

Reelection, Political Selection, and Development

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April 23, 2018

Reports work in progress. Version 1.0.

Abstract

We assemble original data from 112 countries around the world on the reelection rates of national legislators in recent elections. The data show that incumbent reelection rates increase substantially with a country's level of economic development. Using a political agency model with endogenous entry to interpret this pattern, we argue that as a country develops, the pool of politicians improves. We use empirical methods to explore mechanisms that could account for the pattern in political selection that we identify.

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1 Motivation

We begin with a puzzle. Why should reelection rates for national legislators increase with national income?

Figure 1 depicts the observed relationship between recent reelection rates for individual incumbents in the national legislature and the (natural log of the) value of 2012 per capita gross domestic product (GDP) for each country.¹ We show the 112 countries for which we have thus far assembled recent reelection data.² The unit of observation is the individual legislator in the lower house of representatives, grouped into country averages.³

The dashed horizontal line depicts the World Bank's cutoff (\$12,615 in 2012) between low- and middle-income countries (to the left of the line) and upper-income countries (to the right). (For convenience, in what follows, we will often refer to the former as *poor* and the latter as *rich* countries.) The figure also shows the line of best fit and the confidence interval for a regression equation with average reelection rates as the dependent variable and logged GDP as the independent variable. The data presented in the figure show a clear linear relationship: reelection rates rise with national income. If we run a regression with reelection rates as the dependent variable and GDP per capita as the regressor, the relationship is statistically significant (the r^2 is 0.16).

Countries with per capita incomes that place them in the low- and middle-income class — that is, to the left of the dashed line — generally show relatively low reelection rates. The average reelection rate for these countries is 40.7 whereas the average reelection rate for upper-income countries is 51.3 percent. The median reelection rate for poor countries is 35.7. Thus, more than half of poor countries exhibit reelection rates well below 50 percent; indeed, below even 40 percent. This means that a majority of their national legislature comprises new members in each period.⁴

The cross-country relationship that we observe is the reverse of what the literature would lead us to expect. Scholarship characterizes the politics of poor countries as clientelistic and the politics of rich countries (which are almost all long-standing democracies) as subject to voter accountability (Kitschelt and Wilkinson (2007), Stokes et al. (2013), Przeworski, Stokes and Manin (1999)). Where voters are tempted by the individual inducements that come with vote-buying, patronage, and clientelism, we would expect politicians to retain office — indeed, those tactics are depicted as precisely how politicians gain votes to resecure power. Where voters hold their public officials accountable, we

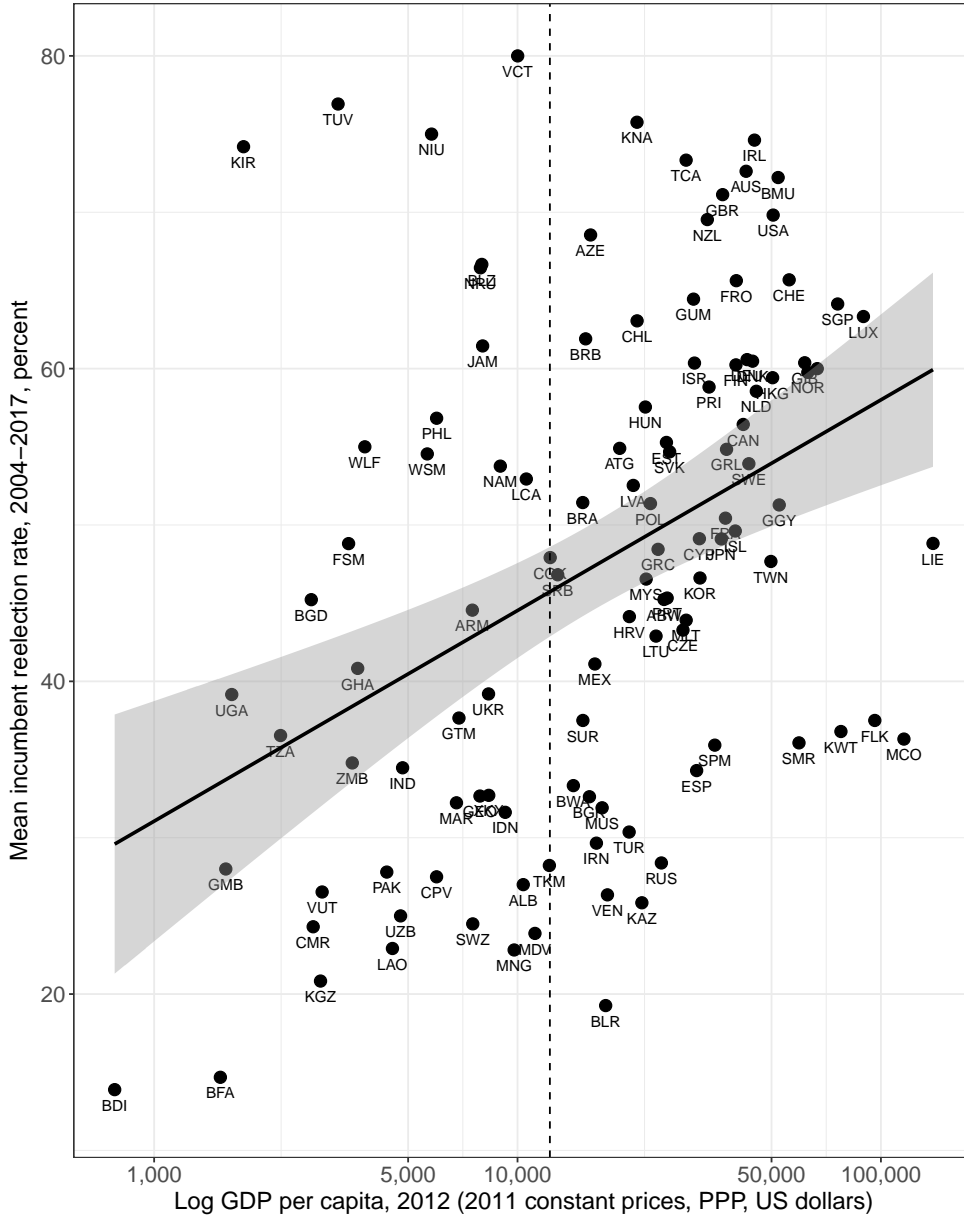
¹For details on measures, see Appendix A.

²Prior research (see Matland and Studlar (2004)) has assembled similar data but only for 25 wealthy countries.

³We create country averages of reelection rates using data on individual legislators from two (or where available from three) elections.

⁴Reelection rates are calculated for incumbents in the last period, not for persons who may have served in any previous legislature. The latter produces higher reelection rates.

Figure 1: Scatterplot of Reelection Rates of National Legislators by GDP



Sources: Authors' calculations. For details, see Appendix A and Appendix C. N = 112 countries.

would expect to see the electorate throw out elected representatives whose job performance proved inadequate. The naive expectation is therefore that we ought to see a *negative* relationship between GDP per capita and reelection rates.

Our paper proposes a simple explanation for the positive correlation we uncover: national income changes the composition of the political class. Our theory builds on two strands of literature: adverse selection and endogenous entry. Our baseline model consists of two periods. At the beginning of each period, a subsection of citizens — the elite — decides whether to enter politics. Members of the elite

can be corrupt or honest, which is their private information (type). They also vary in their productivity in the private labor market. At the end of the first period, voters receive an informative signal about the type of their representative and choose whether to cast a vote for the incumbent or for the challenger. A member of the elite runs for office if and only if his payoff in office is higher than his possible wage in the private labor market. We establish that as the proportion of honest politicians among the political class increases, so does the reelection rate. In turn, the relative value of holding office for honest vis-à-vis corrupt politicians determines the ratio of good versus bad type who enter politics. Combining these two together, the empirical puzzle we document can be explained by the fact that the relative value of office for honest elite members is higher in rich than in poor countries. With the help of this game theoretic framework, we also highlight some potential mechanisms that could drive these compositional changes.

One way to think about the change in the relative value of office-holding with economic development is to note that in poor countries, public office comes with extensive rent-seeking opportunities, whereas in rich countries, political institutions prevent rent-seeking. The rent-seeking opportunities that exist in poor countries provide significant extra-wage financial benefits to public officials and their families. These opportunities thus make public sector jobs highly attractive to the most enterprising, energetic, and materially-motivated individuals in the population. In rich countries, by contrast, rent-seeking in public sector jobs is restricted, leaving them to those motivated by a combination of ego-rents and a genuine desire to improve public life. The modal politician in a rich nation might thus be thought of as a high-minded, public-spirited narcissist. In neither setting do the official wages offered public officials serve as the chief inducement for seeking public positions.⁵ Ultimately, our's is a story about how institutional constraints change the value of public office for individuals with different types of utility functions.

There are multiple mechanisms that potentially transmit rising economic development to improvements in institutions and thence to a transformation of political selection. Possibilities include: (1) Improvements in the application of the rule of law, which reduces rent-seeking, thence lowering the value of holding office for the bad type. (2) Improvements in the performance of the public bureaucracy, which makes policy implementation more effective, thence increasing the value of holding office for the good type. (3) Better voter information, including the cognitive capacity to evaluate complex policy-related information, which allows elites of the good type to win office more often and induces elites of the bad type to lose elections more often. This in turn generates a higher value of holding office for elites of the good type and a lower value for those of the bad type. In a later section of this paper, we discuss some of them along with possible ways to gain causal insights.

⁵Some parts of our theory do not necessarily distinguish elected officials from civil servants. We think that bad types select into both elected and appointed public offices in poor countries, for instance. However, we observe the reelection outcome only for elected officials.

2 Preliminary Empirical Evidence

In the next three sections, we explore the *prima facie* plausibility of our theory by examining patterns in different types of data. We review: (1) personality studies; (2) cross-national data on corruption; and (3) cross-national data on the rule of law and corruption.

2.1 Micro-Level Studies of Personality Types and Job Selection

What is the evidence that politicians differ in their motivations (types) in rich and poor countries? Studies of cheating conducted in lab settings in India and Denmark find that university students with higher propensities to cheat are more likely to select public sector jobs in India but private sector jobs in Denmark (Barfort et al., 2015, Banerjee, Baul and Rosenblat (2015), Hanna and Wang (2015)). Likewise, Cohn, Fehr and Maréchal (2014) reports that international bankers become dishonest when their professional identity is invoked, again suggesting that private sector jobs in the most lucrative sectors in the developed world attract individuals susceptible to cheating.

If these studies generalize, they indicate that persons predisposed to dishonesty enter the public sector in poor nations but the private sector in rich ones. s

2.2 Cross-National Relationships between Corruption and Reelection Rates

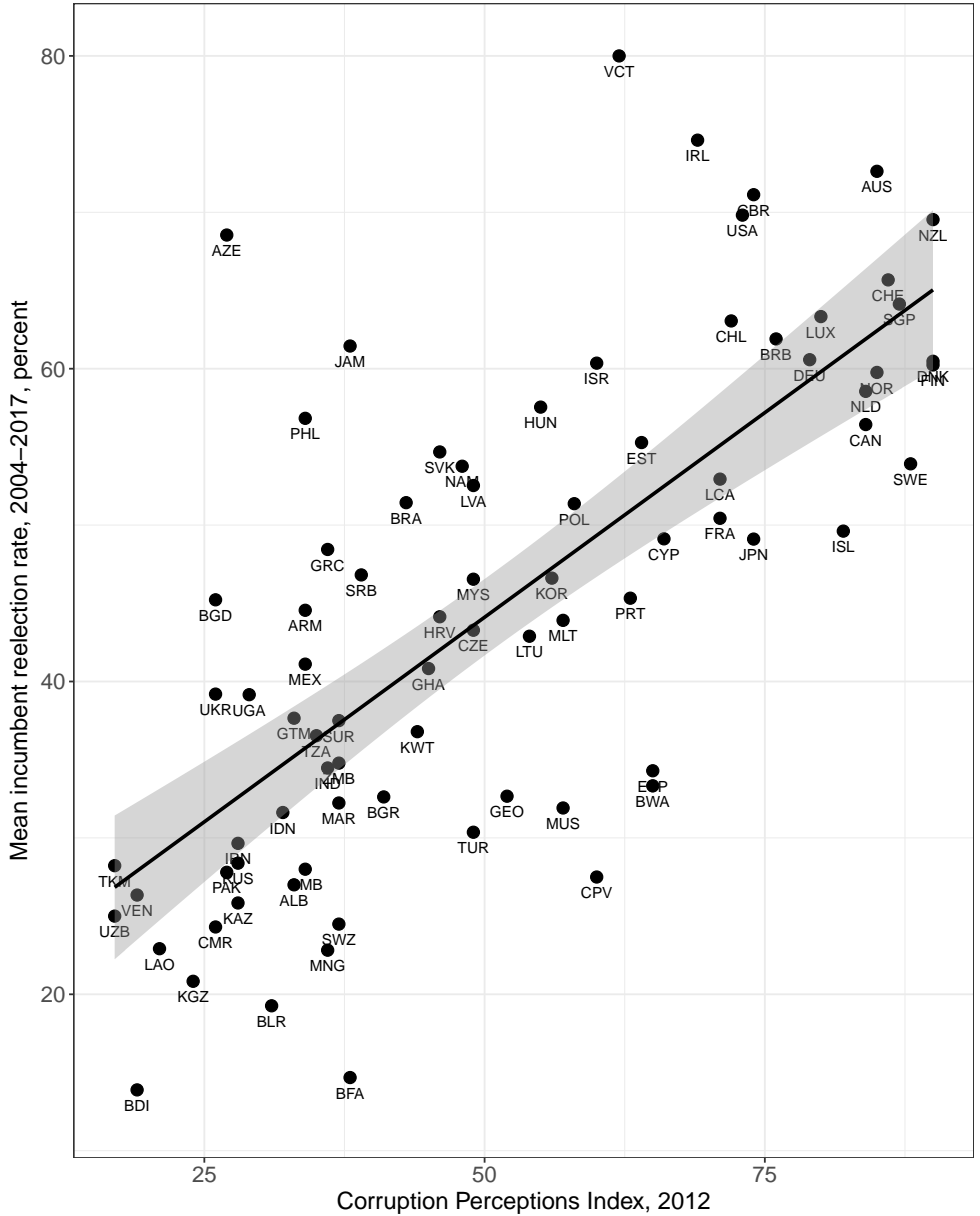
We theorize that legislators in less developed nations seek public office to engage in rent-seeking. Hence, they fail to get reelected because their performance while holding public office is poor. If our theory is correct, we should observe that countries with lower rates of reelection of national legislators are also those with higher rates of corruption.⁶ In Figure 2, we present data corroborating this implication of our theory. The figure depicts the relationship between a measure of corruption perceptions and the reelection rates of national legislators.⁷ As the figure documents, the data show a very strong and statistically highly significant relationship between reelection rates of national legislators and the corruption index. (Note that the index is constructed so that higher values indicate less corruption.)

The cross-national relationship between corruption and reelection rates is consistent with our model. It shows that in countries where office holders are perceived to engage more often in corruption, national office holders are less likely to be reelected.

⁶We should also see a similar relationship between reelection rates and political patronage, but we are unaware of cross-national data on the latter.

⁷The corruption measure is based on perceptions. Although perceptual measures have various shortcomings, they are the only type of cross-national measure of corruption that is available.

Figure 2: Scatterplot of Reelection Rates of National Legislators by Corruption Perceptions



Sources: Authors' calculations. For details, see Appendix A and Appendix C. Higher values on corruption mean less corruption. N = 81 countries.

Historical literature also corroborates increasing reelection rates over time for the few countries for which data have been assembled. (Cite relevant US and UK studies.) We know as well that these countries, like the rest of the wealthy world, were once highly corrupt (Glaeser and Goldin (2006), Popa (2015)). The pattern of historically rising reelection rates and declining corruption is consistent with our theory.

2.3 Cross-National Relationships between the Rule of Law and Reelection Rates

Thus far, we have discussed micro-level studies and presented some macro-level cross-national data largely consistent with our theory. We now investigate cross-national data using regression analysis. We test whether reelection rates are predicted by GDP per capita, with rule of law and corruption as mediating variables.

We theorize that corruption and the rule of law mediate the relationship between GDP per capita and legislator reelection rates. That is, with increasing national wealth, we expect the rule of law to be more effective. Improvements in the rule of law decrease the expected utility of corruption, thereby decreasing its frequency. Bad types become more likely to experience legal penalties if they enter public office; hence the composition of the political class shifts. As rent-seeking opportunities fall and more good types enter public office, reelection rates improve. We depict this relationship in Figure 3.

Figure 3: Theory of a Causal Path from GDP to Reelection Rates



Our empirical strategy for exploring rule of law and corruption as mediators uses a standard regression approach (MacKinnon, Fairchild and Fritz (2007)). Suppose we are interested in the effect of x on y through a mediator, M . We run two separate regressions. First, we run the regression of M on x to see whether there is a relationship. Then we run a regression of y on x . Finally, we run a regression of y on both M and x . In the final, multiple regression, if M is truly a mediator, M should soak up the effect of x on y — if the effect of x on y was significant in the bivariate regression, it should be less significant here. We can use the same procedure with multiple possible mediators. This is not a formal mediation analysis (see Imai, Keele and Tingley (2010)), which is a fraught enterprise. Rather, we examine patterns in the data to see if they are consistent with the causal pathways that we theorize exist.

Our first results are presented in Table 1, where we implement the estimations described above. We use an Ordinary Least Squares (OLS) estimator for ease of interpretation of the results. (We are exploring the possible use of nonlinear estimators.)

Model (r1) in Table 1 show the results of a bivariate regression for the relationship between a rule of law index and per capita GDP. Model (c1) shows results of a similar bivariate regression a measure of corruption. As we would expect from the hypothesized mediation patterns, the corruption perceptions

Table 1: Cross-National Relationship between Corruption, Rule of Law, and Reelection Rates

	Rule of law (r1)	CPI (c1)	CPI (c2)	(re1)	Reelection rate (re2)	Reelection rate (re3)	Reelection rate (re4)
Rule of law			18.404*** (4.255)			18.875*** (3.260)	5.955 (4.877)
GDP pc, log	0.110*** (0.014)	14.768*** (1.535)	11.238*** (2.098)	5.851*** (1.409)			0.175 (2.116)
Corruption					0.523*** (0.049)		0.434*** (0.124)
Constant	-0.449*** (0.134)	-90.900*** (14.510)	-66.198*** (18.886)	-9.363 (14.069)	17.946*** (2.984)	35.490*** (2.622)	17.471 (17.744)
<i>N</i>	64	81	60	112	81	64	60
R ²	0.380	0.501	0.646	0.155	0.512	0.360	0.597
Adjusted R ²	0.370	0.494	0.634	0.148	0.505	0.349	0.576

Notes:

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Robust standard errors in parentheses.

Sources: See Appendix A and Appendix C. Higher values on corruption mean less corruption. In Model (r1), we use a rule of index as the dependent variable. When rule of law is included as a regressor, we use a binary recoding.

index and the rule of law index are both positively correlated with GDP per capita. We also estimate a reduced form bivariate regression, reported in Model (re1), the results of which show a direct positive relationship between our data on reelection rates and per capita GDP. From the results reported in Models (re2) and (re3), we can see that the mediators — the measures of corruption perceptions and the rule of law — are positively correlated with reelection rates. The measure of corruption alone predicts more than 50 percent of the variance in reelection rates. Likewise, the effect of the rule of law measure suggests that countries with better constraints on government have higher reelection rates. When we add the log of per capita GDP to a model that includes the CPI and the rule of law indicator, reported in Model (re4), the coefficient on corruption remains stable and statistically significant whereas GDP does not, which confirms that corruption and rule of law may operate as mediators. We can also see that the direct effect of the rule of law disappears in Model (re4) when we control for corruption, which is suggestive of an indirect effect that the rule of law may play on reelection rates through corruption. This is consistent with the causal path presented in Figure 3.

Our theory is that in rich countries, individuals with a high propensity for corruption do not enter political life. One possible reason for this is that the rule of law is effective in these countries, and this discourages corruption in political life. To explore this possible causal channel, we subset countries into two groups — rich and poor — and study the relationships between corruption and the rule and law on reelection rates in each group. As the results reported in Table 2 show, the data are consistent with the idea that rule of law operates as a mediator in rich but not poor countries. The effect of the rule of law is statistically insignificant in poor countries (Model (p1)), but large and significant in rich ones (Model (r1)). Once we add a control for corruption, its effect in rich countries substantively decreases and is statistically significant at only the 10% level (Model (r2)). These results are consistent with the idea that corruption mediates the effect of rule of law.

3 Theory and Model

Our theory derives from the fact that increasing national wealth changes political institutions. The rule of law operates more effectively; the bureaucracy implements policy more efficiently; the press exercises vigilance over public affairs; and a more educated and cosmopolitan public becomes more autonomous in its political views and more capable of evaluating public policy and candidates for office independently of immediate material gain. All of these changes in the broad parameters of political life make it more difficult for elected officials to rent-seek while in office. They also make politics a more attractive occupation for individuals with programmatic policy commitments, since policy implementation operates more smoothly and effectively with bureaucratic development. Hence, individuals mainly motivated by rent-seeking turn to the private sector.

Table 2: Cross-National Relationship between Corruption, Rule of Law, and Reelection Rates: Rich and Poor Countries

	Reelection rate			
	(p1)	(p2)	(r1)	(r2)
CPI		0.610 (0.385)		0.398*** (0.080)
Rule of law	8.534 (6.248)	3.506 (8.887)	21.831*** (3.442)	8.069* (4.538)
Constant	35.868*** (4.271)	14.038 (10.921)	35.025*** (2.880)	19.612*** (3.112)
<i>N</i>	23	22	41	38
<i>R</i> ²	0.064	0.317	0.515	0.687

Notes: ***Significant at the 1 percent level.
 **Significant at the 5 percent level.
 *Significant at the 10 percent level.
 Robust standard errors in parentheses.
 Models (3)-(4) for rich countries.
 Rich countries are countries with GDP pc
 over the World Bank high-income threshold (\$12,615).

In principle, we can distinguish two incentives that make public office in wealthy countries unattractive to bad types: (1) fear of legal sanctions and (2) fear of loss of office. In polities with well-operating institutions, elected officials found in violation of the law face fines and possibly even imprisonment. Even before they potentially face legal sanctions, politicians guilty of malfeasance find their wrongdoing publicized by a free press, which tarnishes their personal and political reputations. In equilibrium, voters rarely fail to reelect politicians in wealthy countries, precisely because the bad ones do not enter office in the first place.

(Formal model here, in the tradition of Caselli and Morelli, 2004)

4 Possible Strategies for Generating Causal Evidence

Thus far, we have examined various types of data to show patterns that are consistent with our theory. It is challenging to find appropriate data to analyze the causal relationships that we hypothesize exist between the rule of law, corruption, and legislative reelection. The reason is that rule of law, control of corruption, and reelection rates all rise with economic development, and the phenomena interact with each other. These features of the data present challenges for causal identification.

We are currently exploring a number of possible avenues. These include (1) studying the role of party leaders in forcing corrupt politicians out of office in Italy; (2) studying the motivations of individuals who enter public service before and after a regime change in the rule of law in Brazil; and (3) an instrumental variables approach, using distance from the equator as an instrument for rule of law; and (4) a hierarchical model that preserves the large amount of information we have in the dataset we have assembled on the thousands of individual legislators around the world.

The first two possibilities leverage regime changes in anti-corruption enforcement to study whether these affect reelection rates. The designs they use are similar to natural experiments (Dunning (2012)), although the plausibility of their results depends on whether the regime changes in question can reasonably be conceptualized as exogenous shocks. We think that these represent potentially good research designs. The third possibility requires a good instrument for rule of law. If distance from the equator is a good instrument, the design is a straightforward application of an instrumental variables approach (see ch. 4, Angrist and Pischke (2009)). However, we doubt the validity of the instrument. The fourth possibility is a Bayesian hierarchical model (Gelman and Hill (2007)), which also requires a lot of assumptions. We are also thinking about possibilities that would use experimental methods (for instance, manipulating the expectations of candidates for public office of legal sanctions for corruption, and studying the impact on the types of candidates who enter the race.⁸)

We now provide some additional details on the first two possible ways we could assess the causal impact of changes in the rule of law on corruption and reelection.

4.1 Italian Corruption, the Press, and Political Parties

Italy is well-known as a relatively corrupt wealthy country, despite a long history of democracy and an independent judiciary. For many decades, its lower house contained an unusually large number of legislators under investigation by the judiciary for criminal wrongdoing but shielded from prosecution thanks to the high immunity protections that had been put in place when the country emerged from fascism (Golden and Chang (2001), Chang, Golden and Hill (2010)). In the first half of the 1990s, the massive corruption scandal known as “Clean Hands” enveloped the country, subsequently resulting in a constitutional change that allowed the judiciary to proceed more easily with investigations of possible wrongdoing by members of parliament. At the time, the scandal was the largest exposure of widespread, chronic malfeasance by incumbent legislators that the democratic world had ever seen. Although almost none were prosecuted, those charged were removed from office and the political parties with which they had been affiliated collapsed.

⁸ Designs that manipulate who enters public office introduce some ethical and logistical concerns, but have been shown to be feasible in work reported by Gulzar and Khan (2017).

A decade later, a lesser series of scandals exposed corruption by a relatively small set of legislators affiliated with political parties formed after Clean Hands.

We propose to consider these two parallel sets of scandals, each of which bridges two legislative periods. A study by Asquer (2015) assembles data on press mentions of corruption and candidate reselection for the first legislature in the two sets of legislative periods, Legislature X and XI (1987–92 and 1992–94) and Legislatures XV and XVI (2006–2008 and 2008–13). Follow up work by Asquer, Golden and Hamel (2018) adds missing press data from the second legislature in each set in order to perform two difference-in-difference estimations.

The preliminary work reported by Asquer (2015) and then by Asquer, Golden and Hamel (2018) finds that press mentions of corruption have little impact on candidate reselection at the end of the first legislature in each set (that is, for the 1992 and 2008 elections). In those elections, incumbents under investigation for or implicated in political corruption experienced no significant barriers to continuing their political careers. In the second legislature in each set, that was no longer the case. In the Eleventh and Sixteenth Legislatures, allegedly corrupt incumbents were deselected by their party leaders and prevented from standing again in 1994 and 2013 — and the probability of deselection rose with the number of negative press mentions (controlling for the public visibility of the individual).

The interpretation offered by Asquer, Golden and Hamel (2018) is that neither a free press nor an independent judiciary were sufficient to break persistent corruption in Italy. Instead, party elites decided to prevent implicated legislators from running again for office. Corrupt incumbents were finally deselected, possibly in anticipation that allowing them to run again would contaminate the party's reputation nationally and reduce its vote share. In other words, political leaders anticipated voter retaliation and revoked their endorsement of corrupt candidates in order to protect the party brand.

The strength of the research design used by Asquer, Golden and Hamel (2018) is that it uses a difference-in-difference approach over two back-to-back legislatures in two different periods. The two periods are characterized by different electoral and party systems. The results highlight the importance of political elites in anticipating longterm voter reactions to a continued degradation of the party's reputation. In this account, it appears that the causal mechanism doing the work is political leadership, operating to head off the likelihood that voters would “throw the rascals out.”

This story illustrates one outcome when bad politicians enter even in an environment where the rule of law is operative. Political elites intercede to prevent a visible accountability reaction.

4.2 Brazilian Judicial Rulings on Corruption and Motivations for Entering Public Office

The Brazilian Petrobras scandal, also known as “Operation Car Wash,” began in 2014 and is still unfolding. It started with revelations that contractors paid billions of dollars to Brazil’s state-owned oil company, Petrobras, to secure construction and service contracts, and that hundreds of millions of dollars of this money were diverted to the then-ruling Workers’ Party to finance its political campaigns. The judiciary has implicated enough politicians that the scandal has displaced the Clean Hands investigations as the largest such scandal ever to beset a democratic nation. The judiciary is continuing with investigations, and even some successful prosecutions, while at the same time other parts of the Brazilian government are using audits to expose widespread local level corruption (Ferraz and Finan (2011)).

The legal crackdown in Brazil functions like an exogenous shock on the political system. Before 2014, the country was well-known for high levels of corruption and widespread patronage appointments to the civil service (Colonnelli, Teso and Prem (2018)). Political life thus attracted bad types. If the revelations and prosecutions now underway are interpreted by the Brazilian public as representing a structural break in the country’s political life, and not simply a set of one-off issues, we should observe effects on the characteristics of those entering public service: good types should begin to displace bad types.

One way to study whether the sudden increase in the effectiveness of Brazil’s rule of law would be to assess whether civil servants recruited before 2014 exhibit lower educational attainments, more poorly-paid prior occupations, and worse job performance than those recruited after 2016. (This assumes, as noted above in fn. 5, no difference in selection criteria for the civil service and for elected office.) All of these are markers of the use of political patronage in the appointment system, and there should be a drastic reduction in the use of patronage appointments. Likewise, these changes in recruitment patterns should be most evident in municipalities in which prosecutions for corruption have taken place. Data to assess these hypotheses for the pre-2014 period is available but is not fully available for the post-2016 period, when the numbers of observations may still be too small for a reliable statistical analysis.

5 Concluding Remarks

In these remarks, we have described an important theoretical and empirical puzzle that we have identified and laid out some possible avenues for solving it. We have many reservations about each of

the avenues. The Italian story does not map seamlessly onto our theory; the Brazilian requires data that are not yet available and that have to do with appointed not elected public officials. It is probably unnecessary to add that there is yet much work to be done.

Appendix A: Measures Used

Reelection rates: Reelection rates calculated using data on the reentry of individual legislators in the lower house of representatives between 2004 and 2017. For each country, we use the three most recent elections. Where data is not available for three elections, we average over two elections. We create country averages of individual legislator reentry into the next legislature.

GDP: Estimates from 2012 at purchasing power parity.

Corruption: Corruption Perceptions Index from 2012. Created on the basis of expert surveys. This index is almost identical to other available cross-national measures of corruption, such as the control of corruption measure released by the World Bank as one of its Worldwide Governance Indicators (available at <http://info.worldbank.org/governance/WGI>).

Rule of Law: Index measures "constraints on government power," defined as whether government officials in the executive, legislative, and judicial branches are sanctioned for misconduct and whether the executive is constrained by the legislature, the judiciary, or other non-governmental checks.

Appendix B: Summary Statistics

Table A1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Incumbent reelection rate, percent	115	47.373	16.207	13.889	80.000
Rule of Law (index)	64	0.612	0.171	0.180	0.930
Rule of Law (dummy)	64	0.547	0.502	0	1
TI's Corruption Perceptions Index	81	50.938	21.453	17	90
GDP per cap at PPP	112	25,934.350	24,523.310	778.735	139,100.000

Appendix C: Data Sources

Reelection rates: Need to add.

GDP: World Bank. Where unavailable, CIA World Factbook

Corruption Perceptions Index: Transparency International.

Rule of Law: World Justice Project.

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