

When do middlemen matter? Evidence from variation in corruption in India

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Corruption is a persistent problem in developing countries, and recent scholarship suggests that middlemen play an important role in corrupt acts. Yet, while intermediaries can reduce transaction costs in illicit exchange, they also increase agency costs and reduce benefits to others. The involvement of middlemen may thus vary. I argue that middlemen are most likely to engage in, and benefit from, the subset of corruption transactions that are repeated frequently, but not by the same parties. I test the implications of this argument using survey experiments administered to a large sample of politicians and bureaucrats at multiple levels of government in India. I show that middlemen are critical, but far from ubiquitous. Intermediaries are more relevant where corrupt deals are *frequent* but involve *unfamiliar* potential principals. My results suggest that anticorruption efforts must pay greater attention to the type of corruption and the incentives of middlemen.

1 | INTRODUCTION

Corruption is a major concern across developing countries. Cross-national studies estimate the economic cost of bribery at up to \$2 trillion, or 2% of global domestic product (International Monetary Fund, 2016). In a country such as India, more than half of households are estimated to have paid a bribe to acquire public services at some point (Transparency International India [TII] & Centre for Media Studies [CMS], 2005). Nevertheless, how corrupt transactions actually occur is not obvious; corruption often involves parties who do not know each other and who potentially expose themselves to incomplete deals, official punishment, or worse. Dilemmas of trust and matchmaking have led scholars to underscore the importance of middlemen—generally understood as intermediaries who facilitate transactions of some type—as potential solutions to these problems.

Yet, we do not understand whether middlemen are always important to corruption and, if not, the conditions under which they may play a role. Recent theoretical work suggests that middlemen can be vital, minimizing transaction costs associated with negotiating deals while also fostering the perceived inevitability of corruption to ensure demand. However, the introduction of an intermediary can increase

agency costs and reduce rents available to the primary parties to an exchange—making middlemen less attractive. Empirical accounts reflect such trade-offs: In some cases, bribes are paid directly to state actors; in others, the use of middlemen is a ubiquitous characteristic of corrupt acts.

In this article, I examine the role of middlemen in corrupt transactions, as a lens into the industrial organization of corruption. What are the conditions under which the agency costs of middlemen will be overwhelmed by the benefits of solving information and trust dilemmas that might otherwise limit the feasibility of illicit transactions? When middlemen do play a role, are they crucial actors who can extract a large portion of the illicit gains, or only minor players who collect the crumbs of a transaction? Does the answer to this question differ depending on the type of corruption under consideration?

I make several contributions to understanding variation in the participation of middlemen in corruption. I develop a theoretical framework that helps explain why middlemen may often, but not always, play a role. I highlight two important aspects of corruption that help determine whether there is a market for middlemen: (a) the extent to which corrupt actions are repeated (I call this *frequency*) and (b) the degree to which the actors involved in corruption know each other (I call this *familiarity*). Simply, we should observe intermediation where a corrupt act is frequently repeated, but not by the same two parties. These same factors also affect the *relative* value of middlemen, enabling intermediaries to extract a larger proportion of rents where corruption is frequent but between unfamiliar parties—a middleman's fee as a percentage of a bribe increases in the demand for their services. This view provides an analytical structure to account for empirical variation in the intermediation of corrupt acts.

I then test these conceptual and theoretical claims using unique data from surveys of politicians and bureaucrats in three states in India. My empirical strategy adds to existing work on corruption in at least three ways. First, empirical evaluations of corruption are often difficult, given the illicit nature of corrupt acts. I use survey experiments to minimize the risk of social desirability bias in responses. Second, I use vignettes, which describe different corrupt activities, to contribute to a burgeoning literature on variation in the incentives for actors engaged in various types of corruption (Bussell, 2012, 2015; della Porta & Vannucci, 2012; Lambsdorff, 2007). Finally, survey-based analyses of corruption are often limited in that they incorporate responses from only one type of actor, while many different actors may have knowledge of corrupt transactions. To account for the potential role of political actors at many levels of government, my survey design incorporates politicians from all five levels of elected office and bureaucrats from the three main levels of policy implementation, thus including the range of public actors most likely to be engaged in corruption.

I find, first, that middlemen are often thought to be relevant actors in corrupt transactions, and this is the case even when a “middleman” is not mentioned in the content of a vignette. They are not, however, always expected to play a role, and there are clear differences in respondents' perceptions across dissimilar forms of corruption. Specifically, middlemen are perceived to be more likely in forms of corruption that happen frequently, but where the potential bribe giver and bribe receiver do not know each other, such as with speed money to access a basic public service. Second, the relative value of middlemen to a corrupt exchange, as measured by the proportion of rents they are perceived to extract, differs dramatically across types of corruption. Middlemen are perceived to extract a larger proportion of the rents from frequent, unfamiliar forms of corruption than from corruption that is rarer and between known parties, such as kickbacks in contracting or legislation.

This study contributes to three vibrant areas of current research: the role of middlemen in corruption, the dynamics of corruption in India, and the role of intermediaries in governance more generally. First, theories of middlemen to date have highlighted their role, but not the specific conditions under which they are likely to be relevant to a corrupt transaction (Bayer, 2005; della Porta & Vannucci, 2012; Lambsdorff, 2007; Oldenburg, 1987). My results suggest that while recent efforts to increase

attention toward middlemen are warranted, there are specific circumstances in which we should anticipate middlemen to facilitate corrupt exchanges.

Second, analyses of corruption in India have highlighted both the relationship between corruption and public service provision (Bertrand, Djankov, Hanna, & Mullainathan, 2007; Bussell, 2012; Davis, 2004; Gupta, 2005; Peisakhin & Pinto, 2010; Oldenburg, 1987; Widmalm, 2005) and the importance of illicit rents in electoral politics (Bhavnani, 2012; Sukhtankar & Vaishnav, 2015; Vaishnav, 2017). I build on this work by highlighting the specific ways in which nonstate actors engage with elected and appointed officials in corrupt acts that shape service delivery and policy design.

Finally, recent work on intermediaries highlights the important role of individuals who provide benefits to individuals in return for electoral support (Auyero, 2000; Camp, 2017; Stokes, Dunning, Nazareno, & Brusco, 2013; Witsoe, 2012). I build instead on work concerning actors with a more socioeconomic interest in intermediation of access to the state (Krishna, 2011; Manor, 2000; Reddy & Haragopal, 1985). The framework presented here for understanding intermediation of corruption in governance transactions may also be relevant to considerations of the role for intermediaries in other types of interactions.

In the following section, I outline briefly our existing understanding of the role middlemen play in corruption and highlight discrepancies and limitations in this knowledge. I then describe in greater detail my argument for why we should observe middlemen acting more frequently in, and gaining more relative value from, certain types of corruption. I subsequently present my empirical strategy and tests of the perceived role of middlemen in corrupt exchange. I conclude with a discussion of policy implications.

2 | THEORIZING THE PARTICIPATION OF MIDDLEMEN IN CORRUPTION

As has been recognized for decades, middlemen often play an important role in corrupt transactions. I use the term “middlemen” here specifically to refer to those actors engaged in the intermediation of corrupt acts (della Porta & Vannucci, 2012; Jancsics, 2015; Khanna & Johnston, 2007; Lambsdorff, 2007; Oldenburg, 1987). Thus, these actors can be understood as a subset of intermediaries—including the “fixers” often referenced in the literature on India—who may also provide a broader set of services, including legal facilitation to individuals interacting with the state. In practice, the same intermediaries may have distinct functions at different moments in time; I focus here on their specific role as middlemen.

Only recently has there been an upswing in theoretical accounts of why and how these actors contribute to corruption (e.g., Hasker & Okten, 2008). New work suggests that middlemen are often, or always, key actors in corrupt transactions, because they have the capacity to resolve multiple dilemmas faced by potential participants in a corrupt exchange. Simply put, middlemen increase the feasibility of corruption. By specializing in the nuances of illegal markets for goods and services, middlemen can facilitate transactions and reduce costs, thereby meriting their inclusion in an exchange even when they extract some portion of corrupt rents (della Porta & Vannucci, 2012; Lambsdorff, 2007; Oldenburg, 1987). In addition, these actors can reduce uncertainty and risk of exposure for potential bribers and bribe recipients, by drawing on social networks that informally facilitate matchmaking of bribers and recipients and by specializing in making these kinds of connections for particular forms of corruption (della Porta & Vannucci, 2012; Drugov, Hamman, & Serra, 2014; Lambsdorff, 2007; Oldenburg, 1987).

Attention to intermediation in corruption to date, however, has largely ignored the potential costs of adding actors to a transaction. The literature on middlemen more generally suggests that there are clear cases in which we should expect intermediaries to be excluded from transactions (Gehrig, 1993;

Yavas, 1994). In general, the efficiency gains of middlemen must be balanced against the commissions charged by these intermediaries (Yavas, 1994).

Because middlemen are assumed to charge a fee for their services, the overall welfare benefits of an intermediated transaction are expected to depend on both the quality of the intermediary and the cost to agents of conducting their own search. First, as the ability of intermediaries to make a successful match increases, so will their value to potential participants in a transaction. Second, as the costs of nonmediated search increase, so does the value of an intermediary (Yavas, 1994). Thus, middlemen should be less likely in low cost searches and where their matchmaking skills are minimal.

Given competing theoretical expectations about the role of middlemen, what can we say empirically? Oldenburg (1987) notes that “petty bribes” may involve only two actors, but that “as we move up the ladder—of rank, as well as the size of benefits and payoffs—middlemen . . . make their appearance” (p. 526). Indeed, della Porta and Vannucci (2012, pp. 135–172) offer a range of examples in areas such as match fixing and international market entry that suggest intermediaries are active at high levels of government. Yet, other work suggests that brokers are also frequently important actors in “street-level” corruption, such as payments to speed up acquisition of a driver’s license or other public service (Bertrand et al., 2007, p. 1639; Jancsics, 2015, p. 68).

Existing accounts also offer little insight into the *relative value* of middlemen to corruption. If middlemen are more likely in one form of corrupt transaction, then we might also assume that they are *relatively* more important to this form of exchange. If this is true, then we should observe middlemen extracting differential portions of the rents at stake across different forms of corruption.

Building on these accounts, I posit that there are two primary characteristics of corrupt transactions that affect the likely engagement of middlemen and their relative value to an exchange: the degree to which a given corrupt act is (a) repeated frequently and (b) involves unfamiliar parties. Put differently, middlemen will be most likely to play a valuable role when they can develop resources that allow them to enable a particular form of corruption—thereby increasing the efficiency of their matchmaking—and can put those resources to use in bringing together potential parties to corruption.

Consider first *frequency*. Potential middlemen can collect valuable information about many characteristics of a corrupt act, including the nature of bureaucratic processes, the specific individuals willing to be bribed and to what ends, and the amounts of money required to attain those ends. To the extent that similar bribes are paid to the same individuals for the same ends repeatedly over time—such as extra payments to receive a driver’s license without passing the driving test—a middleman can gain the necessary knowledge to facilitate these transactions, making him valuable to both individuals paying bribes and those receiving them.¹

Frequent repetition of official transactions also creates opportunities for cultivating relationships with state agents who are open to taking bribes. This requires an up-front investment to develop the trust of those agents that allows for an ongoing illicit association. Forming these relationships additionally puts a limit on the number of intermediaries who are likely to be active, allowing a middleman to retain a certain degree of monopoly over corrupt transactions in his domain and, thus, an ability to extract a portion of rents. In contrast with true market transactions, where many agents would likely fight over access to state agents, thus reducing individual margins, the need for an established, trusting relationship in conducting an illicit transaction helps to ensure some share of rents to the middleman. Overall, frequency can increase the quality of an intermediary and the efficiency with which they can make a match.

Examples of agents with experience in illicit aspects of bureaucratic transactions exist in many contexts. In Brazil, the middlemen who develop these transaction-specific skills are often known as *despachantes*, actors who “know the bureaucratic ropes, and can work their way around difficulties . . . [and] make payments to ensure that their clients’ papers move swiftly from desk to desk” (Bray, 2005, p. 116, as quoted in della Porta & Vannucci, 2012, p. 1589). The “agents” at New Delhi Transport

offices similarly engage in repeated efforts to facilitate driving licenses, such that it is clear which rules can and cannot be broached (Bertrand et al., 2007, p. 1666).

Frequency could, however, also *reduce* the demand for middlemen. If the individuals paying and receiving bribes repeat a transaction over time, then there becomes less need for the middleman—the briber and bribe recipient could develop their own trusting relationship and eventually exclude the middleman from the transactions. As previously noted, when the cost of searching for a partner goes down, so too do the efficiency gains of using a middleman.

This is why the second characteristic of corrupt exchanges—the familiarity of potential participants—is important. Similar exchanges may be repeated frequently, but for an intermediary to be relevant, these transactions cannot always involve parties known to each other. In particular, a middleman will be most relevant and valuable where one party remains the same and the other, either briber or recipient, changes with each deal. Here, the middleman will have information on the one party's interests that he can use to market his wares to potential third parties. Using again the example of driving licenses, this is likely to be the case when an individual citizen applies for a license and the middleman has a bureaucratic contact to whom he is funneling payments. Because the individual needing a license changes with every transaction, the middleman creates value by linking each new applicant to the corrupt counterpart.

Thus, a middleman's value is determined by the combination of access to high-quality information and relationships, acquired through repeat exposure to similar corrupt transactions, and the ability to use these resources to facilitate exchange between otherwise unlinked individuals. The more and better resources a middleman possesses, and the higher the demand for matchmaking, the more vital he will be to the successful execution of a corrupt deal, and thus, the greater likelihood that he will be brought into the exchange and the larger proportion of the corrupt rents he will be able to obtain. Of these two characteristics, I suggest that familiarity is somewhat more important than frequency: Even if an intermediary has resources related to a potential exchange, he cannot put these resources to use if potential parties to the transaction are already in touch with each other. This will be relevant to distinguishing between the various types of corruption outlined below.

Emphasis on these two features of corruption, frequency and familiarity, allows us to develop a theoretically informed typology of corruption, specific to characteristics of corruption that may be associated with intermediation.² The four resulting types are shown in Table 1. The upper left quadrant of the table represents corruption with the highest demand for a middleman, in which there are frequent exchanges but the potential parties to the act are unfamiliar to each other. The role for, and value of, middlemen should decrease as we move from the upper left toward the lower right corner of the diagram, where corrupt exchange is occasional and likely parties know each other. The remaining two quadrants, reflecting frequent but familiar, and occasional but unfamiliar transactions, are intermediate categories in which a middleman might on occasion play a role, but is likely to provide less value to the transaction. I expect middlemen to be somewhat more likely and valuable in corruption that falls in the upper right quadrant, versus the lower left quadrant, because of the relative importance of familiarity, as described above.

TABLE 1 The demand for middlemen

		Frequency of corrupt transactions	
		<i>High</i>	<i>Low</i>
Familiarity of potential participants	<i>High</i>	<i>Unfamiliar and Frequent</i> Greatest demand for middlemen	<i>Unfamiliar and Occasional</i> Second-greatest demand for middlemen
	<i>Low</i>	<i>Familiar and Frequent</i> Second-least demand for middlemen	<i>Familiar and Occasional</i> Least demand for middlemen

3 | EMPIRICAL ANALYSIS

The discussion to this point implies multiple testable hypotheses:

Hypothesis 1. *Middlemen play an important, but variable, role in corruption transactions.*

Hypothesis 1a. *Middlemen play a role in at least some forms of corruption.*

Hypothesis 1b. *Middlemen are active to differing degrees in different types of corruption, according to the following hierarchy:*

“frequent & unfamiliar” > “occasional & unfamiliar” >

“frequent & familiar” > “occasional & familiar” corruption.

Hypothesis 2. *The benefit of corruption to middlemen differs depending on the type of corruption.*

Hypothesis 2a. *Middlemen receive different proportions of rents from facilitating different forms of corruption.*

Hypothesis 2b. *Their share of rents varies, in general, according to the hierarchy outlined in Hypothesis 1b.*

3.1 | Data sources and research design

Empirical analysis of participation in corruption is difficult for a number of reasons. First, given the range of corruption types of interest here, it can be difficult to find a suitable environment in which to evaluate variation across corruption types in one analysis. Second, without knowing which actors participate in corruption, it is difficult to know what the appropriate subject pool is to evaluate corruption. Third, due to the illicit nature of corruption, we should expect to observe social desirability bias in responses to direct questions about participation in corruption. Fourth, it is critical to develop symmetric measurements across corruption types, yet this is challenging due to variations in corruption forms.

I address each of these constraints in my research design. To account for diverse forms of corruption, I draw on surveys of politicians and bureaucrats, detailed in Supporting Information Appendix B, in the north Indian states of Bihar, Jharkhand, and Uttar Pradesh.³ India, and these states in particular, provides an important empirical testing ground for arguments about the organization of corruption, not only because it is often a reference point for theoretical development but also due to the persistence of corruption in a range of state activities (Bussell, 2012; Chandra, 2004; Sukhtankar & Vaishnav, 2015; TII & CMS, 2005, Transparency International, 2008). A recent spate of multibillion dollar scandals highlights the prevalence of corrupt behavior among high-level politicians and bureaucrats.⁴ These scams reflect corruption in licenses and contracting for public projects. This corruption exists in parallel with frequent demands for bribes in everyday dealings with the state—an analysis of corruption in public service delivery found that more than 60% of Indian households have paid a bribe to receive a government service, amounting to more than 210 billion rupees (approximately US\$3.2 billion) each year (TII & CMS, 2005, p. 3). We also have significant evidence for the distribution of corrupt rents across multiple actors, but have little understanding of the degree to which middlemen benefit from

these transactions (Bertrand et al., 2007; Wade, 1985). Thus, India offers fertile but largely unexplored ground for investigating the role of middlemen in corruption.

An environment with high levels of diverse forms of corruption also addresses the second challenge, which is evaluation of the actors involved in each type of corruption within a single context. I conducted surveys with all levels of elected officials, from village councilors to members of parliament, and the three levels of bureaucrats active in subnational governance (the sampling strategy is described below).⁵ Including such a range of actors helps tap respondents who can identify the set of participants to corrupt transactions, due to their own experience with corrupt activities. But other actors may also have secondary knowledge of who participates in, and benefits from, corruption, either because they previously held office at a lower level or because they use leverage over lower level actors to extract rents from corrupt transactions at those levels (Darden, 2008; Wade, 1985).

3.2 | Questionnaire vignettes and survey experiment

I address the third and fourth challenges—potential social desirability bias in responses and the need for symmetric comparisons across corruption types—by using vignette-based questions that prompt respondents to divide a given bribe across a range of actors, including an intermediary. The vignettes describe typical forms of corruption in which one actor receives a bribe, but other actors might eventually share in that payment. For example, if a bureaucrat in a vignette receives a bribe equivalent to \$100, respondents are asked how much of that bribe would be retained by the bureaucrat and how much is likely to be allocated to other actors. I use a survey-experimental design to allow for direct comparisons of results across respondents assigned to different treatments, without the need to control for potential confounding variables. Each respondent was thus assigned at random to receive one of four vignettes. This design also allows for strong tests of the causal effect of the vignette content on respondents' reports about the allocation of bribes to middlemen.⁶

These vignettes measure the perceptions of respondents regarding distribution of rents to various actors and therefore help to alleviate the risk of social desirability bias in responses. I anticipate that questions not directly implicating the respondent—those asking only for their perceptions of corrupt activity—should result in more honest responses. Finally, individuals at all levels of government can be asked in symmetric ways about their perceptions of different forms of corruption, so as to increase comparability of responses across corruption types.

I summarize the vignettes here and provide the full text in Supporting Information Appendix B. Each of the corruption scenarios operationalizes one of the forms of corruption highlighted in the cells of Table 1. I use “principals” to refer to the individuals engaging in corruption, apart from the middleman. The first vignette represents a form of corruption that involves *unfamiliar* principals, but that is a *frequent*, high-volume transaction (upper-left quadrant of Table 1). Thus, a citizen attempting to collect his monthly ration of subsidized foodstuffs at a government distribution center is approached by a middleman who offers to approach his contacts in the department to help, for a fee (100 rupees or ~ US\$2; Supporting Information Appendix B1).⁷ This reflects a typical form of corruption: In a recent survey, 16% of people utilizing the public distribution system (or 7% of the total population) reported having paid a bribe, with the typical amount ranging from 50 to 500 rupees (about US\$1–US\$8).⁸ As a result, hundreds, if not thousands, of individuals will go to a given ration shop each month, making repeated offers of bribes throughout the month likely, but not from the same individuals.

The second vignette involves corruption that is *occasional* and between *unfamiliar* principals, placing it in the upper right quadrant of the typology in Table 1. An individual is described as attempting to make a change in his land record (a basic property ownership document) with the Revenue Department, but there is a dispute with his neighbor over the plot border. To resolve the issue, the Revenue

TABLE 2 Survey vignettes and types of corruption

		Frequency of corrupt transactions	
		<i>High</i>	<i>Low</i>
Familiarity of potential participants	<i>High</i>	<i>Frequent and Unfamiliar Ration</i>	<i>Occasional and Unfamiliar Land</i>
	<i>Low</i>	<i>Frequent and Familiar Road</i>	<i>Occasional and Familiar Policy</i>

official asks for an additional “fee” of 1,000 rupees (around US\$15; Supporting Information Appendix B2). Such transactions are relatively rare, and the citizens involved are unlikely to know well the local bureaucrat in charge. In this case, no middleman is explicitly highlighted, yet intermediaries are often described as playing a role in such land transactions (Oldenburg, 1987). In the same survey noted above, 48% of people who interacted with the government for land records paid a bribe (about 7% of the total population), with average bribes of 2,000 rupees (US\$30).⁹

For *frequent, familiar* corruption, in the lower left quadrant of Table 1, the third vignette presented a project to build a village road in which the competitive bidding process to choose a contractor was superseded by the local administration to grant the contract to a company promising to provide campaign contributions of 100,000 rupees (around US\$1,500) to politicians in the area (Supporting Information Appendix B3). The building or repair of roads is quite common, making this a relatively frequent transaction. Here, however, there are likely to be a limited number of relatively well-known potential applicants for the contract.

In the final vignette, designed to reflect *occasional, familiar* corruption (the lower right quadrant of the typology), the state government is considering new legislation on industrial development. In order to influence the policy content, a number of large companies are said to have secretly given politicians campaign “contributions.” The proposed size of the bribe in this case is 1,000,000 rupees (about US\$15,000; Supporting Information Appendix B4). The introduction of new policies is relatively infrequent and there are a limited number of companies and legislators who tend to know each other well and would be potential parties to the transaction.

The placement of all four vignettes in the corruption typology diagram is shown in Table 2. To operationalize the concepts in Table 1 appropriately—yet describe distinct forms of corruption in a realistic manner to respondents—it was necessary to vary several features of the corruption scenarios across vignettes. This approach contrasts with survey experiments in which researchers vary only one or two words across treatments. As a result, it is important to consider whether other aspects of the vignette—besides the frequency and familiarity of the corruption that is invoked—might also potentially affect the perceived involvement of middlemen. I return to such differences, and their implications for alternative explanations, after discussion of the empirical results. My evidence suggests that the findings do reflect differences in the frequency and familiarity of corrupt transactions, rather than other differences across the vignettes.

The key outcome measures are (a) whether the respondent allocated any portion of the bribe to a middleman and (b) the proportion of the overall bribe allocated to a middleman. Thus, the assigned vignette was read aloud and the respondent was asked how much of the bribe would end up with each of a set of specified actors, including local administrators and politicians, state politicians, political parties, and a middleman (the full list of potential recipients is provided in Supporting Information Appendix B). Respondents were allowed to respond with any numbers, regardless of whether they added up to the amount of the bribe. I take this into account by summing the overall amounts allocated by each respondent and calculating the proportion allocated to middlemen, relative to this overall total.

I administered this survey experiment to a large sample of politicians and bureaucrats at nearly all levels of office in India. Thus, my sampling procedure incorporated village, block, and district elected councils, as well as state and national legislative constituencies. I randomly sampled block, district, state, and national politicians, as well as block and district bureaucrats, through a multistage selection process. First, I randomly selected districts, then randomly selected blocks within the districts. I included in the sample the presidents of the block and district councils, as well as one council member and the primary bureaucrat (Block Development Officer or District Collector) at each level. For state and national legislators, I mapped the sampled blocks and districts to legislative constituencies and included all politicians whose constituencies fell in the overlapping areas. In a subsequent survey round, I included politicians from all constituencies within the states, so as to approximate a census of legislators. Village council politicians and bureaucrats were selected within the sampled blocks and districts.

The politician and bureaucrat samples are summarized in Supporting Information Appendix Tables B1 and B2. The response rate for the surveys was quite good: For block, district, state, and national politicians, overall response was 61.7%, village politicians was 98.2%, block and district bureaucrats was 90.0%, and village bureaucrats was 85.4%. It is also worth noting why I have not included middlemen themselves in the survey sample. While it would almost certainly be informative to have the perspective of middlemen on their role in corruption, it is difficult to determine how one would identify the appropriate population to survey. There is no ready sampling frame, and thus there is no way to generate a representative sample. For this reason, I have refrained from including middlemen in the current analysis. Future research could develop strategies for sampling middlemen in a rigorous manner, so as to enable an evaluation of the middleman role from the perspective of middlemen themselves.

3.3 | Testing the hypotheses

To what extent do respondents perceive middlemen to be engaged in corruption, in general? I examine first how often respondents allocate some proportion of rents to a middleman. Across all vignettes, respondents allocated rents to a middleman 57.0% of the time. This clearly suggests that middlemen may play an important role in corruption, but there is variation in the perception of this role and middlemen are not a determinative link in the corruption chain in all cases. In addition, middlemen were allocated 60.4% of the bribes overall, suggesting that when they do participate in corrupt acts, they often have the leverage to extract substantial portions of the illicit rents. These findings highlight the importance of asking why middlemen play an important role, given the agency costs from the perspective of principals to a transaction. As my argument suggests, these general findings may actually obscure a more diverse reality, in which agency costs are sometimes—but not always—outweighed by the efficiency gains of utilizing a middleman.

This raises the second question of the analysis: Do respondents perceive middlemen to be more important to corruption, as suggested by my theoretical discussion, where the corrupt act is frequent and involves unfamiliar principals? To answer this question, I examine the experimental variation across vignettes. First, the proportion of respondents who allocated some portion of the given bribe to the middleman, shown in Figure 1, strongly supports the argument that middlemen are more likely in frequent corrupt transactions between unfamiliar actors. Respondents reported a sharp decline in the perceived presence of middlemen in moving from the vignette depicting frequent and unfamiliar corruption—the ration scenario—to the occasional and familiar vignette—policy.

Moreover, middlemen receive a much larger proportion of rents from frequent, unfamiliar corruption than from occasional, familiar corruption. As shown in Figure 1, the proportion of rents allocated to middlemen declines in a similar manner as the participation of middlemen, as we move from frequent, unfamiliar forms of corruption to more occasional, familiar forms.

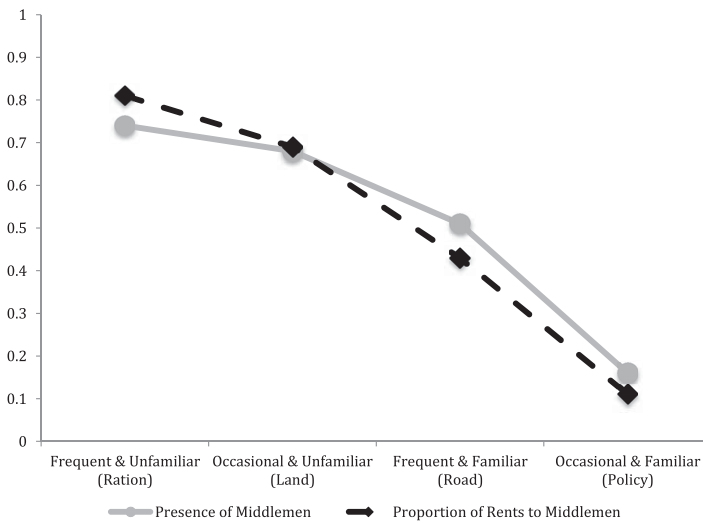


FIGURE 1 Participation, and rents received, by middlemen both decline in occasional, familiar forms of corruption. The x-axis is the vignette that was described to the respondent. For the gray solid line, the y-axis is the proportion of respondents answering the question who allocated something to the middleman. For the black dotted line, the y-axis is the proportion of the bribe described in the vignette that was allocated to the middleman.

These differences are substantively large and statistically significant. I use difference-of-proportions tests to compare both the perceived presence of middlemen across the vignettes as well as the proportion of rents allocated to the middleman. In Figure 2, I show the results of these tests, each comparing responses about the participation of, or proportion of rents going to, middlemen in frequent,

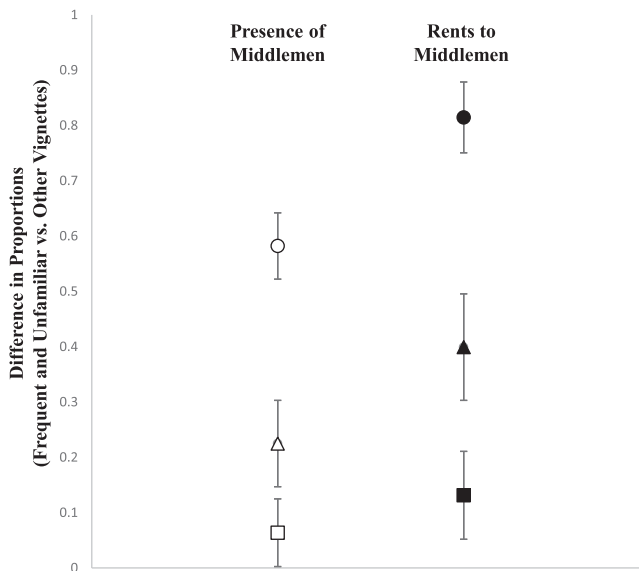


FIGURE 2 Middlemen participate more and take a greater share of rents in corruption that is frequent and between unfamiliar parties. Graph displays the results of difference-of-proportions tests comparing expectations that middlemen participate in, and receive benefits from, different types of corruption. In each test, I subtract from the outcome for frequent and unfamiliar corruption vignette (Ration). The circle denotes the difference for occasional and familiar corruption (Policy); the triangle, frequent and familiar corruption (Road); and the square, occasional and unfamiliar corruption (Land). Hollow markers show differences in the presence of middlemen, while solid markers show differences in the proportion of rents middlemen extract. Vertical lines give 95% confidence intervals for the differences (Ration minus other vignettes).

unfamiliar corruption (ration), to each of the other vignettes. For each test, the proportion for the vignette in which I have hypothesized that there should be a lower presence or benefits to middlemen is subtracted from the proportion for the frequent, unfamiliar vignette. Thus, my hypotheses suggest that the difference in the two proportions should be positive in all cases but largest for the lower-right cells of Tables 1 and 2, as per Hypothesis 1b.

The results of these tests suggest that respondents indeed expect middlemen to be more likely to play a role in forms of corruption that are frequent and unfamiliar and these results are statistically significant at standard levels (left side of Figure 2). Middlemen are expected to participate more often in the frequent, unfamiliar vignette than any other, and the perceived presence of middlemen declines according to the hierarchy outlined in Hypothesis 1.

We observe similar findings for the proportion of rents allocated to middlemen across vignettes (right side of Figure 2). This suggests that the relative value of middlemen to corrupt acts is also higher in more frequent, unfamiliar transactions. These differences are also substantively relevant: Middlemen are expected to receive 81% and 69% of the rents in the unfamiliar vignettes (ration and land, respectively), whereas they are perceived to receive only 43% and 11% of rents in familiar forms of corruption (road and policy, respectively). While these proportions do not take into account the size of the bribe—81% of the 100 rupees in the ration vignette is still less than 43% of the 100,000 rupees in the road contract vignette—the findings for proportions, combined with the findings for the presence of middlemen in the prior analysis, suggest that middlemen are most likely to be entrenched actors in forms of frequent, unfamiliar corruption.

3.3.1 | Robustness checks and alternative explanations

Figures 1 and 2 show that the perceived presence of middlemen accords with the rank ordering of corruption types in Hypothesis 1b. To further evaluate this hypothesis, I compare the proportions for each scenario against each other scenario. In all cases, the differences in proportions are statistically significant and in the predicted direction (Supporting Information Appendix Tables A2 and A3).

As a further robustness check, I also disaggregate respondents into mid- and high-level politicians, low-level politicians, mid-level bureaucrats, and low-level bureaucrats. I find that results are similar across all of the respondent groups, with the large majority of tests in line with the summary analyses (Supporting Information Appendix Tables A4–A11). For mid- and high-level politicians, in all but one case, that comparing the ration and land vignettes, there is a substantively large and statistically significant difference in the proportion of respondents reporting that a middleman would receive some portion of the described bribe, in the predicted direction. For low-level politicians, there are statistically significant differences in the mean response on middleman participation, also in the predicted direction, for three of the six comparisons, and the remaining tests do not highlight any differences. Among mid-level bureaucrats, there are statistically significant results in the predicted direction for four of six tests, and no significant results otherwise. Finally, for low-level bureaucrats, results are in the predicted direction in all cases and statistically significant in five of six tests. Subgroup tests provide similar confirmatory results for the proportion of rents received by middlemen.¹⁰

In a final analysis, I evaluate the distribution of rent allocations to middlemen across the four vignettes. The resulting histograms (Supporting Information Appendix Figures A1–A4) present additional evidence in support of my argument. Nearly all respondents distributed the entire bribe to the middleman in frequent, unfamiliar corruption (A1), and a large majority did so for occasional, unfamiliar corruption (A2), yet almost none did for infrequent, familiar corruption (A4). The results are more varied for frequent and familiar corruption (A3). The distributions are thus in line with my hypotheses.

While these findings provide strong evidence of variation in the perception of middleman participation and benefit across the vignettes used in my survey, it is useful to consider alternative explanations for the observed variation, other than the frequency and familiarity in the type of the corruption. As previously noted, a number of additional characteristics differ across the vignettes that might, hypothetically, lead to variation in perceptions of a middleman's role: the type of briber, the type of recipient, the amount of the bribe, transaction complexity, whether the transaction involves extortion or collusion, the location of the service within the government hierarchy, the specific activities of the middleman, and whether the middleman is explicitly mentioned in the description. I consider each of these in turn.

The type of briber is, alternately, an individual or a company. This is potentially significant if different types of actors are expected to be more or less likely to use a middleman. However, the existing literature suggests that all different types of actors may engage a middleman (della Porta & Vannucci, 2012): It is not the type of actor that matters, but whether they know to whom they can give a bribe and whether they can trust that individual to provide a service. Moreover, in my results, we see large differences across vignettes that involve the same type of actor, be it an individual (ration vs. land) or company (road vs. policy). This suggests that variation in the type of actor is not an exclusive predictor of the presence of middlemen, nor can it explain my empirical results.

The type of bribe recipient also differs across vignettes, from individual intermediary to local administrator to political party. A similar theoretical logic as for type of bribers holds here: Any individual or group may potentially require assistance to identify and engage those who are willing to pay extra for a service. Whether this is the case again depends on familiarity—the ability of potential bribe recipients to identify bribers on their own—which is a function of the type of transaction rather than the type of actor. Across the two vignettes where the recipient of the bribe is an administrator—land and road—we also see variation in the perceived role of middlemen, suggesting that the type of bribe recipient is not driving the effects.

As noted in the descriptions, the amount of the bribe offered increases as we move from the frequent, unfamiliar vignette to the occasional, familiar vignette. The amount of the bribe seems unlikely to be related to the demand for middlemen. This is because regardless of the bribe amount, there is still the potential for issues of trust and other transaction costs to arise, which could be reduced by a middleman. We might actually expect there to be a greater demand for a middleman for higher value transactions, given the increased risk and opportunity cost of failure. Thus, my findings that respondents perceive less use of, and benefit to, middlemen in transactions with greater bribe size may instead underscore the strength of my findings.

The expected complexity of the corrupt transaction also increases in the same direction as the amount of the bribe. Thus, if more complex interactions were expected to be associated with less of a role for middlemen, this might alternatively explain my results. In contrast, existing work suggests just the opposite, that greater complexity is more likely to be associated with middlemen (della Porta & Vannucci, 2012). Thus, my findings are inconsistent with arguments about variations in the complexity of transactions.

The vignettes vary in whether the bribe can be described as a form of extortion or collusion corruption. The frequent, unfamiliar vignette is a form of extortion in that the individual has a right to the ration but has to pay an extra fee to receive it. The occasional, unfamiliar vignette (land) does not offer sufficient information to determine whether this is extortion or collusion among the relevant actors, and the remaining vignettes are clear examples of collusion between actors to achieve a mutually desired end. One possible interpretation is that extortion corruption is more likely to include middlemen and collusion corruption is less likely, particularly if we assume that the land vignette was assumed to be extortion. Yet, this explanation cannot account for the variation that we observe within these forms of corruption, particularly between the road and policy vignettes.

The level of government at which the desired service is allocated differs across vignettes, progressing from the local to state level. In part, this contributes to the frequency of the transactions—low levels of government are more likely to offer frequent services to a large number of individuals, while higher levels of government are more likely to offer occasional services, such as legislation, in general. Beyond this, however, there is no other obvious manner in which the level of government should differentially affect the likelihood of middlemen in a corrupt act.

What a middleman would need to do to facilitate a transaction also differs across the vignettes. A middleman facilitating a ration might help an individual jump to the head of the queue, while a middleman facilitating a road contract may intervene to ensure a particular bid receives extra attention. This could imply that middlemen engaging in different acts would receive different payments for their services. Yet, in all cases, the primary role of a middleman would be to link potential parties to an illicit transaction. Thus, the “reward” that they receive, as a proportion of the overall bribe, is more likely to be related to the demand for this service (due to characteristics of frequency and familiarity) than to the specific activity itself. Variation in the act, then, should not be linked either to the presence of a middleman or his share of rents.

Finally, whether or not a middleman was explicitly mentioned in the vignette has potentially greater relevance. Because a middleman was only noted in the frequent, unfamiliar vignette, it is possible that this may bias my findings toward the presence of middlemen in this vignette. However, this also means that allocation of any funds to middlemen in other vignettes occurs *despite* the lack of a middleman explicitly highlighted in the description. As noted, the great majority of respondents also allocated most of the bribe to the middleman in the land scenario, but almost no one did so in the policy scenario, while the distribution for the road scenario is more mixed (Supporting Information Appendix Figures A1–A4). Thus, mention of the middleman or other differences across vignettes cannot explain the bulk of my results. Instead, the frequency of the corrupt act and the familiarity of potential principals are most likely to account for the varied presence and rent capture of middlemen across these corrupt transactions.

4 | DISCUSSION AND CONCLUSION

Corruption is widely recognized as a problem of political economy across developing countries. Yet, while “the fight against corruption . . . has become a major industry,” this does not mean it has achieved its goals (Persson, Rothstein, & Teorell, 2012, p. 450). Widespread anticorruption efforts have at times even resulted in higher levels of corruption (Fjeldstad, 2003; Persson et al., 2012).

One possible explanation for these failures is insufficient attention to the industrial organization of corruption—including, crucially, the varied presence of middlemen. Anticorruption efforts, for example, that focus on reducing the incentives for corruption by increasing bureaucrat salaries do not take into consideration the incentives of either those citizens attempting to access public services or the intermediaries who generate their income by bringing these actors together. Indeed, middlemen may actually be the *most* important actors for perpetuating corruption, because their livelihoods depend on it more than do those of other actors (Oldenburg, 1987). Citizens and middlemen with an interest in corruption may then pressure bureaucrats to continue their corrupt acts, even at higher salary levels.

Anticorruption efforts that target frequent transactions involving participants who are unknown to each other are likely to require strategies that take into account the full range of actors involved in a transaction. eGovernance and transparency initiatives, for example, may reduce opportunities for discretion in service delivery, but if citizens nonetheless experience long delays in receiving services, they may still have an incentive to seek out intermediaries for assistance. Without alternative income sources, middlemen may use their connections to pressure bureaucrats into using whatever remaining discretion they possess to speed up delivery.

To fight corruption in those areas prone to the interventions of middlemen, then, policy makers may be advised to devise strategies that better acknowledge the full set of actors engaged in corrupt acts. One example would be to consider measures that address not only citizen access to services and bureaucrat salaries but also the lack of attractive legal employment options for those individuals filling the intermediary gap. If a substantial number of potential intermediaries can be taken out of the market due to gainful employment, this would target a previously unaddressed piece of the corruption equation. Where neither bureaucrats nor citizens have strong incentives to pursue corrupt acts, and where few intermediaries are attempting to facilitate the market for bribery, we should observe substantially lower levels of corruption. Only these types of comprehensive strategies are likely to reduce corruption where there is a substantial role for middlemen in facilitating—and perpetuating—corruption.

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ENDNOTES

¹ See, for example, Bertrand et al. (2007).

² See Bussell (2015) for a discussion of corruption typologies.

³ Supporting Information Appendices are available online at <http://www.jenniferbussell.com>.

⁴ Investigations into construction of facilities for the 2010 Delhi Commonwealth Games “discovered widespread . . . falsification of records and unjustifiable inflation in contract costs” (Sexton, 2010); an apartment building in Maharashtra, intended for war veterans, was found to be benefiting top government officials (NDTV, 2010a); and central government officials were accused of costing the government nearly US\$40 billion (NDTV, 2010b) and US\$35 billion (Malik, 2012) through questionable allocation of rights to telecommunications spectrum and coal deposits, respectively.

⁵ Members of central government administrative organizations, other than the Indian Administrative Service (IAS), were not included in the sample. Members of the IAS with positions other than District Collector, such as those within specific state departments, were also excluded.

⁶ For related use of vignette experiments in studies of corruption, see Winters and Weitz-Shapiro (2016).

⁷ Throughout the survey, the Hindi term used for “middleman” is *dalal*.

⁸ TH and CMS (2005). India's public distribution system is a food security program providing subsidized consumables to the poor via a network of “ration” shops. To access these goods, individuals must have a “ration card” that documents their eligibility.

⁹ TH and CMS (2005).

¹⁰ In 19 of the 24 tests, the difference between the perceived benefit to middlemen is statistically significant and in the predicted direction, as shown in the Online Appendix. In the remaining five tests, we do not observe statistically significant differences. The results for proportion of rents are, in most cases, also substantively relevant: mid- and high-level politicians expect middlemen to receive 72% of the bribe in the land vignette versus 4% in the policy vignette, while low-level politicians perceive the allocation to be 74% and 15% in the same comparison. Similarly, mid-level bureaucrats expect the middleman to receive 96% of the bribe in the ration vignette versus 42% in the road vignette.

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