Varieties of Corruption: The Organization of Rent-Seeking in India

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Abstract: How is corruption organized? Studies of corrupt behavior to date shed light on both the causes and consequences of corruption. Yet we have little understanding of how corrupt activities are structured and the ways in which rents are, or are not, distributed across various actors—insights that would, in theory, prove enlightening for efforts to reduce corruption. In this paper, I analyze the organization of corruption through a set of related questions: Are rents from a single bribe distributed across multiple actors? If so, do different types of actors benefit differentially from different types of corruption? What factors, such as the type of corruption or the degree of government centralization, are associated with variation in the distribution of rents? To explore these questions, I first present a new, three-level typology of corruption emphasizing the type of actor paying a bribe and roughly reflecting the character of illicit acts across three realms: high-level policy-making, e.g. bribes for favorable legislation; mid-level policy implementation, such as kickbacks for government contracts; and low-level delivery of public services, for example the payment of "speed money" by citizens. I then draw on new and original data from surveys of Indian politicians to assess how the distribution of rents across actors varies as a function of the type of corruption and the degree of government centralization. I show that there is considerable division of rents across government and non-government actors and the perceived distribution of rents is strongly associated with the type of corruption, though not necessarily in the ways predicted by existing theory. In addition, I find a mixed relationship between government centralization and the distribution of rents. These results validate the utility of a more disaggregated typology of corruption and provide the first clear evidence of the extent to which different political actors benefit from diverse corrupt acts.

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Corruption is an important subject of concern for political economists and social scientists more generally, with a large body of work covering the evolution of corruption, measurement of its presence, evaluation of its causes, and exploration of opportunities for reform (*inter alia*, Bussell 2012a; Ferraz and Finan 2010; Ko and Samajdar 2010; Fan et al. 2009; Fisman and Miguel 2008; Reinikka and Svensson 2006; Rose-Ackerman 1975, 2002; Spector et al. 2005; Wade 1985; Scott 1972, 1969). Yet, this research agenda in general suffers from a lack of detailed conceptual differentiation and attention to the incentives underlying different forms of corruption. For example, are the same institutional structures and interests motivating demands for bribes from individuals to speed up the delivery of drivers' licenses as for kickbacks to politicians to influence the licensing of access to mineral-rich land rights? Does the receipt of rents from these two activities reflect the same distribution of benefits across politicians and bureaucrats, or are significantly different sets of actors profiting from each transaction? While these examples provide perhaps extreme cases of variation in corruption, they also highlight a set of frequent blind spots in the literature, meriting more thorough analysis.

In this paper, I ask a set of related questions about the organization of corruption and, in particular, the distribution of corruption rents: Are proceeds from a single bribe distributed across multiple actors? If so, do different types of actors benefit differentially from different types of corruption? What factors, such as the type of corruption or the degree of government centralization, are associated with these variations in the distribution of rents?

I posit that in order to answer these questions, we must explore a conceptualization of corruption that allows us to distinguish between diverse types of corrupt behavior. To do so, I present a new typology of corrupt acts, with a focus on bribing, emphasizing the kind of actor paying a bribe. This typology highlights general disparities in the character of illicit payments

across three realms: policy-making, e.g. bribes for favorable legislation; policy implementation, such as kickbacks for government contracts; and the delivery of public services, for example the payment of "speed money" by citizens.

I then test the relevance of this typology for our understanding of variation in the organization of corruption, drawing on new, original data from surveys of Indian politicians. The findings help to validate a long-standing claim in the literature that a bribe paid to a single actor is likely to be subsequently distributed in part to a set of other actors. However, the nature of this distribution varies quite dramatically across different types of corruption, highlighting the importance of differentiating between various types of corrupt behavior, even within a single institutional setting.[1] While this finding is intuitive to a point, it is the first clear evidence of the manner by which corrupt rents are shared across multiple actors and the degree to which different sets of individuals benefit from diverse corrupt acts since Wade (1985) initially highlighted these dynamics in the context of a single government department in India. Finally, the analysis provides some initial support for an argument linking the character of government centralization to the distribution of rents.

In the following sections, I consider existing perspectives on the organization of corruption and the distribution of rents and then discuss a set of theoretical propositions. I subsequently review the concept of corruption and its various types before presenting a new typology of corrupt acts to be used in evaluating the testable implications of organizational theories. I then discuss the paper's empirical strategy and present tests of variation in the type of

[1] Much of the literature on corruption highlights the importance of institutional variation in explaining empirical variation in the presence of corruption (Scott 1972; Montinola and Jackman 2002; Treisman 2000; Gerring and Thacker 2004). However, these arguments offer less leverage for understanding variation in corruption within a single institutional context. This study attempts to push forward a research program for understanding underlying causes of variation in corruption in a setting without variation in factors such as electoral rules or legislative form.

corruption in three Indian states, Bihar, Jharkhand, and Uttar Pradesh. I conclude with a discussion of the implications of my findings for our understanding of corruption in India and elsewhere today.

Organization of Corruption and the Distribution of Rents

Despite the wealth of literature on corruption, analysts have dedicated relatively little attention to the organization of corrupt activities and the related distribution of rents across actors. Within the existing work, however, it is possible to identify at least an initial set of arguments with observable implications for the ways in which government actors extract and share rents. For example, Bardhan (1997) contrasts India and Indonesia, which at the time were perceived by foreign businessmen to be similarly corrupt, and notes that it is perhaps differences in the organization of domestic corruption that can explain comparably better economic performance in Indonesia. The top-down nature of Indonesian corruption, "controlled largely by the first family and the top military leadership in cahoots with the ethnic Chinese-run conglomerates" (Bardhan 1997: 1325) was perhaps more predictable, and thus less disruptive to economic interests, than India's "more fragmented, often anarchic, system of bribery" (Ibid.). The organization of corruption, then, may be distinguished by the level of centralization and is relevant due to its relationship with broader socio-economic conditions.

Shleifer and Vishny (1993) offer one of the earliest theoretical accounts of variation in the organization of corruption and the likely implications for the scale of corrupt activities. According to their argument, and similar to Bardhan's observations, the organization of corruption networks should have direct implications "for the level of corruption and for the effects of corruption on economic activity" (Shleifer and Vishny 1993: 600).

Shleifer and Vishny's models make two key distinctions between corruption market scenarios. First, countries are distinguished by the degree of centralization in the government, with the most centralized countries seen as those operating as monarchies or well-organized autocracies. "In such places it is always clear who needs to be bribed and by how much. The bribe is then divided between all the relevant government bureaucrats, who agree not to demand further bribes from the buyer of the package of government goods, such as permits" (Shleifer and Vishny 1993: 605).

Second, countries differ in the degree to which government agencies compete to provide goods and services to citizens and businesses. Where competition does not exist, government actors will have greater discretion over when and to whom to deliver services. Alternatively, where competition between government actors and offices exists, individuals can go to an alternative provider if they are asked for a bribe.

Based on these two characteristics, the authors discuss the empirical implications for three cases.[2] They argue that corruption is likely to be the most prevalent and the least predictable in decentralized countries with no competition between government agents. Corruption should be the least likely in decentralized, competitive regimes whereas centralized, non-competitive regimes fall in the middle.[3]

The nature of rent-sharing across government actors, something that is expected to be more prevalent in non-competitive, centralized regimes given the strong links between the

[2] Shleifer and Vishny do not comment on the fourth logical case, autocracies with competition, perhaps due to the lack of empirical examples.

[3] A related set of arguments address organization in a slightly different way, emphasizing "top-down" or "bottom-up" corruption, "where 'bottom-up' refers to low-level officials collecting bribes and sharing them with superiors, while 'top-down' refers to corrupt superior officers buying the silence of subordinates by sharing their ill-gotten gains" (Rose-Ackerman 1999 as referenced in Waller, Verdier, and Gardner 2002: 688).

centralized organization and local nodes, is also important to this discussion. Shleifer and Vishny highlight the importance of rent-sharing in general, emphasizing that, "[i]f jobs are distributed among officials through an auction mechanism, whereby those who pay the most for a job get it, then the prospective officials who do not collect bribes simply cannot afford jobs" (603-604). Wade (1985) focuses instead on the particular dynamics of rent sharing across government actors. He posits that the transfer mechanism used in the Indian bureaucracy, where higher-level officials and politicians have power to transfer bureaucrats laterally between posts with minimal oversight, results in two related outcomes. First, the system of transfers "allows pressures for 'corrupt' behavior to bear down strongly on the incumbents of certain posts – and itself amplifies those pressures making it more likely that officials will behave in a corrupt manner than if the transfer mechanism were different" (Wade 1985: 467-468). Second, he suggests that, "the pressures on officials to be corrupt cause them to behave in ways that are contrary to the ostensible objectives of their departments" (Wade 1985: 468). Thus, the transfer mechanism is hypothetically linked to both higher corruption in particular and lower quality developmental outcomes in general.

Wade's analysis also highlights the potential for these dynamics to differ depending on the type of government activities under consideration. He notes, as an observable implication of his model, that, "[t]here are systematic procedures for sharing collections at each rank with higher ranks – especially in departments which allocate state contracts (public works contracts, contracts to cut state forest, etc.)" (Wade 1985: 474). This suggests that those areas of government activity most often associated with what I refer to below as "mid-level" corruption, such as rent-seeking in the implementation of policies and contracts with the private sector, are the most likely to exhibit the sharing of rents across actors and, in particular, the movement of

rents up the institutional hierarchy to higher levels of bureaucrats and politicians than those officially associated with these activities.

Yet, despite the richness of these theoretical discussions, little has been done beyond the small-n, case-study based empirical tests of Wade's analysis to evaluate the degree to which rent-sharing occurs in practice among government actors and whether this is linked either to the extent of centralization or the type of corruption, or both. [4] This is despite examples of similar dynamics in contexts as different from India as the United States, where pressure on state employees in Illinois to engage in party fundraising was linked to corruption in the allocation of commercial driver's licenses.[5] I posit that these theoretical discussions imply a number of testable implications worthy of empirical evaluation:

1) Rent-sharing is a characteristic of corrupt behavior;
2) Rent-sharing differs across corrupt activities and is likely to be more common if corrupt activities involve contracting, such as public works; and
3) Rent-sharing is likely to be more common when government power is centralized.

Conceptualizing Varieties of Corruption

In order to evaluate these propositions, it is necessary to gain greater clarity on the concept of corruption itself and, in particular, means of distinguishing between different types of corruption. While the most common definition of corruption, that it is the abuse of public office for private gain (*inter alia*, Olken 2007; Bardhan 2006; Jain 2001; Rose-Ackerman 1975), offers a concise starting point for categorizing various behaviors as corrupt or not, it does little to help us explore variations in types of abuse. As recent work on typologies suggests, a comprehensive delineation

[4] One exception is Beteille's (2009) work on corruption within the Indian educational system.
[5] FMCSA 2000. I thank Susan Rose-Ackerman for bringing this example to my attention.

of the types within a concept can "make crucial contributions to diverse analytic tasks: forming and refining concepts, drawing out underlying dimensions, creating categories for classification and measurement, and sorting cases" (Collier, LaPorte, and Seawright 2012: 217).

Yet, all too frequently, typologies are either not used at all or not operationalized in the context of empirical studies. To this point, in a related examination of the literature on distributive politics, Kramon and Posner argue that, "the outcome one studies affects the answer one gets" (Kramon and Posner Forthcoming: 1). In other words, if political (and social) phenomena are multidimensional and diverse in their characteristics, studying only one element of a particular phenomenon can significantly limit the generalizability of one's findings. In their case, the key observation is that "governments can favor constituencies through the targeting of multiple public and private goods—roads, schools, clinics, electrification, cash grants and transfers, irrigation schemes, subsidies, tax breaks, public service jobs, and so on," (Kramon and Posner Forthcoming: 4), but analyses typically only consider one or a few goods. As a result, "while the inferences these analyses draw about favoritism with respect to the particular outcome being studied may be warranted, conclusions about who benefits from distributive politics per se rest on shaky foundations" (Ibid.).

The literature on corruption suffers from a similar limitation. To an extent, this seems to emerge from a situation in which the difficulty of accurately gauging corruption has resulted in often ad hoc measures that differ substantially across analyses and do not necessarily link clearly to the concept of corruption being used. As Kramon and Posner note, with regard to corruption, "some researchers measure in terms of local bribe taking by civil servants; others in terms of the valuation of publicly traded companies with connections to top government officials; others in terms of tax evasion; and others in terms of leakage in public expenditure" (Kramon and Posner

Forthcoming: 19). These differences in the measurement of corruption, which typically all rely on the same general definition of corruption as the abuse of public office for private gain, may result in analyses with quite different findings regarding what factors encourage corrupt behavior and how corruption affects political and social outcomes.

In recent years, creative efforts to measure corruption, particularly at the sub-national level, have increased our ability to make descriptive and even specific causal claims about the nature of corruption and its effects on political and social outcomes (see, *inter alia*, Bertrand et al. 2007; Bhavnani 2009; Bussell 2012a; Ferraz and Finan 2008; Fisman And Miguel 2007; Olken 2007; Olken and Barron 2009; and Reinikka and Svensson 2004. Reinikka and Svensson 2006 provides an overview of multiple techniques). Yet, improved measurement has emerged without the concomitant improvements in conceptualization necessary to justify broader claims about the causes and consequences of corruption based on these measures. If we are simply to define corruption as "the abuse of public office for private gain" and then proceed to measure it in whatever innovative manner has been chosen for a particular analysis, how can we compare the results identified in one analysis with another? Should we expect bribes paid by large companies to influence the policy making process to have the same effects on broader outcomes—say, economic growth or political accountability—as bribes paid by individual citizens in the act of acquiring services?

A number of analysts have attempted to respond to this conceptual gap through the development of more specific typologies of corrupt behavior. The most common distinction, highlighted by Rose-Ackerman (1999), differentiates between petty and grand corruption—what I refer to here as low-level and high-level corruption. The former refers to bribes citizens pay to lower level officials either to speed the delivery of services or to bribe officials to "bend the

rules" (Rose-Ackerman 2002; Cisar 2003) while the latter "involves large sums of money with multinational corporations frequently making the payoffs" and politicians using their power to shape policies in ways that benefit bribers (Rose-Ackerman 2002; 2008: 265; Jain 2001; see also Bussell 2012a).

Yet, there are two primary limitations to the existing use of typologies in the analysis of corruption. First, the empirical literature in practice largely belies the question of corruption types, typically analyzing only one example of corrupt behavior without categorizing it as a particular type of corruption, and thus leaving a significant gap in our empirical understanding. The imprecise link between concept and measurement in the corruption literature is highlighted in a review of classic and more recent works shown in Table B1 in Appendix B. For each article or book, I note the definition of corruption used, if given, and the measurement technique of the analysis, as well as the associated independent or dependent variable(s). While there is often a reasonably logical match between the measure of corruption and the independent or dependent variables under consideration, there is typically no further distinction of the *type* of corruption that would allow us to compare results across individual analyses. This, then, signifies a significant gap between concept and measurement.

Second, the common dichotomy of petty and grand corruption is incomplete. For example, in their analysis of municipal-level corruption in Brazil, Ferraz and Finan highlight that "most corruption schemes used by local politicians to appropriate resources are based on a combination of fraud in procurements, the use of fake receipts or 'phantom' firms, and over-invoicing the value of products or services" (Ferraz and Finan 2008: 710). None of these activities necessarily fit the characteristics of grand and petty corruption just discussed.

In these cases, we are dealing with fraud in the implementation of state policies, where individual citizens (other than business owners and managers) are unlikely to be directly involved. Yet, we are also not concerned with the design of legislation and regulations at the highest levels. Instead, this type of corruption involves the misuse of government resources, typically by mid-level government officials, either to extract direct gains or to benefit preferred individuals and groups. This also encompasses activities such as the skimming of funds from infrastructure initiatives, as evaluated empirically by Golden and Picci (2005) and Olken (2007).

Thus, a typology of corruption that distinguishes between diverse forms of corrupt acts may better account for the range of activities in which politicians, bureaucrats, and individual citizens are engaged. To develop such a typology, identifying the fundamental differences between examples of corruption is of primary importance. This can help us to explore the likely perceptions and expectations of actors with regard to various corruption types and the incentives for each to participate in corrupt activities in any given environment.

As a starting point for this effort, I differentiate types of corruption primarily by the type of individual paying the bribe. I collapse the range of bribe payers into three categories, broadly reflecting the realm of their desired influence and the level of government at which this interaction is likely to take place: the making of policy, the implementation of policy, or the consumption of government goods and services.

High-level corruption involves the paying of bribes for influence over the design of policies and is relevant in behind-the-scenes negotiations over the content of legislation. In most cases, this means efforts to influence legislators at national and state levels, particularly members of the cabinet or committees tasked with policy development, as well as bureaucrats who provide inputs into the policy development process. The most likely bribe payers are representatives of

large companies or organizations with an economic stake in the outcome of significant legislation. Regulatory policies, in particular, may be of primary interest to private companies, who are looking to maximize market share and revenues.

High-level corruption can also involve bribes to influence the allocation of scarce public resources, such as in the case of the recent scandal in India over second generation (2G) telecommunications licenses (NDTV 2010c) and the allotment of rights to coal extraction (Deccan Herald 2012). In these cases, we are concerned with the implementation of policies, but the same types of individuals or large organizations are likely to be making payments to influence these activities.

Mid-level corruption typically involves bribe payments by smaller companies and individuals, often to intermediate-level bureaucrats or politicians. These bribe payers are interested in influencing, or participating in, the implementation of policies and programs at lower levels of government. Corrupt acts typically comprise efforts to profit from government policy including the misallocation of resources in public programs, such as subsidized foodstuffs that can be sold for higher prices in the open market, or the allocation of government contracts, such as for infrastructure programs and other government initiatives. Contracting interactions may involve direct bribes or facilitation of excess billing, kickbacks, or alternative schemes to extract rents from funds otherwise intended to serve the broader population.

This corruption, like high-level corruption, is often behind-the-scenes and rarely involves a large portion of the population. While citizens may have a greater sense that public services are affected by mid-level corruption activities than with regard to high-level regulatory corruption, they are much less likely to be personally involved in the transactions and so are still likely to be only tangentially aware of the effects of mid-level corruption on their living conditions.

Low-level corruption, otherwise known as petty or retail corruption, refers to activities in which citizens make payments to low-level state actors who have discretion over the delivery of services to individuals and can use this power either to withhold services or to allocate them in uneven, or illegal, ways. This corruption is thus related to the direct consumption of government goods and services and engaged in by individual citizens and street-level government officials. Because officials have the power to determine if and when citizens receive services, individuals may pay bribes, often termed "speed money," in order to encourage bureaucrats to provide services in a more efficient manner. This is particularly common in places where bureaucrats have a monopoly on the provision of services and citizens do not have recourse to other actors for acquiring their desired services (i.e. no competition in service delivery). Low-level corruption may also refer to cases where citizens attempt to increase the chances that they will be chosen for a program with limited enrollment or to acquire a service to which they are not entitled, such as welfare benefits, by paying a bribe to an official.

Table 1 summarizes the characteristics of low-, mid-, and high-level corruption in terms of the primary defining characteristic—the typical actors paying the bribe—as well as representative types of government activities, related corrupt behaviors, and common recipients of illicit funds.

Table 1 – Types of Corruption

Type of Corruption	Type of Briber	Type of Government Activities	Examples of Reasons for Bribe	Type of Actor receiving Bribe[6]
High – Level (Grand)	- Large Private companies	- Central and state government regulations - Allocation of licenses - Allocation of land and natural resources	- Payments for favorable legislation - Kickbacks for licenses, land contracts, natural resource rights	- Central government minister/legislator - Central bureaucrat - State ministers - State bureaucrat
Mid – Level (Intermediate)	- Small-Medium Private companies - Individual entrepreneurs	- Implementation of government schemes (schools, roads)	- Allocation of scheme funds to unapproved/ghost party - Kickbacks on contracts - Overbilling of projects	- State legislator - Sub-state politicians - Intermediate bureaucrat
Low – Level (Petty/Retail)	- Individual citizens	- Provision of individual benefits (e.g. IDs, welfare payments) - Sanctions (e.g. traffic violations)	- Bribes for "speedy" services - Bribes for illegal access to benefits	- Local bureaucrat - Local politician - Middleman

This greater attention to the distinctions between different forms of corruptions should improve our ability to compare across analyses of corruption, thereby increasing our understanding of both of corruption's causes and consequences. In addition, attention to types of corruption may help us to understand how changes in the nature of corruption may be related to shifting availability of rents from alternative sources. While a reduction in petty corruption may seem, on its face, to be an improvement in overall corruption levels, it may instead be masking an increase in rent-seeking from other government sources, which could have even more extreme

[6] This column includes only those actors who are likely to be the *direct* beneficiaries of a corrupt transaction. As noted discussed elsewhere, other individuals are likely to be indirect beneficiaries at all levels of corruption, as payments flow through the hierarchy, largely due to the bureaucratic transfer system.

downstream consequences for overall development than previously pervasive low-level corruption. In other words, different types of corruption may at times be substitutes, but without an investigation of the relationship between types, this dynamic would not come to light.

Empirical Strategy

In this section, I provide the background for an initial attempt to gain leverage on these gaps in our current understanding of rent distribution and the organization of corruption, based on surveys of politicians in India.

Corruption and Politics in India

India provides an important empirical testing ground for these arguments, not only because it is often a reference point for theoretical development but also due to the empirical persistence of multiple corruption types throughout the subcontinent. At the same time, while many studies highlight the prevalence of corruption in India (Bussell 2012a; Transparency International 2008; Transparency International India and Centre for Media Studies 2005, 2008), little work has analyzed the nature of variation in Indian corruption (a recent exception is Charron 2010).

India also provides a context in which popular attention to corruption is at arguably the highest level since Independence in 1947. A recent spate of scandals have highlighted the prevalence of corrupt behavior by politicians and bureaucrats alike: investigations into the construction of facilities for the 2010 Commonwealth Games in Delhi "discovered widespread contract rorting,[7] falsification of records and unjustifiable inflation in contract costs" (Sexton 2010); an apartment building in Maharashtra, intended to serve war veterans, was found instead

[7] "Rorting" is a British term referring to fraudulent abuse of a public scheme.

to be benefiting top politicians, bureaucrats, and members of the military (NDTV 2010a; 2010b); and central government officials have been accused of costing the government nearly U.S. $40 billion through allocation of second generation mobile communications spectrum at "throwaway prices" (NDTV 2010c) and U.S. $35 billion (Rs.1.76 trillion) through questionable procedures for distributing rights to coal deposits (Malik 2012).

These high-level corruption scandals exist in parallel with the frequent demands for bribes that the general public faces in the course of their everyday dealings with the state. An analysis of low-level corruption at the state level and across eleven government departments found that more than 60% of Indians have paid a bribe to receive a government service, amounting to more than Rs. 210 billion (approximately U.S. $4.7 billion) in bribes each year (Transparency International India and Centre for Media Studies 2005: 3). Another survey found that more than one-third of people below the poverty line in India had paid a bribe in the previous year to access government services (Transparency International India and Centre for Media Studies 2008).

What has received less empirical attention is mid-level corruption in the implementation of state policy. For example, India's public distribution system, which provides subsidized foodstuffs to low income households, is thought to involve significant leakage of both funds and foodstuffs, yet little empirical work has attempted to quantify the problem. The oft-repeated critique by Prime Minister Rajiv Gandhi that only 16 paisa (cents) of every rupee spent in the program reaches intended citizens has been validated by recent government analyses (Times of India 2009). Similarly, a government audit of spending through constituency development funds by Members of Parliament uncovered a multitude of discrepancies and illegal use of funds across

India's states (Keefer and Khemani 2009; Bussell 2012a), many of which involved inappropriate contracting, but these types of activities have received minimal academic attention.

Related analytical gaps exist in our deeper understanding of which actors engage in, and benefit from, corruption, resulting in a number of unanswered questions regarding the nature of corruption in general. In particular, other than limited analyses in the water and education sectors (Wade 1985; Beteille 2009), we have only minimal evidence of the dynamics highlighted above with regard to the sharing of rents across various actors. In other words, to what extent does the recipient of a bribe have to distribute these rents to other actors and does this differ across types of corruption? I begin to answer these questions in the empirical analysis that follows.

India also provides a viable empirical context for testing hypotheses regarding the relationship between centralization of government and the nature of corruption. While analyses to date have attempted to compare country-level contexts in which a wide variety of institutional variables differ in addition to government centralization (e.g. Bardhan on Indonesia versus India), India's sub-national environment allows for holding constant a range of institutional characteristics while centralization (at the state level) is left to vary. Here, I consider centralization of government power in terms of the degree to which a single party or coalition of parties holds power at multiple levels of government and thus can exert pressure on bureaucrats throughout the administrative apparatus. Because Indian elections are highly competitive and the nature of ruling government power differs quite dramatically across the sub-national states (Nooruddin 2010; Bussell 2012a), with both single party and coalition governments common, there is considerable opportunity to assess the relevance of variation in centralization within the Indian context. I discuss the operationalization of centralization used here in the sub-section on measures below.

Sampling Strategy

The data source for this analysis is a set of original surveys conducted in Bihar, Jharkhand, and Uttar Pradesh, three states in the Hindi-speaking belt of North India.[8] Within each state, two surveys were conducted in parallel, of local and higher-level politicians.[9] The surveys included all levels of elected officials, from village councilors to members of parliament. In the analysis and discussion below, I refer to three groups of politicians: low-level, which includes members and presidents of village councils; mid-level, including members and presidents of block and district councils; and high-level, including members of state legislatures (Members of the Legislative Assembly or MLAs) and members of parliament (MPs).

In order to include all levels of politicians, the sampling procedure for these surveys incorporated village, block, and district councils, as well as state and national legislative constituencies.[10] For mid- and high-level politicians, respondents were sampled randomly, through a multistage selection process. First, districts were randomly selected. Then, blocks were randomly selected within the districts. Mid-level (block and district) politicians were chosen accordingly, with the president of the (block or district) council and one council member included in the sample at each level. For high-level respondents (MLAs and MPs), the blocks

[8] Jharkhand was carved out of Bihar and made an independent state in 2000.
[9] Surveys were also conducted with citizens and with village, block, and district level bureaucrats. The results for these surveys are not presented here. The surveys were conducted in collaboration with Thad Dunning (Yale University).
[10] The village council (*gram panchayat*), typically covers 5 villages in Bihar, 7 in Jharkhand and 2 in Uttar Pradesh, the block council (*panchayat samiti*), typically includes about 16 village councils in Bihar, 20 in Jharkhand, and 65 in Uttar Pradesh, and the district council *(zilla parishad*), incorporates approximately 14 blocks in Bihar, 9 in Jharkhand, and 12 in Uttar Pradesh. Bihar has approximately 38,475 villages, 8,463 village councils, 534 blocks, and 38 districts; Jharkhand has 32,620 villages, 4423 village councils, 212 blocks, and 24 districts; and Uttar Pradesh has 97,607 villages, 52,905 village councils, 814 blocks, and 70 districts.

and districts in the sample were mapped to state and national constituencies and all of the politicians whose constituencies fall in the overlapping areas were included in the sample.

Once districts and blocks were chosen, selection of village councils, and thus low-level politicians, was done on the basis of a regression discontinuity design determined by the reservation of village council president seats for scheduled castes.[11] Though the sampling of village councils is not strictly random, it is largely consistent with a random sample. The set of selected councils is statistically indistinguishable from the population on a host of characteristics, as measured in the Indian census (Dunning and Nilekani 2013). A summary of the sampled jurisdictions in each state is shown in Table 2 and a summary of the sample of politicians and bureaucrats is provided in Table 3.

To my knowledge, this sampling procedure results in the most comprehensive set of politician surveys ever conducted in India or elsewhere.[12] The response rate was also quite good: in Bihar, we were able to interview all but 4 of the 219 sampled mid- and high-level politicians, the majority of which were block panchayat presidents, for a non-response rate of only 1.8%. In Jharkhand, we were unable to interview 3 of 115 mid- and high-level politicians, all of whom were block panchayat presidents, resulting in a non-response rate of 2.6%.[13]

Table 2 – Distribution of Sampling Units by State and Office

Administrative Region	Bihar	Jharkhand	Uttar Pradesh
Districts	15	9	30
Blocks	67	16	149
Village Councils	166	118	298
Total Sampled Units	248	143	477

[11] For additional details, see Dunning and Nilekani (2013).
[12] Similar surveys are currently being conducted in an additional set of states.
[13] A small portion of the Uttar Pradesh surveys are yet to be conducted, so the final response rate is not currently available.

Table 3 – Overall Sample

Politician Group	Type of Politician	Bihar	Jharkhand	Uttar Pradesh
High-level	Members of Parliament	17	6	19
	Members of the Legislative Assembly	53	18	88
Mid-level	District Council Presidents	14	8	17
	District Council Members	13	12	19
	Block Council Presidents	63	32	26
	Block Council Members	61	36	36
Low-level	Village Council Presidents	158	120	280
	Village Council Members	328	234	592
Total Sample		707	466	1077

Questionnaire Scenarios and Survey Experiment

The questionnaire utilized a survey experiment to evaluate politicians' perceptions of how rents from the three types of corruption are allocated across government and non-governmental actors. The survey-experimental design was used to ensure that exposure to one scenario did not affect respondents' subsequent perceptions of and responses to other scenarios.[14]

The scenarios were developed to reflect the different types of corruption discussed above. The full text of the scenarios is provided in Appendix A. Two scenarios represent low-level corruption. In the first, a citizen is attempting to collect his monthly ration of subsidized foodstuffs when he is approached by a man saying that he knows people at the department and can help the individual for a fee (Rs. 100 or ~ U.S. $2). This reflects a situation that is most likely to be faced by the poor. In a recent survey, 16% of people utilizing the public distribution system[15] (or 7% of the total population) reported having paid a bribe, with the typical amount

[14] Randomization of question order within surveys proved logistically challenging, but this option is being explored for future surveys in other states.

[15] India's public distribution system is a food security programs that provides subsidized foodstuffs and non-food items to the poor, via a network of public distribution or "ration" shops. In order to access these goods, individuals must have a "ration card" that documents their eligibility.

ranging from Rs. 50 to 500 (U.S. $1-10) (TII/CMS 2005). In the second low-level corruption scenario, an individual attempts to make a change in his land record (a basic property ownership document) at the Revenue Department, but there is a dispute with his neighbor over the border of the plot. In order to resolve the issue, the Revenue official asks for an additional "fee," proposed in the questionnaire to be Rs. 1000 (U.S. $20). In the same survey noted above, 48% of people who interacted with the government for land records paid a bribe (approximately 7% of the total population), with the average bribe paid at approximately Rs. 2,000 (U.S. $40) (TII/CMS 2005).

To represent mid-level corruption, a scenario was used in which there is a project to build a road through a village and instead of a competitive bidding process to choose a contractor for the project, the local administration grants the contract to a company that has promised to provide campaign contributions to politicians in the area (Rs. 100,000 or U.S. $20,000). In the fourth and final scenario, chosen to reflect high-level corruption, a new policy is being considered by the state government to change regulations regarding industrial development policy in the state. In order to influence the policy in their direction, a number of large companies are said to have secretly given politicians campaign "contributions." The proposed size of the bribe in this case is Rs. 1,000,000 (U.S. $200,000).

For high- and mid-level politicians, each respondent was presented with two of the four scenarios, which were altered in order across randomly assigned versions of the questionnaire. Low-level politician respondents were presented with one scenario.[16] The scenario was described and the respondent was asked how common is the interaction just portrayed. The respondent was then asked how they think the amount paid would be allocated across a set of individuals and groups, including local administrators and politicians, state politicians, and political parties.

[16] Low level politicians were presented with only one scenario due to the larger sample of these respondents and a longer questionnaire.

Measures of Rent Distribution and Government Centralization

Building on these scenarios, I develop a new measure to evaluate the relative sharing of rents perceived by respondents. Similar to measures of the effective number of parties, I measure the Effective Distribution of Rents (EDR) based on the proportion of rents each respondent allocated to each type of individual in responding to a given scenario. The formula for the calculation is $n = 1/\Sigma p_i^2$ where n denotes the effective distribution of rents and p_i is the proportion of rents received by each type of actor.

I also develop a new set of measures to gauge the degree of government centralization. Within India's states, there is little variation in formal institutions that would lead to differing centralization across or within states. However, there is substantial variation in the strength of ruling parties both inter- and intra-state. Within states, parties that hold power in the state government may draw their strength from particular regions or from particular levels of government. For example, within a single district, there are typically multiple state assembly constituencies. Thus, districts can vary quite dramatically in the degree to which a single party dominates the administrative region in terms of their state legislative power.

I draw on this variation to develop a measure of centralization that emphasizes the relative strength of parties at the district level. The district is a particularly appropriate level for this measure, as it is the level at which a substantial number of government programs are initially implemented.[17] I calculate measures both for the proportion of seats held by the party with the most seats in each district (DistrictPartyPropSeats) as well as the proportion of seats in the district held by the ruling party or coalition in the state (StateGovPropSeats). The latter is a stronger measure of centralization, as it measures the degree to which the ruling state party(ies)

[17] Even resources for those programs that have been formally decentralized to village councils for implementation typically pass through the district level.

also hold power at the district level. Given the arguments above, we should expect to see greater transfer of rents, perhaps most likely upwards in the hierarchy, in those districts with stronger representation by state government parties at the district level.

Findings

In this section, I discuss tests of the spread of rents across actors and the relationship between this distribution and both the type of corruption and degree of government centralization. I first present the findings for politicians' perspectives on the distribution of rents across all types of actors, before disaggregating the findings according to the type of corruption. I then consider overall results for the effective distribution of rents. Throughout the discussion, I present consolidated findings from each of the two surveys separately, with responses from mid- and high-level politicians (MPs, MLAs, district representatives, and block representatives) presented in the first table and those of low-level politicians (village council representatives) presented in the second table for each analysis. The responses from these two broad groups often display substantial differences that would be lost with a pooled presentation.

Distribution of Rents

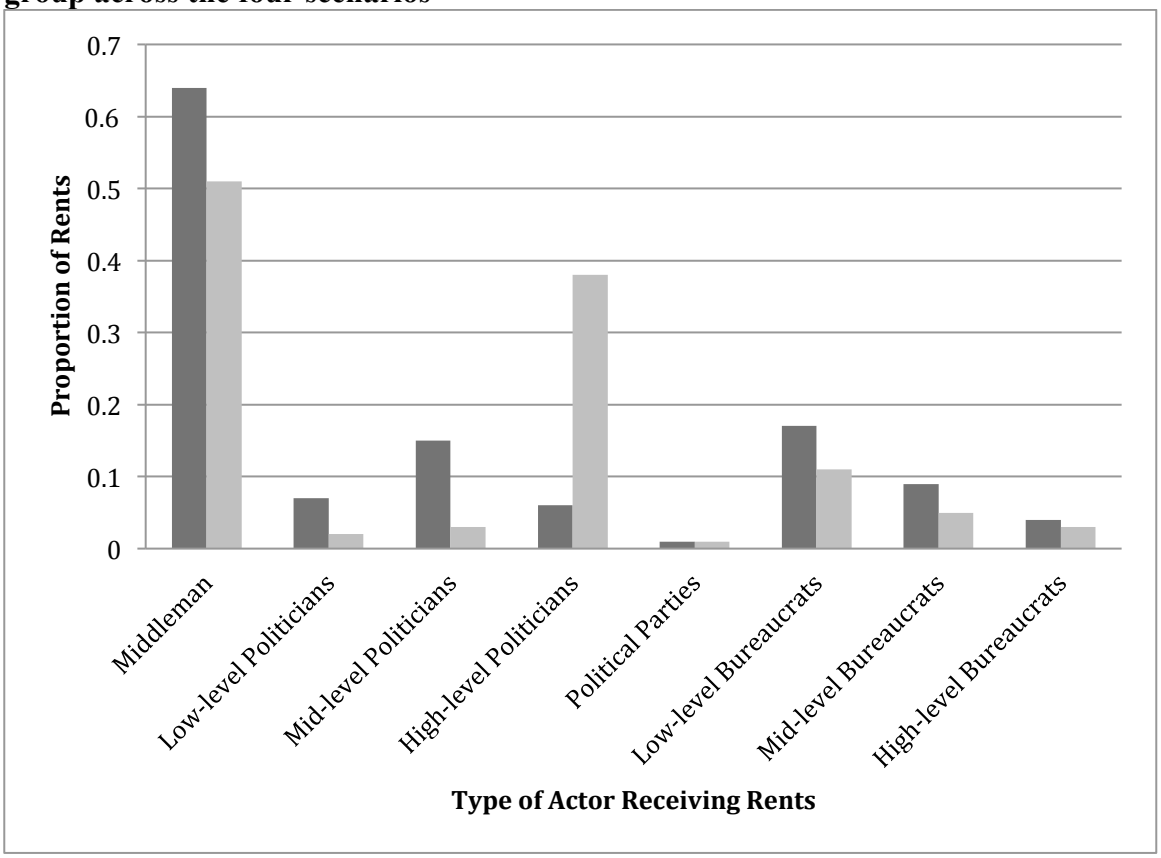
The first set of tests evaluates responses to questions in which respondents were asked to allocate the bribe described in the scenario across a set of individuals and organizations. The goal of this question was to assess the degree to which respondents perceive the sharing of rents across government and non-government actors. In other words, is the direct recipient of the bribe the only person who profits from the act, or is there a perception of rent spillovers, to the benefit of other actors? While this question does not allow us to observe the mechanism(s) of allocation,

such as Wade's (1984) description of the pressure on bureaucrats to share rents with politicians in order to ensure the former's position or enable transfer to a more preferable position, at a minimum it allows for independent validation that rents are perceived to be shared across actors, as well as to test whether this distribution differs across types of corruption.

Figure 1 summarizes the findings for the three states. In order to compare across the scenarios, which each involved a different amount of money to be divided across actors, I converted the absolute numbers into a proportion of the overall amount allocated in each scenario. As the graph shows, there is no single actor type that is expected to receive all of a bribe that is paid. In general, middlemen are expected to receive the largest proportion of bribes, but other actors, including high-level politicians, mid-level politicians, and low-level bureaucrats are also perceived to receive, on average, more than a tenth of the bribe paid.

These findings differ based on the position of the respondent. Mid- and high-level politicians (light gray bars) perceive high-level politicians to receive a larger proportion of bribes than low-level politician respondents (dark gray bars) do. Low-level politicians, in contrast, perceive middlemen, mid-level politicians, and low-level bureaucrats to receive a larger allocation of rents. Interestingly, these findings also contradict what we might expect to see in terms of social desirability bias. Each group of respondents, low-level politicians and mid-/high-level politicians, reports perceiving that its own peers receive a larger proportion of rents than they are perceived to receive by the other group.

Figure 1 - Mean proportion of funds allocated by the respondent to each type of actor group across the four scenarios*



*Dark gray bars represent responses by low-level politicians and light gray bars represent responses from mid- and high-level politicians.

Distribution of Rents and Type of Corruption

While these overall findings highlight that, in general, the money paid in a bribe is not expected to go to a single actor, the specific allocation of rents may differ based on the type of corruption. As outlined in the typology discussion above, actors at different levels of government are likely to play a primary role in different types of corruption. In addition, rent-sharing may be most likely in activities involving a large number of actors and major public contracts, such as in the public works initiatives characterized by mid-level corruption.

Tables 4 and 5 present results for initial tests of these expectations by disaggregating responses to the "allocate the bribe" question by the type of corruption in the scenario.[18] The first observation is that, as with the overall results, multiple individuals are expected to receive some portion of the rents in each case. However, the distribution of rents does differ quite dramatically across the scenarios and these differences reflect reasonably well the types of corruption. For example, the middleman is expected to receive a significant majority of the rents in both low-level corruption scenarios, but his share of rents drops dramatically in the mid-level corruption scenario and drops again substantially in the high-level policy corruption scenario. The opposite is the case for high-level politicians, who garner only a small share of rents from low-level corruption, but see their take increase in the road (mid-level corruption) and, in particular, policy (high-level corruption) scenarios (as previously noted, low-level politicians allocated a much smaller share of rents to high-level politicians than did higher-level politician respondents).[19]

[18] The proportions for each scenario do not add up exactly to one (1) due to differences in the number of response categories in the Bihar survey instrument versus the instrument used in Jharkhand and Uttar Pradesh.

[19] A secondary finding is that respondents did not simply allocate a large proportion of the rents to the first category of individual listed in the questionnaire.

Table 4 – Mean proportion of funds allocated by the respondent to each type of actor group on the four scenarios – Respondents are mid-level and high-level Politicians (standard deviation in parentheses and largest proportion for each scenario in bold).

	Low-level Corruption		Mid-level Corruption	High-level Corruption
	Ration	Land	Road	Policy
Middleman	**.91 (.21)**	**.80 (.33)**	.31 (.46)	.00 (.01)
Low-level Politician	.00 (.03)	.01 (.03)	.06 (.15)	.00 (.03)
Mid-level Politician	.00 (.01)	.01 (.08)	.10 (.29)	.01 (.04)
High-level Politician	.00 (.01)	.01 (.06)	**.54 (.49)**	**.95 (.19)**
Political Party	.00 (.00)	.00 (.00)	.02 (.14)	.01 (.08)
Low-level Bureaucrat	.06 (.14)	.36 (.36)	.01 (.05)	.00 (.03)
Mid-level Bureaucrat	.01 (.05)	.06 (.17)	.11 (.26)	.02 (.10)
High-level Bureaucrat	.03 (.09)	.17 (.21)	.01 (.10)	.01 (.05)

Table 5 – Mean proportion of funds allocated by the respondent to each type of actor group on the four scenarios – Respondents are low-level Politicians (standard deviation in parentheses and largest proportion for each scenario in bold).

	Low-level Corruption		Mid-level Corruption	High-level Corruption
	Ration	Land	Road	Policy
Middleman	**.76 (.35)**	**.74 (.33)**	**.33 (.28)**	.14 (.21)
Low-level Politician	.05 (.16)	.06 (.16)	.13 (.20)	.08 (.19)
Mid-level Politician	.02 (.12)	.03 (.12)	.29 (.35)	**.54 (.42)**
High-level Politician	.01 (.04)	.01 (.06)	.14 (.25)	.18 (.33)
Political Party	.00 (.01)	.01 (.05)	.00 (.02)	.04 (.15)
Low-level Bureaucrat	.13 (.24)	.30 (.35)	.10 (.14)	.06 (.13)
Mid-level Bureaucrat	.04 (.12)	.06 (.15)	.28 (.36)	.13 (.29)
High-level Bureaucrat	.04 (.14)	.04 (.10)	.02 (.05)	.02 (.08)

While the findings for middlemen and high-level politicians are the most dramatic, differences are also evident for other groups, such as low-level bureaucrats, who benefit most from the land registration scenario, and mid-level politicians, who are consistently expected to see a reasonable benefit from corruption in road contracts, versus lower forms of corruption.

More generally, these findings likely reflect the intuitive expectation that the person with the most direct control over the distribution of the particular good or service under consideration is expected to receive the largest proportion of rents from a corrupt act, but exceptions to this rule highlight what may be important underlying dynamics of corrupt activities. In both examples of low-level corruption, in rations and land administration, bureaucrats at all levels of government are perceived to benefit to some degree from the extraction of rents, even when a middleman plays a role in the transaction. In the case of land records, all levels of politicians are also seen to benefit from these transactions, though to a much smaller degree.

For mid-level corruption—here corruption in the allocation of road contracts—high-level politicians, who have little direct authority over this public resource, are seen to be significant beneficiaries of corrupt activities. This is despite the fact that mid-level bureaucrats (who are expected to receive rents, but a similar or substantially smaller proportion) should, in theory, have the greatest control over the implementation of transportation programs. With regard to policy-making, while high-level politicians dominate the allocation of expected benefits, mid-level bureaucrats are also expected to reap a small benefit, which may reflect their role in policy implementation.

Additional analyses help to evaluate further the degree to which each type of actor is expected to benefit from differing types of corruption. I use *t*-tests to examine within-actor differences in share of rents (Tables 6 and 7). In each table, the columns reflect difference in

means calculations for each pair of scenarios, e.g. the mean proportion of rents allocated to a particular type of actor in the Ration scenario minus the mean proportion of rents allocated to the same actor type in the Land scenario. The rows reflect the various types of actors. Thus, going down one column allows for a comparison of two scenarios in terms of the proportion of rents allocated to all actor types. Alternatively, looking across a single row allows for a comparison within a single actor type of the relative perceived rents received by that actor across each of the scenario pairs. Overall, the findings validate what we would expect based on the mean responses shown in the previous two tables. The differences are largest for middlemen and high-level politicians, with middlemen consistently benefiting more from lower levels of corruption and high-level politicians consistently benefiting more from higher levels of corruption.

Some additional interesting findings emerge for other types of actors. Among other elected officials, low-level politicians are seen to benefit most from corruption in the road contract scenario versus all other examples of corruption, though mid- and high-level politicians perceive this to be the case (Table 6) more than low-level politicians themselves (Table 7). Corruption in the Road scenario is also seen to provide the largest proportion of rents for mid-level politicians, however low-level politician respondents (Table 7) (more than their high-level peers (Table 6)) also perceived mid-level politicians to benefit significantly from corruption in the policy realm. With regard to political parties, all respondents see corruption in policy making as the most likely to garner rents for parties. While the difference in proportions here is quite small, the absolute benefit to parties from a single corrupt transaction could still be substantial, given the value of the rents allocated in this scenario.

Among bureaucrats, the ration and land scenarios, indicative of low-level corruption, are generally perceived to be more lucrative than higher forms of corruption for low-level

administrators. Mid-level bureaucrats, in contrast, are expected to benefit most from corruption in road contracts, with mixed findings for other types of corruption. This result highlights the relative importance of mid-level corruption to mid-level bureaucrats and thus may have implications for the quality of a substantial range of policy implementation at the district level. The findings for high-level bureaucrats display statistically significant results only in the sample of mid- and high-level politicians (Table 6). Within this group, they are seen to benefit most from corruption in land administration.

Table 6 – Bihar, Jharkhand, and Uttar Pradesh - *t*-tests comparing the mean proportion of funds allocated by the respondent to each actor type based on the four scenarios – Respondents are mid- and high-level politicians (Difference in means is shown, with t-ratio in parentheses).

Difference in Means ***Recipient Type***	Ration-Land	Ration-Road	Ration-Policy	Land-Road	Land-Policy	Road-Policy
Middleman	.11** (2.78)	.60*** (11.46)	.92*** (42.96)	.56*** (9.10)	.82*** (23.99)	.24*** (5.08)
Low Politician	-.00 (-.88)	-.05*** (-4.35)	.00 (.52)	-.05*** (-4.35)	.00 (.98)	.05*** (4.85)
Mid Politician	-.01 (-1.55)	-.11*** (-4.72)	-.01* (-2.27)	-.10*** (-4.50)	-.00 (-.83)	.10*** (4.75)
High Politician	-.01* (-2.49)	-.54*** (-14.33)	-.95*** (-72.93)	-.52*** (15.14)	-.93*** (-58.22)	-.41*** (-11.12)
Party	-.00 (-.76)	-.02* (-2.22)	-.01* (-2.16)	-.02* (-2.56)	-.01* (-2.05)	.01 (1.12)
Low Bureaucrat	-.29*** (-11.14)	.05*** (4.75)	.06*** (5.66)	.34*** (12.76)	.35*** (12.96)	.01 (1.31)
Mid Bureaucrat	-.05*** (-4.44)	-.10*** (-4.88)	-.01 (-.97)	-.05* (-2.18)	.04** (2.93)	.09*** (4.70)
High Bureaucrat	-.14*** (-8.68)	.04*** (3.53)	.02** (2.61)	.06** (3.27)	.06*** (4.42)	.01 (.60)
N	162-418[20]	176-346	167-420	150-380	176-372	155-382

[20] The main discrepancy in the N across the tests comparing each pair of scenarios is due to the fact that "middleman" was included as an answer category in the Bihar survey instrument only for the Ration scenario and "high-level bureaucrat" was included only in the Ration and Land scenarios. As a result, tests for these actor categories involving other scenarios use data only from Jharkhand and Uttar Pradesh.

Table 7 – Bihar, Jharkhand, & Uttar Pradesh - *t*-tests comparing the mean proportion of funds allocated by the respondent to each actor type based on the four scenarios – Respondents are low-level politicians (Difference in means is shown, with t-ratio in parentheses).

Difference in Means ***Recipient Type***	Ration-Land	Ration-Road	Ration-Policy	Land-Road	Land-Policy	Road-Policy
Middleman	.43*** (6.54)	.02 (.40)	.62*** (11.58)	.41*** (6.39)	.60*** (11.54)	.19*** (3.53)
Low Politician	-.08** (-3.07)	-.01 (-.74)	-.03 (-1.43)	-.07* (-2.50)	-.02 (-.83)	.05 (1.42)
Mid Politician	-.26*** (-8.66)	-.00 (-.34)	-.51*** (-14.91)	-.26*** (-8.18)	-.51*** (-14.20)	-.25*** (-3.79)
High Politician	-.13*** (-6.48)	-.00 (-.29)	-.17*** (-6.90)	-.12*** (-5.93)	-.17*** (-6.47)	-.05 (-.95)
Party	-.00 (-1.76)	-.01 (-1.44)	-.04** (-2.91)	.00 (.33)	-.03* (-2.08)	-.03 (-1.62)
Low Bureaucrat	.02 (.77)	-.17*** (-5.46)	.07* (2.49)	.20*** (4.15)	.24*** (5.96)	.04 (1.84)
Mid Bureaucrat	-.24*** (-7.69)	-.03 (-1.86)	-.10*** (-3.78)	-.21*** (-6.21)	-.07* (-2.46)	.14* (2.59)
High Bureaucrat	.02 (.76)	-.00 (-.08)	.02 (1.03)	.02 (1.05)	.02 (1.38)	.00 (.18)
N	187-243	257-350	204-266	178-229	195-253	81-151

Effective Distribution of Rents

A final test of the difference in allocation of rents uses the effective distribution of rents measure described above. This measure evaluates overall rent distribution across different types of corruption, rather than disaggregated by type of actors. The summary statistics for these measures are provided in Tables 8 (mid- and high-level politician respondents) and 9 (low-level politician respondents). Recall that the road construction scenario, as representative of public works programs, is expected to have the greatest dispersion of rents (Wade 1985). Here, however, we see that the relative size of EDR scores differs across the two pools of respondents, with mid-

and high-level politicians reporting the highest EDR for the land scenario while low-level politicians attribute the highest EDR to the road scenario.

Table 8 – Summary Statistics for Effective Distribution of Rents, Respondents are mid- and High-level Politicians, all States[21]

Scenario	Observations	Mean	Standard Deviation	Minimum	Maximum
Ration	215	1.36	.81	1	4.57
Land	198	1.71	.90	1	4.83
Road	175	1.30	.89	1	6.74
Policy	198	1.13	.66	1	6.74

Table 9 – Summary Statistics for Effective Distribution of Rents, Respondents are low-level Politicians, all States

Scenario	Observations	Mean	Standard Deviation	Minimum	Maximum
Ration	192	1.55	1.03	.8	7.69
Land	168	1.68	.94	1	4.70
Road	66	2.16	1.30	1	7.56
Policy	93	1.73	1.18	.5	6.67

To further evaluate differences in EDR across scenarios, I again use difference of means tests, as reported in Tables 10 and 11. As implied by the summary measures for mid- and high-level respondents, the difference in the effective distribution of rents for the land scenario versus all other scenarios is statistically significant. In contrast, low-level respondents attribute a larger effective distribution of rents to the road scenario and this difference is again statistically significant in all cases. Thus, there is only mixed evidence to support the hypothesis that the distribution of rents should be greatest in corrupt transactions related to public works programs.

[21] Because the options for this question differed somewhat on the Bihar questionnaire, it is possible that the Bihar results may be disproportionately affecting the findings reported here. However, tests excluding the Bihar data produce similar results, with the overall means slightly smaller in all cases but with the same relative rankings and the results of tests of the difference in mean EDR in the same direction, though only the differences between the land and road scenarios and the land and policy scenarios are statistically significant.

Table 10 – Bihar, Jharkhand, & Uttar Pradesh - *t*-tests comparing the Effective Distribution of Rents in the four scenarios – Respondents are Mid- and High-level politicians

Difference of Means	Ration-Land	Ration-Road	Ration-Policy	Land-Road	Land-Policy	Road-Policy
Mean Effective Distribution of Rents	-.33*** (3.89)	.11 (1.23)	.22** (2.85)	.40*** (4.27)	.53*** (7.46)	.16 (1.82)
N	387	342	386	351	360	350

Table 11 – Bihar, Jharkhand, & Uttar Pradesh - *t*-tests comparing the Effective Distribution of Rents in the four scenarios – Respondents are Low-level politicians

Difference of Means	Ration-Land	Ration-Road	Ration-Policy	Land-Road	Land-Policy	Road-Policy
Mean Effective Distribution of Rents	-.14 (-1.31)	-.61*** (-3.86)	-.19 (-1.37)	-.47** -3.08)	-.05 (-.38)	.42* (2.13)
N	360	258	285	234	261	159

Government Centralization

A final set of tests, using basic bivariate regressions, give us an initial sense of the relationship between government centralization and the distribution of rents. Results are shown in Tables 12 and 13. As noted above, higher levels of government centralization are expected to facilitate the coordination of rent-seeking and the movement of rents up through the political hierarchy (Shleifer and Vishny 1993; Bardhan 1997). Thus, regions with greater centralization should be associated with a more significant spread of rents across actors.

The first group of models (1-4) tests the relationship between the degree to which any party dominates politics at the district level and the perceived distribution of rents in each scenario. In these cases, the party with the largest proportion of seats in the district is not necessarily a ruling party in the state. In the second set of models (5-8), the independent variable

is a measure of state government strength at the district level, based on the proportion of legislative seats in the district held by the ruling party or coalition at the state level.

Table 12 presents the results for mid- and high-level politician respondents. There is no clear relationship between district party strength and the distribution of rents, with no statistically significant results and both positive and negative coefficients. In contrast, the second set of results highlights a statistically significant relationship between state government strength and the effective distribution of rents in the Road scenario. This relationship is in the predicted direction, with greater state government strength at the district level associated with a larger effective proportion of rents, and is substantively relevant; a move from 0 to 1 in the proportion of seats held is associated with an increase of more than half a standard deviation in the effective distribution of rents. The results for low-level politician respondents, shown in Table 13, display no statistically significant relationships.

Table 12 – Government Centralization and Effective Distibution of Rents – Mid- and High-level Politicians (bivariate OLS models)

	District Party Strength				State Government Strength			
	Model 1 Ration	Model 2 Land	Model 3 Road	Model 4 Policy	Model 5 Ration	Model 6 Land	Model 7 Road	Model 8 Policy
District Party Prop Seats	.02 (.08)	-.23 (-.66)	.52 (1.48)	.11 (.44)				
State Gov Prop Seats					.02 (.12)	.34 (1.62)	.50* (2.19)	.18 (1.17)
Constant	1.34 (7.00)	1.85 (8.32)	.97 (4.20)	1.06 (6.47)	1.35 (9.77)	1.47 (9.37)	.95 (5.50)	1.01 (9.06)
N	215	198	175	198	215	198	175	198
Adjusted R-squared	-.00	-.00	.01	-.00	-.00	.01	.02	.00

Table 13 – Government Centralization and Effective Proportion of Rents – Low-level Politicians (bivariate OLS models)

	District Party Strength				State Government Strength			
	Model 1 Ration	Model 2 Land	Model 3 Road	Model 4 Policy	Model 5 Ration	Model 6 Land	Model 7 Road	Model 8 Policy
District Party Prop Seats	-.54 (-1.31)	-.13 (-.34)	-1.05 (-1.28)	-.40 (-.61)				
State Gov Prop Seats					.03 (.12)	.34 (1.30	-.84 (-1.59)	.44 (1.05)
Constant	1.88 (7.11)	1.76 (7/17)	2.86 (4.99)	1.98 (4.68)	1.52 (8.14)	1.46 (7.81)	2.74 (6.83)	1.44 (4.78)
N	192	168	66	93	192	168	66	93
Adjusted R-squared	.00	-.00	.01	-.01	-.00	.00	.02	.00

Discussion and Conclusion

The presence of corruption, and even a range of its causes and consequences, is relatively well-covered territory in analyses of political economy. Yet, the organization of corrupt practices and the nature by which these practices differ is largely understudied, leaving substantial questions regarding the practice and persistence of corruption unanswered. The empirical analysis presented here provides evidence to suggest that the type of corruption plays an important role in shaping a primary characteristic of corruption—the distribution of rents across actors. In addition, these findings, based on original survey data from politicians at all levels of India's government, provide qualified evidence of a link between the degree of centralization and the distribution of rents, with more centralized governments associated with greater rent distribution in mid-level corruption.

I highlight for the first time that politicians perceive the distribution of rents across actors to differ depending on the type of corruption. For examples of low-level corruption, middlemen and low-level bureaucrats are expected to reap the largest proportion of rents. For mid-level corruption, on the other hand, high-level politicians are expected to reap substantial rents, as well

as middlemen, both low- and mid-level politicians, and mid-level bureaucrats. The high-level corruption scenario resulted in a clear consensus among mid- and high-level politician respondents that high-level politicians are the predominant beneficiaries of this corruption type, followed by mid-level bureaucrats.[22] These findings offer systematic empirical support for the popular belief that differing levels of actors benefit from different kinds of corrupt behavior, but they also go beyond this to show which actors are most likely to be benefiting and, as such, who would be the least likely to support anti-corruption measures targeting various types of corruption. In general, where individuals differentially benefit from distinct types of corruption they should have clear incentives to pursue the types of corruption for which they will receive the greatest benefits. This set of findings, then, also has important implications in general for understanding the motivations of politicians to engage in, or support, different types of corruption.

At the same time, the findings throw some doubt on existing theoretical arguments regarding the likely relationship between the distribution of rents and both the level of government centralization and the type of corruption. While centralization, as just noted, is strongly correlated with rent distribution in the road contracting scenario, this finding holds only for mid- and high-level politician respondents and we see no similar relationships for other types of corruption. Thus, the strength of this relationship requires further investigation, perhaps through the use of both additional scenarios and alternative measures of government centralization.

[22] While low-level politicians attributed more rents to mid-level politicians in this scenario, it seems reasonable that they are less likely than their mid- and high-level peers to be aware of the allocation of rents at high levels.

Similarly, the hypothesis in the existing literature that we should see the most significant sharing of rents in situations involving public works received mixed support from the analysis. Theoretically, we should see the broadest distribution of rents in the road contract scenario, as this best represents public works programs in general. Yet, mid- and high-level politicians perceive the greatest sharing of rents, based on the effective distribution of rents measure, in the land records scenario, an example of low-level corruption. Low-level politicians, in contrast, perceive the greatest distribution of rents in the road contracting, the mid-level corruption scenario. It this case, while the type of corruption is clearly linked to variations in the distribution of rents, the empirical analyses suggest that further theoretical work is necessary to illuminate the underlying mechanisms driving this relationship.

These analyses also take advantage of a new typology of corruption, introduced here, which emphasizes the type of individual or organization typically involved in paying a bribe. Unlike in much previous work, this typology allows for distinguishing between different forms of corrupt behavior and comparing characteristics of these behaviors. Explicit attention to the variation in corruption types allows, here, greater insights into the organization of corruption and distribution of rents and should similarly enable further research into the characteristics of corruption more generally.

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Appendix A – Corruption Scenarios

Scenario 1 – Rations

An individual goes to collect his monthly ration, but there is a long line. The person is approached by a man who says that he knows people in the department and can help the individual for a fee.

If the individual pays 100 Rupees to gain access to their monthly ration, how much money, if any, will each of the following individuals receive?

Scenario 2 – Land records

A man goes to the Revenue Department to make a change to his land record, but there is a dispute with his neighbor over the border of the plots. The Revenue official offers to help resolve the situation for a fee.

If the individual pays 1,000 Rupees, how much of the fee, if any, will each of the following individuals receive?

Scenario 3 – Road contract

There is a project to build a road through a village in the state. Instead of a competitive bidding process to choose a contractor for the project, the local administration grants the contract to a company that has promised to provide campaign contributions to politicians in the area.

If the company contributes 1 lakh (Rs. 100,000), how much of that money, if any, will each of the following individuals receive?

Scenario 4 – Legislation

A new policy is being considered by the state government to change regulations regarding industrial development policy in the state. A number of large companies have secretly given politicians "contributions" in order to influence the policy in their direction.

If a company gives a 10 lakh (Rs. 10,000,000) contribution to a MLA, how much of that money, if any, will go to the following individuals?

Appendix B

Table B1 - Studies Analyzing Corruption: Variables, Concepts, and Measures

Article/Book	IVs and/or DVs	Concept	Measurement Strategy
Ades, Alberto and Rafael Di Tella. 1999.	- IVs: "Natural" rents, e.g. from natural resources, and "market" rents, e.g. from lack of competition	- Undefined	- Business Intelligence corruption index, World Competitiveness Report scores for "the extent to which improper practices (such as bribing or corruption) prevail in the public sphere" (World Competitiveness Report, as quoted in Ades and Di Tella, 986)
Alt, James E. and David Dreyer Lassen. Forthcoming.	- IV: Prosecutorial resources	- The misuse of political and administrative power at the expense of citizens; the misuse of public office for private gain	- Corruption convictions in the United States, as reported by the Public Integrity Section of the US Department of Justice.
Bertrand, Marianne, Simeon Djankov, Rema Hanna, and Sendhil Mullainathan. 2007.	- DV: Ability to obtain driver's license	- Undefined - Operationalized as extra payments to agents or bureaucrats to receive a government service (driver's license)	- Difference between proportion of subjects in the "bonus for fast receipt of driver's license" treatment and those in the lesson and control conditions who receive their license, how quickly they receive it, whether they take the licensing exam, whether paid above official fees, whether tried to bribe, whether used an agent, etc.
Banerjee, Abhijit and Rohini Pande. No date.	- IV: Voter ethnicization (greater voter preference for the party representing her ethnic group)	- Undefined - Information not provided on details of corruption scale used and content of vignettes	Three measures: - Survey of journalists and politicians about politicians and candidates - Index of the economic gain by the politicians after entering politics, averaging: "whether the politician used political office for personal gain, whether he or his family saw a significant improvement in their economic position, whether they started or expanded a business, and whether they started of expanded contracting activity" (19). - Whether the politician has a criminal record
Barr, Abagail and	- IV: Country of	- Payment/receipt of a bribe	Individual corruption level

Danila Serra. 2010.	origin	for a "corrupt" service (e.g. reduction in tax, preferential treatment in court hearing, speedier admission to a hospital)	- Whether subjects are willing to pay a bribe for a "corrupt" service and how much - Whether willing to accept a bribe and how much Home country corruption level - Transparency International CPI
Bhavnani, Rikhil. 2010.	- IV: Holding political office	- Misuse of public office for private economic gain - Gains/benefits from public office	- Estimating changes in wealth among elected politicians versus those not elected who ran again in the next election
Bose, Niloy, Salvatore Capasso, and Antu Panini Murshid. 2008.	- DV: Quality of public infrastructure	"[W]hen bureaucrats leverage their positions to further their own interests" (1174).	- Transparency International Corruption Perceptions Index
Bussell, Jennifer. 2012a.	- DVs: Timing, comprehensiveness, and ownership and management model of eGovernment policies	- Corruption: the abuse of public office for private gain - Grand corruption: Corruption in procurement and government contracting - Petty corruption: Corruption in the delivery of public services	- Grand corruption: Index based on Government of India Report on the Member of Parliament Local Area Development Scheme - Petty corruption: Index based on Transparency International India and Centre for Media Studies Indian Corruption Study (survey of Indian citizens)
Chong, Alberto, Ana L. De La O, Dean Karlan, and Leonard Wantchekon. 2012.	- DV: Vote for candidates, turnout	- Undefined	- "[P]ercentage of resources mayors spent in a corrupt manner (i.e. spending where some form of irregularity was identified such as over-invoicing, fake receipts, diverting resources, fraud, etc.)" (3).
De Figueiredo, Miguel F. P., F. Daniel Hidalgo, and Yuri Kasahara. 2012.	- DV: Vote for candidates, turnout	- Undefined	- Convictions for impropriety while in government office.
Ferraz, Claudio and Frederico Finan. 2008.	- DV: Election outcomes	- "[A]ny irregularity associated with fraud in procurements, diversion of public funds, or over-invoicing" (710).	- "Each audit report contains the total amount of federal funds transferred to the current administration and the amount audited, as well as an itemized list describing each irregularity. Based on our readings of the reports, we codified the irregularities listed into those associated with corruption and

			those that simply represent poor administration" (709-710).
Fisman, Raymond and Edward Miguel. 2007.	- IVs: Cultural norms, legal enforcement	"The abuse of entrusted power for private gain."	- Accumulation of unpaid parking violations by diplomats in Manhattan
Gerring, John and Strom C. Thacker. 2004.	- IVs: Territorial sovereignty (unitary or federal), composition of the executive (parliamentary or presidential)	- Corruption: "An act that subverts the public good for private or particularistic gain" (300). - Political corruption: "An act by a public official (or with the acquiescence of a public official) that violates legal or social norms for private or particularistic gain" (Ibid.).	- Kaufman, Kraay, and Zoido-Lobaton index; Transparency International Corruption Perceptions Index
Glaeser, Edward L. and Raven E. Saks. 2006.	- IVs: Education, income, income inequality, racial fractionalization - DV: Economic development	"Official corruption" – "conflicts of interest, fraud, campaign-finance violations, and obstruction of justice" (1053). "Crimes by public officials for personal gain (Rose-Ackerman, 1975)" (1055).	- The number of government officials convicted for corrupt practices through the Federal justice department/the number of Federal corruption convictions per capita by state. - "The usual problem with using conviction rates to measure corruption is that in corrupt places, the judicial system is itself corrupt and fewer people will be charged with corrupt practices. This problem is mitigated with focusing on Federal convictions, because the Federal judicial system is relatively isolated from local corruption and should treat people similarly across space" (1054).
Golden, Miriam A. and Lucio Picci. 2005.	- N/A	Though not stated explicitly, the basic working definition of corruption here is the misuse of public finances.	"The difference between the amounts of physically existing public infrastructure (roads, schools, hospitals, etc.) and the amounts of money cumulatively allocated by government to create these public works. Where the difference between the two is larger, more money is being lost to fraud, embezzlement, waste, and mismanagement; in other words, corruption is greater" (37).
Mauro, Paulo. 1995.	- DV: investment	- Undefined	- Business International Corruption measures, based on surveys of BI in-country correspondents responding to the statement:

			"the degree to which business transactions involve corruption or questionable payments" (684).
McMillan, John and Pablo Zoido. 2004.	- IVs: opposition parties, the judiciary, the news media	- Undefined - Operationalized as bribes paid by the secret police chief to judges, politicians, and the news media	- Secret police chief Vladimiro Montesinos Torres' records of bribes paid
Montinola, Gabriella R. and Robert W. Jackman. 2002.	- IVs: Political competition, economic competition, inequality, public sector wages	- Undefined	- Business International corruption scores, Transparency International Corruption Perceptions Index
Olken, Benjamin A. 2007.	- IVs: Government audits, grassroots participation in monitoring	- Undefined - Operationalized as the misuse of public funds in building of roads	- The difference between official project cost (of building roads) and independent engineers' estimate of costs.
Olken, Benjamin A. and Patrick Barron. 2009.	- IVs: Market structure, price discrimination	- Undefined - Operationalized as bribes paid by truckers to police, soldiers, and weigh station attendants	- Observation of payments made by truckers during trips to an from Ache, Indonesia.
Reinikka, Ritva and Jakob Svensson. 2006.	N/A (review article)	"Political and bureaucratic capture, leakage of funds, and problems in the deployment of human and in-kind resources, such as staff, textbooks, and drugs" (360).	Public Expenditure Tracking Surveys – "A public expenditure tracking survey (PETS) tracks the flow of resources through these strata [layers of government bureaucracy], on a sample survey basis, in order to determine how much of the originally allocated resources reach each level" (360).
		- Misuse of public office/failure to perform	Frontline Provider Surveys/Quantitative service delivery survey - Unannounced visits to hospitals/schools to evaluate what

		required tasks while still taking salary	fraction of professionals were at their posts
		- Payment/receipt of bribes for services	- Firm/corporation surveys
Reinikka, Ritva and Jakob Svensson. 2004.	- IVs: Local community characteristics	- Undefined ("corruption" not used explicitly in the discussion, though it is referred to in footnotes and in further work by this authors citing this paper)	- The difference between money allocated to schools by the Ugandan government and money actually received -
Shleifer, Andrei and Robert W. Vishny. 1993.	- IV: Market structure of the supply of government goods - DV: Economic efficiency	- Government corruption: "[T]he sale by government officials of government property for private gain" (599).	- Unmeasured
Treisman, Daniel. 2000.	- IVs: Religion, colonial history, economic development, import levels, federalism, democracy	- The misuse of public office for private gain	- Transparency International Corruption Perceptions Index, Business International index of perceived corruption
Van Rijckeghem, Caroline and Beatrice Weder. 2001.	- IV: Bureaucratic wages	- Undefined	- International Country Risk Group corruption scores
Wei, Shang-Jin. 2000.	- DV: Foreign direct investment	- Undefined - Operationalized, in the author's interpretation of the surveys used, as "the administration of rules/laws	- Business International index of perceived corruption, International Country Risk Group corruption measure, and Transparency International Corruption Perceptions Index

		pertinent to foreign firms…weighted by efficiency level as perceived by those who were surveyed" (3).	