Corruption for Competence

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Abstract

When do citizens tolerate corrupt, but competent, politicians? This paper formally establishes conditions under which citizens trade off corruption for competence. First, the regime has to be sufficiently democratic such that a corrupt politician has to bargain with citizens in order to stay in power. Second, the politician obtains rents largely by taking bribes in exchange for spending revenues on public goods, rather than by stealing the revenues outright – the former generates public goods from which all citizens benefit, while the latter does not. Under these two conditions, the bargaining power of both citizens and politicians are strong such that competence sustains corruption, and vice-versa.

keywords: grand corruption, rent-seeking, theft, bribery

1 Introduction

Consider a politician who wants to maximize rents. Extracting rents, however, requires staying in power. In a democracy, this means winning elections; in an autocracy, keeping loyal a coalition of supporters. In both cases, political competition checks the politician's ability to extract rents. However, citizens cannot fully prevent such rent-seeking, since political turnover always entails costs.[1] Equilibrium rents are therefore an interior solution whose distance from the corners, i.e. maximum rents or zero rents, depends on the strength of 'political punishment'.

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[1]Persson and Tabellini (2000), for instance, make this explicit in models in which politicians cannot contract future performance, making promises by a 'benign' opposition non-credible, or in which citizens cannot know ex ante the type of politician they are selecting. Contractual incompleteness and imperfect information thus afford the incumbent politician an inherent advantage.

Note, however, an underlying assumption—citizens dislike political rents. At first glance, this appears unassailable: why would citizens want politicians to extract rents? Yet there are two reasons why citizens might tolerate political rent-seeking. One is that some of them may share in the rents. Existing models, from lobbying and special-interest politics (Grossman and Helpman 1994, 2001, Dixit, Grossman, and Helpman 1997, Bernheim and Whinston 1986a, 1986b) to public good provision via selectorate theory (Bueno de Mesquita et al. 1999, 2003, Bueno de Mesquita and Smith 2010, Smith 2008), show precisely how government revenues can be targeted toward political patrons. The other reason is that the politician, in exchange for bribes or kickbacks, can spend the revenues on public goods from which ordinary citizens can benefit. Citizens could then be willing to tolerate the rent-seeking if it results in higher public good provision that would otherwise be the case.

Indeed, empirical findings from Latin America have suggested that citizens trade off corruption for competence (See Rosas and Manzetti (2015), Choi and Woo (2013), Zechmeister and Zizumbo-Colunga (2013), and Winters and Weitz-Shapiro (2013)). Winters and Weitz–Shapiro (2013) describe the attitude of voters concerning corrupt politicians using the Portuguese "Rouba, mas faz" ("He robs, but he gets things done"). This could explain why providing voters information about corrupt candidates does not seem to improve electoral accountability, as demonstrated by recent field experimental evidence, e.g. Boas, Hidalgo and Melo (2018), Chong et al. (2015), and Arias et al. (2018). Non-experimental evidence also suggest that electoral sanctions have little bite. Avis et al. (2018) show that Brazilian mayors are instead deterred from engaging in corrupt behavior because of legal punishments. Chang (2020) finds, using data from East Asia, that voters are more tolerant of corrupt politicians when corruption is institutionalized.

This is not to say, however, that voters never punish politician malfeasance and corruption. Recent evidence by Foresta (2020), for instance, shows that electoral sanctions can be effective against politicians involved in corruption scandals in Italy. Nevertheless, the precise mechanism by which the trade-off occurs is still unclear, as studies thus far

are mostly empirical. To fill this gap, I propose a simple model that formally establishes conditions that can generate the trade-off.

To motivate, consider two of the highest profile corruption cases that are currently being investigated. The Petrobras scandal in Brazil, which erupted in 2014, is the largest **bribery** scandal in Latin America to date. A total of $2.1 billion dollars were allegedly paid by construction firms to executives of state-owned oil company Petroleo Brasileiro SA (Petrobras) in exchange for contracted projects, and funneled to the Workers Party, including former presidents Michel Temer and Lula Da Silva. An even larger corruption scandal is the 1MDB **theft** case, exposed in 2015, in which $4.5 billion dollars were allegedly stolen from the funds of the Malaysia government development company 1 Malaysia Development Berhad (1MDB), of which $700 million dollars appears to have been transferred to the personal bank account of former Malaysian prime minister Najib Razak.

These two cases are examples of grand corruption involving high level elected public officials. The Brazil case is in the form of bribery in the allocation of public goods, i.e. the construction projects, while the Malaysian case is in the form of theft of public funds. Note also that while both countries are democratic regimes, Brazil has consistently had higher democracy scores than Malaysia. From measures constructed by the Varieties of Democracy (V–Dem) Institute, the average electoral democracy index of Brazil between 2010 to 2019 is 0.82 out of a highest possible score of 1, while Malaysia's is only 0.33.

In my model, the type of regime, and therefore the extent of citizen accountability, interacts with the kind of corruption that the politician is able to engage in. The key question is under what conditions do citizens tolerate a corrupt politician. I obtain two results. First, the trade-off is stronger the more democratic the regime, that is, when political turnover is largely determined by ordinary citizens. In this case, a corrupt politician has to 'bargain' with citizens to stay in power, and cannot unilaterally engage in corrupt behavior and expect to get away with it. The second result specifies what this bargain is. What do citizens get in exchange for turning a blind eye? I show that the trade-off between competence and corruption is all the more possible when the way the politician

earns rents is by extracting bribes in exchange for providing public goods, rather than by stealing public funds outright. Citizens are more likely to tolerate the bribe-taking of the politician because they can benefit from public goods, whereas stolen revenues only generate private benefits to the politician and her patrons.

These results can potentially explain why public officials in Brazil could not simply siphon off the funds from Petrobras, but first had to allocate them towards construction projects, before taking a kickback. With a more democratic regime, the bargain with voters is stronger, and therefore officials have to provide commensurate public goods. In contrast, that officials in Malaysia appeared to have blatantly stolen public funds reveals their belief that citizen accountability and, hence, the bargain with voters, is low.

Such explanation, of course, is still highly suggestive and warrants careful empirical investigation. But the intuition builds on the widely held view that a politician's accountability to citizens is inextricably tied with public funds. Bates and Lien (1985), North and Weingast (1989), and Tilly (1992) have long argued that the commitment of leaders to their citizens become more credible the more reliant they are on tax revenues and loans – funds that are obtained from the citizens. The implication is that rentier states, e.g. oil and resource-rich countries, that are less reliant on revenues obtained from citizens are less accountable and are thus prone to corruption and other bad governance outcomes, i.e. the political resource curse. (See, e.g., Ross (2015), Desierto (2018b), Wiens et al. (2014), Brollo et al. (2013), Fisman and Gatti (2002).) While existing papers focus on the implicit bargain between politicians and citizens concerning the source of public funds, my model analyzes another source of bargain – the *use* of such funds, i.e. on public goods or direct, private, transfer to the politician and her patrons.

The paper thus contributes to the formal literature on political rent-seeking and corruption, and the accountability of politicians to citizens. While the formal literature on electoral accountability is large - see Duggan and Martinelli (2017) and Ashworth (2012) for surveys, to the best of my knowledge, none distinguishes between the types of corruption. An exception is Martinelli (2020), in which low-ranked politicians take bribes, and

the politician who is voted to a higher-ranked position extracts rents directly and also takes bribes.[2]

My model is also not confined to *electoral* accountability as I do not use elections to specify the process of political turnover. Rather, I adopt the selectorate framework of Bueno de Mesquita et al. (1999, 2003) and Bueno de Mesquita and Smith (2010), in which the political leader needs to maintain the support of a coalition W of members of the 'selectorate' S in order to stay in power. The fraction $\frac{W}{S}$ then captures the type of regime in a simple way. For instance, in majoritarian democracies, one expects this value to be at least one-half, as at least half of the selectorate determines the leader's political survival. In autocratic regimes, $\frac{W}{S}$ is less than one half, and would be closer to zero the fewer the 'elite' members who can be part of the leader's coalition. The model can thus obtain results not only for different, continuous, degrees of democracy - e.g. Brazil and Malaysia, but also for the whole spectrum of regimes, including autocracies. In this manner, it also makes a related contribution to the formal literature on accountability and corruption in autocratic regimes, which is relatively scant. (See, e.g., Hollyer and Wantchekon (2015) and Dixit (2010).)

The remainder of the paper is organized as follows. In the next section, I formally define theft and bribery and allow for the possibility that the politician who has discretion over government revenues can simultaneously engage in both. Section 3 presents the model and derives the main results. Section 4 concludes.

2   Theft and Bribery

I focus on grand corruption that is committed by high-level politicians, as opposed to bureaucratic corruption that is committed by government-appointed public officials.[3] The

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[2]See, also, Desierto (2021a) in which the political resource curse is modeled through theft and bribery, and Desierto (2021b) for an empirical measurement of Philippine mayors' rents from theft and from bribery.

[3]Rose–Ackerman (1978, 1999, 2007) makes a similar categorization – low level corruption that is committed by bureaucrats in the performance of their administrative duties, and high level corruption committed by politicians in their choice of intervention. For a survey of bureaucratic corruption, see Tirole (1992), Bardhan (1997), Aidt (2003), and Banerjee et al. (2012). For grand corruption, see Rose–Ackerman (2006), Rose–

distinction is important, as it determines the relevant checks and balances. Corrupt bureaucrats face legal sanctions and are subject to the authority of the appointing government. With good institutions and a generally non-rent seeking government, bureaucratic corruption can be effectively monitored and controlled. As Becker and Stigler (1974) have shown, an increase in 'efficiency wages' of bureaucrats can raise the latters' opportunity cost of malfeasance.

In contrast, the control of unappointed, high level, politicians rests on constitutional checks and balances and the threat of political turnover, that is, of being replaced by political opponents (Acemoglu et al. (2013)). However, political competition and turnover can be a weak tool. In fact, Avis et al. (2018) show that the threat of legal, rather than political, sanctions has a relatively stronger corruption-deterrent effect among mayors in Brazil. In my model, I show precisely why the political tool is blunt, by highlighting a particular bargain that corrupt politicians can make with citizens to allow them to stay in power.

The key to identifying this bargain is to acknowledge the different ways by which the corrupt politician can obtain rents. There are indeed many kinds of grand corruption, including cronyism and nepotism, and the rents obtained from government regulations and subsidies, price distortions, and the privatization and nationalization of public goods and services (see Coolidge and Rose-Ackerman (1997)). However, I focus on two major types of grand corruption that are associated with the allocation of public funds. As shown in Desierto (2021a, 2021b), a high-level politician that has discretion over the government budget can obtain rents from both sides of the budget – by stealing some of the revenues, and by spending them on contracts for public goods and services in exchange for bribes from the contractors. Shleifer and Vishny (1993) make a similar distinction for bureaucratic corruption. That is, a bureaucrat who has discretion over the allocation of some public good or service can engage in 'corruption with theft', whereby she provides the service, obtains the official payment for the service and a bribe for expediting it, but

Ackerman and Soreide (2011), Rose–Ackerman and Palifka (2006), and Fisman and Golden (2017).

does not remit the payment to the government. She can also engage in 'corruption without theft', whereby she remits the payment but keeps the bribe for herself.

By focusing on theft and bribery, it becomes apparent that the latter type of corruption is likely to be the more important source of the bargain between corrupt politicians and citizens. Bribe-taking is done while providing public goods and services which benefit ordinary citizens, while theft is a diversion of public funds to the politician and her patrons which confers no gain to ordinary citizens. The bargain is also likely to be stronger the more democratic the regime since, as compared with autocracies or weaker democracies, citizens have a larger say in determining whether the politician stays in power.

Before I derive such results, I first provide simple and formal definitions of theft and of bribery. Denote public goods as g, government revenues as τ and political rents r, and suppose the politician can convert revenues into public goods at rate $\theta \in \mathbb{R}_{\geq 0}$. Then θ is the marginal benefit of citizens from the revenues that are spent – a pure transfer, for instance, is captured by $\theta = 1$. When $\theta < 1$, the politician loses some of the value of the revenues, but out of 'incompetence', rather than malfeasance.[4] That is, corruption here is distinctly captured by rents r and not conflated with how well the politician manages the use of revenues for public benefit.

Consider then two ways by which a politician generates public goods and obtains the rents.

Definition 1. **Theft of public funds**. The politician in charge of public funds appropriates some of the funds, and the remainder is spent on public goods. Thus, $g = \theta(\tau - r)$.

This is the exact specification in Brollo et al., in which politician rent-seeking is only through the theft of revenues. More generally, it is seen in political agency models, a la Barro (1973), Ferejohn (1986), and Persson and Tabellini, in which the politician appropriates a portion of government revenues for herself and her patrons. Such a framework is widely adopted in formal models that explain a political resource curse – revenues from

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[4]For example, revenues might be allocated toward government buildings that are vacant and unused. See https://abcnews.go.com/WN/taxpayer-owned-crumbling-vacant-government-buildings/story?id=10198415.

oil, natural resources and other windfall tend to be associated with higher corruption because they enable the politician who has discretion over those revenues to steal them, rather than spend them on public goods.[5]

Definition 2. **Bribery from public spending**. The politician in charge of public funds spends them on public goods in exchange for bribes. Thus, $g = \theta\tau - r$.

This definition is a simple, reduced-form, specification of bribery a la Grossman and Helpman (2003) in which a firm or contractor supplying a public good offers a bribe to the political agent in charge of government revenues in exchange for a larger allocation of the revenues towards its contract. As demonstrated in Desierto (2021a, 2021b), in equilibrium, the amount of bribes extracted by the politician depends on the (marginal) value of those public goods. To capture this and, at the same time, have a definition that is most analogous to Brollo et al., one can interpret $\theta\tau$ as the gross value, as it were, of the public goods – the larger it is, the higher the rents r that the politician can extract. Since the politician gets a kickback of r, the net value of the public goods is then $\theta\tau - r$.[6]

Thus, the politician who has discretion over the use of public funds can obtain rents by stealing some of the funds outright, or by spending them first and taking a cut from the value produced. It is then straightforward to construct the following general specification, in which the politician can engage in both theft and bribery:

$$g = \theta(\tau - \alpha r) - (1 - \alpha)r, \tag{1}$$

where $\alpha \in (0,1)$ is the fraction of total rents that is obtained in the form of theft. Thus, when α approaches 1, the rents are mostly from stolen revenues, and when α approaches 0, they are mostly from bribes. I take α to be exogenous, which can capture underlying institutions, e.g. legal sanctions, that determine the ease with which revenues can be

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[5]See, e.g., Desierto (2018a, 2018b), Brollo et al. (2013), Ahmed (2012), Abdih et al. (2012), and Robinson et al. (2006).

[6]A simple example is when revenues are allocated towards a highway – a public good with high potential or gross value. The contractor can give a kickback to the politician by using substandard materials, thereby decreasing the net value by the amount given to the politician.

stolen, relative to sanctions that punish bribery. For example, requiring strict evidence of quid pro quo could make it harder to prove allegations of bribery and thus could generate a value of α close to 0. Meanwhile, anti-bribery laws like the Foreign Corrupt Practices Act (FCPA) which prohibits US companies from paying bribes in foreign countries, or granting immunity from prosecution to whistleblowers in bribery cases could generate a α close to 1.

With these formal definitions of theft and bribery, I then derive the relationship between the size of rents and politician competence in producing public goods, by modeling the political competition that the politician has to survive in order to stay in power.

3   Political Rents and Public Spending

Since the control of corrupt, high level, politicians rests on the threat of being replaced by their political opponents, one needs to specify such process of political turnover. A canonical framework that can be applied to both democratic and autocratic regimes is that of selectorate theory developed by Bueno de Mesquita et al. (1999, 2003) and Bueno de Mesquita and Smith (2010). There is a subset S of the population, of size S – the 'selectorate', that determines political turnover. Specifically, an incumbent leader tries to maintain the support of a coalition $W \subset S$ of supporters, of size W, drawn from S to remain in power. She does this by providing a combination of public goods or public policy which all members of S share, and private transfers that are given only to her coalition W. A challenger successfully replaces the incumbent if she is able to form her own coalition, also of size W, at least one of whom is a defector from the incumbent's coalition. In majoritarian democracies, for instance, one expects the size of W to be at least half of that of S, and defecting from the incumbent leader is done by elections; the defectors are therefore the swing voters. In autocracies, W would be less than half of S, as only a few elite members of S are part of the leader's coalition. Defection of any member to a political challenger are not necessarily done by elections, but whatever the precise

mechanism – selectorate theory abstracts from this, defection of the incumbent's coalition members erodes the incumbent's political power, enabling the challenger to replace the incumbent.

To entice the incumbent's coalition members to defect to her own coalition, the challenger also offers public goods/policy and transfers. The best that any challenger can offer is a mix that is optimal to her coalition. However, this offer is not fully credible, since the challenger can always change the composition of her coalition once she is in power. This, then, discourages members of the incumbent's coalition to defect to the challenger's. In equilibrium, the incumbent is able to take advantage of this 'loyalty norm', by giving an amount of transfers that is less than what a challenger would offer. The amount of public goods the incumbent provides, however, is the same as what a challenger would provide. This is because public goods are non-rivalrous and non-excludable. The provision of public goods therefore cannot prevent or entice defection since any selectorate member can benefit from them whether or not they remain in any leader's coalition.

Robinson et al. (2006), Smith (2008), Gehlbach (2013), Desierto (2018a), and Desierto and Koyama (2020) have used this selectorate framework to analyze the provision of public goods and policy in various contexts. In this paper, I adapt the selectorate framework to the context of grand corruption in which the leader uses some revenues on public goods and extract some as rents. To do so, I explicitly interpret the transfers as rents which the leader shares with her coalition. Thus, even the challenger can be corrupt – she can also offer transfers/rents to entice at least one member of the incumbent's coalition to defect. I then analyze what happens when the incumbent and challenger are not equally competent in generating public goods out of the revenues.

Consider, then, a selectorate S of size normalized to one, whose members determine leader selection through the following game that is played at each time period $t = 0, 1, 2, ...\infty$.

1. The incumbent leader I, with competence θ^I in producing public goods, forms a

coalition of selectors of size W from selectorate S who are highest in her affinity ordering. Political challenger C, with competence θ^C, nominates a coalition also of size W which includes at least one member of I's coalition. I and C each propose their policy – the level of public goods g and amount of transfer r. All members of S get g, but coalition members also get r when their leader is in power. That is, transfer r captures rents that the leader shares among her coalition.

2. Each selector in S chooses between I and C. I is deposed only if at least one selector in I's coalition chooses C.

3. The policy of the chosen leader is implemented.

I construct a stationary equilibrium in which I survives each period.

The best policy offer that challenger C can make entails using the revenues to provide public goods and transfers at a mix that her coalition members would find optimal. Let $U = u(g, r)$ denote the utility that a member derives from public goods and transfers, with $u'(g), u'(r) > 0$.

The present value of the infinite stream of utilities that challenger C can thus provide, and which I has to match so as to prevent her coalition members from defecting to C, is

$$V_C = u(g_C, r_C) + \delta\Big[\frac{W}{S}V_I + (1 - \frac{W}{S})V_o\Big], \tag{2}$$

where g_C and r_C denote C's offer of public goods and transfers, respectively, δ is the discount rate, V_I denotes the value of being inside the ruling coalition, that is, being inside the coalition of whoever is the incumbent, and V_o the value of being outside this coalition. With S selectorate members who each have the same probability of being included in the coalition of size W, the probability of being in the coalition and obtaining V_I is $\frac{W}{S}$.[7] Since outsiders get only public goods, then $V_o = \frac{u(g_I, 0)}{1-\delta}$, with g_I denoting the

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[7]This assumption is standard in selectorate theory. An exception is found in Desierto and Koyama (2020), where W is composed of subgroups, and each selectorate member has a different probability of being in W, depending on which subgroup she belongs to.

public goods that are provided by whoever is the incumbent.

The level of public goods and transfers that maximize $U = u(g, r)$ depends on the government budget constraint which, in turn, depends on how rents are obtained. One possible budget constraint is $g + r = \theta\tau$, which implies $g = \theta\tau - r$. Recall that this scenario captures bribery — the leader spends revenues τ in order to generate social value $\theta\tau$, from which rents are obtained and, in this case, distributed among coalition members. A second possibility is that of theft in which $g = \theta(\tau - r)$ – that is, r is directly appropriated from revenues τ and shared to all coalition members, and the remaining revenues are spent on public goods. Combining these two gives $g = \theta(\tau - \alpha r) - (1 - \alpha)r$, where as in equation (1), α is the fraction of rents that comes from stolen revenues. Recall that most of the rents come from stolen revenues when α is close to one, and from bribes when α is close to zero.

Using this expression for public goods g, the value of being outside the ruling coalition is

$$V_o = \frac{u\big(\theta^I(\tau - \alpha r_I) - (1 - \alpha)r_I, 0\big)}{1 - \delta} \tag{3}$$

and the value of the challenger's offer is

$$V_C = u\big(\theta^C(\tau - \alpha r_C) - (1 - \alpha)r_C, r_C\big) + \delta\left[\frac{W}{S}V_I + (1 - \frac{W}{S})\frac{u(\theta^I(\tau - \alpha r_I) - (1 - \alpha)r_I, 0)}{1 - \delta}\right], \tag{4}$$

where r_I is the transfer given by the incumbent, and r_C by the challenger.

For the incumbent to remain in power, she must match the value of C's offer. That is, in equilibrium, $V_I = V_C$, which implies

$$V_I = \left[\frac{1}{1 - \frac{\delta W}{S}}\right]\left[u\big(\theta^C(\tau - \alpha r_C) - (1 - \alpha)r_C, r_C\big) + (1 - \frac{W}{S})\frac{u(\theta^I(\tau - \alpha r_I) - (1 - \alpha)r_I, 0)}{1 - \delta}\right]. \tag{5}$$

Now the value of remaining in the incumbent's coalition is

$$V_I = \frac{u\big(\theta^I(\tau - \alpha r_I) - (1 - \alpha)r_I, r_I\big)}{1 - \delta}. \tag{6}$$

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Plugging this into (5), rearranging, and expressing $\theta^I(\tau - \alpha r_I) - (1 - \alpha)r_I$ as function $g_I(\theta^I, \tau, \alpha, r_I)$ and, similarly, $\theta^C(\tau - \alpha r_C) - (1 - \alpha)r_C$ as $g_C(\theta^C, \tau, \alpha, r_C)$, one obtains:

$$F \equiv \frac{u(g_I(\theta^I, \tau, \alpha, r_I), r_I)}{1 - \delta} - \left[\frac{1}{1 - \frac{\delta W}{S}}\right]\left[u(g_C(\theta^C, \tau, \alpha, r_C), r_C) + (1 - \frac{W}{S})\frac{u(g_I(\theta^I, \tau, \alpha, r_I), 0)}{1 - \delta}\right] = 0 \tag{7}$$

The threat of political punishment, that is, of being replaced by a challenger does not necessarily prevent the incumbent from rent-seeking – the incumbent can obtain rents because the challenger would also do the same. In fact, Proposition 1 shows that the incumbent's rent can rise by more than the challenger's, i.e. $\frac{\partial r^I}{\partial r^C} > 1$:

Proposition 1 $\frac{\partial r^I}{\partial r^C} > 1$ *if* $au'(r_C) + bu'(g_C) > cu'(r_I) + du'(g_I)$ *(but ≤ 1 otherwise), where the weights a, b, c, d are defined as:*

$a \equiv \frac{S}{S - \delta W} < \frac{1}{1 - \delta} \equiv c;\ b \equiv (\frac{S}{S - \delta W})[(1 - \theta^C)\alpha - 1];\ d \equiv (\frac{W}{S - \delta W})[(1 - \theta^I)\alpha - 1].$

(All proofs are in the Appendix.)

To examine the condition that allows $\frac{\partial r^I}{\partial r^C} > 1$, one can simplify by letting the marginal utility from rents – being monetary transfers, be equal to one. Then $u'(r_C) = u'(r_I) = 1$, and the condition in Proposition 1 reduces to $bu'(g_C) - du'(g_I) > c - a$. Thus, $\frac{\partial r^I}{\partial r^C} > 1$ is more likely when W is small relative to S since, in this case, a would be large, b large, and d small, and therefore the condition is more easily met. Conversely, it is more likely for $\frac{\partial r^I}{\partial r^C} < 1$ when W is large relative to S.

Proposition 1 thus implies that the more democratic the regime, the lower the rents the incumbent leader can extract relative to the challenger. This is akin to the results in current selectorate models. In Gehlbach, for instance, $\frac{\partial r^I}{\partial r^C}$ approaches some lower bound $\epsilon = (1 - \delta) < 1$ as $\frac{W}{S}$ approaches 1. The difference, however, is that in current models, while the value of $\frac{\partial r^I}{\partial r^C}$ decreases as W increases, it is always less than one. The results in Gehlbach, Smith, and Desierto, are in fact a special case of our model in which $u'(r^I) = u'(r^C) = 1$, $g_I = g_C$, $r_I < r_C$, and $\frac{\partial r_I}{\partial r_C} < 1$. Specifically, to obtain this case, Proposition 2 shows that it must be that the incumbent is less competent than the

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challenger. That is:

Proposition 2 *If $g_I = g_C$ and $r_I < r_C$, then it must be that $\theta^I < \theta^C$.*

The intuition is straightforward. For a less competent incumbent to be able to provide the same level of public goods as a more competent challenger, the incumbent has to use more revenues and therefore has less rents to give to her coalition than what a challenger would give.

More generally, our model allows for the possibility that the incumbent and challenger offer different levels of public goods, and that the incumbent can actually provide larger rents than the challenger, (such that $\frac{\partial r^I}{\partial r^C} > 1$). When the incumbent and challenger have different levels of competence, they can provide different levels of public goods, and therefore, different rent amounts. As the condition $bu'(g_C) - du'(g_I) > c - a$ implies, when the incumbent provides less public goods than the challenger, then the former is likely able to extract relatively higher rents. That is, $bu'(g_C) - du'(g_I) > c - a$ and, thus, $\frac{\partial r^I}{\partial r^C} > 1$ are more likely when $u'(g_C) > u'(g_I)$ or, equivalently, when $g_C > g_I$.

The more important results of the model – those that can establish a trade-off between the extent of corruption and the competence of the incumbent, are given in the succeeding analysis. In particular, I show that the amount of rents the incumbent provides to her coalition is more likely to increase with the incumbent's competence, depending on two factors – the size of the coalition and the manner by which rents are extracted, i.e. W and α.

First, suppose size W of the coalition is large relative to S.[8] As Proposition 3 shows, when W is large, the more likely it is that the marginal value of the public goods, $u'(g_I)$, that the incumbent provides is greater than some threshold $\bar{u}'(g_I)$.

Proposition 3 *Let $\bar{u}'(g_I) \equiv \left(\frac{S - \delta W}{W - \delta W}\right)u'(r_I)$. Then $u'(g_I) > \bar{u}'(g_I)$ is more likely when W is large.*

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[8]Recall that this also makes it more likely that $\frac{\partial r^I}{\partial r^C} < 1$, but here we focus only on the amount of rents r^I that the incumbent extracts in equilibrium and, in particular, in showing how a more competent incumbent is able to extract more rents, i.e. the likelihood that $\frac{\partial r^I}{\partial \theta^I} > 0$.

In turn, if W is sufficiently large such that $u'(g_I) > \bar{u}'(g_I)$, it is more likely that rents increase with incumbent competence if the rents the incumbent extracts are largely from bribe-taking, i.e. α is close to zero. In fact, as Proposition 4 implies, there is a sufficiently small α for which threshold $\bar{\theta}^I$ would be non-positive, and in which case rents always increase with incumbent competence.

Proposition 4 *Suppose W is sufficiently large such that $u'(g_I) > \bar{u}'(g_I)$, and let $\bar{\theta}^I \equiv 1 - \frac{1}{\alpha}\left(1 - \frac{\bar{u}'(g_I)}{u'(g_I)}\right)$. Then $\frac{\partial r_I}{\partial \theta^I} > 0$ if $\theta^I > \bar{\theta}^I$, which is more likely when α is close to zero.*

When the condition $u'(g_I) > \bar{u}'(g_I)$ is met, then in $\bar{\theta}^I \equiv 1 - \frac{1}{\alpha}\left(1 - \frac{\bar{u}'(g_I)}{u'(g_I)}\right)$, $\frac{\bar{u}'(g_I)}{u'(g_I)} < 1$, which implies that $\bar{\theta}^I < 0$ for sufficiently small α, and therefore $\theta^I > \bar{\theta}^I$ and $\frac{\partial r_I}{\partial \theta^I} > 0$. If the condition is not met such that $\frac{\bar{u}'(g_I)}{u'(g_I)} > 1$, then $\bar{\theta}^I$ is always positive. However, $\bar{\theta}^I$ can still be kept to a minimum, and $\theta^I > \bar{\theta}^I$ met, for as long as α is close to one. In this case, then, it is more likely that rents increase with competence when α is close to one. That is:

Corollary 5 *Suppose W is sufficiently small such that $u'(g_I) < \bar{u}'(g_I)$. Then, $\frac{\partial r_I}{\partial \theta^I} > 0$ is more likely when α is close to one.*

The foregoing results thus suggest that in stronger democracies, a more competent incumbent is able to extract more rents, provided that the rent-seeking is done largely through bribe-taking. In contrast, in autocracies or weaker democracies, a more competent incumbent is able to extract more rents, provided it is done mostly by stealing or appropriating revenues.

The intuition is that in more democratic regimes, the incumbent can only rent-seek by generating public goods whose marginal value satisfies some threshold. She is then more able to do so if she obtains the rents at the same time that she produces the public goods, i.e. by taking bribes. In less democratic or more autocratic regimes, however, the incumbent is not similarly constrained. In equilibrium, she provides public goods

whose marginal value is less than the threshold. This, then, allows her to appropriate the revenues for her coalition.

These results thus suggest that the trade-off between corruption and competence is more pronounced in democracies, and when the corruption occurs through bribery, rather than theft. In this case, for every rent extracted, the incumbent leader has to provide public goods whose marginal value is larger than the weighted marginal value of rents, i.e. $u'(g_I) > \frac{S-\delta W}{W-\delta W}u'(r_I)$. Under these conditions, the bargaining power of the selectorate who demand public goods is, as it were, matched by the bargaining power of the leader who is able to produce public goods whose marginal value is sufficiently higher than that of the rents she shares with her coalition. By this mechanism, there exists a trade-off between corruption and competence. In contrast, such trade-off is less likely in weaker democracies and autocracies. In such cases, the leader is not constrained to provide public goods with marginal value greater than the weighted marginal value of rents - on the contrary, $u'(g_I) < \frac{S-\delta W}{W-\delta W}u'(r_I)$. This is because rents are relatively more important in weaker democracies and autocracies, i.e. its weight $\frac{S-\delta W}{W-\delta W}$ is larger the smaller W is. The leader is thus more able to directly appropriate rents by stealing revenues.

The model can thus potentially explain variation in the kind of grand corruption that a politician engages in. There is, of course, no existing dataset on corruption that distinguishes between theft and bribery. However, important anecdotal evidence may provide initial support to the results presented here. Specifically, the results can explain why the largest corruption scandal in Brazil (Petrobras) is that of bribery in exchange for the construction of public works, while in Malaysia (1MDB) it is from the theft or direct appropriation of the 1MDB development fund. As a relatively stronger democratic regime, Brazilian voters exert more influence in leader selection and can therefore demand a trade-off – that is, some rent-seeking may be tolerated if it is matched by a commensurate value of public goods. In contrast, electoral accountability is weaker in Malaysia, which allows the incumbent to expect to siphon off some public funds without providing public goods to the electorate.

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In addition, findings on the political resource curse are not inconsistent with our theoretical predictions, in that the curse of higher corruption appears to be more ubiquitous in weaker democracies or autocracies. (For a survey, see Ross (2015).) Existing empirical papers do not specify the type of corruption that occurs. However, as Desierto (2018b) shows, formal models of the political resource curse on which empirical results are presumably grounded depict the corruption as the theft of revenues from oil and natural resources, rather than bribe-taking.

4   Conclusion

When do citizens trade off corruption for competence? I propose a model in which a corrupt politician earns rents by stealing government revenues or spending the revenues on public goods from which she extracts bribes. Members of the politician's coalition share in the rents, but ordinary citizens benefit only from the public goods. I find that the more democratic the regime, and the more rent-seeking is done through bribe-taking rather than through theft, the more likely it is that a politician will be able to earn more rents at the same time as she delivers more public goods. This trade-off between corruption and competence can potentially explain why political malfeasance is rarely punished by citizens.

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Appendix

Since $\frac{\partial F}{\partial r_I} \neq 0$ (see below), one can apply the implicit function theorem to get: $\frac{\partial r_I}{\partial r_C} = -\frac{\partial F}{\partial r_C}/\frac{\partial F}{\partial r_I}$ and $\frac{\partial r_I}{\partial \theta^I} = -\frac{\partial F}{\partial \theta^I}/\frac{\partial F}{\partial r_I}$.

Note, then, that $\frac{\partial F}{\partial r_I} = (\frac{1}{1-\delta})[u'(g_I)\frac{\partial g_I}{\partial r_I} + u'(r_I)] - [(\frac{1}{1-\frac{\delta W}{S}})(\frac{1-\frac{W}{S}}{1-\delta})][u'(g_I)\frac{\partial g_I}{\partial r_I}]$, where $u'(g_I)$ is the marginal utility of selector from public good g_I provided by the incumbent, while $u'(r_I)$ is the marginal utility of a ruling coalition member from rents. Since $\frac{\partial g}{\partial r_I} = (1-\theta^I)\alpha - 1$, then one can re-arrange and simplify to get

$$\frac{\partial F}{\partial r_I} = (\frac{1}{1-\delta})u'(r_I) + (\frac{W}{S-\delta W})\left[u'(g_I)[(1-\theta^I)\alpha - 1]\right] \tag{8}$$

Similarly:

$$-\frac{\partial F}{\partial r^C} = (\frac{S}{S-\delta W})\left[u'(g_C)[(1-\theta^C)\alpha - 1] + u'(r_C)\right] \tag{9}$$

Now, since $\frac{\partial g_I}{\partial \theta^I} = \tau - \alpha r_I$, then $-\frac{\partial F}{\partial \theta^I} = -(\frac{W}{S-\delta W})[u'(g_I)\frac{\partial g_I}{\partial \theta^I}]$ can be written as

$$-\frac{\partial F}{\partial \theta^I} = -(\frac{W}{S-\delta W})[u'(g_I)(\tau - \alpha r_I)]. \tag{10}$$

Proof of Proposition 1

From (8) and (9), $\frac{\partial r^I}{\partial r^C} > 1$ if $(\frac{S}{S-\delta W})\left[u'(g_C)[(1-\theta^C)\alpha - 1] + u'(r_C)\right] > (\frac{1}{1-\delta})u'(r_I) + (\frac{W}{S-\delta W})\left[u'(g_I)[(1-\theta^I)\alpha - 1]\right]$ or, rearranging, $au'(r_C) + bu'(g_C) > cu'(r_I) + du'(g_I)$, where $a \equiv \frac{S}{S-\delta W}$, $c \equiv \frac{1}{1-\delta}$, $b \equiv (\frac{S}{S-\delta W})[(1-\theta^C)\alpha - 1]$, and $d \equiv (\frac{W}{S-\delta W})[(1-\theta^I)\alpha - 1]$.

Proof of Proposition 2

Suppose that $\theta^I = \theta^C$. To get $g_I = g_C$ in the model, it must be that $\theta(\tau - \alpha r_I) - (1-\alpha)r_I = \theta(\tau - \alpha r_C) - (1-\alpha)r_C$, which implies $r_I = r_C$. Thus, for $g_I = g_C$ and $r_I < r_C$ to both hold, it must be that $\theta(\tau - \alpha r_I) - (1-\alpha)r_I < \theta(\tau - \alpha r_C) - (1-\alpha)r_C$ or, simplifying, that $\theta^I < \theta^C$.

Proof of Proposition 3

The condition $u'(g_I) > \bar{u}'(g_I)$ is more likely to hold when $\bar{u}'(g_I)$ is small which, in turn, is more likely when W is large, since $\frac{\partial \bar{u}'(g_I)}{\partial W} = \frac{-(W-\delta W)(\delta u'(r_I)) - (S-\delta W)u'(r_I)(1-\delta)}{(1-\delta)^2} < 0$.

Proof of Proposition 4

By (10), $-\frac{\partial F}{\partial \theta^I} < 0$. Thus, $\frac{\partial r_I}{\partial \theta^I} > 0$ if $\frac{\partial F}{\partial r_I} < 0$. Now, by (8), $\frac{\partial F}{\partial r_I} < 0$ if $\left(\frac{1}{1-\delta}\right)u'(r_I) < -\left(\frac{W}{S-\delta W}\right)\left[u'(g_I)[(1-\theta^I)\alpha - 1]\right]$. Re-arranging and simplifying this condition gives $1 - \frac{1}{\alpha} + \frac{1}{\alpha}\left(\frac{S-\delta W}{W-\delta W}\right)\frac{u'(r_I)}{u'(g_I)} < \theta^I$, which can be written as $\bar{\theta}^I \equiv 1 - \frac{1}{\alpha}\left(1 - \frac{\bar{u}'(g_I)}{u'(g_I)}\right) < \theta^I$, with $\bar{u}'(g_I) \equiv \left(\frac{S-\delta W}{W-\delta W}\right)u'(r_I)$. Thus, $\frac{\partial r_I}{\partial \theta^I} > 0$ if $\theta^I > \bar{\theta}^I$. Since $\bar{\theta}^I$ is increasing in α, then it is more likely that $\theta^I > \bar{\theta}^I$ and, hence, that $\frac{\partial r_I}{\partial \theta^I} > 0$ the closer α is to zero.