



EVIDENCE REVIEW

## J-PAL GOVERNANCE INITIATIVE REVIEW PAPER EXECUTIVE SUMMARY

This publication summarizes the academic review paper that informs the research agenda and highlights open questions of J-PAL's Governance Initiative.

Governments around the world spend billions of dollars annually to provide basic services and development programs aimed at improving the lives of those living in poverty. At the same time, many foundations and international aid organizations channel their development dollars through government-run programs. However, the effectiveness of such public spending is often compromised by a number of interconnected factors: policies that do not reflect the needs or wishes of the people, lack of citizen participation, leakages due to corruption or inefficient program delivery, poor oversight of public spending, and poorly trained or unmotivated public servants.

Despite the crucial importance of good governance for development, many questions about how to effectively improve governance remain unanswered. Researchers working on field experiments to evaluate programs and policies can provide crucial insights to policymakers on how to improve governance. The value of experimental evidence is likely to be particularly high when it provides clear tests of hypothesized channels of influence.

As a response to these unanswered questions, the Governance Initiative (GI) paper summarizes empirically rigorous evidence on governance issues in low- and middle-income countries (LMICs) and identifies new directions for research. The objective is twofold: to provide information about how to improve participation in the political and policy processes, reduce leakages in public programs, and strengthen state capacity and to identify gaps in the governance literature that researchers within the GI will seek to fill.

The 2019 GI review paper is an update to its 2013 version. The 2013 review began with the GI co-chairs identifying research areas that have been influential in the field of governance within the economics and political science literature. Within these areas, the research team conducted an extensive keyword search in the top economics and political science journals and reviewed the papers. Sources for the keyword search included journals in economics and political science and unpublished working papers presented at conferences or available through universities and top research centers.





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From this range of publications, we selected the subset of papers that presented empirical evidence on the topic of governance and addressed the issue of causal relations in what we judged to be a reasonably effective way given modern standards of empirical work. As a main criterion for inclusion, selected papers should present studies that provide empirical evidence on the causes and consequences of poor governance in LMICs, based on a rigorous empirical identification strategy. We included both randomized and nonrandomized studies and made particular efforts to include studies that provide causal evidence on why poor governance exists and persists and what can be done about it. This selection criterion reflects the ultimate focus of GI on supporting empirical research. That said, papers providing a theoretical rationale for empirical tests were prioritized.

This updated version includes new published and working papers released between 2013 and 2016 as well as research funded by J-PAL's GI up to 2019, following the same search protocol and inclusion criterion described above. On the basis of new research, this updated GI review paper highlights emerging insights on the drivers of good governance, a new section on strengthening state capacity, and updated open questions to guide further research. As the work under GI continues to progress and more gaps are filled, the review paper will be updated to reflect the latest research.

## 1. WHAT DO WE MEAN BY GOVERNANCE?

We recognize that the term “governance” means different things to citizens, researchers, and policymakers. Indeed, there is great diversity in the research domains that are considered governance research. We do not attempt to capture all such areas in the GI review paper, nor attempt to build false links between them. Rather, we cast the problem of good governance as primarily a two-part principal-agent problem. In the first part of the problem, the principals are the citizens, who vote to elect as their agents, politicians, whose job is to enact policies that are in line with the voters’ interests. In the second part of the problem, politicians become principals themselves, who must in turn work with their agents, civil servants, and other service providers to actually implement those policies. In this updated review paper, we emphasize the importance of understanding the behavioral mechanisms driving governance outcomes.

Although democratic forms of governance are prevalent worldwide, the quality of governance remains a challenge, as measured by accountability, government effectiveness, and control of corruption (Worldwide Governance Indicators 2018). When citizen control over politicians is weak, the results can range from politicians directing state resources to connected firms (e.g., Khwaja and Mian 2005) to politicians implementing programs that in their original design are cost-effective but in the presence of corruption are not (e.g., Olken 2006). When control over civil servants is weak, the results can range from public works officials stealing funds (e.g., Olken 2007) to teachers and nurses who rarely show up to work (e.g., Kremer et al. 2005; Banerjee et al. 2008).

The GI review paper focuses on each of these principal-agent problems as key areas of research. First, how can citizens exercise greater control over politicians and policy through elections and participatory institutions? Second, which incentive schemes and institutional features can encourage civil servants to do their jobs properly, without leakages?<sup>1</sup> Third, this updated version incorporates a section on the personnel economics of the state, highlighting evidence in the selection, incentive structures, and monitoring of civil servants for public service delivery. In each of these areas, we review the state of knowledge as it exists today and, in doing so, identify what we believe are the key gaps in knowledge and priority areas for research.

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<sup>1</sup> Corruption is widely understood as “the misuse of public office for private gain.” For our purposes, we use the word “corruption” as “incidents where a bureaucrat (or an elected official) breaks a rule for private gain.” This broader definition would include the most obvious type of corruption—a bureaucrat taking an overt monetary bribe to bend a rule—but also encompass more nuanced forms of bureaucratic corruption including nepotism to favor a family member rather than issue a competitive bid. We use the word “leakages” to not only include this broad definition of corruption but also to include other acts that are sometimes not seen as corruption but nevertheless lead to a loss of public funds or create inefficiencies in the delivery of public goods and services. Examples include unauthorized absenteeism of government staff while still collecting a paycheck, needless delays in providing public services, and a lack of sufficient effort toward final outcomes.

## 2. PARTICIPATION IN THE POLITICAL AND POLICY PROCESS

The first part of the principal-agent problem we consider is how citizens influence government decision-making. While participation is widely considered a primary means of empowerment in democratic societies, there is little empirical evidence on how participation actually influences policy and how any such policy changes impact the lives of citizens. There remains significant unanswered questions in less benign institutional environments, where citizens need to leverage alternative channels to participate in policy and to monitor government performance. We begin by examining the open questions around the impact of participation and then turn to questions around how best to improve participation in meaningful ways.

### 2.1. The impact of citizen participation

The presumption of democratic governance is that citizen participation in decision-making processes—as voters, politicians, and local community members—makes the electorate and polity more representative of the society, better aligns policies with citizens’ preferences, and ultimately results in better outcomes for the citizenry. These assumptions in turn form priorities for rigorous empirical research. We examine the potential impacts of citizen participation on three dimensions: policy outcomes, economic growth, and citizen satisfaction.

#### 2.1.1 Impact on policy outcomes

**Participation as voters:** Does increasing the share of the electorate of a given group mean that policy preferences better reflect that group’s preferences? While an answer to this question in the affirmative seems intuitive, the fact that many countries have long had universal suffrage without corresponding improvements for disadvantaged groups makes rigorously answering this question challenging. If the right to vote is necessary but is not sufficient to ensure that the marginalized groups’ preferences are translated into policy, several other policies may facilitate citizen participation and improve outcomes for citizens.

**Participation as leaders:** One mechanism for ensuring that the preferences of marginalized groups are translated into policy is to directly ensure their presence as leaders, such as by instituting electoral quotas that guarantee a minimum number of elected positions to such groups. This is an area influencing participation where we have rigorous evidence. Research using random allocation of gender quotas demonstrates that leader identity influences policy outcomes: quotas shift policy outcomes to favor the priorities of the disadvantaged



groups. Quota-induced exposure to leaders from initially underrepresented groups can also change voters' willingness to elect candidates from these groups, even when the seat is no longer reserved. The efficiency consequences of such quotas and their impacts on long-run candidate entry and party dynamics remain important areas for research. Interestingly, the findings for ethnic minorities differ significantly from those for women—which points to the importance of theorizing about the nature of initial discrimination. More broadly, we know from both micro and macro evidence that leaders matter, but we know relatively little about what makes for good and bad leaders.

**Participation as community monitors:** Communities can also participate by monitoring the service delivery process. On the one hand, local communities may have better information on needed goods and services and may also face stronger incentives to recognize and respond to inefficiency or corruption in implementation. On the other hand, local communities may be prone to elite capture, and some types of monitoring may require skills that are not available at the local level. While there is a large body of evidence from randomized evaluations, results on the impact of community monitoring are mixed. For example, community monitoring was very effective in Ugandan health centers, ineffective for education in India, and effective only under some circumstances in limiting corruption in road building in Indonesia. Evidence suggests that details about the design of community participation programs and the context in which they are implemented are critical factors in determining whether and how these programs affect final outcomes. Which mechanisms influence the success of community monitoring, and how those mechanisms are determined by contexts and conditions, remain important questions for future work.

**Participation through decentralization:** Increased citizen participation can also be achieved by decentralizing government to allow for more local decision-making. The public finance theory of decentralization suggests that decentralization is optimal if there is substantial preference heterogeneity, limited spillovers across jurisdictions, and limited economies of scale. Beyond this, there is an argument that having government closer to the people results in better citizen monitoring of politicians. The limited evidence we have on decentralization in LMICs supports several of these predictions: there is some suggestive evidence that local elections in China, for example, limited the enforcement of unpopular policies, though there is evidence that this channel is less effective when there is substantial heterogeneity within the population.

One form of decentralization, community driven development (CDD), allocates control over the selection and implementation of public goods and services directly to communities. A recent meta-analysis of randomized evaluations of CDD programs in different countries finds such programs can improve citizen satisfaction and effectively deliver public services in difficult environments. However, participation also entails a time-cost for citizens, with little evidence on whether CDD programs fundamentally change local institutions, empower marginalized groups, or improve other channels for collective action. Developing a better understanding of the advantages and challenges of decentralization, and determining the optimal level of participation, are important areas for future research.

### *2.1.2. Impact on economic growth*

While it is difficult to assess the impact of greater participation on policy, it is even more difficult to establish a relationship between increased participation in decision-making and economic growth. Not surprisingly, the evidence here is mixed. While some argue poor countries can implement good policies regardless of their institutional arrangement, others suggest that democratization is associated with higher growth. Similarly, the macro institutions literature demonstrates that historical choice of institutions casts a long shadow over current policies and limits the influence of citizen participation and voting. According to this view, the introduction of democracy per se is unlikely to influence growth. Overall, the channel of influence from citizen participation to growth, which the macro literature has been unable to clearly identify, is an important area for future research.

### *2.1.3. Impact on citizen satisfaction*

Irrespective of the impact on policy outcomes, an alternative justification for democratic forms of governance is that it can lead to greater citizen satisfaction with the political and policy process. Recent experimental literature confirms this idea: improved citizen participation in decision-making processes increases citizens' satisfaction, regardless of whether policy actually changes. On the other hand, evidence collected in the context of electoral quotas for women in India suggests that citizens' satisfaction can reflect their biases about who are appropriate leaders rather than measures of leader performance. These results lead us to ask how information about policy outcomes influences citizens' perceptions of the participation process and what the links are between leader performance and satisfaction.

### Impact on policy outcomes

#### As voters

- How do voters trade off preferences for competent or honest politicians with redistributive preferences? How can institutional design and information about available policies alter these trade-offs?
- Does greater voter participation lead to more emphasis on populist policies?
- What is the incidence of electoral malpractices, and what policy solutions are effective?

#### As leaders

- Which qualifications or characteristics of leaders influence the efficiency of policymaking?
- How do selection procedures influence leader choice and therefore policy? What are the implications for disclosure laws?
- Do more competent or honest politicians care more or less about redistributive preferences?
- What types of policies are most affected by leader qualifications?
- What is the role of compensation, selection, and other incentives in influencing who becomes a politician and how politicians behave?

#### As community monitors

- How does the institutional structure of community monitoring determine its impact on policy? What are the channels of influence?
- Are some programs and policies more amenable to being monitored by the community compared to others?

#### Through decentralization

- Does decentralization of policymaking change (i) the nature of citizen participation, (ii) policy outcomes, and (iii) electoral accountability?
- What is the optimal role of community participation and community ownership of shared resources to improve citizen control over policy?



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### Impact on growth

- Does greater democratization of decision-making processes influence growth? What are the channels of influence?
- How do leaders influence growth outcomes?

### Impact on citizen satisfaction

- Is citizen satisfaction with democratic processes independent of actual policy choices?
- How does information about policy outcomes influence citizen satisfaction with the process?
- Are attitudes toward leaders influenced by performance information?
- What are the links between leader performance and satisfaction outcomes?



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## 2.2. The determinants of citizen participation

The existing evidence suggests that increased democratization of governance structures typically improves the representation afforded to citizens. However, several factors might in practice limit their willingness or ability to participate. In particular, we consider three characteristics of low-income settings that are often considered key constraints on participation: weak institutions, demographic factors, and limited information flows. We also examine the impact of government programs and the role of new technologies in shaping whether and how citizens participate.

### 2.2.1. Institutions

A growing literature suggests that weak institutions have been an important colonial legacy for many LMICs. Elite capture of democratic institutions can create a barrier between citizen participation and actual policies, impede economic growth, and damage people's satisfaction with the process. Weak institutions can undermine voter participation by allowing electoral malpractice such as vote-buying, intimidation, or ballot stuffing. This, in turn, can worsen politician selection and reduce incentives for politicians to perform. Direct evidence on the importance of these channels in linking vote-buying with poor governance is scant. There is, however, indirect evidence that electoral malpractice reduces the quality of elected officials and reduces the representation afforded to the relatively poor. There is significant need for more research on whether and how weak institutions exacerbate electoral malpractices.

Another example of weak institutions is elite capture of the entry process, for example, through dynastic politics. However, it is unclear whether political dynasties are worse for governance outcomes; ex ante, the effect could go either way. Elite control can also undermine the role of participatory processes. A study in Sao Tome and Principe found that leaders exerted a strong influence in the outcomes of a public consultation process to discuss policy priorities. The evidence suggests that the way participatory processes are structured matters for reducing potential elite capture.

Even when elections look clean and fair while in progress, there are other types of preelection irregularities—such as voter registration fraud—that can negatively impact political participation. The evidence suggests that policies aimed at controlling fraud during elections can fail if such policies push misconduct to less visible stages of the election process. Whether a more comprehensive strategy for monitoring before, during, and after elections can be more successful at reducing irregularities is an interesting area for future research.

### 2.2.2. Demographics

Individual and group demographics—including ethnicity, gender, education, or socioeconomic status—can play an important role in participation. The existing evidence is mixed regarding the impact of such demographic factors on political participation and whether policy can change this impact.

Ethnic diversity can constrain political participation due to mistrust of candidates who might distribute public goods to other groups or areas, facilitating clientelist practices. Most studies show a negative relation between ethnic diversity and local investment, public good provision, and, ultimately, growth. However, a concern with this literature is the researchers' limited ability to control for unobservable regional characteristics that vary alongside ethnic diversity.

While ethnicity can influence political participation and public good provision, there is also evidence that the salience of ethnic identities increases during election time, reinforcing the initial relation. For instance, in parts of sub-Saharan Africa, identification with ethnic groups increases during election time, causing voters to focus more on candidates' ethnic identity than on their qualifications or past performance. A plausible interpretation is that electoral competition creates fluctuations in ethnic saliences that are correlated with the timing of elections. It is possible that these fluctuations reflect strategic behavior by political parties. Limited information about candidate qualifications and performance may be an important reason why ethnicity or other group characteristics become dominating forces in elections in low-income and low-information settings.



Gender can also directly influence political participation and selection, with gender bias limiting women's access to public office. Gender quotas are one policy tool that can increase women's representation in politics. Multiple studies in India have found that reserving positions for women in previous elections increases the probability of a woman running for, and winning, such positions in the future. Exposure to female leaders through reservation also increases the likelihood that male villagers associate women with leadership activities (for more information, see Section 2.1.1. above).

There is also a rich literature that examines the impact of gender quotas on service delivery. Evidence suggests that gender quotas can increase the provision of goods aligned with female preferences. In some contexts, gender quotas have also led to heightened police responsiveness to crimes against women, improvements in children's early life nutrition and educational outcomes, and changes in women's career aspirations. A study in Brazil also found that female winners of close mayoral elections between men and women were less likely to engage in corruption. We encourage future research that examines the drivers of gender exclusion, theories for gender differences, and policies that work (or do not work) to reduce gender bias in political participation.

The networks that underlie a citizen's social interactions can also play an important role in determining their political participation. Understanding how information and behaviors spread through social networks, and how networks affect coordination and collective action, have important implications for designing more effective governance programs. We view this area as a promising avenue for new research.

### 2.2.3. Information

Limited information can exacerbate the negative impacts of weak institutions and demographics-based politics. When citizens lack information about candidate quality or achievement, they may be forced to vote based on observable characteristics such as ethnicity and gender, which in turn may reduce electoral accountability (in terms of, say, competence). An emerging body of evidence shows that information can affect political outcomes. Voters are sensitive to the provision of information on candidates and policies. Such information can affect voting behavior, generally increasing vote shares for less corrupt, more qualified, and better performing candidates. The evidence also suggests that information is more likely to improve the selection of politicians when it is credible and directly links politician behavior to policy outcomes. Yet, we still know little about how parties and other political actors respond to greater information availability and how disclosure laws should be structured to avoid biasing voters against incumbent candidates. We view this area as an important area for further research.

### 2.2.4. Government programs

The government programs that citizens experience may also affect whether and how they engage in the political process. Some theories assert that voters are retrospective, voting according to whether or not they are satisfied with the incumbent's performance in office. If this is the case, government programs may increase support for the implementing administration among beneficiaries of such programs. Existing evidence suggests that this may be especially true for cash transfers, which can deliver a substantial increase in income to poor families. A study in Uruguay found that eligibility for a cash transfer program was associated with increased support for the current government. Similarly, a study in the Philippines found that the incumbent mayor's vote share was higher in municipalities where all villages received a conditional cash transfer program. We view this area as an important one for further research.

### 2.2.5. Technology

New technologies for monitoring may also strengthen participation, either by providing tools that are difficult to tamper with, enhancing communication, or through new avenues yet to be discovered. For example, a study in Afghanistan found that a new camera monitoring technology reduced electoral fraud. Although monitoring technologies can camera monitoring be effective, corrupt agents often adapt to monitoring efforts, especially if they become predictable. In the same study, researchers found evidence that the new technology displaced some electoral fraud to unmonitored polling stations.

Another obstacle to fully democratic elections may be that the voting process is too complicated for individuals with little education. If individuals fill out their ballots incorrectly, their votes are not counted. As a result, uneducated (and often poor) individuals have little influence on policymaking. Technologies for voting, such as electronic voting machines, may help enfranchise such voters. A study in Brazil found that the use of electronic voting machines, which displayed photos of candidates and alerted voters if their ballot was filled incorrectly, effectively enfranchised many poor and illiterate voters.

Finally, some have argued that coordinated citizen participation may have been aided by the rise of social media and swift spread of cellphone usage in LMICs. Understanding how new technologies can strengthen participation and monitoring, and how citizens and politicians behave in response, are important areas for new research.

### Institutions

- How can elite capture of electoral processes be constrained in low-income settings?
- What are the strategic responses of political actors to transparency initiatives during elections?
- What is the impact of different institutional arrangements in influencing the political voice afforded to different citizen groups, and what are their implications for policy outcomes?
- What is the incidence of electoral malpractices, and what policy solutions are effective?

### Demographics and identity

- How can institutional design reduce the impact of demographic identities?
- When and how does ethnic diversity worsen collective action and policymaking?
- How does institutional design of elections and community programs influence entry?
- How can more committed or qualified candidates be encouraged to stand for elections?
- How can people be encouraged to be more involved in community participation?
- What are the behavioral underpinnings of citizens' decision to participate?
- Do policy and public good preferences differ by gender?
- Through what channels do beliefs, institutions, or policies drive gender exclusion in the political and policy process?
- How does gender bias limit women's access to public office? What types of interventions impact bias?
- How does improving women's representation in politics affect service provision, citizen outcomes, and beliefs and aspirations regarding women's participation?
- How can social and other networks be best used to encourage participation in the political process?



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### Information

- What are the best ways to inform voters to elicit a change in their behavior or attitudes toward corruption, gender, ethnicity, or politician under performance?
- Does the form of information provision influence voter responsiveness?
- How do political parties and other political actors respond to greater information disclosure?
- How should disclosure laws be structured? Is there an anti-incumbency bias built into such laws?

### Government programs

- Do governments strategically target programs to increase their chances of reelection?

### Technology

- What strategies can help to prevent corrupt agents from adapting to monitoring technologies or tools?
- What is the influence of technology and social media on electoral outcomes?



### 3. IMPACTS AND DETERMINANTS OF LEAKAGES

Although anecdotal evidence suggests that poor quality government services, as well as outright corruption, are significant governance concerns in LMICs, there are remarkably few reliable estimates of the actual magnitude of leakages from the public sector, and the credible estimates we have are surprisingly heterogeneous. Moreover, just knowing the magnitude of leakages does not inform us about how serious the problem is from an economic perspective—the efficiency costs may exceed the extent of direct losses in several ways. Poor quality government services, leakages, and corruption can raise the marginal tax rate of firms, decrease business activity, and raise the marginal costs of public funds, making certain government projects economically unviable, or they can undo the government’s ability to correct externalities, thus leading to inefficient outcomes. Effective policies to improve government services, reduce leakages, and mitigate corruption must ensure not only that they solve the direct problem but also ensure that they do so in a way that increases economic efficiency and ensures they are sustainable in the long run.

#### 3.1. How bad is the problem, really?

Despite frequent discussion of the issue, there is surprisingly little hard data on the quality of government service provision, particularly leakages and corruption. Due to the difficulty in measuring illegal activity, until recently, most estimates of corruption were based on surveys of perceptions of corrupt activity. Evidence suggests that these estimates are often inaccurate due to the inability of most people to estimate fraudulent quantities of inputs in public projects, heterogeneous impacts by education level and other characteristics, and the lack of information or of a free press.

Economists have increasingly focused on direct measures of leakages. A variety of empirical methods have been developed, including surveys of bribe payment, direct observation of corrupt activity, comparisons of reported versus actual expenditures or inputs used in government projects, and estimates from market inference. While several credible estimates have emerged, there is still relatively little hard data compared with other development indicators. In comparison, virtually all countries have regular measurements of government expenditure, GDP, manufacturing, education, and health, compiled on a regular basis at the provincial level, and even finer levels of detail. But our knowledge about leakages is still limited to a few cases, with little meaningfully comparable data across countries.

Existing data suggest a strong negative relationship between income levels and the extent of leakages. However, the causality likely runs in both directions. It is easy to see how low corruption could cause countries to become rich if corruption hinders economic activity. However, the relationship in the other direction—that richer countries become less corrupt—is less understood. On the one hand, certain types of income shocks, such as natural resource shocks, may lead to more rents being expropriated and to more corruption. On the other hand, more complex business relationships may lead to demand for better government, and higher incomes may mean that countries have more resources to invest in cleaning up corruption. Recent findings in Vietnam suggest that economic growth may increase competition between jurisdictions, which may in turn reduce corruption. Another study suggests that the need to pay bribes in cash puts a limit on how large bribes can be, limiting the (real) size of bribes that can be paid in rich countries. Understanding the mechanisms through which higher incomes lead to lower corruption remains an important open question.

Even among countries at similar income levels, or within countries, there is still a marked amount of heterogeneity in corruption levels. For example, a study in Uganda estimated a leakage rate of 87 percent in education block grants; a study in Indonesia showed that missing expenditures in a road project averaged 24 percent of the total cost of the road; while in Mozambique, bribes represented 14 percent of total shipping costs for standard containers. Similarly, in a study of six countries, absenteeism rates for health workers ranged from 25 percent in Peru to 40 percent in India. Within India, teacher absenteeism ranged from 15 percent in Maharashtra to 42 percent in Jharkhand.

One issue with most “hard” estimates of corruption available is that they may suffer from selection bias in both directions: while corrupt agents might understate their corruption level, researchers might cherry-pick places where corruption is most severe. Developing careful, rigorous metrics of corruption that are not subject to these types of selection bias is an important area for future research.

#### KEY OPEN QUESTIONS: HOW BAD IS THE PROBLEM, REALLY?

- How much corruption would we find if we could construct an unbiased sample?
- What are the mechanisms through which higher incomes lead to less corruption?
- What prevents corrupt officials and political leaders from extracting even larger amounts?
- What is the relationship between payments in cash and corruption? Does transitioning to electronic payments from cash reduce corruption?



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### 3.2. Does corruption matter?

#### 3.2.1. Impact on firms

It is theoretically possible that corruption simply represents a transfer of money from governments to bureaucrats and does not necessarily reduce economic efficiency. However, empirical evidence suggests otherwise. At the firm level, the cost of paying bribes can be regarded as an additional tax that may distort the way that businesses choose to operate. Research in Uganda suggests that bribes may have as much as three times more negative impact on firms' growth compared to taxes. Moreover, indirect effects, such as uncertainty surrounding corruption, can also result in inefficient decisions, as firms change their production choices to avoid areas or activities with high corruption. However, the evidence we have on this topic is very limited, and more rigorous evidence of the efficiency cost of corruption on firms is needed.

#### 3.2.2. Impact on governments

Leakages have efficiency consequences for government programs via two channels. First, the theft of government resources increases the costs of providing goods and services. Governments may therefore provide less of, and significantly lower quality of, potentially important services because the net cost of providing these services is excessive. Second, leakages can create indirect costs if corrupt officials change the structure of programs to make corruption easier and more concealable. These increasingly convoluted programs may induce inefficiencies, which could potentially be larger than the direct cost of the lost funds themselves.

#### 3.2.3. Impact on correcting externalities

Governments structure laws and penalties to correct externalities such as keeping overloaded trucks and untrained drivers off the road or preventing the sale of counterfeit or out-of-date medicines. However, if people can bribe police officers or judges instead of paying fines, and if the relationship between the bribe they pay and the activity the government wishes to prevent is flatter than under the official law,<sup>2</sup> then the threat of punishment is diminished and people have less incentive to obey the law. There is now considerable evidence demonstrating that corruption indeed hinders governments' ability to correct various externalities. Several studies confirm that while rule-breakers do pay a higher cost than rule-followers, the marginal cost of breaking the law is lower in the presence of corruption than it would be without corruption. Thus, corruption has an efficiency cost because it reduces the marginal cost of the negative behavior and decreases the effectiveness of the law. Furthermore, evidence suggests that innovations to reduce corruption can effectively reduce negative externalities. For example, in India, new pollution audit incentives improved audit accuracy and in turn induced plants to reduce pollution.

<sup>2</sup> A flatter relationship means that as the "value" of the offense increases, the bribe increases less than the official fine does.

### 3.2.4. Impact on individuals

Part of the cost to individuals comes indirectly from the impacts described above: the changes to firm behavior, the reduced efficacy of government service provision, and the government's reduced ability to correct externalities. Corruption and leakages can also affect individuals directly, with the impact disproportionately distributed in society. For example, research in China reveals that corruption can lead to the disproportionate loss of life of workers whose firms ignore safety procedures due to their political connections.

#### KEY OPEN QUESTIONS: DOES CORRUPTION MATTER?

- What is the impact of corruption on firm performance, and why is the impact of corruption higher than the impact of taxes?
- Does corruption exacerbate misallocation across firms in the economy? How can this be reduced?
- How does corruption impact individuals? Does it have distributional consequences?
- Does corruption cause governments to reoptimize expenditures? If so, do governments shift into lower corruption sectors (to avoid distortions) or higher corruption sectors (to maximize rents)?
- How can the government design the official law to best achieve its desired ends in the presence of corruption?

### 3.3. What determines corruption?

Understanding the determinants of leakages and their relative impact is essential to devising policies to reduce corruption. Key determinants include the incentives that bureaucrats, citizens, and firms face; external factors such as technology, transparency, the judiciary, and demographics; and long-term anticorruption policy.

#### 3.3.1. The incentives that bureaucrats, citizens, and firms face

Economic theory tells us that corruption is shaped by the incentive structure faced by individual bureaucrats, including methods of selection, compensation, monitoring (probability of detecting corruption), punishment for the corrupt, and incentives for better performance. Despite the importance of these channels, there is relatively little evidence on how they affect actual performance, particularly with respect to selection of civil servants, wage levels, and output-based incentives. We discuss the selection, recruitment, and performance of public officials in more detail in Section 4.

The approach taken in analyzing the bureaucrat's decision problem in Section 4 below describes an approach to corruption and leakages based on a principal-agent framework, focusing on how a principal—the government—can best monitor its agents—civil servants. In other settings, however, market forces may partially determine the level of corruption, as strategic interactions between corrupt agents themselves become important to consider. In this view, corrupt agents behave like profit-maximizing firms, and the level of corruption is determined not just by monitoring but also by the structure of the “market” for bribes, the elasticity of demand for the officials' services, and the degree to which corrupt officials can coordinate with one another in setting prices. It follows that changing the structure of a bureaucracy can also reduce corruption and improve positive outcomes, primarily via two channels. Simplified regulations decrease opportunities for corruption and can lead to increases in new businesses and wage employment. Setting up structures to encourage competition between bureaucrats could also drive down corruption levels, although there is little rigorous evidence testing for this idea. Understanding how these strategic interactions affect the welfare of those trying to access public goods is a key question for governance research.

An alternative approach is to focus on the citizen who is contemplating paying a bribe or being honest. Can this approach reduce corruption? One argument is that if bribe payments were legal, then bribe payers would have an incentive to cooperate with law enforcement against bribe takers. This is a very innovative idea but one for which—to the best of our knowledge—there is no evidence on to date. Of course, the converse could also be true: increasing enforcement actions against citizens could also reduce corruption. Alternatively, citizens themselves could improve enforcement and reduce illicit behavior. Recent studies in Brazil and Mexico find that programs that provide financial incentives to citizens linked to firms' tax compliance led to improved firm compliance. While there is some existing research that focuses on the citizen side of the corruption relationship, we see this as an important area for further research.

We can also consider the incentives for corrupt officials and the incentives for citizens together. In particular, a relatively new empirical approach to corruption thinks of bribes as part of the equilibrium of a bargaining game between both sides. In this approach, the amount of the bribe is determined by each side's outside option (i.e., the payoff from being honest and not engaging in corruption) and their relative bargaining weights. Approaching corruption as a bargaining outcome can yield surprising and counterintuitive predictions.



### 3.3.2. External factors

Another approach to tackling corruption is to change external factors that are beyond the control of either the bribe payer or the bribe taker: for example, by using technology to ensure that certain procedures are followed or by increasing the transparency of their activities to provide information quickly and accurately to supervisors or other stakeholders. The role of judicial institutions, as well as individual and group demographics, can also be influential factors external to the control of the bribe payer or the bribe taker.

**Technology:** Technology can have a substantial impact on corruption by providing tools that are hard for humans to tamper with and by enhancing communication. There are also other mechanisms through which technology could matter, many of which likely have yet to be discovered. A variety of programs using technology for monitoring purposes (GPS systems, cameras, biometric captures, and wireless data transmission) are currently being piloted in LMICs. However, evidence suggests that these technologies are only as effective as the systems that process their information. If there are weak incentives based on the information returned, or if the incentive scheme is poorly designed, then technology can have little effect on corruption.

Technology can also be used to facilitate communications and payments systems. While these systems may be able to reduce leakages in program implementation, they may also raise a whole set of other issues, such as the power of agents within the system and the ability of low-literacy populations to use these systems effectively. Technology can also be used to detect fraud. One application is to tax enforcement, where double reporting allows tax departments to detect and investigate discrepancies. Machine learning techniques are also a promising avenue for fraud detection. We view these areas as important for further research.

**Transparency:** One way transparency can improve governance outcomes is if more information about government actions enables citizens and civil society to better monitor government performance. However, the effect of making information about politicians publicly available is theoretically unclear. For example, while disclosure of information could improve political accountability, it could also undermine politicians' privacy and discourage qualified candidates from participating in politics. A growing body of micro-level studies suggest that there is indeed a positive relationship between providing access to information about politicians' performance and both political accountability and the quality of government. Several recent studies also find that freedom of information provisions and information on entitlements of citizens can increase investments in public goods and access to public benefits.

While there is a growing body of evidence at the micro level, there is still very little academic literature on how increased transparency at the macro level, on issues such as the public budget and natural resource extraction, will impact politicians and the policies they choose to implement.

**Judiciary:** Judicial corruption poses a tremendous challenge because the judiciary is a key component in the efforts to fight all other types of corruption. If judges or prosecutors are corrupt, then it will be difficult to impose punishments (other than administrative sanctions) against other corrupt officials since they can bribe the prosecutors or judges and avoid punishment. Judicial corruption can also have important efficiency implications for civil contract enforcement. If judges are bribable, then in the event of disputes, contracts will be awarded to the party that can bribe more. Despite the importance of judicial corruption, there is very little rigorous literature on the topic, either in terms of its consequences or how to control it. Indeed, there is relatively little empirical literature on courts in LMICs at all, with most focusing on the effect of delays.

**Demographics:** Various individual and group demographics—including ethnicity, gender, education, or socioeconomic status—may be a salient factor in the bargaining process around corruption. For example, the equilibria for bribes may differ according to the demographic characteristics between a citizen and a government official. A recent study in India finds that voting outcomes are significantly impacted by the religious and caste composition of election officer teams managing polling stations, likely through own-group favoritism. Biases on the basis of individual and group demographics may also affect the prevalence or type of corruption. We encourage future research that examines the role of demographics in reducing corruption and leakages.

### 3.4. Anticorruption policy in the long run

Much of the evidence in the governance literature pertains to the short-run effects of anticorruption measures. But there is ample evidence that suggests that the long-run impacts could be quite different. For example, it could take corrupt officials time to learn how to manipulate a new system. Alternatively, a new, less corrupt group of civil servants may gradually select into a less corrupt system. Several studies from Brazil, Colombia, India, Indonesia, and Puerto Rico suggest that the long-run effect of anticorruption policies may be smaller than the short-run effects as officials adapt. More research is needed to understand how these systems can evolve over a period of years so that anticorruption policies and systems persist in the long run.

### The incentives that bureaucrats, citizens, and firms face

- Can changing the structure of the bureaucracy to encourage competition between government officials lower bribes?
- Does making it easier to report corrupt activities (e.g., by making paying bribes legal or otherwise) discourage corrupt activity in the first place?
- Can citizens be leveraged as anticorruption agents outside of the tax setting? If so, how?
- How should government best allocate limited audit resources against the population to minimize tax evasion and bribery?
- Would providing incentives to citizens to behave honestly decrease bribes?
- How can governments reduce the bargaining power of potentially corrupt officials?
- Can incentives for government officials be deployed effectively without increasing bribe rates?
- Are there multiple equilibria in corruption? If so, what causes this? And if so, can temporary corruption crackdowns have permanent effects?

### External factors

#### Technology

- How can technology be leveraged to reduce tax evasion and decrease leakages from tax?
- Does e-procurement prevent corruption or prevent collusion?
- That is the role for electronic payments in reducing leakages? How can the challenges of electronic systems be mitigated?
- How can technology be used to effectively detect and deter fraudulent behavior, reducing leakages to the government?

#### Transparency

- How does transparency about politician wealth decrease corruption and leakages?



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### Judiciary

- What are the impacts of judicial corruption on economic efficiency?
- How can the extent and effects of judicial corruption be measured?
- What approaches work best in reducing the levels and efficiency costs of judicial corruption?
- Is it possible to insulate the judiciary from corruption that is endemic in the rest of the government?

### Demographics

- Are demographics a salient factor in the bargaining process around corruption? If so, through what channels?
- How do biases based on gender, ethnicity, education, and socioeconomic status affect the prevalence or type of corruption?

### Anticorruption policy in the long run

- How can corruption be effectively combated in the long run?
- How can the impacts of anticorruption programs be made to persist?







## 4. PUBLIC SERVICE DELIVERY: ELECTION, INCENTIVES, AND SMART GOVERNANCE<sup>3</sup>

Understanding how bureaucracies work has the potential to unlock some of the doors to efficient service delivery and good governance. In this section, we examine a particular determinant of government performance: the individuals who perform government functions who can broadly be defined as either appointed civil servants or frontline service providers (e.g., teachers, nurses, firefighters, and trash collectors).

Several key features of the state distinguish its personnel practices from those of the private sector, particularly in LMICs. First, the state has a long horizon, which allows the state to make long-lived promises to its employees, such as pensions, which may be difficult for the private sector to make. Second, the need to isolate the employment decision from political influence limits the set of contracts a state can offer its employees, typically with strict formulas defining the hiring criteria, promotion patterns, and wage levels. Relatedly, public sector contracts usually do not include pay for performance, which can create severe multitasking problems, where bureaucrats focus on the incentivized dimension of their job at the expense of the non-incentivized dimension. Third, the services provided by the state—like schooling and health—are heavily subsidized, thus limiting the competition the state faces from other providers. Fourth, government careers differ from nongovernment careers in the mission of the organization: government organizations often aspire to public service, while private sector aspires to profit. Finally, the state also self-regulates to a much larger extent than the private sector, which potentially leads to conflicts of interest.

Taken together, the public sector is substantially different from the private sector in terms of wage levels, composition of the labor force, fringe benefits, and tenure. But understanding the impact of these personnel policies—and the ways they can be altered to improve government performance—is challenging. Field experiments offer an attractive way of providing evidence on these outcomes by examining what happens when these practices are altered or changed on various dimensions. We examine the evidence on three dimensions through which the performance of government employees is determined and potentially can be improved: selection and recruitment, incentives, and monitoring.

### 4.1. The selection and recruitment of public officials

Who are government employees, how are they recruited, and are there ways of improving the recruitment process? While the public service mission might attract employees with a “prosocial motivation”—who care about benefiting others—in LMICs, corruption in the public sector may attract those who are interested in pursuing corrupt activities.

Do mission-driven organizations, such as public bureaucracies or private nonprofit organizations, attract employees who have prosocial motivation? In general, the literature in public administration and economics supports this idea. Besides the prosocially motivated, however, public bureaucracies can also attract individuals with less desirable personality traits. Organizations that offer low-powered incentives or are unable to hold their employees accountable can attract individuals with limited aspirations and a poor work ethic. Widespread corruption may attract dishonest or venal individuals. Recent evidence also supports this view. In this section, we examine how certain job attributes affect who applies for a job and who accepts a job in the public sector and how intrinsic motivation is related to job performance.

#### 4.1.1. Wages and compensation

If higher quality candidates demand more compensation, then higher wages in the public sector may be necessary to attract these individuals. Conversely, offering higher wages may attract individuals who are more corruptible or care less about the mission. A few empirical studies examine whether this trade-off exists in a variety of contexts and find mixed results. For example, a study in Mexico found that higher wages did help attract higher quality candidates, and these effects did not come at the cost of attracting less publicly motivated candidates. In contrast, a study in Uganda found that financial incentives lead to a less socially motivated applicant pool for a community health worker position. Without more information on how personality traits vary across broader populations, it is difficult to make general conclusions about the exact trade-offs that financial incentives induce.

Financial incentives can also affect who accepts the job. In other words, higher wages may also increase an organization’s ability to fill vacancies. The same study in Mexico also found that offering a higher wage increased the government’s likelihood to fill a vacancy, even for less desirable posts, in part because the higher wages helped to compensate for aspects of the job that a candidate disliked.

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<sup>3</sup> This section is based on the chapter “The Personnel Economics of the Developing State” by Frederico Finan, Benjamin Olken, and Rohini Pande, originally published in the second volume of *Handbook of Field Experiments* (2017).



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#### 4.1.2. How should governments screen?

Wage offers affect who applies for government jobs, but government jobs are typically oversubscribed, so governments—like all employers—need to winnow down the set of applicants to those they hire. Governments vary in the way they screen their public servants. Some rely on the passage of civil service exams or on the attainment of university degrees. Others adopt more discretionary approaches that, while permitting more flexibility, can also be prone to corruption and patronage. These different screening strategies have important implications for not only the quality and performance of the bureaucracy but also for the type of person who applies.

For governments, who are responsible for providing public goods, the ability to recruit public-service-motivated individuals might be especially beneficial. In addition, individuals with high levels of intrinsic motivation may be less likely to shirk in environments with low-powered incentives or noncontractible elements of service provision. Indeed, a large empirical literature in public administration, and a growing literature in economics, shows that intrinsic motivation—and specifically public service motivation—is associated with higher levels of performance in government work.

Despite the mounting evidence linking public service motivation to job performance, establishing causality has proven challenging. Given the difficulties in directly generating experimental variation in a person's level of intrinsic motivation, researchers have had to rely on indirect approaches. One approach has been to introduce experimental variation in who applies for the same job. In this vein, a study in Zambia found that community health workers who were recruited with advertisements emphasizing career incentives, compared to social incentives, were more effective at delivering health services. In comparison, a study in Uganda found that advertising a community health worker position with higher wages, compared to lower wages, discouraged applicants who cared mainly about the social component of the job. Furthermore, workers recruited under lower pay, who were measured to be more prosocial, performed better on the job, visiting more households and conducting more natal checks on average. While these studies can credibly identify the effects of “selection” on job performance, prosocial motivation is frequently correlated with various other personal traits, making it difficult to separate the effects of intrinsic motivation from other positive personality traits.

Another experimental approach has been to test whether a particular intervention is more effective among individuals with high levels of intrinsic motivation. While this approach establishes that the characteristics of individuals are an important determinant of performance, and these determinants suggest how governments could change the applicant pool, it does not necessarily tell us how governments should screen among the candidates who apply to further improve selection. Understanding how to most effectively screen seems an important direction for future research.

#### KEY OPEN QUESTIONS: THE SELECTION AND RECRUITMENT OF PUBLIC OFFICIALS

- What are the trade-offs associated with higher wages?
  - Selection:** Do they improve the qualifications or prosocial motivation of public sector job applicants?
  - Performance:** Do higher wages reduce corruption and, if yes, through which channels?
- What are the possible selection and promotion criteria to reduce the propensity of civil servants to be corrupt?

## 4.2. Using incentives to improve performance

Once selected, it may be possible to use incentives to further improve workers' performance and to reduce corruption on the job. In many countries, to limit politician discretion over civil servants' pay and promotions, public sector salaries are based on rigid and formulaic pay scales. These pay scales feature compressed wages relative to that in the private sector. The combination of formulaic pay systems and wage compression limits the degree to which financial incentives can be used to reward the performance of public servants. While this type of salary structure may be appropriate for governments in many contexts, it may not be effective in contexts where government performance is often poor. Therefore, scholars have begun to examine the costs and benefits of providing additional incentives, both financial and nonfinancial, to government workers.

### 4.2.1. Compensation and corruption

Despite the attention often given to civil service wages, there is relatively little evidence on their impact for reducing corruption. Several cross-country studies find that higher public wages are associated with lower corruption, though these studies are essentially cross-sectional in nature. At a more micro level, a few studies have examined the idea of an "efficiency wage," where civil servants may earn a high enough salary to be reluctant to accept bribes given the risk of being dismissed if caught. This idea was examined during a corruption crackdown in Argentina, where researchers found that higher wages played no role in reducing input prices, associated with lower corruption, when audit intensity was highest, but decreased input prices when audit intensity decreased to an intermediate level. Another study in India found that increases in expected future opportunities for rents, specifically from corruption rather than wages, effectively reduced the level of daily corruption. Aside from wage increases, additional studies suggest that other types of resource windfalls, such as federal transfers, can influence corruption by local officials. While the existing evidence suggests that there might be a relationship between the future returns to employment and the amount of corruption chosen, the evidence is by no means dispositive, and this issue remains an important area for future research.

### 4.2.2. Financial incentives

Government officials do many types of jobs, and some are easier to incentivize than others. For "agents of government authority"—such as police, judges, prosecutors, tax inspectors, and building inspectors—there is a natural tension between what the government would like the agent to do (e.g., to make people pay taxes that are due under the law) and what the targets of government enforcement would like the agent to do

(e.g., to allow them to avoid paying taxes). This tension invites opportunities for corruption between the agent and the citizen (e.g., reducing taxes in exchange for a bribe) and complicates the incentive problem for the government.

Recent experiments in Pakistan focusing on the tax sector find evidence for both the positive and negative aspects of financial incentives: incentives increased tax revenue, but they also increased bribe rates in incentive areas, potentially to compensate incentivized tax inspectors for foregone incentive payments. Understanding the degree to which incentives can be effective in these contexts without further empowering these officials to collect more bribes or overenforce the law is an important area for future work. In other cases, such as frontline government service providers, the government's and the citizen's incentives are aligned: both would like the agent (e.g., the teacher) to provide more or better services. Providing incentives may therefore be more straightforward in these cases.

In education, evidence from India and Kenya suggests that teacher incentives based on student test scores can improve test scores and learning. Moreover, in India researchers found positive spillover effects, as students also did better in non-incentivized subjects. However, researchers found no such positive spillover effects in Kenya, potentially because teachers may have emphasized test-taking skills, as opposed to general instruction, in response to the incentives. In both cases, incentives improved outcomes targeted under the incentive scheme, but understanding why there were positive spillovers in some contexts but not others seems to be an important area for future research.

In healthcare, incentives for providers have tended to focus on measures of service delivery, such as the number of immunizations given, rather than on health outcomes, which can depend on a variety of factors beyond provider effort. Evidence from Rwanda and Argentina find that performance-based incentives for healthcare workers can increase provider effort and improve service delivery, although the evidence is mixed as to whether these effects translate into improved health outcomes. Incentives can also work at the community level. For example, evidence from Indonesia on incentivized community block grants finds that incentives sped up improvements on targeted health outcomes.

Financial incentives can also be unconditional. For example, a large-scale study in Indonesia examined the impact of doubling teacher salaries and found that the increase in wages had no impact on students' test scores or teachers' effort.



### 4.2.3. Nonfinancial incentives

While the majority of existing research has focused on financial incentives, nonpecuniary incentives are potentially important. While civil service regimes typically place many restrictions on hiring and firing, they have much more flexibility in assigning bureaucrats to postings within the civil service, and these postings can be used as reward and punishment devices. One problem with transfers as an incentive device is that desirable posts can be assigned due to politics or patronage, rather than performance, which can dampen their usefulness as a performance tool. However, recent studies in India and Pakistan suggest that carefully designed incentive programs that use transfers to reward good performance can improve service delivery. In Pakistan, for example, researchers studied the impact of randomly offering performance-based transfers to tax inspectors and found that transfers substantially raised tax revenues. Effects were similar in magnitude to the financial incentives discussed above in Section 4.2.2., but transfers were more cost-effective since they did not incur any cost for the government to implement.

Beyond explicit incentives, it may be possible to use other types of intrinsic rewards as a motivational tool. Public sector jobs in particular may seek to take advantage of the fact that their employees may be public-spirited and use this as a way of creating rewards. A study in Zambia found that social incentives were twice as effective as financial incentives for incentivizing female condom sales among public health extension workers. Under social incentives, agents were awarded stars to display publicly based on their sales, which may have created social comparison with other agents. While much less extensively studied than pecuniary incentives, this growing body of evidence suggests that nonfinancial incentives are a promising direction for further exploration.

#### KEY OPEN QUESTIONS: USING INCENTIVES TO IMPROVE PERFORMANCE

- When are those in charge of enforcing regulations (auditors, police, prosecutors, anticorruption commissions, etc.) effective at reducing corruption, and when do they themselves become corrupt and only add to the problem?
- How can incentives be effectively designed for nonfrontline service providers, like tax, police, or procurement officials?
- Can output-based incentives for government officials such as police and tax inspectors reduce corruption, or will they lead to overenforcement and extortion?
- Can outcome-based incentives improve quality of service delivery? Does a narrow focus on incentivized outcomes reduce performance on other dimensions?
- Can nonfinancial motivations such as shame, intrinsic motivation, and mechanisms to internalize the greater good reduce corruption?

### 4.3. Monitoring mechanisms and public service delivery

In the context of civil servant performance, incentives often focus on tying rewards to easily observable and verifiable measures of performance. In many cases, however, monitoring performance itself is a costly effort. Increased monitoring can improve program performance via multiple channels. First, in cases where outcomes are not observed without some effort, increased monitoring can allow managers to directly enforce punishments and rewards based on program outcomes (e.g., firing or transferring poor performers). Second, monitoring can play an important deterrence role. Third, access to monitoring results can empower citizens to demand and obtain better services by threatening to report on or vote out poor performers.

However, there are also reasons to believe that incentives and monitoring alone may not suffice. First, in situations where state capacity is weak, managers' or regulators' ability to impose punishments is limited, and improving information flows may do relatively little by itself. Second, those in charge of collecting information or monitoring based on available information may themselves be susceptible to corruption and misuse this information. One may worry that allowing managers discretion in collecting and using information may have the perverse effect of increasing rather than reducing program leakage. Thus, a key factor in determining the role of information in improving service delivery is the extent to which those who receive the information—be they supervisors or workers—have the incentives and ability to act on it.

#### 4.3.1. Government monitoring

Information on project and intermediaries' performance arises in multiple ways. The classic method remains via government auditing and inspection units that are required to monitor government programs. Several studies examine the role of government audits and provide evidence that audits can have a significant deterrence impact and reduce corruption, even in a highly corrupt environment where those doing the monitoring are themselves susceptible to corruption. For example, in Indonesia, increasing the probability of a government audit from 4 percent to 100 percent in a village road construction program significantly reduced unaccounted expenditures or leakages. In Brazil, publicly released corruption audits reduced reelection rates for incumbent municipal mayors with an intermediate or higher number of corruption violations. Yet we know little about whether monitoring by government auditors would work in the long term if they had more of an opportunity to form corrupt relationships with those being monitored.

More recently, the rise of e-governance has meant that government agencies have access to large administrative datasets on fund flow, intermediaries' behavior, and monitored program outcomes. These data directly allow managers to obtain better real-time data on program performance. In many cases, public availability of these data (aided in part by the rise of freedom of information acts) also increases citizen monitoring. Several studies have examined the impacts of e-monitoring systems on provider attendance and performance. In some cases, monitoring alone, without incentives, did lead to positive results. However, evidence also suggests that the robustness of such monitoring systems is sensitive to how tamper-proof the monitoring mechanism is. For example, in India, a program that monitored nurse attendance using time/date stamp machines was ultimately ineffective in improving attendance, most likely because nurses learned how to exploit loopholes in the monitoring system. More generally, if the incentive system allows for loopholes or considerable supervisor discretion to enforce punishment, then improved information may do little to change behavior.

Another common concern is the veracity of information collected by monitors. Incentives to provide poor quality information may arise if inspectors and auditors are corruptible by those they intend to monitor. This possibility is, arguably, particularly stark in the case of private sector auditors paid by the firms or institutions they audit. A study of third-party environmental auditors in India found that making auditors more independent improved the truthfulness of their reporting and reduced firms' pollution emissions. This evidence suggests that third-party reporting systems create conflicting interests between those conducting the monitoring and those being monitored, which can help establish the veracity of the information reported.

#### 4.3.2. Citizen monitoring

The last decade has seen increased interest in monitoring undertaken directly by citizens. In part, this interest reflects the increasing incidence of freedom of information acts and the greater ease of obtaining already digitized data on program performance. A growing body of evidence indicates that information provision to citizens can have positive impacts. For example, providing information to beneficiaries of their entitlements under a subsidized rice program in Indonesia significantly increased the subsidy received by eligible households, likely by increasing citizens' bargaining power with local officials.



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One method of providing information on program performance is through creating committees made up of citizens and program providers. A study in Uganda found that informing Ugandan citizens of the state of local health service delivery, and holding meetings between citizens and health workers to agree on action plans, significantly improved service delivery and health. A follow-up study in the same context examined a less expensive version of the program that did not provide information on health worker performance to communities and found no impacts, suggesting that access to information was key. Another study of school committees in Indonesia points strongly to the importance of institutional reforms that lead to positive interactions between monitoring and incentive mechanisms.

#### KEY OPEN QUESTIONS: MONITORING MECHANISMS AND PUBLIC SERVICE DELIVERY

- Does providing government information on its intermediaries' (civil servants) performance via audits or time-stamp technology improve outcomes?
- How can community monitoring programs be designed to make them more effective in monitoring civil servants?



## 4.4. Cross-cutting factors: the promise of e-governance and demographics

### 4.4.1. The promise of e-governance

An emerging body of evidence suggests that e-governance and other technological changes in how the government functions may help improve governance in low-income settings, perhaps by replacing some of the functions played by personnel—who may have incentives to shirk, take bribes, or otherwise underperform—with technological solutions.

There are a number of ways in which technology can constrain the discretion of local officials and can improve performance. Recent papers from India, for example, examine how e-governance and the use of biometrics can help improve both the fund flow system from central coffers to village-level coffers and the transfer of resources from the village-level provider to the final beneficiaries.

Another area where technology shows some promise is in government procurement. Government procurement accounts for an enormous amount of government expenditures, and despite many regulations put in place to ensure that procurement is conducted fairly and with limited corruption, the fact that procurement regulations must be implemented by officials allows scope for discretion. Recent evidence suggests that electronic procurement systems could allow greater access to information for all potential bidders and ensure that procurement rules are followed correctly.

Another issue that bureaucracies typically face is the inability to perfectly monitor their employees. Fortunately, advances in technology appear to be a step forward. The use of smartphone technology and e-governance platforms not only promote transparency and accountability but also serve as disciplining devices. Importantly, these technological advances may also create a feedback loop on the compensation structure of employees. As governments increasingly adopt these new technologies, thus enabling them to better monitor and evaluate their employees, the set of contracts that they can offer their employees expands. The relationship between technology adoption and compensation scheme is another exciting area of future research.

### 4.4.2. Demographics and public service delivery

Another cross-cutting consideration across the selection, recruitment, incentives, and monitoring of civil servants is the role of demographics. Bias along gender, ethnicity, religion, socioeconomic, or other factors may affect the recruitment of civil servants and the wages offered to applicants. An individual's prosocial and intrinsic motivation may also differ by demographic characteristics, with implications for performance. The design of personnel policy and incentive structures to improve performance may also have differential impacts by various demographic factors. For example, a recent

study in India found that when shopkeepers were members of historically disadvantaged scheduled castes (SCs), the distribution of subsidized goods was higher among SCs and lower among non-SCs, likely because SC pairing contributed to the ability of the community to monitor and enforce distribution. We find this area to be an important one for future research.

#### KEY OPEN QUESTIONS: CROSS-CUTTING FACTORS: THE PROMISE OF E-GOVERNANCE AND DEMOGRAPHICS

- Can e-governance limit corruption and leakages by automating processes previously conducted by individuals with discretion?
- Can e-procurement improve the efficiency of government investment?
- Do certain screening strategies reduce or exacerbate bias by gender, ethnicity, religion, or other demographic dimensions?
- How do biases based on demographic factors affect the wage premiums of civil servants?
- How does affirmative action affect service delivery?
- Are there differential responses to performance incentives by demographic factors?

## ABOUT J-PAL

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a global research center working to reduce poverty by ensuring that policy is informed by scientific evidence. Anchored by a network of 181 affiliated professors at universities around the world, J-PAL conducts randomized impact evaluations to answer critical questions in the fight against poverty.

## FOR FURTHER READING

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