether a separately elected president exists and include other background political and economic variables.

Corruption data

Corruption is necessarily difficult to define, systematically observe and measure. However, several indices attempt to capture the abuse of political and bureaucratic power across countries. We rely on the Control of Corruption Index (*CORRWB*), also known as *GRAFT*, compiled by the World Bank (Kaufmann, Kraay, and Zoido-Lobaton, 1999). This index includes estimates for 124 countries using data similar to that used by Transparency International (TI) which has published its annual *CPI* ranking of countries since 1995 (Lambdsdorff, 2005). Both TI and the World Bank aggregate surveys of perceived corruption across countries based on the views of business people, risk analysts, investigative journalists and the general public. Specifically, the focus is on kickbacks in public procurement, the embezzlement of public funds, and the bribery of public officials. Although the two indices are highly correlated, we prefer *CORRWB* because it covers a larger number of countries and is a 'second-generation index' in terms of aggregation methodology. It uses an unobserved components model to aggregate up to thirty surveys in 1997–8. This model expresses the observed data as a linear function of unobserved corruption plus a disturbance term capturing perception errors and sampling variation in the indicator. The model allows one to compute the variance of this disturbance term, which is a measure of how informative the index is. The point estimate of control of corruption is the mean of the conditional distribution of *CORRWB* given the observed data and ranges between -2.5 (most corrupt) and $+2.5$ (least corrupt). The variance of this conditional distribution provides an estimate of the precision of the *CORRWB* indicator for each country.

The indices measure overall perceptions of public-sector corruption in a country, but our interest is only in rent-seeking corruption by politicians. Ideally, we would prefer a more precise measure of political, as opposed to bureaucratic, corruption. Unfortunately, only one of the component surveys, the Gallup International, distinguishes between political and administrative corruption, and it has very limited country coverage. However, as reported in the TI *CPI Framework Document*, the correlation between the assessments of political and bureaucratic corruption is 0.88. Transparency International considers this a justification for 'blending political and bureaucratic corruption, because there is no strong evidence that countries differ in prevalence of one type of corruption over another' and claims that 'the extent of political corruption is well-represented by these data' (Lambdsdorff, 1998). The same

argument can also be made for *CORRWB*, because it shares the same substantive characteristics as the *CPI*. Furthermore, the survey respondents are mostly people who would be particularly familiar with high-level corruption, most of which will involve top political actors even if it occurs within the executive branch.

Institutional data

Our theoretical model concentrates on the distinction between three broad and stylized electoral rules: *PLURALITY*, *CLPR* and *OLPR*. The electoral system variables are derived from the World Bank's Database on Political Institutions (DPI 2a) as described in Beck *et al.* (1999). We also check the robustness of our results by using a measure of party-centrism developed by Seddon, Gaviria, Panizza, and Stein (2003) and by substituting for our dummies the proportion of lower-house seats elected by *CLPR*.

The original dummy variables *PLURALITY* and *CLPR* and *OLPR*, taken from DPI 2a for a cross-section of countries in 1997, have a non-empty intersection. In most cases, this reflects the fact that some bicameral systems use PR for one house and *PLURALITY* for another, or that there are mixed electoral rules in a unicameral legislature. We create mutually exclusive categories, *PLURALITY*, *CLPR*, and *OLPR*, by considering which electoral rule elects the majority of representatives in the Lower House. To see if the group of 'hybrid' electoral systems is different from the 'pure' ones, we construct two dummy variables, *PRMIXED* and *PLUMIXED*. The former takes the value one when a system that we have characterized as PR also has plurality elements. The latter takes the value one whenever a system labelled as *PLURALITY* has some PR features. There are fourteen countries in each of these categories.

We consider two alternatives to our main explanatory variables. First, we employ the index of particularism (*PARTICULARISM*). It is designed to be an 'indicator of the degree to which individual politicians can further their careers by appealing to narrow geographic constituencies, on the one hand, or party constituencies, on the other' (Seddon, Gaviria, Panizza, and Stein, 2003). The index is based on the seminal work by Shugart and Carey (1992).

The second alternative to simple electoral system dummies is *CLSHARE*, a variable that, first, distinguishes between systems where *CLPR* dominates and all others, and, second, reflects the strength of *CLPR* in those systems where it is the dominant rule. Thus the variable is 0 for all systems we classify as *PLURALITY* and *OLPR* and takes on values greater than .5 and less than or equal to one for countries in our *CLPR* category, that is, those that elect at least half of their legislatures using *CLPR*. It is obtained by interacting *PLIST* from Persson, Tabellini, and Trebbi (2003) with the *CLPR* dummy. Thus, for those that have a share of *CLPR* that is less than half, for example, Albania and Armenia, *CLSHARE* takes the value of zero.

To test for interaction effects between electoral rules and presidentialism, we employ a presidential dummy (*PRESIDENT*). *PRESIDENT* is derived from

DPI 2a and takes the value 1 if the system has a directly elected president independent of the legislature and 0 otherwise. We interact *PRESIDENT* with the electoral rules dummies to obtain mutually exclusive categories *CLPRES*, *OLPRES*, *PLPRES*, *CLPARL*, *OLPARL*, and *PLPARL*.

Control variables

We control for other institutional and background conditions. Theoretical work on federalism is inconclusive. On the one hand, a more decentralized system might make monitoring easier for voters. On the other hand, local politicians may be able to wield monopoly power over voters, especially in systems with a history of local political or economic fiefdoms. Recent empirical work has found that, on balance, federal systems are more corrupt than unitary systems (Treisman, 2000). Thus, we include federal structure as a control variable. The dummy (*FEDERAL*) is taken from DPI 2a; it has the value 1 if there are autonomous regions with extensive taxing, spending, and regulatory authority.

To control for economic development, we use the log of averaged GDP per capita (*GDP*), 1995–7 (World Bank, 2001). We also control for other aspects of the political system that may influence the level of corruption – such as political rights and liberties. Freedom House (*FREEDOM*) provides a measure of these factors (consult <http://www.freedomhouse.org/research/freeworld/2000/methodology.htm>). Its index is a composite of several aspects of personal and economic freedom, including freedom of the press, an aspect of public life that is particularly relevant to the control of corruption. We averaged the years 1992/3 to 2000/1; the index takes values from 1 (free) to 7 (least free). Because we are only interested in democracies, we exclude from our sample those countries that score 5.5 or higher on this index even if some of these countries have formal electoral institutions.

Although we consider GDP per capita and the Freedom House index to be the most important background controls, we also experimented with a larger set of economic, cultural and social variables that were shown to influence corruption by other studies. These results are reported in Kunicová and Rose-Ackerman (2005); the addition of these variables did not change the results.

Econometric methods

Each country's *CORRWB_i* index has a different conditional variance, which makes our data set heteroscedastic by definition. Because standard errors are reported for each country estimate, we employ weighted least squares (WLS) to correct for this problem, using the inverse of the standard error of *CORRWB_i* as analytic weights. To check the robustness of our results, we also ran all our models using OLS with White-corrected standard errors. The results we report below were not materially affected (see Kunicová and Rose-Ackerman, 2005).

In testing H1, we use *PLURALITY* as an excluded category and examine the coefficients on *CLPR* and *OLPR* as well as the marginal impact of introducing mixed electoral elements; significant negative coefficients on *CLPR* and *OLPR* mean that these systems lead to more corruption than *PLURALITY*. *CLPR* includes many more cases than *OLPR*. Therefore, we test whether a potentially insignificant coefficient on *OLPR* means that *OLPR* is closer to *PLURALITY* than *CLPR*, or that there are simply not enough cases to determine its effect.

Testing H2 requires employing ‘interaction terms’ between electoral rules and presidentialism. However, because we are dealing with categorical variables, we simply divide our sample of countries into six mutually exclusive categories (*CLPRES*, *OLPRES*, *PLPRES*, *CLPARL*, *OLPARL*, and *PLPARL*) and use plurality-parliamentary systems (*PLPARL*) as a benchmark group that should be least corrupt according to our theory.

Finally, although we used WLS and OLS with robust standard errors to correct for heteroscedasticity, further regression diagnostics are warranted to identify influential observations and outlying cases. For each of our three hypotheses, we select a representative model and examine influential observations that influence the intercept (studentized residuals), regression coefficient, or the model as a whole.

7 Empirical results

The empirical results are mostly consistent with our theoretical claims. Regression diagnostics demonstrate that the results are not unduly influenced by influential observations or outlying cases.

H1: the relationship between electoral rules and corruption

Table 1.2 reports the results of the four models that we used to test H1. Model 1 is a benchmark regression without any institutional structure. It shows that *GDP* and *FREEDOM* alone explain 68 per cent of variation in *COR-RWB* on a sample of 93 countries. Adding electoral rules, presidentialism, and federalism explains an additional 8 per cent of variance. Most importantly, *CLPR*, *PRESIDENT*, and *FEDERAL* all have negative coefficients significant at a 10 per cent level or better. The coefficient on *OLPR* also has the right sign, is smaller than the coefficient on *CLPR*, but just misses significance. However, a post-estimation test reveals that we cannot distinguish it from *CLPR*. Therefore, on the basis of Model 2 we can only claim that PR systems are more corrupt than *PLURALITY*. In addition, mixed systems that add some degree of ‘PR-ness’ to *PLURALITY* are also significantly more corrupt than pure *PLURALITY* systems. In fact, the coefficient is similar to that on *CLPR*, suggesting that the anti-corruption benefits of *PLURALITY* rule only hold in relatively pure cases. In contrast, the other type of mixed system cannot be distinguished from a full-scale PR regime.

Table 1.2 H1: Electoral rules and corruption

| | <i>Model 1</i> Coeff | <i>Model 2</i> Coeff | <i>Model 3</i> Coeff | <i>Model 4</i> Coeff |
|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| <i>CLPR</i> | | ***-0.39 (0.14) | | |
| <i>OLPR</i> | | -0.29 (0.18) | | |
| <i>PLU-MIXED</i> | | ***-0.44 (0.16) | | |
| <i>PR-MIXED</i> | | -0.08 (0.15) | | |
| <i>PRESIDENT</i> | | ***-0.33 (0.12) | *-0.25 (0.12) | *-0.23 (0.14) |
| <i>FEDERAL</i> | | *-0.32 (0.17) | ***-0.42 (0.14) | ***-0.43 (0.16) |
| <i>PARTICULARISM</i> | | | **0.21 (0.09) | |
| <i>C-PARTICULARISM</i> | | | -0.30 (0.26) | |
| <i>CLSHARE</i> | | | | *-0.31 (0.15) |
| <i>GDP</i> | ***0.59 (0.07) | ***0.54 (0.07) | ***0.47 (0.07) | ***0.64 (0.08) |
| <i>FREEDOM</i> | ***-0.20 (0.06) | ***-0.22 (0.05) | ***-0.27 (0.06) | ***-0.17 (0.06) |
| Intercept | ***-4.31 (0.72) | ***-3.28 (0.69) | ***-2.8 (0.77) | ***-4.44 (0.86) |
| Adj. R-sq. | 0.68 | 0.76 | 0.78 | 0.80 |
| Obs. | 93 | 93 | 93 | 67 |

Notes: Dependent variable: *CORRWB*. Estimation: weighted least squares. Weights: inverse of standard errors of *CORRWB*.

Significance: *** for $p < .01$; ** for $.05 > p \geq .01$; * for $.10 > p \geq .05$ (2-tailed tests).

Model 3 tests the robustness of our results, replacing our electoral rule dummies by an interval measure of individual-versus-party-centrism of the electoral system, proxied by the index of particularism (*PARTICULARISM*). We find *PARTICULARISM* to be positively significant which is what we expect because it is inversely related to 'PR-ness'. In comparison to our attempt to distinguish different types of systems along one basic dimension – electoral rules, the *PARTICULARISM* variable includes many more features of electoral systems that make them more party-centred. Because the aggregation method of the *PARTICULARISM* index requires many judgments that make the index difficult to interpret, we prefer our electoral dummies that provide a simple, more transparent measure of electoral structure. The additional control variable, *C-PARTICULARISM*, measures the proportion of elected legislators

considered in the *PARTICULARISM* index (see Seddon, Gaviria, Panizza, and Stein, 2003). We are encouraged that an alternative effort to measure the power of political parties across electoral systems produces consistent results.

Finally, Model 4 replaced the electoral dummies with *CLSHARE*. This also proves to be a good proxy for the electoral system dummies used in Model 2. Its main drawback is the fall in the number of data points from 97 to 67. Running Model 2 with the countries in Model 4 produced consistent results. Thus it appears that not much additional value is added by using *CLSHARE* instead of the dummies.

On balance, these results strongly suggest that PR, federalism, and presidentialism increase corruption holding other factors constant. What can be said about the magnitude of these effects? Model 2 allows the following numeric experiments. If we compare a country using plurality rule to one with *CLPR*, the World Bank corruption control index would be .39 higher in the former; this is about .41 of *CORRWB*'s standard deviation. For the sake of comparison, this is about the same effect as an increase in *GDP* per capita to about 49 per cent of its current level. Although this hypothetical experiment needs to be taken with several grains of salt, it does suggest that the relative magnitude of the effect of electoral rules on corruption is rather large when compared to the effect of economic development. Yet the effect of electoral rules seems to be smaller than that of other institutional factors such as federalism and presidentialism.

Interaction between presidentialism and electoral rules

Table 1.3 reports the results obtained by interacting presidentialism with electoral rules. The most important result here is that presidentialism interacts with PR to produce a particularly corruption-prone political system. Model 1 uses *PLPARL* (that is, Westminster democracy) as a benchmark category, which we expect to be the least corrupt. The tests confirm our predictions. All five remaining categories (*CLPRES*, *OLPRES*, *PLPRES*, *CLPARL*, and *OLPARL*) have negative signs. Only *CLPRES*, however, is statistically significant, together with *PLUMIX*, federalism and the background controls. Post-estimation tests show that all coefficients, except *OLPRES*, are different from *CLPRES*. However, the coefficients on *CLPARL* and *OLPARL* are not statistically different from each other. Therefore, in Model 2, we use all parliamentary systems as a benchmark category. Post-estimation tests once again reveal that we cannot distinguish the coefficients on *CLPRES* and *OLPRES*. *PLPRES* is different from *CLPRES* (the difference is significant at 0.01 level), but it is not significantly different from the base case. Similar to H1, the same results hold when we include a large set of controls. These results suggest that the real problem is not the voting system viewed in isolation but is, instead, the interaction between proportional representation and presidentialism. The voting system produces powerful party leaders who are difficult to monitor and permits corrupt interactions to occur between them

Table 1.3 H2: The interaction effects: electoral rules and presidentialism

| | <i>Model 1</i> <i>Coeff</i> | <i>Model 2</i> <i>Coeff</i> |
|-----------------|--------------------------------|--------------------------------|
| <i>CLPRES</i> | ***-0.67 (0.16) | ***-0.58 (0.13) |
| <i>OLPRES</i> | -0.26 (0.36) | -0.18 (0.35) |
| <i>PLPRES</i> | -0.22 (0.15) | -0.17 (0.14) |
| <i>CLPARL</i> | -0.17 (0.19) | |
| <i>OLPARL</i> | -0.14 (0.19) | |
| <i>PLUMIXED</i> | ** -0.39 (0.15) | ** -0.33 (0.14) |
| <i>PRMIXED</i> | -0.12 (0.15) | -0.14 (0.14) |
| <i>FEDERAL</i> | * -0.30 (0.17) | * -0.30 (0.17) |
| <i>GDP</i> | ***0.53 (0.07) | ***0.52 (0.07) |
| <i>FREEDOM</i> | ***-0.21 (0.05) | ***-0.20 (0.04) |
| Intercept | ***-3.33 (0.70) | ***-3.44 (0.68) |
| Adj. R-sq. | 0.75 | 0.75 |
| Obs. | 94 | 94 |

Notes: Dependent variable: *CORRWB*. Estimation: weighted least squares. Weights: inverse of standard errors of *CORRWB*.

Significance: *** for $p < .01$; ** for $.05 > p \geq .01$; * for $.10 > p \geq .05$ (2-tailed tests of significance).

and directly elected presidents in systems with weak popular and political control.

8 Discussion and conclusions

The choice of electoral rules can influence the level of political corruption. Under our theoretical framework, PR systems are more susceptible to corruption relative to *PLURALITY* systems because PR leads to more severe collective action problems for voters and opposition parties in monitoring corrupt incumbents. Closed party lists weaken the link between re-election

and performing well in office. We have also hypothesized the existence of interaction effects between electoral rules and presidentialism. Our empirical findings support our theoretical hypothesis that PR systems, especially in conjunction with presidentialism, are associated with higher levels of corruption. The most important route by which CLPR seems to produce high levels of corruption is through its interaction with presidentialism.

How do our findings compare to those of other scholars who have explored related questions empirically? Lijphart (1999) argues theoretically that consensus democracy (a term that subsumes PR systems) should constrain corruption, but empirically he finds consensus democracies to be *more* corrupt. However, the coefficients are not significant in his bivariate regression covering 36 countries. Our findings, with significant coefficients in the same direction, are based on a much larger sample and include relevant controls. Thus, we reject Lijphart's hypothesis with more force than his own empirical findings. However, it may well be that 'consensus democracy' is simply an overly aggregated measure. For example, although PR systems are more consensual than plurality systems, presidential systems are less consensual than parliamentary ones. Lijphart's theory would predict that presidential systems ought to be more corrupt, which we indeed find. Finally, we show that federal or decentralized systems are more corrupt, which again goes against Lijphart's expectations.

A more recent empirical study of political institutions and corruption by Persson and Tabellini (2003) has both better country coverage and more econometric sophistication than Lijphart's work. Although we reach a similar basic finding concerning the greater corruption of PR systems, we make the opposite predictions about presidentialism. Persson and Tabellini expect presidential systems to be less corrupt due to their competitive nature and to checks and balances, but they cannot confirm this prediction empirically, except on a subset of old democracies. US-style checks and balances may indeed have a constraining effect on corruption, especially in well-established democracies, but we argue that checks and balances are not a representative, let alone fundamental, feature of presidential systems. Once new and fragile democracies are included in the sample, presidentialism becomes a significant predictor of higher corruption levels, controlling for major economic, political and social background factors. Theoretically, we have traced this relationship back to more fundamental and prevalent characteristics of presidentialism, such as fixed terms in office and legislative bargaining patterns, and we argue that these make presidential systems structurally more susceptible to corruption.

Our work further differs from Persson and Tabellini (2000, 2003) in our treatment of proportionality and mixed systems. Persson and Tabellini argue theoretically that the channels through which proportionality leads to higher corruption are the percentage of representatives elected on party lists and district magnitude. Their findings suggest that the systems that constrain

corruption best are those that *both* have no representatives elected on party lists and have large districts. Of course, in practice, such systems do not exist. The analytical problem here is that district magnitude and the percentage of legislators elected on party lists are not independent variables but rather move together in opposite directions as the system moves from proportional to majoritarian.

Our findings about mixed systems help one to understand these two contradictory tendencies. We show that adding some PR to plurality systems substantially increases corruption (PLU-MIXED), while adding some plurality to PR systems has no effect (PR-MIXED) (Table 1.2 Model 2). PLU-MIXED systems increase the proportion of politicians elected on party lists, which is bad for corruption control because, we argue, it increases the power of party leaders and raises monitoring costs. PR-MIXED systems lower the percentage of members elected on party lists while retaining high district magnitudes. Compared to pure PLURALITY systems, this should be good for corruption control according to Persson and Tabellini, but it has no effect according to our results.

Clearly, from the point of view of proposing reforms, more work should be done on the causal variables to discover if any of them can be treated as separate foci of reform in an otherwise unchanged electoral system. The results reported here are essentially reduced form econometric results that demonstrate an association that is consistent with our underlying story. An empirical exploration of the underlying causal mechanisms is a logical next step in this line of research and should help sort out the conflicting causal stories.

We have treated electoral systems and other aspects of government structure as exogenous and studied their impact on corruption. However, in practice, electoral rules are themselves chosen by political actors who may be concerned to limit or restrict corruption. In most cases, today's corrupt individuals did not design the structure of government under which they operate. Nevertheless, one can ask if the empirical regularities we find could have been self-consciously produced by politicians who are more or less concerned with their ability to extract rents from the state. The fact that all democracies have not converged on a single equilibrium constitutional form and set of electoral rules suggests either that the goals of political actors differ or, as is likely, that the functions served by government institutions go far beyond the control (or encouragement) of corruption. For example, although the empirical analysis dealt with corruption, we raised the possibility that there may be a trade-off between systems that provide targeted benefits to narrow constituencies and those that foster corruption. The design of constitutional structures and electoral rules is a balancing act that has produced a wide range of solutions.

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