
| RESEARCH ARTICLE

Modeling Corruption in Democratic States: Using Coordination Games to Explain Observed Trends in Corruption and Democratization

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| ABSTRACT

This article examines the complex relationship between democratization and corruption, emphasizing the non-linear effects of prolonged exposure to democratic institutions. A repeated coordination game model is presented to capture the evolving political incentives in democratic systems and their impact on corruption levels. By incorporating evolving heterogeneous payoffs, the model realistically reflects individual incentives and provides insights into the rate of convergence toward a stable equilibrium. The results generally align with existing empirical findings, demonstrating that significant reductions in corruption typically emerge only after sustained exposure to democratic institutions. These findings not only support previous empirical research, but also offer a robust theoretical framework for understanding the delayed yet profound improvements in governance associated with democratization.

| KEYWORDS

Corruption, Democracy, Applied Game Theory, Coordination Games, Repeated Games, Political Economy

| ARTICLE INFORMATION

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1. Introduction

In recent years, American foreign policy and global development efforts have emphasized the idea that corruption is a critical barrier to economic growth and governance. This focus is echoed by international organizations like the International Monetary Fund (IMF), which has made tackling corruption a central pillar of its policy advice and lending programs. Under the leadership of Managing Director Kristalina Georgieva, the IMF has intensified efforts to promote transparency and good governance, arguing that corruption undermines trust, distorts markets, and hinders sustainable economic development. Similarly, initiatives led by Paul Wolfowitz, former President of the World Bank, sought to address corruption in developing nations by tying financial support to governance reforms. The Millennium Challenge Corporation (MCC), a U.S. government aid agency, operates on the principle that aid is most effective when it rewards and reinforces good governance, applying stringent criteria to fund countries that meet high standards of institutional quality and transparency. With billions of dollars invested globally to combat corruption, understanding its root causes and economic impacts remains an urgent priority for policymakers and researchers.

Corruption encompasses a broad spectrum of activities—public and private, legal and illegal—but it is often defined in economic discourse as the use of public office for private gain. An extensive literature offers mixed perspectives on its relationship with economic performance. While some argue that corruption may occasionally "grease the wheels" of inefficient bureaucracies (Bardhan, 1997), the dominant view is that corruption acts as an inefficient and distortive form of taxation (Azfar et al., 2001; Svensson, 2005). This is supported by studies like Fisman and Svensson (2007), who use firm-level data from Uganda and find

that higher bribery rates directly impede firm growth, highlighting corruption's detrimental effects on private-sector development and market efficiency.

Empirical research generally supports the view that corruption impedes growth. In his seminal paper, Mauro (1995) identifies a strong negative correlation between national growth rates and corruption indices in a cross-sectional analysis. Similarly, Acemoglu, Johnson, and Robinson (2001) establish a causal relationship between sound institutions—measured by protection against expropriation—and economic performance. In their meta-analysis of the relevant econometric literature, Campos et al., (2016) confirm a consistently strong negative relationship between corruption and econometric growth. Focusing their attention on studies which identify a causal link, Campos et al., (2016) determine that the “grease the wheels” argument only holds in very specific circumstances, whereas the overwhelming trend is that corruption hinders growth in most contexts.

Having established a robust connection between corruption and economic underperformance, it is incumbent upon social scientists to explore the underlying causes of corruption. Corruption prevalence is influenced by various factors, including natural resource dependency (Ades and Di Tella, 1999) and rent-seeking opportunities (Krueger, 1974). One primary explanation, however, is the lack of political competition and accountability. In democratic systems, political candidates compete for office and are accountable to voters, who can penalize corruption by voting officials out of office (Alt and Lassen, 2003). For instance, Ferraz and Finan (2011) find that in Brazil, mayors eligible for reelection misappropriate fewer resources compared to term-limited mayors, demonstrating the positive impact of electoral accountability.

The ability of voters to hold politicians accountable, however, depends on complementary factors associated with prolonged exposure to democratization, including the dissemination of information through a free press (Brunetti and Weder, 2003). Increased access to information improves government transparency, making corruption riskier by enabling voters to identify corrupt candidates (Kolstad and Wiig, 2008). Audits of local governments, for instance, have been shown to reduce corruption levels and facilitate voter punishment of corrupt incumbents (Olken, 2007; Ferraz and Finan, 2008). Similarly, the threat of audits discourages individual tax evasion (Kleven et al., 2011).

Another important factor is education which, in conjunction with the dissemination of information, equips voters to make better-informed decisions. Educated voters are better able to discern credible information and act on evidence of corruption (Weitz-Shapiro and Winters, 2017). For example, Klačnja (2017) finds that voters with greater political awareness in U.S. congressional elections are less likely to support corrupt incumbents and Anduiza et al. (2013) find that in Spain, less politically aware voters are more likely to tolerate corruption from their preferred party. In summary, a growing body of research demonstrates that free and fair elections reduce corruption most effectively when paired with other hallmarks of democracy, including broad access to education and robust information dissemination (Lindstedt and Naurin, 2010).

In light of the strong economic benefits of reduced corruption, it is essential to understand the mechanism by which democratization reduces corruption. This paper proceeds as follows. Section 2 reviews the relevant empirical and theoretical literature on the relationship between corruption and democracy, with a focus on how previous research utilizes game theory to model corruption dynamics in democratic states. Section 3 introduces the methodology, presenting a Bayesian coordination game modeling political incentives and incorporating heterogeneous payoffs to reflect real-world complexities. We then use the model to identify a stable Nash equilibrium and explore the speed of convergence to the equilibrium. Section 4 discusses the results, describing how the model's predictions align with observed empirical trends. Finally, Section 5 concludes by summarizing the findings, highlighting their implications for policymakers, and suggesting directions for future research.

2. Literature Review

There is a large body of theoretical literature which utilizes game theory models to explore the mechanism through which democratic institutions affect corruption. This is complemented by a separate body of empirical literature which explores the observed relationship between corruption and democratization. In this section, we review the empirical literature with a special emphasis placed on cross-country analyses of the relationship between corruption and duration of exposure to democracy (Treisman, 2000; Rock, 2009). We then describe the various theoretical models which explore the mechanisms by which democracy affects corruption and discuss the extent to which these models are consistent with the empirical literature.

2.1 Review of Empirical Literature

A range of studies evaluate the observed impact of democracy on corruption, yielding mixed evidence on whether higher levels of democracy correspond to lower corruption (Ades and Di Tella, 1999; Fisman and Gatti, 2002; Jackman and Montinola, 2002;

Chowdhury, 2004; Sung, 2004). Research in this area struggles to quantify and measure corruption and democracy, leading most researchers to rely on indices for analysis of these concepts.

Rather than focusing solely on the level of democracy, Treisman (2000) argues that sustained exposure to democratic institutions is key to reducing corruption. Supporting this claim, Serra (2006) finds that longer continuous periods of democratic governance are among the most robust determinants of lower corruption levels across countries.

In their cross-country analysis, Treisman (2000) regresses corruption indices against several variables, including the level of democratization and the length of exposure to democracy. Their findings reveal a non-linear relationship between corruption and the duration of democracy. Specifically, corruption appears to decline significantly only after approximately 20 years of continuous democratic governance. This finding highlights the importance of time in developing the institutions necessary to combat corruption effectively.

Utilizing a similar approach, Rock (2009) provides further nuance and identifies an inverted U-shaped relationship between corruption and length of exposure to democracy. In other words, Rock finds that corruption often rises during the initial stages of democratization but declines as democracies mature. They postulate that early years of democratic governance are marked by instability and weaker institutions, leading to increased corruption. However, as democratic institutions strengthen, and both accountability and transparency improve, corruption begins to decline. Rock supports this argument with case studies from Indonesia and Thailand, where democratization initially disrupted centralized corruption networks, leading to more decentralized and visible corruption before institutional reforms eventually reduced corruption with time.

In contrast to Treisman, Rock's empirical framework allows for the possibility that the initial transition to democracy may be marked with setback. However, both studies agree on the eventual decline in corruption. Collectively, these studies suggest that the corruption-combatting benefits of democratization are not immediate but are eventually realized.

It is important to note some limitations of these analyses. First, it is possible that their estimates yield downwardly biased estimates of the impact of democracy on corruption because, as previously noted, democratization often coincides with greater transparency and information dissemination. This raises the possibility that any increase in a corruption index is reflecting an increase in perceived corruption rather than actual corruption.

Additionally, both studies implicitly assume a causal relationship between duration of democracy and corruption. However, there may be endogeneity at play—for example, corrupt officials may be more likely to support legislation that limits political freedoms. Such an endogenous relationship would result in upwardly biased estimates. However, Kolstad and Wiig (2015) address the possible endogeneity with a creative instrument and find that, if anything, previous econometric analyses understate the true impact of democracy on corruption.

2.2 Review of Theoretical Literature

The relevant theoretical literature includes several models that, while not explicitly focused on democracy, can be applied to the topic. For example, Shleifer and Vishny (1993) develop a framework demonstrating that centralized corruption may be more efficient than decentralized corruption. The key idea behind this model is that accepting one large lump-sum bribe distorts the economy less than accepting multiple smaller bribes, partly due to incomplete information and coordination issues inherent in decentralized systems. A strong central government enables large-scale corruption among its highest-ranking leaders but also allows for control over lower-level officials. Shleifer and Vishny illustrate this contrast with the examples of Indonesia, which experiences limited but large-scale corruption, and India, which faces more widespread, small-scale bribery. Their model suggests that a strong dictatorship may exhibit lower levels of corruption compared to a weak and decentralized democracy. This has significant implications for countries transitioning from authoritarian regimes to democracies. The model predicts that in the early stages of such a transition, weakened institutions may lead to higher corruption levels, but as the system stabilizes and becomes more centralized, corruption levels are likely to decline.

In contrast, Rasmusen and Ramseyer (1994) construct a coordination game predicting that under certain conditions, democracies may foster higher levels of corruption than dictatorships—even in the long run. Their model is inspired by anecdotal accounts of corrupt U.S. politicians who jeopardized their careers for surprisingly small bribes. Although these actions appear irrational due to the high expected costs relative to the bribes, Rasmusen and Ramseyer determine that such behavior might be rational under specific circumstances. A key assumption of their model is that a politician's probability of reelection is primarily influenced not by their individual voting record but by the performance of their political party as a whole. Consequently, if all other members of

a politician's party have agreed to accept bribes, it becomes optimal for the individual politician to do the same. Since an individual politician cannot significantly affect the party's overall record, rejecting the bribe would be a futile sacrifice. They model payoffs such that it is optimal for a politician to accept any bribe greater than ϵ .

Under this framework, if there are n members in the majority party then a lobbyist may successfully buy all the votes necessary to pass a bill for only $n\epsilon$; whereas if this same lobbyist were to try and bribe a dictator it would probably cost much more. One implication of this model is that democracies have the potential to foster a greater number of corrupt exchanges. The predictions of this model are very sensitive to specific conditions and are therefore not necessarily inconsistent with any of the relationships observed in the empirical papers; however, the model does not adequately describe the robust observed trends identified in the empirical literature.

Utilizing a similar theoretical framework, Andvig (1991) develop a coordination game to model the decision-making of political leaders in a democratic system. In their model, each politician must choose at any given time whether to engage in corruption (by accepting bribes) or to be honest. Since it is a coordination game, the expected payoff for each strategy depends on the choices made by other politicians. Specifically, if all politicians choose to remain honest, the expected payoff for being honest is higher than the payoff for being corrupt, because a large number of honest officials increases the likelihood of corrupt politicians being caught and penalized. However, as the number of corrupt politicians grows, the expected payoff for engaging in corruption rises due to the reduced likelihood of being exposed by other officials. Simultaneously, the expected payoff for remaining honest decreases, until a tipping point is reached where the expected payoff for corruption surpasses that of honesty.

Given this framework, there are three equilibria: (i) a state where all politicians are honest, (ii) a state where all politicians are corrupt, and (iii) a state where the expected marginal benefit of corruption equals the expected marginal benefit of honesty. The first two equilibria are stable, while the third equilibrium is unstable. The ultimate equilibrium depends on the country's initial level of corruption. A country with a low initial level of corruption that adopts a democratic system will eventually converge to a state of zero corruption. Conversely, a country with a high percentage of corrupt officials transitioning to democracy will experience an increase in corruption and ultimately converge to a state where all politicians are corrupt. The final equilibrium is entirely determined by the initial level of corruption at the time of the country's transition to a democratic system.

While the model's assumptions appear reasonable, its predictions are inconsistent with observed trends. Empirical evidence indicates that even countries with high initial levels of corruption often experience a gradual decrease in corruption over time under democratic governance. As explored in the next section, this unrealistic result is tied to the model's assumption that payoffs are homogenous across players.

Andvig and Moen (1990) also employ a coordination game to model corruption in democratic states, adding complexity by including lobbyists as players. Their model assumes that all lobbyists seek to bribe politicians but are constrained by downward-sloping demand. As in Andvig (1991), the authors posit that as the number of corrupt politicians increases, the likelihood of being caught decreases, which raises the expected payoff of corruption. However, their model also assumes that as the supply of corrupt officials grows, the market price of a bribe decreases. The interplay of these two effects results in a bell-shaped relationship between the expected payoff of corruption and the number of corrupt officials. From the perspective of a lobbyist, an increase in the number of corrupt officials reduces the search costs associated with offering bribes, thereby increasing the quantity demanded of corrupt transactions.

In this setting, two stable equilibria emerge: one where all politicians are corrupt and another where all politicians are honest. Similar to model developed by Andvig (1991), the equilibrium a country converges to depends on its initial level of corruption. However, this model introduces the possibility of supply and demand shocks, which can alter the trajectory of convergence. This model possesses enough external flexibility that its implications are not necessarily inconsistent with the observed empirical data. However, as in Andvig (1991), the assumption of homogeneous payoffs leads to the unrealistic possibility that countries with high initial levels of corruption will remain corrupt.

3. Methodology

This section introduces a Bayesian coordination game to describe the mechanism by which a country's duration of exposure to a democratic system influences its level of corruption. The coordination games reviewed in the previous section provide important insight about how democratic political incentives influence corruption. However, the implication that countries with high initial corruption levels will experience an increase in corruption is at odds with the observations of Treisman (2000) and Rock (2009).

Additionally, these models do not examine the rate of convergence to equilibria. The model developed in this paper builds on earlier coordination games but introduces a significant innovation by incorporating evolving and heterogenous payoffs. Previous models assumed homogeneous payoffs, leading to predictions of constant rates of change in corruption through time, which does not align with the nonlinear trends observed by Treisman (2000) and Rock (2009). Our assumption of heterogenous payoffs better reflects the reality that some politicians face higher stakes or have different pre-existing tolerances for corruption. This heterogeneity better captures real-world dynamics and, crucially, allows for a nonlinear relationship between corruption and the duration of democratization. Additionally, this framework yields only one stable Nash equilibrium where all players reject corruption regardless of initial conditions, which better aligns with trends described in Treisman (2000) and Rock (2009).

This section proceeds as follows. We begin by presenting the normal form coordination game, describing the players, their strategies, and their heterogenous payoffs, and then analyzes the associated pure strategy Nash equilibria. We then clarify the assumptions of the continuously repeated game where each player's expected payoff not only depends on their own actions, but also the percentage of coordinating players who choose the same action. Under the assumptions of the continuously repeated game, we derive null clines in order to understand the intuition of this model's predictions.

The normal form of the game is presented in Figure 1. Players in this game are divided into two roles: politicians, indexed by $i \in I$ and lobbyists, indexed by $j \in J$. Each player has two possible strategies: being corrupt or being honest.

The payoff for being honest is normalized to 0. If one player is corrupt while the other is honest, the corrupt transaction does not occur, and the corrupt player incurs a cost less than 0, which is normalized to -1. This cost can be interpreted as the penalty for being exposed by the honest player, potentially resulting in reputational damage or loss of position. After these normalizations, the payoffs associated with both players being corrupt capture all the heterogeneity in the game. It is assumed that being corrupt without getting caught is more beneficial than being honest. Thus, if both the politician and the lobbyist choose to be corrupt, their payoffs are θ_i and θ_j , where $\theta_i, \theta_j > 0$ and are drawn from the distributions F and G respectively. This game has two pure strategy Nash equilibria: both players choosing honesty and both players choosing corruption.

Figure 1: The Normal Form Game

	H	C
H	0,0	0,-1
C	-1,0	θ_i, θ_j

This is a continuously repeated game played each time a lobbyist attempts to influence the passage or blockage of a bill by bribing a politician, or when a politician suspects a lobbyist might pay a bribe and offers to sell their vote. The duration of this interaction varies depending on how long it takes to process the bill.

This game is applicable to a democratic setting, as it assumes a large number of players who face a negative expected payoff if caught accepting a bribe. Let x_p be the percentage of politicians who are corrupt and x_L be the percentage of lobbyists who are corrupt. Because this is a coordination game, as x_L increases, the expected payoff of a politician choosing to be corrupt increases. As x_L changes, a politician's optimal strategy may shift and, given that interactions vary in length, this shift may occur during an ongoing game.

It is assumed that players reevaluate their situations at the end of each game and may revise their strategies for subsequent interactions. Another simplifying assumption is that relationships between pairwise combinations of lobbyists and politicians do not persist over time. Players are randomly matched for each game, and lobbyists, when deciding which politician to bribe, are not influenced by a politician's reputation for accepting bribes but focus solely on their ability to pass or block a bill.

Given these assumptions, we know that a politician will choose to be corrupt if the expected payoff of corruption is greater than or equal to the expected payoff of honesty:

$$-1(1 - x_L) + \theta_i x_L \geq 0(1 - x_L) + 0x_L$$

This condition reduces to:

$$\theta_i \geq \frac{(1 - x_L)}{x_L}$$

Therefore, at a revision opportunity, the probability a random politician chooses to be corrupt is:

$$1 - F\left(\frac{(1 - x_L)}{x_L}\right)$$

At a revision opportunity the average number of honest politicians who realize they can improve their situation by becoming corrupt is:

$$1 - F\left(\frac{(1 - x_L)}{x_L}\right)(1 - x_P)$$

The average number of corrupt politicians who realize they can increase their expected payoff by being honest is:

$$F\left(\frac{(1 - x_L)}{x_L}\right)(x_P)$$

Therefore, at a revision opportunity, the politicians' average net movement will be:

$$\dot{x}_P = 1 - x_P - F\left(\frac{(1 - x_L)}{x_L}\right)$$

By symmetry, the average net movement for the lobbyist is:

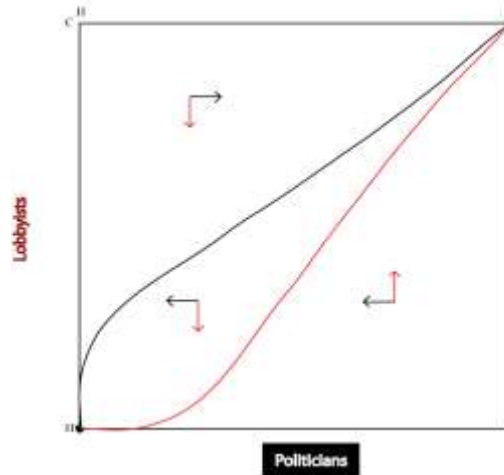
$$\dot{x}_L = 1 - x_L - G\left(\frac{(1 - x_P)}{x_P}\right)$$

For example, we assume that F and G are identically and exponentially distributed with parameter $\lambda=1$. This distribution implies that some politicians derive very high benefits from corruption, while others derive very low benefits.¹ Figure 2 illustrates the null clines of lobbyists and politicians under this distribution. The origin (H) represents the scenario where all lobbyists and politicians are honest, while point C represents the scenario where all are corrupt. Moving rightward along the figure indicates an increase in the number of corrupt politicians, and moving upward indicates an increase in the number of corrupt lobbyists.

Examining the null clines provides a general intuition about the model's predictions. If the initial state is to the right of the lobbyists' null cline (the red line), the net movement for lobbyists will be positive, while the net movement for politicians will be negative. Over time, this results in an increase in the number of corrupt lobbyists and a decrease in the number of corrupt politicians. Conversely, if a country is at a point to the left of the politicians' null cline (the black line), the opposite occurs: there will be fewer corrupt lobbyists and more corrupt politicians over time. If a country is at a point between the two null clines, the net movements for both lobbyists and politicians will be negative, leading to less corruption in both groups. As Figure 2 illustrates, regardless of the initial level of corruption, the adoption of democracy leads to an eventual movement toward no corruption.

¹ As discussed below, we experiment with alternative specifications and find similar results.

Figure 2: The Null Clines



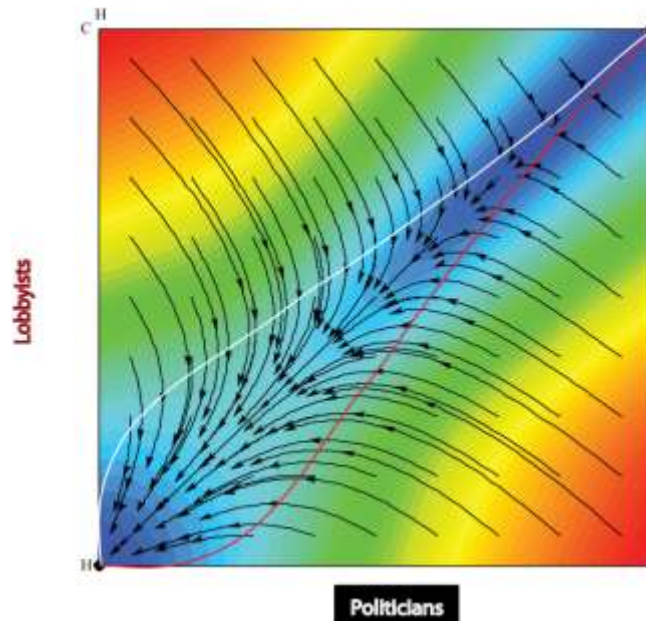
4. Results and Discussion

The above discussion provides an intuitive understanding of why we would expect all countries to eventually converge to an equilibrium where all players are honest, regardless of initial corruption levels. We examine the framework more rigorously by utilizing the publicly available Dynamo software to generate a phase diagram (Figure 3), identifying the equilibrium and examining the trajectory to that equilibrium over time.

4.1 Stable Nash Equilibrium

An examination of the dynamics presented in Figure 3 confirm that under this framework, all initial levels of corruption converge to a single stable equilibrium at point H. In other words, the adoption of democracy will eventually lead to reductions in corruption, even for countries with high initial levels of corruption. This is an important departure from the previous coordination games which yield two stable Nash equilibria and find that countries with high levels of initial corruption will converge to a more corrupt equilibrium. The predictions of our model better align with the empirical observations of Treisman (2000) and Rock (2009), who find that extended exposure to democracy typically eventually reduces corruption.

Figure 3: The Phase Diagram



This diagram was generated with Dynamo: (Sandholm, et al., 2012). The colors indicate speed of movement. Ranked from highest to lowest: Red, Orange, Yellow, Green, Light Blue, Dark Blue.

4.2 Initial Conditions and Rate of Convergence

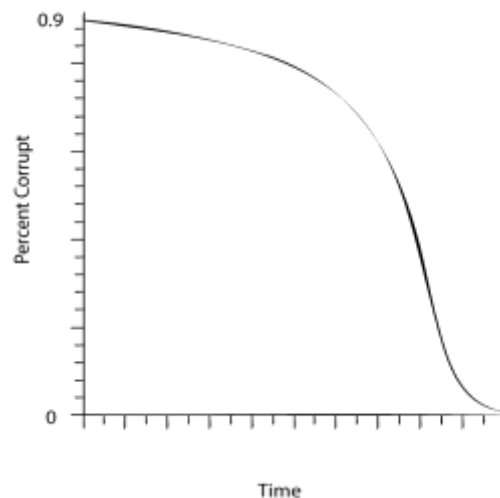
Crucially, this phase diagram reveals the speed of convergence through a rainbow color scheme, with faster convergence indicated in red and slower convergence in dark blue. All initial points eventually lead to the unique stable equilibrium where all players choose honesty; however, the path to that outcome is influenced by the initial condition (i.e., the level of corruption prior to the transition to democracy). Examining the phase diagram, we observe that the convergence pattern best aligns with empirical trends when initial corruption levels are relatively high (i.e., the initial point is in the upper-right quadrant).

Within the upper-right quadrant, let's examine the trajectory of countries that initially lie along the blue diagonal, representing scenarios where similar fractions of politicians and lobbyists are choosing corruption. For instance, consider the extreme condition where all players are initially corrupt (point C). After the adoption of democracy, convergence to the honest equilibrium begins slowly (as indicated by the dark blue), accelerates (as shown by the lighter blue), and then decelerates as equilibrium is approached. This general convergence pattern applies to all initial points in the upper-right quadrant near the blue diagonal.

To better visualize this convergence path, we assume a specific initial point where 90% of lobbyists and politicians are corrupt and plot the fraction of corrupt politicians across time.² The results, presented in Figure 4, illustrate that this convergence path is well-aligned with empirical findings of gradual corruption reduction documented in Treisman (2000). As in Treisman's analysis, significant reductions in corruption are only observed after extended exposure to democratic institutions. While the tail end of the convergence path might appear at odds with Treisman's findings, it is important to note that Treisman's estimation framework does not allow for such non-convexity, and their sample includes few countries with essentially zero corruption.

Our model's theoretical prediction that the speed of convergence eventually decelerates reflects the idea that as a zero-corruption equilibrium is approached, incremental progress becomes increasingly difficult and protracted, because some players derive exceptionally high payoffs from corruption that are not easily disrupted by evolving political incentives.

Figure 4: Corruption Through Time



Returning to the phase diagram in Figure 3, we observe that for points in the upper-right quadrant, as the initial point moves away from the blue diagonal, the convergence trajectory more closely resembles Rock's (2009) pattern of an initial increase in corruption (since the fraction of corrupt individuals may initially increase for one of the groups) followed by a steep decline. Notice this convergence path also exhibits deceleration as equilibrium is approached. Once again, this aspect of the trajectory may seem at odds with Rock's findings, but this discrepancy can be explained by the fact that Rock's estimation framework and sample do not allow for detailed examination of the tail end of the convergence path.

For initial points characterized by at least one group being relatively honest (i.e., initial points in the other three quadrants), the model's predictions are less well-aligned with observed trends and may even suggest a generally decreasing rate of convergence. The fact that this model is more strongly aligned with observed trends for countries with higher levels of initial

² Because this is a symmetric starting point in a symmetric game, the percent of corrupt lobbyists follows the same path through time.

corruption does not pose a challenge, as the presumed framework is that undemocratic states are characterized higher rates of corruption (i.e., higher initial corruption at the time of democratic transition).

4.3 Robustness to Alternative Specifications

The model's predictions remain robust across different payoff distributions, including exponential and normal distributions. Higher average benefits of corruption (higher λ values) accelerate convergence but do not alter the fundamental trajectory, indicating that the results are not sensitive to the specific parameter values. We chose to model the interaction as occurring between a lobbyist and politician but, of course the framework could be easily amended to capture a variety of political interactions.

5. Conclusion

The model developed in his paper provides a novel approach to understanding the relationship between democratization and corruption, addressing key limitations of prior theoretical frameworks. By incorporating evolving heterogeneous payoffs that more accurately reflect real incentives, the model bridges the gap between theoretical predictions and empirical observations, offering a more realistic depiction of corruption dynamics in democratic settings, thus yielding predictions that generally align with documented empirical trends. Specifically, the framework implies that transitioning to democracy will eventually result in decreased rates of corruption, regardless of initial corruption levels. For countries where initial corruption levels are somewhat high, the rate of convergence is consistent with the trend observed by Treisman (2000) and Rock (2009). In other words, large reductions in corruption are not immediate but instead require prolonged exposure to democratic governance, with a nonlinear trajectory of improvement over time. The fact that this relationship can be modeled under a reasonable set of assumptions reinforces the validity of the trends observed in Treisman (2000) and Rock (2009). Importantly, the game presented in this paper provides a theoretical foundation for a more nuanced empirical examination of how convergence paths are influenced by initial corruption levels, further enriching our understanding of how context impacts a government's efforts to reduce corruption.

The results underscore that the cultivation of sound political incentives (through transparency and accountability) plays a crucial role in corruption reduction efforts. This finding is especially relevant for policymakers and international organizations, such as the World Bank and the IMF, who are intensely interested in the economic development that accompanies reductions in corruption.

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