

Why Low Levels of Democracy Promote Corruption and High Levels Diminish It

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Abstract: Theory predicts democracy should reduce corruption. Yet, scholars have found that while corruption is low at high levels of democracy, it is high at modest levels, as well as low when democracy is absent. A weakness of studies that aim to explain this inverted curvilinear relationship is that they do not disaggregate the complex concepts of democracy and corruption. By contrast, this paper disaggregates both. We demonstrate that the curvilinear relationship results from the collective impact of different components of democracy on different types of corruption. Using Varieties of Democracy data, we examine 173 countries from 1900 to 2015, and we find freedom of expression and freedom of association each exhibit an inverted curvilinear relationship with corruption—both overall corruption and four different types. The introduction of elections and the quality of elections each act in a linear fashion—positively and negatively with corruption, respectively—but jointly form a curvilinear relationship with both overall corruption and many of its types. Judicial and legislative constraints exhibit a negative linear relationship with executive corruption. We offer a framework that suggests how these components affect costs and benefits of engaging in different types of corruption and, therefore, the level of corruption overall.

Keywords: corruption, democracy, freedom of expression, freedom of association, elections, constraints on the executive

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In theory, democracy should be associated with less corrupt governments. Government officials should use public office more for the public good than for private gain in democracies, compared to autocracies. Yet, recent research has shown an inverted curvilinear relationship between democracy and corruption, rather than a linear one. While low corruption levels coincide with both very high levels of democracy and an absence of democracy, high corruption levels are associated with modest levels of democracy.¹ What explains this inverted curvilinear relationship? Answering this question is important not only for theoretical, but also for practical, reasons because corruption undermines regime legitimacy, fosters political and economic inequality, and increases economic inefficiencies (Miller, Grødeland, and Koshechkina 2001; Roniger 2004; Rose-Ackerman 1999; Uslaner 2008).

This paper departs from earlier studies by disaggregating both democracy and corruption theoretically as well as empirically to reveal the connections underpinning the curvilinear relationship. Theoretically, other studies conceptualize democracy and corruption broadly, such as “political democracy in a liberal sense” and “quality of government” (Bäck and Hadenius 2008; Charron and Lapuente 2010). Empirically, there is also a lack of disaggregation: most scholars rely on composite indices of democracy and corruption rather than indicators of individual democratic institutions or practices and measures of specific types of corruption (e.g., Bäck and Hadenius 2008; Charron and Lapuente 2010).

A different set of studies, while disaggregating democracy, examines only one or two components of democracy and does not seek to explain the overall curvilinear relationship (e.g., Adserá, Boix, and Payne 2003; Brunetti and Weder 2003). This strand

of research emphasizes how certain democracy components strengthen the accountability of officials to the public, as well as between each other, and thus increase the costs of engaging in corruption. This offers only an account for why high levels of democracy curb corruption, but no explanation for why a shift from autocracy to a modest level of democracy seems to foster it.

These weaknesses have left us with competing explanations populating the field. Bäck and Hadenius (2008) argue that the infusion of freedom accompanying democratization initially increases corruption because authoritarian controls “from above” dissolve without comprehensive democratic checks on officials’ behavior “from below,” such as electoral participation and public access to information. Charron and Lapuente (2010) contend that the curvilinearity stems from an interaction effect between GDP per capita, which drives citizens’ demand for quality of government—the specific outcome they consider—and democracy, which drives the supply of leaders willing to enact non-corruption reforms. Their conclusion is that we should expect democracy to decrease corruption but only in rich countries. Relatedly, Keefer (2007) suggests that young democracies exhibit more corruption than old democracies because political candidates in the former rely on clientelism to a greater extent to compensate for their inability to make credible pre-electoral promises.²

This paper tests these competing explanations, but it also empirically demonstrates that the curvilinear relationship results from the collective impact of different components of democracy on different types of corruption. Using data from the Varieties of Democracy (V-Dem) Project (Coppedge et al. 2016c), which enables us to disaggregate the concepts of democracy and corruption for 173 countries from 1900 to

2015, we conduct time-series, cross-sectional regression analysis.³ We find the following: freedom of expression and freedom of association each exhibit an inverted curvilinear relationship with corruption—both overall corruption and four different types. The holding of elections is positively associated with corruption and the quality of elections is negatively associated with corruption, and jointly these two electoral variables form a curvilinear relationship with both overall corruption and many of its types. Judicial and legislative constraints on the executive exhibit a negative linear relationship with executive corruption.

Our theoretical argument suggests how these specific components of democracy influence the calculations of different individuals—executives, legislators, judges, public servants, and average citizens—about the costs and benefits of corruption and thus help determine corruption levels in countries. Though a large body of work has examined the decision to engage in corruption as a cost-benefit calculation (e.g., Becker and Stigler 1974; Klitgaard 1988; Van Rijckeghem and Weder 2001), an innovation of this paper is to use a cost-benefit framework to explain how democracy components increase and then decrease corruption levels. We incorporate the concepts of transaction costs, political benefits, and accountability costs in our framework, and use these concepts to suggest one possible explanation for the upward stretch of the curve—from low levels of corruption in the most extreme autocracies to high levels of corruption where modest levels of democracy exist (i.e., hybrid regimes). By contrast, studies of corruption that focus exclusively on the accountability costs of corruption can explain only the downward curve.

Argument

We argue that the curvilinear relationship results from the collective impact of different components of democracy on different types of corruption. These components and resulting levels of corruption are connected through individuals' calculations about the costs and benefits of engaging in corrupt exchanges. The emergence or strengthening of specific components of democracy affects the costs or benefits to individuals of corrupt acts, which in turn determines the total level of corruption in a country. Individuals' positions in government determine the type of corruption—executive, legislative, judicial, or public sector.⁴ The curvilinear relationship between democracy and corruption is evident when looking across many countries.

We employ the standard definition of corruption—the use of public office for private gain. This includes executives (heads of government and state and cabinet ministers), legislators, judges, and bureaucrats stealing, embezzling or misappropriating public funds or other state resources for personal or family use and granting favors in exchange for bribes, kickbacks, or other material inducements. Our definition and empirical analysis exclude electoral irregularities, such as vote buying and ballot-stuffing, for two reasons. First, electoral fraud does not necessarily involve public officials; it can be carried out by individuals and organizations (e.g. political parties) outside of government. Second, some of the funds secured from the misuse of public office might pay for electoral fraud, but our focus is on the misuse of public office to secure those funds, not how they are spent.⁵ In sum, we examine executive, legislative, judicial, and public-sector corruption.

We consider six components of democracy: freedom of expression, freedom of association, judicial constraints on the executive, legislative constraints on the executive, the existence of elections, and the quality of elections. These components are central to the electoral and liberal conceptualizations of democracy, which are the most common conceptualizations (Schumpeter 1942; Held 2006, ch. 3).

These components of democracy affect three costs and benefits of engaging in the different types of corruption. *Accountability costs* refer to the punishments that democratic institutions mete out to government officials who engage in corruption. These democratic institutions include competitive and fair elections, independent legislatures and high courts, civil society, and free media (Adserá, Boix, and Payne 2003; Lederman, Loayza, and Soares 2005). The *transaction costs* of corrupt exchanges are the expenses in time and effort (and sometimes material goods) of identifying who might be able and willing to engage in a particular exchange and communicating with that person to plan and complete the exchange (Coase 1960; Lambsdorff 2002, p. 221). A *political benefit* is the advantage of maintaining one's government position, obtained by bolstering the backing of those already loyal and discouraging the threatening actions of the potentially disloyal. We conceptualize "backing" more broadly than merely the act of voting;⁶ it also includes not leading coups and not fomenting revolutions. The inclusion of transaction and accountability costs and political benefits in our framework allows us to suggest an explanation, described below, for the upward stretch of the curve—from low levels of corruption in the most extreme autocracies to high levels of corruption where modest levels of democracy exist. By contrast, studies of corruption that focus

exclusively on the accountability costs of corruption can explain only the downward curve.

Democratic Components' Effect on the Three Costs and Benefits

We suggest that each democratic component, when absent, weak, or strong, has a particular effect on accountability costs, transaction costs, and/or political benefits for individuals and, consequently, corruption. Figure 1 depicts each component's expected influence on corruption—with the democratic component on the X-axis and the corruption type on the Y-axis. This figure also foreshadows that our explanations and hypotheses about how costs and benefits shift differ with each component. We expect that the six relationships collectively generate the inverted curvilinear relationship between democracy and corruption.

[Insert Figure 1 about here]

We expect that freedom of expression and freedom of association each have an inverted curvilinear relationship with each type of corruption, as depicted above. These freedoms influence the levels of corruption, we suggest, because they have an effect on the transaction and accountability costs of engaging in corruption.

We suggest that the levels of these freedoms affect the transaction costs of corruption because, as the extant literature shows, engaging in corruption requires information about the government and interactions with potential collaborators. And, freedom of expression and freedom of association increase these.

The corruption literature demonstrates the importance of information and interactions to illicit exchanges. Bussell (2018, p. 468) emphasizes that for public sector corruption bribe-givers need information about “the nature of the bureaucratic processes”. Lambsdorff (2002, p. 223) underscores the importance of understanding, for all forms of corruption, the responsibilities of different government officials: “Seeking a corrupt service requires information with respect to the capability of the potential partner to actually provide the required service.” Bussell (2018, p. 468) also identifies the importance of information about “the specific individuals willing to be bribed.” In other words, as Oldenburg (1987, p. 529) writes, “The donor’s problem lies in identifying who, precisely, will take the bribe.” The “problems of donor and recipient making contact” impede corruption initiators whether they are citizens, bureaucrats, or officials. (Oldenburg 1987, p. 529). These challenges of obtaining information and interacting with potential co-conspirators are compounded for illicit exchanges that are more complicated than a citizen bribing a bureaucrat. “Often transactions require the careful orchestrations of the activities of a large number of people which change according to the nature of the favor sought” (Husted 1994, p. 21). Nielsen (2003) describes how corruption often involves a network, with a single one typically including a variety of bureaucrats, politicians from different branches, police, journalists, and businesspeople from various industries.

When freedom of expression and freedom of association are at their lowest (i.e., in an authoritarian regime), the transaction costs of acquiring information and interacting with potential collaborators are high. The literature on authoritarianism reveals how the absence of these freedoms limits communication among individuals and information

about government. As Glasius (2013, p. 52) notes, “the main thrust of these regimes...is to ‘atomize’ society in order to rule,” so people’s communication with each other is restricted. Boix and Svolik (2013, p. 300) describe the “secrecy that pervades authoritarian governance,” where the leadership withholds information and issues misinformation about the government. Likewise, Hollyer et al. (2011) find that information about the government and its policies is less available under these political regimes. Because of the challenges of communication and understanding how the government works, it is more difficult for citizens, bureaucrats, and officials to identify opportunities and potential collaborators for corruption. Because of the governments’ efforts to atomize people, it is also more difficult for people in these societies to interact with potential collaborators. People lack the variety of business partners, organizational links, and social affiliations that enable corruption, according to Lambsdorff (2002, p. 224, 233-234; 2007, p. 195). As Nguyen and Pham (2016, p. 3-4) found in their research and pithily summarize, “If [these] transaction costs are too high, then the corruption activities cannot occur.”⁷

When freedom of expression and freedom of association exist, transaction costs are lower. The literatures on these freedoms show that they increase people’s ability to communicate and interact with others. Thus, these freedoms mitigate challenges to initiating and engaging in illicit activities. Zeno-Zencovich (2008, p. 52-53) describes freedom of expression as “the social dimension of the individual and the right to communicate his or her ideas to others,” and he underscores that this communication is not necessarily used toward good ends. Greater abilities to communicate can, in fact, be used to gather information about corruption opportunities and to identify co-conspirators.

“Freedom of association...refers to the liberty a person possesses to enter into relationships with others—for any and all purposes” (Alexander 2008, p. 1). Kateb (1998, p. 36) notes that these relationships include “economic associations.” Scholars concur that the relationships can be solely in one’s own interest and for bad reasons. (Alexander 2008, p. 16; Bell 1998, p. 239-240, 260-262; Gutmann 1998, p. 25; Kateb 1998, p. 39). Thus, freedom of association enables one to expand one’s circle of people, making it easier to identify co-conspirators among or through one’s business, organizational, and social affiliations. It also makes it easier to interact with one’s co-conspirators.

Were freedom of expression and association to have an impact only on transaction costs, we might expect a positive, linear relationship with corruption. However, high levels of these freedoms also increase *accountability* costs, thus creating a curvilinear relationship with corruption.

It is well-established in the democracy and corruption literature that high levels of freedom of expression and association increase accountability costs to government officials, discouraging them from engaging in all forms of corruption. High levels of these freedoms enable media freedom and a vibrant civil society, which are two key accountability mechanisms. Lederman, Loayza, and Soares (2005) have argued that media freedom provides citizens with information about corrupt acts and viable avenues for reporting and punishing corruption by their officials (also Adserá, Boix, and Payne 2003; Lindberg, Lührmann, and Mechkova 2017; Sandholtz and Koetzle 2000). Sandholtz and Koetzle (2000) have noted that a high level of freedom of association also provides greater potential for facilitating collective action in reaction to knowledge about

corruption. The accountability that high levels of these freedoms produce discourages corruption among government executives, legislators, judges, and bureaucrats. By contrast, when these freedoms are minimal, media and civil society are too weak to serve as effective accountability mechanisms (Sandholtz and Koetzle 2000).

In sum, when freedom of expression and freedom of association are at their lowest, the high transaction costs for all corruption types keep corruption levels low even though the accountability costs are low.⁸ When modest levels of freedom of expression and freedom of association exist, transaction costs are low and accountability costs also remain low because accountability mechanisms are not strong enough to work effectively. Consequently, corruption is high. When levels of freedom of expression and freedom of association are high, transactions costs are low and, because sufficient freedoms exist for accountability mechanisms to operate effectively, accountability costs are high. As a result, corruption is low.

This interplay among freedoms, transactions costs, and accountability costs are exemplified by Zambia when it saw an increase in freedom of expression and freedom of association as part of its democratic transition in 1990. With some freedom of expression and association, Zambian government officials at multiple levels were able to organize a “dramatis personae and network of ‘looters,’” creating a “plunder of the nation’s wealth by the politically connected,” and accountability mechanisms were not yet strong enough to deter the officials involved from these illicit exchanges (Mbao 2011, p. 262).

From this analysis, we derive our first two hypotheses:

H1: There is a curvilinear relationship between freedom of expression and all types of corruption.

H2: There is a curvilinear relationship between freedom of association and all types of corruption.

We expect that legislative and judicial constraints on the executive each form a negative relationship with executive corruption, as depicted in Figure 1. When each of these constraints is strengthened, both accountability costs and transaction costs for the executive of engaging in corruption increase, and executive corruption therefore decreases. As Rose-Ackerman (1996) has argued, the judiciary and legislature can function as accountability mechanisms. The judiciary constrains the executive when its higher and lower courts are independent and it can ensure that the executive complies with the constitution and the courts' decisions. The legislature constrains the executive when legislators can question, investigate, and challenge the executive. When these practices exist, the judiciary and legislature act as internal monitors to help ensure that members of the executive do not abuse their offices. Kolstad and Wiig (2016) demonstrate that judicial and legislative constraints also tend to increase the transaction costs of executive corruption that involves collusion between the executive and government officials outside the executive (also Rose-Ackerman 1996). By definition, the constraints indicate that the judiciary adheres to the constitution and the legislature challenges the executive, so it would be more difficult for the executive to convince judges and legislators to collaborate in corruption. The level of executive corruption

tends to fall as legislative and judicial constraints on the executive grow stronger. The importance of judicial constraints was evident when Uruguay implemented effective judicial constraints on the executive in the mid-1980s and witnessed a drop in corruption. Judges enjoyed a high degree of independence and followed the law in meting out punishment to those officials engaged in corruption (Anticorruption Laws: Uruguay 2013).

Based on this analysis, we hypothesize that

H3: There is a negative relationship between judicial constraints on the executive and executive corruption.

H4: There is a negative relationship between legislative constraints on the executive and executive corruption.

We expect the existence of elections, regardless of how free and fair, to have a positive relationship with corruption. We suggest that the presence of elections increases the political benefits of corruption for a variety of officials and thus facilitates all types of corruption. This is because, as numerous scholars have demonstrated, the presence of elections, even when “results” are controlled from above, amplifies the threat that political leaders will lose office. And, as other scholars have shown, government leaders engage in more corruption when their time horizons are shortened and, more specifically, when they face elections.

Knutsen et al. (2017, p. 100) argue, “Elections are focal points, allowing diverse challengers to organize around one mass event (the election).” Likewise, Schedler (2015) notes that elections tend to bring grievances to the forefront, suggest collective action repertoires, activate mobilizing structures and act as political opportunities—ingredients for a revolution. And, Magaloni (2008, p. 728) found that elections also offer discontented elites a “credible exit option.” Non-incumbent elites may draw on mobilized popular opposition to stage a coup. Knutsen et al. (2017) have noted that incumbent defectors may stage a coup to prevent a revolution or a coup by non-incumbent elites. When leaders’ control of elections is imperfect, they can suffer actual electoral defeat.⁹

Numerous studies show that government leaders engage in more corruption when their time horizons are shortened (Chang and Golden 2010; Clague et al. 1996; Olson 1993). Clague et al. (1996) argue that government leaders use public funds and state resources specifically in order to expand and shore up their support.¹⁰ Further, a set of studies shows that the increased uncertainty from the holding of elections, not just uncertainty in general, motivates government officials to engage in corruption. They found that government officials use their public positions to extract from firms illegal kickbacks and bribes for public works and procurement contracts, and the officials use this money to shore up their support in preparation for elections (Golden 2003, p. 104; Kapur and Vaisnav 2011; Mironov and Zhuravskaya 2016).¹¹

The increase in the political benefit of corruption is most apt for officials subject to elections, but, we expect, the uncertainty of elections can also encourage non-elected officials to shore up their political support. Unelected officials associated with the ruling regime are likely to be less confident about maintaining their positions and therefore

motivated to engage in corruption to ensure their political support and avoid losing their posts. For these reasons, we suggest that the presence of elections can promote corruption by a variety of officials.

The use of state resources for political support when elections are held was evident in the late 1980s and early 1990s in Mozambique as the country transitioned from a civil war peace agreement to its first multiparty elections in 1994. Government officials in the incumbent party FRELIMO gave money intended for loans for rural residents instead to urban military veterans and party officials who the regime feared would challenge the party's pro-peace and pro-market reform positions (Hanlon 2004).

From this logic,¹² we arrive at a fifth hypothesis,

H5: There is a positive relationship between holding elections and all types of corruption.

The mere presence of elections, regardless of their quality, increases corruption. By contrast, as election quality improves corruption decreases. This is because when elections become increasingly free and fair, the electoral accountability mechanism works more effectively, increasing accountability costs and counteracting the political benefit of corruption when elections, regardless of quality, are held. Consequently, all types of corruption drop; as Figure 1 depicts, free and fair elections have a negative relationship with corruption. The role of free and fair elections as electoral accountability mechanisms is well documented in the literature. As Ferejohn (1986) lays out, in free and fair elections, voters are better able than in noncompetitive, manipulated elections to hold corrupt officials accountable for their actions by removing them from office and not

re-electing corrupt officials (also Barro 1973; Kolstad and Wiig 2016; Pellegata 2013). Those who have been engaging in illicit activities to shore up their positions are more likely to be held accountable for doing so. As Adserá, Boix, and Payne (2003) argue, because of these costs, elected executives, legislators, and judges tend to eschew corrupt practices in order to remain in office and more readily punish their peers or bureaucrats who engage in corrupt activities (also Sandholtz and Koetzle 2000).

The 2018 general elections in Malaysia exemplify how accountability costs are high when elections become more free and fair. For the first time since independence, the country's ruling coalition was voted out of office after Prime Minister Najib Razak's popularity plummeted with the discovery that billions of dollars had gone missing from a state-owned investment fund (Beech et al. 2018).

For these reasons, we include a sixth, and final, hypothesis,

H6: There is a negative relationship between the quality of elections and all types of corruption.

Data and Methods

To test our hypotheses, we use the V-Dem dataset, which has data for 173 countries from 1900 to 2015 (Coppedge et al. 2016c). This provides a longer time-series and greater number of disaggregated data points to study this relationship than datasets used in earlier corruption studies. The indices we create and use consist of nearly all V-Dem expert-coded indicators with a small number of basic factual indicators, such as which offices are elected, provided by V-Dem research assistants. For each expert-coded

indicator, V-Dem enlists a minimum of five experts per country-year with documented expertise in the particular area. A customized measurement model using Bayesian ordinal item response theory aggregates these responses into one indicator-country-year observation. The measurement model weights each coder by a reliability parameter, determined by the coder's level of agreement with other country coders (Coppedge et al. 2016b; Pemstein et al. 2017).¹³

Dependent Variable

The dependent variable to test H1, H2, H5, and H6 is *Corruption Index*, which is the V-Dem political corruption index, formed by combining six V-Dem indicators—executive bribery, executive embezzlement, public sector bribery, public sector embezzlement, legislative corruption, and judicial corruption.¹⁴ We also test each of these hypotheses using the indicators for the specific form of corruption. The indicators capture corruption in different regime types well, for example recognizing that authoritarian leaders might have formalized abuses of public office for private gain through regulations; whereas, this legal façade for corruption is less common in democracies. An extensive discussion regarding the validity of the V-Dem political corruption index can be found in the V-Dem working paper “Strategies of Validation” (McMann et al. 2016). More details about this index and the other variables used in this paper can be found in the List of Variables in the online supplemental materials at <http://prq.sagepub.com> and in the V-Dem Codebook (Coppedge et al. 2016a). Summary statistics for all variables appear in Table 1A of the supplemental materials.

Our argument and hypotheses about the linear effects of judicial and legislative constraints on the executive (H3 and H4) pertain most directly to the effect of these constraints on executive behavior, and therefore we use executive corruption as the dependent variable to test these hypotheses. *Executive Corruption* is a lower-level index formed by combining executive bribery and executive embezzlement using Bayesian factor analysis (Coppedge et al. 2016a).

Independent Variables

To validate that the curvilinear relationship found by other studies using different data is replicated using the V-Dem dataset, we measure democracy using V-Dem's *Electoral Democracy* index.¹⁵

To test H1 and H2, we employ two V-Dem indices. *Freedom of Expression* is an index formed by taking the point estimates from a Bayesian factor analysis model of the indicators for freedom of discussion for men/women, print/broadcast censorship effort, internet censorship effort, harassment of journalists, media bias, media self-censorship, the level of critical discourse in print/broadcast media, the balance in perspectives in print/broadcast media, and freedom of academic and cultural expression (Coppedge et al. 2016a). This operationalization of freedom of expression captures the concepts of openness of communications and information availability and thus allows us to test our idea about modest levels of these facilitating corruption schemes and high levels producing free media and civil society that can hold corrupt officials and bureaucrats accountable. *Freedom of Association* is an index formed by taking the point estimates from a Bayesian factor analysis model of the indicators for civil society organization

(CSO) entry and exit, CSO repression, bans on parties, barriers to parties, opposition party autonomy, and the multiparty character of elections (Coppedge et al. 2016a). This index takes into account the organizational costs of forming CSOs and parties and any ongoing barriers to operation, which allows us to test our idea that high levels of independent association can enable civil society to punish those engaging in corruption. It also serves as a proxy for freedom of association among government officials, bureaucrats, and average citizens. A global time series measure of interaction among these individuals is not available. We use *Freedom of Association* as a proxy for informal freedom of association, under the assumption that levels of formal and informal association coincide. Our assumption is supported in part by the high correlations between *Freedom of Association* and the V-Dem indicators *Freedom of Discussion for Men* (0.86) and *Freedom of Discussion for Women* (0.84). When it is easier for political parties and civil society organizations to exist and operate, it is also easier for people to talk to each other and hatch corruption schemes. Thus, this indicator allows us to test our idea that even low levels of association facilitate identifying and interacting with co-conspirators.

To test H3 and H4, we use two more indices from V-Dem. *Judicial Constraints on Executive* is an index formed by taking the point estimates from a Bayesian factor analysis model of the indicators for high court independence, lower court independence, executive compliance with the judiciary, executive compliance with the high court, and executive respect for the constitution (Coppedge et al. 2016a). *Legislative Constraints on Executive* is an index formed by taking the point estimates from a Bayesian factor analysis model of the indicators for executive oversight, legislature questions officials in

practice, legislature investigates in practice, and legislative opposition parties (Coppedge et al. 2016a). Each of these indices captures multiple accountability mechanisms that might limit corruption, as described in our argument. As the questions that constitute these indices pertain to *de facto* behaviors rather than *de jure* institutions, one may be concerned that they are effectively capturing corruption (or the lack of it). However, we note that these questions are sufficiently narrowly worded so as to limit this source of bias.

For H5 and H6, we analyze two variables tapping into different aspects of the argument. The variable *Electoral Regime* is a binary indicator for whether or not a country holds elections, and provides an independent variable for H5 (Coppedge et al. 2016a). *Free and Fair Elections* is an index formed by taking the point estimates from a principal components factor analysis model of the indicators for election management body (EMB) autonomy, EMB capacity, voter registry, government election intimidation, electoral violence, other voting irregularities, and whether or not the election was generally free and fair. Departing from the higher-level free and fair elections index produced in V-Dem (Coppedge et al. 2016a), we exclude vote buying, as other scholars have considered vote buying to be an alternative measure or specific form of corruption.¹⁶ *Free and Fair Elections* allows us to measure our ideas about how high quality elections enable voters to punish corrupt officials and deter officials from engaging in illicit activities.¹⁷

Control Variables

In all our analyses, we include country-fixed effects to control for time-invariant factors thought to be associated with both democracy and corruption (such as colonial heritage, ethnic heterogeneity, and Protestantism). To control for possible global co-trending of democracy and corruption, we also control for year-fixed effects.

Although in our main models we prefer a leaner specification to avoid post-treatment bias, as a robustness check we also run all models including four additional time-varying control variables: *State Capacity*, using the Hanson and Sigman (2013) state capacity index, one of the most expansive dataset on state capacity available;¹⁸ income (*GDP per Capita*); income inequality (*GINI Coefficient*); and *Trade Openness*.¹⁹ Because many of these control variables come from sparser datasets, and many of them (in particular, income inequality and trade openness) are slow-moving, the effect of democracy components on corruption often disappears when we include control variables. However, when we use the same sample, but without the control variables, the lack of significant findings persists, which tells us that the reduction in observations, not the inclusion of controls, is driving the loss of significance. A diagram of and tests with controls can be found in Figure 1A and Table 2A, respectively, of the online supplemental materials.

Modelling Strategy

These robustness checks and our main regressions, described below, all include two lags of the dependent variable,²⁰ year- and country- fixed effects,²¹ and clustered standard errors at the country level. Short-run (one-year lagged) effects of democracy

components on corruption appear substantively insignificant, even if statistically significant. As corruption is a sticky phenomenon, the effect of democracy on corruption levels should be expected to be felt primarily over a long-term period. To capture this idea and depict the long-run effects visually, we calculate the long-run effects by aggregating the effect of the independent variable in question over time. In the supplementary appendix Table 19A, we also show that all results are robust to the exclusion of the lagged dependent variables.

The Curvilinear Relationship

Prior to testing our hypotheses, we validate the presence of a curvilinear relationship between democracy and corruption in the V-Dem data. Extant research has provided evidence of three curvilinear relationships: an inverted U-shaped curve, where corruption levels are low in the most authoritarian and the most democratic states; an inverted J-shaped curve, where corruption levels are the lowest in the most democratic states; or an S-shaped curve, where there is an initial drop in corruption with liberalization in the most authoritarian countries.²² It is important to note that J- and U-shaped relationships are statistically identical—both have a significant squared term. The only difference is whether the y-intercept is located close to the right-most expected value, where x is at its maximum. The theoretical and substantive differences between the J- and U-shaped curves are minimal: what is key is that the relationship is non-monotonic. The previous finding of an S-shaped curve by one scholar is problematic substantively as there is no compelling theory, including our own argument, as to why we would expect an S curve.

The V-Dem data show a strong inverted J-shaped relationship between corruption and democracy (Figure 2). Corruption increases as democracy increases from 0 to approximately 0.5 (on a scale of 0 to 1), what would be a hybrid regime displaying some weak components of democracy. From 0.5 to 1, increases in democracy are associated with decreases in corruption. In Table 1 we take further steps to test the robustness of this relationship and find that it remains. Throughout the table, evidence of the curvilinear relationship can be seen in the statistically significant and positive coefficients on *Electoral Democracy*, and the statistically significant and negative coefficients on *Electoral Democracy*². First, we introduce controls for serial dependence and potential backwards causality by introducing lagged dependent variables and lagged democracy variables, as well as controlling for possible global co-trending of democracy and corruption by introducing year-fixed effects (Model 1). Next, to further reduce threats to inference from omitted variable bias, we exclusively restrict attention to within-country variation by also incorporating country-fixed effects (Model 2). The relationship also remains largely unchanged when outliers are removed, as demonstrated in Table 3A in the online supplemental materials.

[Insert Figure 2 about here]

[Insert Table 1 about here]

We do not find evidence of an S-curve. Using a third-order functional form, Sung (2004) finds an S-shaped relationship between democracy and corruption, in that there

are negative coefficients on the linear, squared, and cubic terms. When we use a cubic functional form, we find a positive linear, negative squared, and positive cubic terms. These results are available in Table 4A of the online supplemental materials.

In sum, the V-Dem data generate a curve similar to most of the literature, which has found either an inverted J- or U- curve. We consistently find an inverted J-curve, which again is nearly identical statistically to the inverted U-curve.

Alternative Explanations

Before testing our own explanation for this puzzling curve, we test alternative explanations using V-Dem data. First we control for the time-weighted cumulative stock of electoral democracy (*Stock of Democracy*)²³ and *GDP per Capita* (Model 3, Table 1). The results challenge the notion, implied by Keefer (2007) and also Treisman (2007), that the curvilinear relationship between democracy and corruption might be driven by the relationship between a country's experience with democracy and its level of corruption. As can be seen, even after controlling for *Stock of Democracy*, the curvilinear relationship still holds.

In Model 4, we also test Charron and Laupente's (2010) argument that the curvilinear relationship is produced by an interaction effect between GDP and (electoral) democracy. Though they are considering the broader outcome variable of "quality of government," rather than corruption, it is nonetheless compelling to note the statistically insignificant coefficient on the *GDP per Capita*Electoral Democracy* interaction term.

Finally, in Model 5, we examine the implication of Bäck and Hadenius' (2008) argument that public sector corruption drives the relationship between democracy and

corruption. Even when excluding public sector corruption from the dependent variable and focusing on only corruption in the executive, *Executive Corruption*, the effect holds.

Testing the Hypotheses

Unable to account for the inverted curvilinear relationship between corruption and democracy with existing explanations, we turn to our hypotheses. First, our argument predicts that the inverted curvilinear relationship should be present when considering the effect of *Freedom of Expression* and *Freedom of Association* on corruption (H1 and H2, respectively). We find strong support for both of these hypotheses. In both Model 1 and Model 2 of Table 2, there is a significant and positive coefficient on the linear term and a significant and negative coefficient on the squared term. We also find an inverted curvilinear relationship when we disaggregate corruption and examine the impact of each of these freedoms on executive, legislative, judicial, and public corruption. These results are presented in Tables 5A-8A in the online supplemental materials.

[Insert Table 2 about here]

It is reasonable to be cautious when interpreting our findings on *Freedom of Expression*. As Montinola and Jackman (2002, p. 163) point out, any positive relationship between democracy and corruption “may reflect the increase in information and reporting of corruption that typically accompanies democratization.” As the V-Dem *Freedom of Expression* index includes several indicators that pertain to the availability of information in the media, one might be concerned that this index is serving as a proxy indicator for the attention the issue of corruption is getting in the media. Accordingly, we

acknowledge that the results regarding freedom of expression presented in Table 2 may demonstrate a curvilinear relationship between freedom of expression and corruption, or alternatively, may demonstrate simply that there is a curvilinear relationship between media attention on corruption and expert coder ratings of corruption. However, there are two reasons we believe the results on freedom of expression support our hypothesis. First, the concern that Montinola and Jackman (2002) point to implies a positive, linear relationship between media attention on corruption and coder perceptions, and what we find is a curvilinear relationship implying that after a certain threshold freedom of expression does hurt corruption. Second, when we include a measure of media freedom from outside the V-Dem dataset, *Media Freedom* from Whitten-Woodring and Van Belle (2015), as a control variable capturing specifically changes in media scrutiny, the relationship between freedom of expression and corruption holds (Model 3, Table 2).

In Table 3, we test H3 and H4, which examine the relationships between judicial and legislative constraints, respectively, and corruption. In these models, we control for *Electoral Democracy* and its squared term, so as to isolate the horizontal accountability mechanism from the vertical accountability mechanism. Model 1 shows that *Judicial Constraints on Executive* negatively impacts executive corruption, supporting H3, though the effect is marginally significant. In support of H4, Model 2 shows that *Legislative Constraints on Executive* significantly reduces executive corruption. Tables 9A-11A in the online supplemental materials shows these results are robust to using other forms of corruption as the outcome variable, though we maintain that executive corruption is the more theoretically grounded choice.

[Insert Table 3 about here]

Finally, we test our hypotheses regarding the effect of electoral mechanisms, H5 and H6. We start in Model 1 in Table 4 by testing H5, the idea that there is a direct positive effect of elections on corruption. We find that electoral regimes, without any other pieces of democracy included, are more corrupt, corroborating H5. In Model 2 in Table 4, we test H6 by allowing the *Electoral Regime* variable to hold a linear relationship with corruption and then adding only the linear *Free and Fair Elections* term. The result still holds. In line with H5, the mere holding of elections as compared to closed authoritarian regimes is *positively* related to corruption. This, we argue, is one of the key explanations for the upward bend of the inverted curvilinear relationship between democracy and corruption. Then, controlling for whether elections are held, and in line with H6, election quality is *negatively* related to corruption, consistent with the corruption-purifying effect of electoral accountability. This helps account for the downward bend of the inverted curve. Further confirming H5 and H6, our results are generally consistent when we disaggregate corruption.²⁴ These results appear in Tables 12A-15A in the supplemental materials. All the findings from our hypothesis testing remain consistent when the additional controls are included. This is evident from Table 2A in the online supplemental materials.²⁵

[Insert Table 4 about here]

In sum, these results support our hypotheses about the relationships between specific components of democracy and different types of corruption and illustrate how,

together, these disaggregated associations match the curvilinear relationship between democracy and corruption. As is typical in cross-national, time series research, disaggregated analysis cannot prove causal mechanisms. However, the findings are consistent with our argument that democratic components influence the costs and benefits of corruption and, ultimately, the level of corruption.

Conclusion

By disaggregating democracy and corruption theoretically and empirically, this paper explains a puzzling phenomenon: high levels of democracy or autocracy coincide with low corruption but modest levels of democracy coincide with high corruption. We argue that specific components of democracy influence individuals' calculations about the transaction and accountability costs and political benefits of corruption and thus help determine, collectively, the levels of different types of corruption and overall corruption in countries. Consistent with our argument, we find that freedom of expression and freedom of association each exhibit an inverted curvilinear relationship with corruption—both overall corruption and four different types. The introduction of elections and the quality of elections each act in a linear fashion—positively and negatively with corruption, respectively—but jointly form a curvilinear relationship with both overall corruption and many of its types. Judicial and legislative constraints exhibit a negative linear relationship with executive corruption.

This research has important theoretical and policy implications. Theoretically, our findings underscore that it is not intermediate levels of “democracy,” but rather specific democratic components, that fuel corruption—namely the holding of elections in the

absence of ensuring they are free and fair, and levels of freedom of expression and freedom of association too modest to ensure accountability mechanisms operate effectively. For policymakers, this is a hopeful finding in the sense that democratization does not necessitate tolerating higher corruption. Potentially through careful sequencing of the introduction of democratic components and the strengthening of some components early in the democratization process (Lindenfors et al. 2018), a proliferation of corrupt activity can be avoided. For example, the finding that even weak judicial and legislative constraints are associated with a decline in corruption indicates that some democratic institutions may mitigate corruption even early in the democratization process. Finally, we should not lose sight of the reassuring finding that corruption levels are quite low once all democratic components are strong. In short, democracy works.

Notes

¹ Early research found a negative linear relationship, but recent advanced analysis has consistently demonstrated an inverted curvilinear relationship. Early research includes Goldsmith 1999; Sandholtz and Koetzle 2000; Treisman 2000. Recent research is discussed below.

² Montinola and Jackman (2002) question whether the relationship actually exists. We test for this possibility below and find no support for it.

³ The replication dataset, codebook, and STATA .do file for this article are available at <https://doi.org/10.7910/DVN/QUXC0N> in Harvard Dataverse.

⁴ When different types of officials, for example a legislator and a judge, participate in a single corrupt act, this can be considered more than one type of corruption.

⁵ Our theoretical conceptualization of corruption is slightly different than some others used in the literature, such as Bäck and Hadenius' (2008) focus on bureaucratic corruption, or Charron and Lapuente's (2010) focus on the quality of government. Also see Keefer (2007) for more on the relationship between democracy and clientelism.

⁶ As noted above, our focus is not electoral corruption, and our conceptualization of illicitly obtaining political support does not pertain to vote buying.

⁷ The idea is not that the regime actively prevents corrupt exchanges but rather that by denying freedom of expression and association it has the side effect of increasing the transaction costs of illicit exchanges.

⁸ Some corruption exists because there are standard interactions between citizens and those in government (e.g., licensure) that enable officials and bureaucrats to extort money. However, without freedom of expression and freedom of association, individuals are

limited in their ability to organize numerous, varied, and large corruption schemes thus resulting in low corruption levels.

⁹ Political benefits are relevant regardless of the quality of the elections, and thus the concept is not equivalent to vertical accountability, which exists only when elections are of high quality. Loss of office through revolution or coup during the electoral season are not examples of accountability because officials do not lose power through the elections themselves.

¹⁰ We consider maintaining one's office a private gain. A government position typically provides income and status, and, in some contexts, it facilitates personal enrichment schemes too. Using the resources of one's public office to maintain one's position in that office would be a corrupt act, as laws separating campaigning and holding public office, in many countries, acknowledge.

¹¹ Neither these studies nor our argument suggest that these efforts are necessarily successful.

In countries without elections, officials need to obtain political support, and they may use corruption to help them secure it. However, the presence of elections, relative to the absence of elections, increases the threat of losing office and therefore leaders' motivation to engage corruption.

¹² The inclusion of political benefits in our argument underscores that it is not just bureaucrats, but also top government officials, who contribute to the increase in corruption. By contrast, Bäck and Hadenius (2008) attribute the increase to the weakening of authoritarian controls from above, but their explanation accounts for an increase in only bureaucratic corruption. By considering the value of corruption to

political support, our framework also accounts for why top government leaders engage in more corruption when elections are present.

¹³ Given the long time series of the V-Dem data, it is critical to consider whether expert-coded data going back in time are reliable and valid. McMann et al. (2016) deals directly with this issue for the corruption indicators. By comparing V-Dem data to qualitative case studies, they find the V-Dem data are valid back in time. They also find that inter-coder disagreement at the country-year-indicator level is not significantly higher in older years, indicating that there is a common understanding among coders, even when coding back in time. Also there is no significant difference between the “contemporary” V-Dem coders (who code 1900 onwards) and the “historical” V-Dem coders (who code 1700-1920). As these are separate groups of coders with somewhat distinct backgrounds, we find it encouraging that they agree in coding cases from 1900-1920.

¹⁴ As legislative corruption data are missing for countries lacking legislatures, we take the average of public sector corruption, executive corruption, and judicial corruption to create the corruption index in these cases. For details about these V-Dem indicators, see McMann et al. 2016.

¹⁵ For more discussion about this index, see Teorell et al. 2019.

¹⁶ See, respectively, Keefer 2007; Van Ham and Lindberg 2016.

¹⁷ For three reasons, we believe that the concern that coders are considering corruption when coding the indicators constituting the Free and Fair Elections Index, or vice versa, is alleviated. See text about this preceding Table 17A in the online supplemental materials.

¹⁸ We would like to control for the effect of trust, which has been shown to affect both democracy and corruption levels. However, there are not adequate time-series, cross-national data on trust available for inclusion in our analysis. Bjørnskov and Paldam 2005; Morris and Klesner 2010.

¹⁹ These data come from UNU-Wider 2008; Barbier, Keshk, and Pollins 2009; and Maddison 2010.

²⁰ The results presented here are robust to the inclusion of zero, one, or two lags of the dependent variable, and to lagging the independent variables by one, two, or three years. (Results available upon request.) Note that the vast majority of cases experience no change in either democracy or corruption levels from year to year. Those that do experience changes in either democracy or corruption levels are much more likely to experience rapid and sharp changes rather than slow-moving shifts.

²¹ Table 18A in the supplemental materials includes a full set of regressions using time trends (year, year², year³) rather than year fixed effects, and the results are consistent. Though we use fixed effects in combination with a lagged dependent variable, the risk of Nickell bias is low, as $T \gg 20$ in our sample (Beck and Katz 2011).

²² For example, see, respectively, Montinola and Jackman 2002; Bäck and Hadenius 2008; Sung 2004.

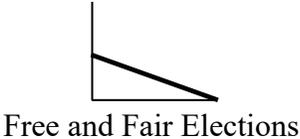
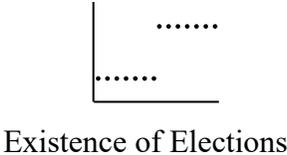
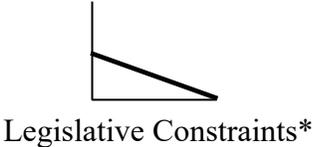
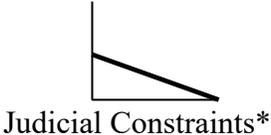
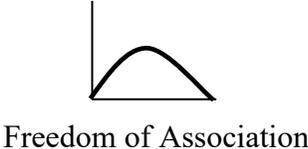
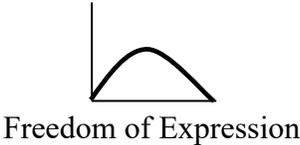
²³ This is calculated from *Electoral Democracy* using a 10% depreciation rate, so that a country's more distant history of democracy is discounted.

²⁴ *Electoral Regime* has a positive linear relationship with executive, judicial, and public sector corruption, and *Free and Fair Elections* has a negative linear relationship with executive, judicial, and public sector corruption. Neither elections variable significantly 35

explains variation in legislative corruption levels. This is our only unexpected result, and it requires further research.

²⁵ Because we use V-Dem data for both dependent and independent variables, one might be concerned about a correlation in measurement error biasing the results of analysis. We consider this possibility and conduct analyses designed to test whether this is an issue in Tables 16A and 17A of the appendix. In brief, we find no evidence that this is cause for concern.

Figure 1: Relationship between Corruption and Components of Democracy



*Expected influence on *executive* corruption only
For each graph, the strength of the democratic component is on the X-axis and the type(s) of corruption is on the Y-axis. Lines depict stylized relationship, not anticipated slopes.

Figure 2: Scatter Plot of Democracy and Corruption (with quadratic fit)

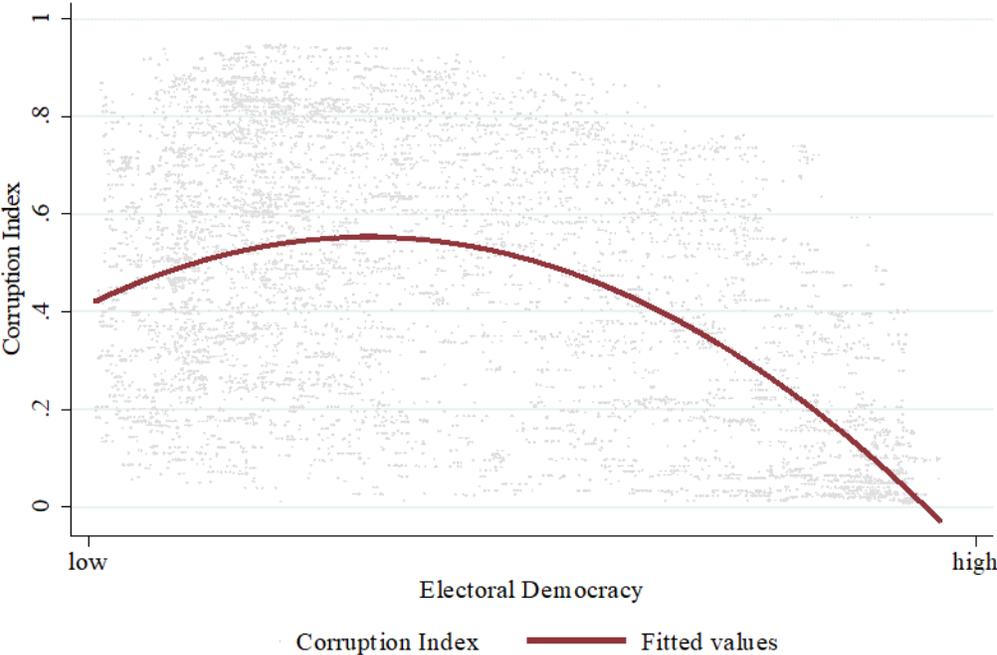


Table 1: Relationship between Corruption and Electoral Democracy

	(1) Corr. Index	(2) Corr. Index	(3) Corr. Index	(4) Corr. Index	(5) Exec. Corr.
Corruption Index, Lagged (1 Year)	1.051*** (0.015)	1.034*** (0.015)	1.037*** (0.017)	1.037*** (0.017)	
Corruption Index, Lagged (2 Years)	-0.062*** (0.015)	-0.063*** (0.015)	-0.081*** (0.016)	-0.081*** (0.016)	
Executive Corruption, Lagged (1 Year)					1.045*** (0.0167)
Executive Corruption, Lagged (2 Years)					-0.097*** (0.016)
Electoral Democracy Lagged (1 Year)	0.014*** (0.003)	0.033*** (0.006)	0.014* (0.008)	0.015* (0.008)	0.021** (0.010)
Electoral Democracy ^2	-0.023*** (0.004)	-0.034*** (0.006)	-0.026*** (0.009)	-0.028*** (0.009)	-0.039*** (0.012)
Stock of Democracy, Lagged (1 Year)			0.002*** (0.001)	0.002*** (0.001)	0.003*** (0.001)
GDP Per Capita, Lagged (1 Year)			-0.000 (0.000)	-0.000 (0.000)	-0.001* (0.001)
GDP Per Capita x Electoral Democracy				0.000 (0.000)	0.001 (0.001)
<i>R</i> ²	0.988	0.954	0.932	0.932	0.912
<i>No. Countries</i>	173	173	154	154	154
<i>Avg. Years per Country</i>	91.4	91.4	66.3	66.3	66.3
<i>No. Observations</i>	15818	15818	10208	10208	10208

Entries are regression coefficients, with standard errors clustered on countries, in parentheses.

Country- and year-fixed effects included in regressions but omitted from the table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2: Freedom of Expression, Freedom of Association, and Corruption

	(1)	(2)	(3)
Corruption Index, Lagged (1 Year)	1.035*** (0.015)	1.035*** (0.015)	1.014*** (0.018)
Corruption Index, Lagged (2 Years)	-0.062*** (0.015)	-0.061*** (0.015)	-0.071*** (0.016)
Freedom of Expression, Lagged (1 Year)	0.022*** (0.006)		0.018 (0.011)
Freedom of Expression ²	-0.023*** (0.006)		-0.025** (0.011)
Media Freedom, Whitten-Woodring and Van Belle			0.000 (0.001)
Freedom of Association, Lagged (1 Year)		0.026*** (0.006)	
Freedom of Association ²		-0.026*** (0.006)	
<i>R</i> ²	0.953	0.954	0.910
<i>No. Countries</i>	173	173	169
<i>Avg. Years per Country</i>	89.7	91.4	50.7
<i>No. Observations</i>	15521	15818	8574

Entries are regression coefficients, with standard errors clustered on countries, in parentheses. Country- and year-fixed effects, as well as Stock of Democracy, Lagged (1 Year), included in regressions but omitted from the table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Judicial and Legislative Constraints on the Executive and Executive Corruption

	(1)	(2)
Executive Corruption Index, Lagged (1 Year)	1.031*** (0.016)	1.015*** (0.017)
Executive Corruption Index, Lagged (2 Years)	-0.066*** (0.016)	-0.070*** (0.016)
Electoral Democracy, Lagged (1 Year)	0.044*** (0.008)	0.038*** (0.011)
Electoral Democracy ²	-0.045*** (0.008)	-0.045*** (0.011)
Judicial Constraints on Executive, Lagged (1 Year)	-0.010* (0.005)	
Legislative Constraints on Executive, Lagged (1 Year)		-0.011** (0.005)
<i>R</i> ²	0.938	0.912
<i>No. Countries</i>	173	172
<i>Avg. Years per Country</i>	91.4	74.6
<i>No. Observations</i>	15818	12830

Entries are regression coefficients, with standard errors clustered on countries, in parentheses. Country- and year-fixed effects, as well as Stock of Democracy, Lagged (1 Year), included in regressions but omitted from the table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Explaining the Relationship between Corruption and Electoral Democracy

	(1)	(2)
Corruption Index, Lagged (1 Year)	1.037*** (0.015)	1.035*** (0.015)
Corruption Index, Lagged (2 Years)	-0.062*** (0.015)	-0.062*** (0.015)
Electoral Regime, Lagged (1 Year)	0.003*** (0.001)	0.005*** (0.001)
Free and Fair Elections, Lagged (1 Year)		-0.007** (0.003)
<i>R</i> ²	0.954	0.954
<i>No. Countries</i>	173	173
<i>Avg. Years per Country</i>	91.4	91.4
<i>No. Observations</i>	15818	15812

Entries are regression coefficients, with standard errors clustered on countries, in parentheses. Country- and year-fixed effects, as well as Stock of Democracy, Lagged (1 Year), included in regressions but omitted from the table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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