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Corruption in India: Bridging Research Evidence and Policy Options§

ABSTRACT Corruption has become an increasingly salient issue in India today, spawning enormous interest from the media as well as a large amount of academic research. Yet, there is a large gap between what has captured the media's attention, the policy options under discussion, and the actual evidence base drawn from empirical research on corruption. We attempt to bridge this gap by directly addressing the particular challenges that corruption in India poses. Academic evidence supports the popular perception that corruption is widespread and endemic. However, we find that the costs of day-to-day corruption are just as large, if not larger, than those of the "scams" that dominate headlines. Further, we find that there is very little evidence to support the idea that greater transparency, information, and community-based efforts have a significant impact on reducing corruption on their own. This is also true for some technological interventions, although those interventions—like direct benefit transfers—that bypass middlemen and corrupt officials have a much greater scope for success, as do interventions that transfer bargaining power to citizens and beneficiaries. We find much to commend in the sensible and wide-ranging legislative agenda to combat corruption, including the Right to Service and Public Procurement bills. However, what is most important for combating corruption is not the law on paper but the implementation of the law; the binding constraint, as always, is the government's desire and ability to punish corrupt officials and politicians.

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1. Introduction

orruption in India is a topic that seems to never fall out of fashion. From as far back as Kautilva's Arthashastra in the 4th century BC to the 2G telecommunications spectrum scam in the contemporary period, corruption is widely perceived to be an endemic phenomenon in the Indian subcontinent.

Yet, by any measure, the salience of corruption in the public policy discourse in India has ratcheted up in recent years. This is, in part, a reflection of a series of high-profile "scams" that plagued the recently departed United Progressive Alliance (UPA) government. In 2011, India saw a grounds well of popular protest in which thousands of citizens joined in anticorruption demonstrations after a series of scandals implicated ruling politicians and their cronies in billions of dollars of graft—from the Commonwealth Games to 2G scandals, and from "Coalgate" to Adarsh Housing Society. This simmering discontent later gave rise to a new political party—the Aam Aadmi Party (AAP)—that burst onto the political scene with a pledge to clean up government.

While the AAP's popularity has largely been limited to Delhi and its surrounding areas, the recent anticorruption mood in India arguably helped propel the Bharatiya Janata Party's (BJP) Narendra Modi and his National Democratic Alliance (NDA) government into power in the 2014 general election. Indeed, Modi consistently invoked his fight against corruption on the campaign trail, telling huge crowds that the Congress government stood for the "ABCD of corruption," listing numerous scams in which the party and family members of the Nehru-Gandhi dynasty were implicated: "A for Adarsh, B for Bofors, C for CWG, and D for Damad Ka Karobaar ('son-inlaw's business,' a reference to corruption allegations lodged against Robert Vadra, the son-in-law of Congress president Sonia Gandhi)."

A postelection analysis conducted by the Centre for the Study of Developing Societies (CSDS) suggests that anticorruption sentiment was a key contributor to the BJP's winning an outright majority in parliament, the first time any party has done so in three decades (and the first time in history such a feat was accomplished by a party other than the Congress). According to CSDS' 2014 National Election Study, only concerns over inflation and lack of economic development were more important than corruption in determining voters' choices in the election.

In this paper, we try to bridge the gap between evidence and policy when it comes to understanding the causes and consequences of corruption in India and formulating solutions to address its spread. This gap exists for several reasons.

For starters, corruption is by its very nature difficult to objectively measure. Most corrupt transactions transpire out of public view and the parties involved have incentives to keep it that way. What emerges from media reporting is, by definition, ex post and often sensationalist in nature. For example, the media focuses on "scams" that involve billions of rupees worth of malfeasance; yet our calculations suggest that the costs of day-today corruption are at least of the same order of magnitude, if not higher. We compiled an inventory of the biggest public corruption scandals uncovered after the year 2000, finding that the amounts involved sum up to hundreds of billions of dollars (the mean scam "value" was ₹36,000 crore, and the median ₹12,000 crore; see Table 1).2 Eye-popping as these numbers are, the costs of day-to-day corruption are comparable: e.g., Muralidharan et al. (2014b) calculate the annual costs of teacher absence to be in the range of ₹8,100–9,300 crore; Transparency International and CMS (2005) estimate the costs of bribes paid annually for accessing various government services across India to be ₹21,000 crore. Hence, attention-grabbing one-off scandals may deflect attention from corruption that is just as costly, but is harder to find and measure.

Second, while the existing social science literature has established some theories of corruption, these have produced markedly divergent predictions about both the causes and consequences of corruption. In particular, existing theory is ambiguous about whether corruption is bad for the economy. An old literature suggests that corruption "greases the wheels" of the economy by providing incentives for bureaucrats to work harder, and also by allowing firms and individuals to get around costly and inefficient red-tape and regulations (Huntington 1968, Leff 1964). Another strand of thought predicts that corruption may have no efficiency effects, only redistributive ones; e.g., if the most efficient firm is the one that can pay the highest bribes to

- 1. While there is no precise formula for determining what constitutes a big scandal, we began by scanning lists of "corruption scams" compiled by news outlets (India Today, Outlook, NitiCentral, Yahoo, DNA) over the past several years. We then created a shortlist so that only scams that featured on multiple lists were included. For some number of scams, it was difficult to find the level of detail we wanted, so we excluded these. Table 1 summarizes the 28 scandals we examine.
- 2. Not all of these amounts involve losses to the government and, moreover, these amounts must be viewed with caution, since the media tends to inflate and focus on the largest numbers. Indeed, the "costs" written up in the media conflate the value of bribes that changed hands, pure theft or embezzlement from the government of various sorts, cheating the exchequer out of the appropriate value of assets, as well as private losses in which one party simply cons the other.

TABLE 1. Major Corruption Scandals in India in the 21st Century

Name	Date	Years	Sector	State	Cost (₹Crore)	Cost type
Taj Heritage Corridor Scam	2002-03	2	Construction	Uttar Pradesh	175	Embezzlement
Uttar Pradesh NRHM Scam	2005–11	7	Construction	Uttar Pradesh	10,000	Embezzlement
Tatra Trucks Scam	1997–11	15	Defense	N/A	750	Bribes
Agusta Westland Chopper Deal Scam	2010–13	4	Defense	N/A	450	Bribes
Calcutta Stock Market Scam	2001	1	Financial	Calcutta	120	Private fraud
Telgi Stamp Scam	2003–13	11	Financial	Maharashtra, others	43,000	Private fraud
IPO Demat Scam	2003-05	3	Financial	N/A	146	Private fraud
Saradha Group Chit Fund Scam	2006–13	8	Financial	West Bengal, others	20,000	Private fraud
Sahara India Pariwar - Investor Fraud Case	2008–10	3	Financial	Uttar Pradesh	24,000	Private fraud
Kerala Solar Panel Scam	2010–13	4	Financial	Kerala	7	Private fraud
Rice Export Scam	2008-09	2	Food grains	N/A	2,500	Value loss to govt
Uttar Pradesh Food Grain Scam	2002–10	9	Food grains	Uttar Pradesh	35,000	Embezzlement
Gegong Apang Public Distribution System Scam	1995–04	10	Food grains	Arunachal Pradesh	1,000	Embezzlement
Antrix Devas/ ISRO Spectrum Allocation Scam	2005–11	7	IT	N/A	2,00,000	Value loss to govt

(Table 1 Contd)

(Table 1 Contd)

Name	Date	Years	Sector	State	Cost (₹Crore)	Cost type
2G Spectrum Scam	2008	1	IT	N/A	56,000	Value loss to
Satyam Computer Services Scandal	2009	1	IT	N/A	14,162	Private fraud
Karnataka Wakf Board Scam	1954–11	58	Land	Karnataka	2,00,000	Value loss to govt
Maharastra Adarsh Housing Society Scam	2003–10	8	Land	Maharastra	163	Value loss to govt
Andhra Pradesh Land Scam	2006–12	7	Land	Andhra Pradesh	1784	Value loss to govt
Noida Corporation Farm Land Scandal	2009–11	3	Land	Uttar Pradesh	5,000	Value loss to govt
Maharashtra Irrigation Scam	1999-09	11	Land	Maharashtra	35,000	Embezzlement
Orissa Mine Scam	2000-10	11	Mining	Orissa	50,000	Value loss to govt
Coalgate	2004–12	9	Mining	N/A	1,86,000	Value loss to
Bellary Mining Scandal	2005–11	7	Mining	Karnataka, AP	21,000	Value loss to
Jharkhand Mining Scam	2006–09	4	Mining	Jharkhand	3,400	Value loss to govt
Goa Mining Scam	2009–11	2	Mining	Goa	35,000	Value loss to govt
Cash for Votes Scandal	2008	1	Political	N/A	50	Bribes
CWG Scam	2010	1	Procurement	N/A	70,000	Embezzlement

Source: Compilation of various media sources. Full details provided in Online Appendix A.

officials in order to obtain contracts or licenses from the government, then there is no efficiency consequence, just a transfer from the government to the corrupt official (Lui 1985).

On the other hand, there are a number of theoretical reasons why corruption might negatively affect efficiency and economic and political development. Continuing the example above, the secrecy inherent in corruption might mean that firms connected to the bureaucrat, which might not necessarily be the most efficient ones, obtain contracts or licenses (Shleifer and Vishny 1993). Meanwhile, not all rules and regulations are inefficient, and in cases where individual willingness or ability to pay diverges from what is considered socially good, corruption will not be optimal (Banerjee 1997). For example, being able to drive a car is a reasonable requirement for obtaining a driver's license, and bribing to get around this rule might reduce social welfare. Further, bribery might increase bureaucrats' incentives to create inefficient red-tape in the first place (Banerjee 1997).

Third, the industrial organization of corruption may also matter. Suppose a firm needs multiple clearances to set up a project. If a number of decentralized corrupt agents act as independent monopolists, they will charge bribes that are "too high" and create an inefficient entry barrier (Shleifer and Vishny 1993). Additionally, corruption that involves straight theft might distort optimal public finance (Niehaus and Sukhtankar 2013b). Finally, the presence of widespread corruption in the economy might incentivize rentseeking rather than productive activities (Murphy et al. 1991).

Fortunately, one recent bright spot from the research community is the development of a burgeoning empirical literature on corruption in India that tests many of these theoretical predictions. These studies have produced a vast amount of knowledge about both the political economy of corruption as well as the relative effectiveness of various solutions in addressing this scourge.

However, much of this scholarly work has not filtered down into the policy domain. While there are several excellent recent reviews of research on corruption drawing on a wide array of settings (Banerjee et al. 2012; Olken and Pande 2012; Pande 2007), corruption in India poses particular challenges that these surveys do not explicitly address. For example, India's archaic campaign finance laws result in candidates turning to illicit means to raise funds for elections (Kapur and Vaishnav 2015; Sukhtankar 2012). Moreover, electoral accountability mechanisms proven to check corruption in other contexts (Ferraz and Finan 2011) fail in India where criminal and corrupt politicians thrive in spite of these measures (Aidt et al. 2013, Banerjee and Pande 2009, Vaishnav 2012). Furthermore, many

such reviews do not produce explicit recommendations for formulating better public policy.

These various misalignments have created a great deal of confusion. Despite the increasing salience of corruption in India and the heated political rhetoric the subject arouses, there is a large gap between what has captured the media's attention, the policy options under discussion, and the actual evidence base from empirical research on corruption. To give one example, the conventional wisdom holds that corruption in politics or in public works programs is often the result of information asymmetries. Yet, multiple studies actually show that information provision is largely ineffective in producing better governance outcomes, at least in isolation (Banerjee, Banerji, Duflo, Glennerster, and Khemani 2010a; Murgai 2013; Niehaus and Sukhtankar 2013b; Ravallion, van de Walle, Dutta).

The objective of this paper is to make a modest contribution toward a more optimal alignment. To begin with, we define corruption using the most common academic definition: "the misuse of public office for private gain" (Bardhan 1997). Note that this immediately narrows our focus to the public sector, to include both bureaucrats and politicians. Our choice of definition does not imply that we are leaving out the private sector or private individuals, usually the source of bribes that represents the "private gain" of the bribe receivers; it simply means we are ignoring purely private fraud, e.g., a case of a private firm paying off another private firm to get an unfair advantage in a private transaction between them.³ Given the paucity of research in this area and the difficulty in conceptualizing every type of private sector malfeasance, we focus on public sector corruption.

Having defined corruption in this manner, we divide the remainder of the paper into four main parts. In Section 2, we provide a stylized classification of the causes of corruption in India. We identify four underlying drivers: two "deep" causes (lack of enforcement capacity, regulatory complexity) and two "proximate" causes (inadequate regulation of political finance, shortcomings in public sector recruitment and postings).⁴

In Section 3, we pivot from a discussion of corruption's underlying drivers to presenting a rubric for classifying corrupt acts. Specifically, we organize corruption into three general categories based on the actions of public officials: facilitative, collusive, and extractive corruption. Using

^{3.} However, some of the scams that we identify in Table 1 involve financial sector fraud with only private actors.

^{4.} Technically speaking, the issues of political finance and discretionary transfers and postings are both drivers of corruption, as well as corrupt outcomes in and of themselves. In the latter regard, they are manifestations of collusive and/or extractive corruption.

this simple framework, we then draw on research from both economics and political science to describe the magnitudes, causes, and consequences of each of these types of corruption.

Section 4 discusses broad strategies for combating corruption, describes major recent anticorruption legislation either passed or under discussion, and explores academic evidence that evaluates the effectiveness of both broad strategies and particular legislation in combating corruption. In Section 5, we discuss India's unique political economy of reform and what, if anything, India can learn from the historical record. In Section 6, we conclude with some parting lessons.

It is important to note that our focus is on academic research that has rigorously evaluated causal relationships with the best quality data and information possible. Given the vastness of the literature on corruption in India, we were compelled to narrow our parameters in this way. Furthermore, with an eye towards distilling the major takeaways of this literature and extracting the core policy prescriptions that emerge, we have generally tried to avoid discussions of empirical methodology. In so doing, we follow a template similar to that pursued by Muralidharan (2013) in his review of education in India.

2. Causes of Corruption

In this section, we briefly review the major causes of corruption in India. Given the complexity and breadth of an issue such as corruption, it is impossible to fully account for all of the underlying drivers that create incentives for corrupt behavior. Rather than attempting to construct such an unwieldy inventory, we focus instead on stylized drivers of corruption.

India's per capita Gross Domestic Product (GDP) in 2015 places it among the ranks of the world's lower middle-income countries. Given the inverted-U shaped relationship between corruption and per capita GDP across countries, it seems intuitive that corruption in India might pose a particular challenge. In the poorest countries, corruption is limited because there is, frankly, not much to steal; in the most undeveloped economies, there is little need to delegate the types of discretionary tasks that lend themselves to bribery. On the opposite end of the spectrum, the rich, advanced industrialized countries have developed robust legal frameworks and institutional and enforcement mechanisms necessary to deter and combat corruption. As Laffont (2006) points out, one is likely to find the greatest corruption in those countries standing at the unfortunate juncture of a heavily regulated economy that does not yet boast adequate enforcement capacity.

We refer to these two factors—lack of enforcement capacity and regulatory complexity—as "deep" causes, insofar as they reflect the key institutional parameters that define India's corruption environment. The remaining two drivers—inadequate regulation of political finance and shortcomings in public sector recruitment and postings—are more "proximate" in nature. By proximate, we do not mean to imply that they can be easily addressed in the short term, but rather that they are well-defined pathologies spawned by larger infirmities plaguing India's institutional moorings. Based on the literature, we believe these four drivers set the stage for the vast majority of corrupt acts taking place in India in recent years.

2.1. Regulatory Complexity

In light of India's experience of colonial exploitation and the realities of its abject poverty, and in concert with prevailing ideological trends of the era, India's first Prime Minister, Jawaharlal Nehru, launched India down a path of state-led development. Upon Nehru's death, his daughter Indira Gandhi doubled down on this state-led model, triggering the onerous system of state controls later dubbed the "License Raj." With the "pro-business" reforms of the 1980s and the "pro-market" reforms of the early 1990s, the role of the state in India's economy appreciably diminished (Rodrik and Subramanian 2005). However, more than two decades after enacting liberal economic reforms that loosened controls on private business and deepened India's economic integration with the rest of the world, many vestiges of the License Raj persist and help facilitate significant rent-seeking activity.

First, India remains an intensely difficult place for firms to do business. According to the 2015 World Bank Doing Business indicators, India ranks 142 out of 189 countries. Its standing compares unfavorably to its South Asian peers, as well as other "lower middle income" economies, and even within the universe of BRICS nations. For instance, according to the World Bank survey, the act of obtaining a single construction permit in India involves 27 discrete procedures, takes 162 days, and costs 46% of the total cost to a construction firm of building a warehouse.

Second, lucrative sectors of the economy remain largely untouched by economic reforms, allowing the state to exercise a heavy hand through its regulatory authorities as well as the market power of public sector undertakings. As Reserve Bank of India Governor Raghuram Rajan has noted, the state in India continues to dominate the "commanding heights," such as oil and gas, mining, and heavy industry (Rajan 2012). The possibilities of quid pro quos are especially high in these areas, as the allocation of rights over natural resources has been poorly defined historically and virtually all but ignored by successive economic reforms.

Two facts result from this state of affairs. First, the regulatory intensity of the state with respect to private business activity not only minimizes the role for market forces, but also facilitates a natural quid pro quo whereby the state provides licenses, permissions, clearances, etc. in exchange for side payments. This is why India reliably rates poorly on most perception-based indicators of corruption and bribery.

Second, corruption is most intense in those sectors where the regulatory footprint of the state is the greatest. Consider, for instance, the sectoral breakdown of our inventory of scams listed in Table 1. The clustering of scams within certain sectors is quite instructive; the mining and land sectors are most commonly represented, accounting for 35% of the total (10 of 28). This category includes scams such as the now infamous "Coalgate" scandal, in which the Comptroller and Auditor General of India (CAG) accused the Union Government of allocating almost 200 coal blocks without a competitive bidding process between 2004 and 2009. The CAG alleged that private firms paid far less than what they would have had the licenses been auctioned. Many of these firms were owned by, or closely linked with, sitting politicians, implying that political criteria were used to allocate licenses.

As argued above, this interaction of regulatory intensity and corruption is in line with our priors, as these areas represent obvious sources of rents in the economic sense of the word—they are sectors of the economy where the regulatory intensity of the state is immense and the opportunities for bribes or kickbacks are legion. The values involved are also generally high in these sectors, given their centrality to the broader economy.

2.2. Lack of Enforcement and Implementation Capacity

While regulatory complexity allows wide scope for rent-seeking and extraction, the capacity to combat misdemeanor and enforce rules and regulations is seriously limited. The government agencies in charge of administration and law and order are overburdened, inadequately staffed, and often poorly equipped. Thus implementing complex rules and policies, as well as catching and punishing rule-breakers, is a massive challenge.

Given the discussion on the cumbersome role of the state in the previous section, it is somewhat counterintuitive that India has the smallest number of government employees as a ratio of its population among any of the Group of 20 (G-20) nations, with only 146 public sector employees per 10,000 residents (Figure 1). Compared to China (537), the USA and Germany (both about 730), or Russia (1534), this number is remarkably low. Even this low number is likely an overestimate of administrative capacity, given that it includes employment in the state-owned Indian Railways, one of the largest employers in the world. Furthermore, the overall strength of the public sector has declined since 2001, although this likely reflects a divestment from public sector enterprises and a move to greater contract employment, rather than a reduction in administrative capacity per se (Figure 2).

Nevertheless, what the relatively small number of public employees means for a country India's size is that the administrative service has an enormous burden placed on it to not only implement the plethora of schemes and regulations in place but also to enforce them. For example, the chief administrative officer of the most relevant administrative unit for implementing public programs in India—the district collector—is also the official in charge of law and order in a district, which has on average 2 million inhabitants. While these officers are selected from the cream of the crop of the Indian Administrative Service (IAS), given the enormous burden placed on their shoulders, the decks are stacked against them from the beginning.

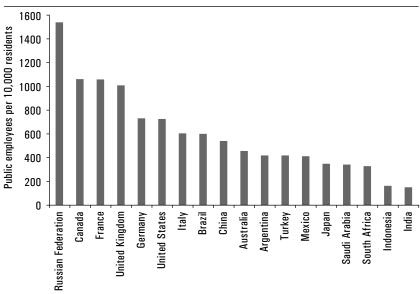


FIGURE 1. Public Sector Employment in G-20 Countries

Sources: Interntional Labor Organization; Saudi Arabia Ministry of Economy and Planning; China National Bureau of Statistics; World Bank.

25 19.1 19.1 20 Sublic employment (million) 17.5 15.5 15 10.7 10 5 0 1971 1981 1991 2001 2011 Yeay

FIGURE 2. Public Employment in India from 1971-2001 (millions)

Source: Economic Survey of India (various years).

Compounding the administrative burden they face, officers regularly face political interference. Although rules were designed to prevent meddling, Krishnan and Somanathan (forthcoming, p. 11) write that, "the power to punish arbitrarily has been acquired (and used to telling effect) by the political executive ... through misuse of the power of transfer." Frequent transfers, or the very threat of transfers, make officers' jobs even harder, as they only have "short tenures in each post, which greatly diminishes effectiveness."

The state of public administration is not helped by the fact that many government jobs are left unfilled, possibly due to political jockeying (see Section 2.4 below). The problem of unfilled job vacancies is particularly severe for the police and courts, the pillars of the enforcement arm of the government. To begin with, the number of police and judicial officials as a proportion of the population is very low. By our rough estimate, India has approximately 16.5 judges per one million residents, which compares unfavorably to around 101 judges for a comparable population in the USA. In addition, India has the lowest rate of police officers per capita—122.5 per 100,000 people—of any G-20 member state. Yet even with this low base, a quarter of police vacancies across the country are unfilled. For certain states, the vacancy rate veers on the alarming: Uttar Pradesh, e.g., which faces serious law and order difficulties, has nearly 60% of its police posts unfilled (Table 2).

TABLE 2. Police Vacany Rates across Indian States, 2013

State	Sanctioned	Actual	Vacancy Rate
Andhra Pradesh	107730	89787	16.66%
Arunachal Pradesh	5322	4548	14.54%
Assam	30979	19870	35.86%
Bihar	78641	62803	20.14%
Chhattisgarh	54499	32259	40.81%
Goa	5330	4722	11.41%
Gujarat	75267	54921	27.03%
Haryana	48569	39059	19.58%
Himachal Pradesh	10833	9864	8.94%
Jammu & Kashmir	51860	47755	7.92%
Jharkhand	55771	42073	24.56%
Karnataka	82358	68584	16.72%
Kerala	40185	37995	5.45%
Madhya Pradesh	76518	62281	18.61%
Maharashtra	191197	182832	4.38%
Manipur	18636	12219	34.43%
Meghalaya	7490	5948	20.59%
Mizoram	4321	3377	21.85%
Nagaland	6013	5637	6.25%
Odisha	35047	30850	11.98%
Punjab	59201	59969	-1.30%
Rajasthan	88881	69689	21.59%
Sikkim	2381	1906	19.95%
Tamil Nadu	99541	87581	12.02%
Tripura	12898	10441	19.05%
Uttar Pradesh	331984	133261	59.86%
Uttarakhand	17074	16643	2.52%
West Bengal	101560	72083	29.02%
A&N Islands	3741	3453	7.70%
Chandigarh	5794	5414	6.56%
D&N Haveli	354	287	18.93%
Daman & Diu	422	370	12.32%
Delhi	72686	67686	6.88%
Lakshadweep	606	384	36.63%
Puducherry	2423	2433	-0.41%
Total (All)	1786112	1348984	24.47%

Source: National Crime Records Bureau, Crime in India, 2013.

The judiciary faces the same dilemma: almost 30% of seats on High Courts across the nation are vacant, in addition to 22% of seats in district and subordinate courts. Only the Supreme Court seems to be free of this malaise, as the corresponding rate there is only 6.5% (Figure 3).

One of the main consequences of these judicial vacancies is that it takes an inordinately long time to resolve cases. This fact should come as no surprise to anyone in India, but the figures do not make for enjoyable

35% | 29.4% | 22.3% | 22.3% | 22.3% | 30% - 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% |

FIGURE 3. Unfilled Vacancies in Judicial System

Source: Supreme Court of India, Court News (various years).

Note: Measured at 12/31/2013 for Supreme and High Courts, 9/30/2013 for District/Subordinate.

reading. As of 2011, approximately 24% of court cases had been pending for at least five years, while 9% had been pending for more than 10 years (Law Commission of India 2014). At the start of 2014, there were a total of 31.4 million cases pending across all courts in India (Figure 4). While the situation is slowly improving—for all courts the number of outstanding cases on January 1, 2013 was higher than the end of year figures—the sheer level of backlog induces despair.

We discuss initiatives to tackle these administrative and judicial issues in the final section. But as of now, we merely stipulate the fact that India's capacity to enforce rules and regulations in virtually every domain is severely wanting.

2.3. Inadequate Regulation of Political Finance

Turning now to proximate drivers of corruption, India's approach to political finance is emblematic of these larger weaknesses of enforcement and regulation. What makes this failing puzzling is that it stands in sharp contrast to the actual planning and execution of elections, which are ably handled by the independent Election Commission of India (ECI), one of the most autonomous election agencies in the world. At the heart of this puzzle sits the aforementioned overbearing role of the state in the economy. As a recent analysis of India's political finance regime concludes, "Until the Indian state retreats from major sectors of the economy and gives way to market

3,00,000 | Opening Case | Pending Cases Dec | 2,50,000 | 1,50,000 | 1,00,000 | 50,000 | Supreme | High (100s) | District/Subordinate (100s)

FIGURE 4. Outstanding Cases in Indian Courts, 2013

Source: Supreme Court of India, Court News (various years).

forces, politicians and business will have reason to perpetuate a system of trading policy and regulatory favors for monetary payments and campaign 'donations'" (Sridharan and Vaishnav forthcoming).

Buttressing this system of favor trading are shortcomings in the underlying legal and regulatory powers of the ECI to adequately regulate political finance. For instance, corporations and parties are only legally required to publicly disclose political contributions in excess of ₹20,000. This rule allows contributors to package unlimited political contributions just below this threshold value completely free of disclosure. Indeed, in 2014 the Association for Democratic Reforms (ADR) reported that 75% of the income of India's six major parties comes from undocumented sources (ADR 2014).

On the expenditure side, candidates face strict limits on spending once elections have been announced, but election authorities struggle to properly verify their reported expenditure since a substantial portion typically occurs "in the black." Even though the ECI has devoted greater resources to addressing this problem, it faces several challenges. Under existing statute, the ECI lacks clear powers to take follow-up action in the event a candidate files false or misleading declarations. An even bigger problem lies with a loophole in the law that allows candidates to keep secret party and supporter expenditures on behalf of their campaigns that are spent propagating the party program rather than endorsing the specific candidate in question (Sridharan and Vaishnav forthcoming).

In theory, if parties were transparent in their finances, some triangulation would be possible. Unfortunately, party finances are highly opaque. Parties are required to submit audited accounts to the ECI, but there is no requirement that the auditor needs to be an independent, third-party entity, which creates incentives for parties to cook the books. The ECI recently issued guidelines to parties to strengthen the reporting of their finances, but without additional legal authorities, the ECI has no credible sanctioning mechanism.

In light of these infirmities, the regulation of political finance in India is in dire shape and, hence, susceptible to corruption. Of the themes highlighted in this paper, political finance is arguably in greatest need of further research and exploration. Commentators across the political spectrum have recognized its centrality in corruption dynamics in the country. For instance, Mehta (2002) has noted: "The reform, regulation and overhaul of the means by which political parties and candidates finance elections is arguably the single most important institutional challenge facing Indian democracy." The Economist (2014) summarized the issue in the context of the recently completed 2014 general election more poetically: "picture the elections as a dark sea of liquid assets, mostly undocumented cash (and a lot of liquor too), overspilling the dykes that were meant to keep it in check."

The opacity of political finance, however, presents an obvious obstacle to careful empirical work. Hence, there is space for creative "forensic" approaches.⁵ One such study is Sukhtankar (2012). The author finds evidence of electoral cycles in input prices paid for sugarcane among politically controlled mills in Maharashtra. Specifically, he finds that cane prices paid to farmers by politically controlled mills falls in election years. Sukhtankar claims that sharp drops in cane prices represent mill funds siphoned off to finance politicians' electoral campaigns; in other words, these funds serve as indirect political contributions. Interestingly, the funds are paid back after elections to farmers (with interest, so to speak) conditional on the respective political mill chairman (or his party) winning office.

5. For instance, Gingerich (2014) takes advantage of a police investigation in Brazil into an illicit campaign spending scheme which took place in the run-up to the elections in the Brazilian state of Minas Gerais in 1998. Based on police reports, which contain detailed bank transactions listing the names of those who received under-the-table election funds, he is able to analyze the allocation of payments to local vote brokers and estimate their effect on election outcomes. Mironov and Zhuravskaya (2014) aim to measure illicit payments by firms to politicians in Russia. The authors find that firms involved in government procurement substantially increase "tunneling" (defined as transfers by legitimate firms to fly-by-night firms established with the purpose of taking cash out of companies) around regional elections. These illicit flows exhibit a political business cycle, in contrast with firms not involved in public procurement.

Sukhtankar's paper captures an important truth characterizing India's electoral dynamics: the costs of elections have grown so immensely in recent years that politicians face incentives to recoup some of the financial "investments" made during the campaign by using their political positions to extract rents. Indeed, political office is widely perceived to be a highly lucrative proposition in India. Unfortunately, quantifying just how "lucrative" elected office can be is not an easy task. However, some scholars have attempted to estimate the financial returns to office, drawing on new data drawn from affidavits candidates submit at the time of their nomination which detail, among other parameters, their financial assets and liabilities. Analyzing the affidavits of state and national incumbent legislators who won elections in the early 2000s and then recontested elections several years later, Sastry (2014) finds that the average wealth of sitting MPs and MLAs increased by 222% during their tenure in office (from an average of ₹1.8 crore in the first election to ₹5.8 crore at the time of reelection).

More systematic explorations of the financial rewards to office that take selection bias into account suggest more modest returns. Bhavnani (2012) compares the change in winners' and losers' self-declared family assets in the country's two most recent state and national elections, using a regression discontinuity design. His results indicate that the average election winner increased his assets by 4–6% a year. Using a similar design, Fisman, Schulz, and Vig (2014) focus on the subset of elections where both winner and runner-up from the same constituency run in the subsequent election. Their analysis reveals that incumbents enjoy a "winner's premium" of 4.5% on average; the additional returns to ministers, and to incumbents who faceoff against freshmen legislators, are even higher, 10 and 12%, respectively.

Thus, careful econometric analyses suggest the financial returns to elected office are real, but perhaps not as abnormally large as one might expect. Yet there are reasons to treat these estimates with caution: they only look at reported income; the data are restricted to a small sub-sample of all candidates; and one of the two studies (Fisman et al. 2014) focus on politicians' assets net of liabilities, a questionable decision since access to low-interest loans in India is often conditioned by political connections (Cole 2009).

Finally, the new candidate affidavit data has also shed light on the direct link between the issue of political finance and the criminalization of politics in India. Of the 543 members of the 16th Lok Sabha elected in May 2014,

^{6.} Bhavnani concludes that 4-9% of election winners appear "suspect," since their asset growth is greater than what they would have earned based on their salaries (and perks) as lawmakers.

34% face pending criminal cases while 20% face charges of a "serious" nature. The situation is broadly similar at the state level, where 31% of elected MLAs face pending cases (15% fall into the serious category). To compound matters, the share of elected officials with pending criminal cases has been increasing, rather than decreasing, over time. In 2004, 24% of MPs faced criminal cases (12% faced serious charges). This proportion grew to 30% in 2009 (15% serious) and 34% (21% serious) in 2014.

Research by Vaishnav (2012) has shown that one reason parties value candidates with criminal records relates to their access to financial resources. As the costs of elections have surged, parties, in response to their declining organizational strength, have grown increasingly reliant on self-financing candidates. In fact, there is a strong correlation between a parliamentary candidate's personal assets—a good proxy for financial capacity—and the likelihood of election. The affidavit data convincingly show that criminal candidates, in turn, have a distinct financial advantage over "clean" candidates, controlling for a range of possible confounding factors.⁷

Dutta and Gupta (2014) have a slightly different explanation, but it too emphasizes the importance of money. The authors present a formal model which assumes that candidates facing criminal charges do face a certain degree of negative stigma amongst the voting population. In other words, voters will—all else equal—be less likely to vote for candidates under criminal scrutiny. However, there are offsetting considerations. Since campaigns are costly, candidates with wealth can draw upon their largesse to win disaffected voters by convincing them of their "innocence." In a related vein, the authors argue that wealth offsets the electoral disadvantage criminal candidates face on account of negative stigma. The authors validate their hypotheses using data from the 2009 Lok Sabha election.

2.4. Public Sector Recruitment, Postings, and Transfers

A final proximate cause of corruption is the broken system of public sector recruitment, postings, and transfers, which perpetuates—indeed, practically mandates—corruption by public officials. There are at least two primary reasons this system is dysfunctional. First, recruitment, transfers, and postings are conducted on the basis of bribes rather than merit. Second, the wage and incentive structure does not adequately reward performance and punish malfeasance.

^{7.} A descriptive analysis by Sastry (2014) confirms this association as does a more systematic regression approach by Dutta and Gupta (2014).

It has long been known that recruitment, transfers, and promotions across the administrative services at the state and central levels in India are regularly made on the basis of bribes rather than merit (with the recruitment of elite IAS officers serving as a prominent exception). Wade (1985) in his aptly titled and seminal article "The Market for Public Office" blames "the corruption-transfer mechanism and its effects on bureaucratic initiatives" for the failure of the Indian development state. At the very least, the consequences of the allocation of public sector posts on the basis of money rather than merit include a multiplier effect on corruption, since officials who paid to obtain these posts must recoup their costs through rent extraction. For example, Wade documents that the cost of obtaining the post of Superintendent Engineer in the Irrigation Department was 40 times the average salary for the position. This leads to a vicious circle: the cost is high because of the rents that can be extracted from the post, incentivizing the employee to recover their investment once in office. A related further consequence is that it is unlikely that honest officers could obtain these lucrative posts.

Before a skeptic claims that the evidence we cite is 40 years old, let us point out that the situation has not improved since. Krishnan and Somanathan (forthcoming) note that, "the promotion of state service officers has been heavily politicized." Using data on the universe of serving IAS officers, Iver and Mani (2012) empirically document the system of political control over bureaucrats, again pointing out that transfers are the key mechanism used. In one highly publicized recent case, the media reported that IAS officer Ashok Khemka, who earned a reputation for fighting graft (including lodging investigations against dodgy land deals involving Robert Vadra, Sonia Gandhi's son-in-law) has been transferred no fewer than 46 times in a 22-year career (Siwach 2015).

In addition to hiring, the system of remuneration of public sector employees leaves much to be desired. There are at least two problems. First, the wage structure is compressed, with entry level wages too high relative to private sector wages (see Figure 2 from Muralidharan and Sundaraman 2013) and top wages too low relative to comparable private sector compensation. Second, there are virtually no rewards or punishments on the basis of performance, and hence little incentive to perform well.

High entry level wages lead to too many people spending too much effort trying to simply enter public service. This problem is exacerbated by rules governing attempts at clearing the civil service entry examinations, with current regulations allowing 4–7 attempts (depending on caste category) between the ages of 21–30 (Krishnan and Somanathan, forthcoming). If a candidate spends nine years outside the labor force simply trying to get a public sector job, it is quite likely that this expenditure in terms of opportunity cost and investment in studying must again be recouped. On the other end of the spectrum, wages for top level administrators lag behind their counterparts in the private sector, increasing the temptation to be corrupt. For example, Krishnan and Somanathan point out that wage compression (at least until the 1990s) "led to a loss of morale and an excuse and justification for corruption."

Finally, there is little reward to performing well, and worse, rarely any punishment to nonperformance. The entrenched power of employee unions and onerous government regulations means that, short of murder, it is nearly impossible to fire a public sector employee. The news media recently reported on the amazing case of a government official who did not show up for his job for 24 years, yet continued to draw salary while numerous attempts were made to fire him (*Agence France-Presse*, 2015). Krishnan and Somanathan suggest euphemistically that "judicial interpretation and, in particular judicial leniency to civil servants who perform inefficiently, has reduced efficiency." Under such circumstances, the only surprise is that there remain honest public officials at all.

3. Varieties of Corruption: Magnitudes and Consequences

Having reviewed some of the leading drivers of corruption, in this section we turn to a review of the literature on corruption in India, focusing on evidence on the scale and scope of corruption and on the crucial issue of whether corruption actually affects economic and political outcomes. To make sense of this vast literature, we follow a simple rubric. Since our definition of corruption is based on actions of public officials, we categorize corruption according to the nature of the corrupt actions taken by these officials.

Our first category involves *facilitative* corruption. This type of corruption involves officials charging fees or bribes for activities that they should be doing in the first place. For example, this category would include all types of "speed money" bribes to obtain government services like ration cards, passports, etc.

The second category is *collusive* corruption. This involves officials breaking or bending rules to benefit bribers, and is particularly difficult to detect since no party has an incentive to report the crime. Bribes paid to bypass fines and regulations, kickbacks from procurement in government,

and bribes paid to illegitimately obtain government contracts or licenses would all fit into this category.

The final category relates to *extractive* collusion. In this case, the official simply extracts funds from the government or private parties, either through harassment or stealth. Within this category we would include embezzlement from public funds, harassment bribes, as well as actions like shirking or not showing up to work.

Our categorization may not necessarily encompass every instance of corruption by bureaucrats or politicians, although it does cover the majority of cases in the literature. Furthermore, it provides us with a useful tool for conceptualizing the impact of corruption. Hence, we not only summarize the empirical literature on each category of corruption, but also attempt to outline how each type of corruption might distort allocations.

A word of caution is in order prior to delving into the existing body of corruption-related research: India is vast and heterogeneous, and many of the studies conducted in one state or region may not be easily extrapolated to other states or regions. When issues of external validity and small sample size warrant particular attention, we highlight them. When multiple studies in different contexts reach the same conclusion, we are more confident in drawing policy prescriptions. In all other cases, we leave the reader with this general caveat.

3.1. Facilitative Corruption

The first category is a form of corruption that a majority of Indians have likely experienced: the payment of bribes to obtain routine government services and documents such as ration cards, driver's licenses, passports, residence and caste certificates, etc. Transparency International notes that 54% of urban respondents who had contact with nine common government service organizations had to pay a bribe to obtain the service (Transparency International 2011 South Asia Barometer). The popular website www.ipaidabribe.com was started in part because of the commonality of this type of experience, and although the self-reports collected there are not representative, the site claims millions of visits and tens of thousands of reports from 600 cities and towns across India. Popular resentment against this type of corruption has led to the introduction of Right to Service legislation, although the bill is still languishing in the Lok Sabha.8

^{8.} The bill's full title is: the Right of Citizens for Time Bound Delivery of Goods and Services and Grievance Redressal Bill, 2011.

Theoretically, this type of corruption likely comes under the heading of "corruption without theft," where officials pass on the official price of the good or service to the government but charge additional fees or bribes that they keep (Shleifer and Vishny 1993). Under this scenario, officials need to artificially restrict the quantity of service provided so that they can charge a higher overall price. Further, social and efficiency consequences are likely to arise from the "wrong" people—from the point of view of society—getting the document or service: e.g., unqualified drivers getting driving licenses, rich people obtaining Below Poverty Line (BPL) cards, etc. Of course, if bribes simply serve as user fees or "speed money" to incentivize bureaucrats to work faster but do not allow "bad" types to obtain services or documents, the negative consequences might be mitigated.

Recent empirical work provides us with good evidence on the extent and consequences of this type of corruption. Bertrand, Hanna, Djankov, and Mullainathan (2007) followed 822 applicants for driver's licenses in Delhi. As predicted by theory, bureaucrats artificially restrict licenses and create red tape in order to charge applicants more than official fees and clear the market: government officials seem to arbitrarily fail applicants taking the official driving test, as the authors find that failure on this test is uncorrelated with actual driving ability as measured by an independent driving test. Accordingly, applicants must make multiple trips to obtain licenses, and end up paying 2.5 times the official fees for the license.

These bribes do not simply represent a transfer from applicants to bureaucrats, but are actually harmful to society: 71% of license getters do not take the licensing exam, and most damningly 62% of license getters failed the independent driving test. Further, the authors experimentally manipulate willingness to pay (private value) by offering a random subset of study subjects a substantial bonus if they obtain their licenses quickly. They find that the licensing process is very responsive to private value, but not to social value: those offered a bonus were much more likely to both get a license but also to be unable to drive when compared to the control group. At this point, bribes to obtain licenses cross over from being simply facilitative corruption to collusive corruption (discussed below).

A similar story of extra-statutory fees and the "wrong" people getting government services and benefits holds true for BPL cards. These cards entitle households to a range of welfare benefits, most importantly to subsidized food under the Targeted Public Distribution System (TPDS). Niehaus et al. (2013) surveyed 14,074 households in rural Karnataka to learn about the process for obtaining BPL cards. They found that bribery is widespread:

75% of households reported paying bribes to obtain the cards, although the average payment above official fees was small: ₹14.

More importantly, however, they found that 48% of households are misclassified. Seventy percent of households that were ineligible to receive BPL cards—based on criteria such as owning a vehicle, color TV, gas connection, or more than 5 acres of land—had a card (type 1 error), and worryingly, 13% of eligible households did not (type 2 error). Overall, statutory eligibility was much more strongly correlated with income than actual ownership of cards, suggesting that reasonable targeting rules were perverted by the corrupt allocation process.9

Two studies in Delhi (Peisakhin and Pinto 2010; Peisakhin 2012) found similar arbitrariness and restriction in the provision of ration cards (required for TPDS benefits) as well as voter ID cards, although these results must be viewed with caution given the small and nonrepresentative samples (86 and 121 individuals in one slum and university area, respectively). For study subjects, it was practically impossible to obtain these documents without paying a bribe or resorting to a Right to Information request. We discuss these studies further in Section 4.

3.2. Collusive Corruption

Collusive corruption occurs when officials, conspiring with bribers, bend or break rules and regulations. Assuming that the given rule was good for society in the first place, distortionary effects can be large. For example, government agents might grant firms contracts in exchange for bribes or kickbacks, which could result not just in economic distortions but also efficiency losses. If an agent awards an infrastructure contract to a firm for reasons independent of firm quality, it is possible that the firm is unqualified to execute the contract faithfully or will shirk in order to recoup the financial loss incurred by the bribe payment. A 2014 survey of "Global Economic Crime" by the accounting firm (Pricewaterhouse Coopers LLP) PwC found that the industry reporting the greatest degree of procurement fraud was government/state-owned enterprises (PwC 2014). In India, corruption in public procurement is a well-identified obstacle to improving the country's investment climate (UNODC 2012).

^{9.} Besley, Pande, and Rao (2007) examine data from four south Indian states and find that while local-level politicians target BPL cards to households which are relatively disadvantaged on average, households in which politicians themselves are living are much more likely to possess BPL cards.

Unfortunately, this type of corruption is also difficult to empirically document, since neither the bribe-giver nor bribe-taker has an incentive to publicize this transaction (Bardhan 1997). However, a recent paper by Duflo, Greenstone, Pande, and Ryan (2013) breaks new ground. In most markets in which the state plays a regulatory function, regulated firms themselves often choose and pay for the "third-party" audits meant to monitor compliance. This naturally creates a conflict of interest: the firm has an interest in an audit that paints the firm in a good light, while the auditor has an interest in satisfying the client in order to maintain business. This creates an incentive for rampant corrupt behavior although it need not necessarily have an adverse direct impact on economic efficiency.

In the context of a third-party audit experiment involving pollutant-emitting plants in the state of Gujarat, the authors uncover systematic evidence of corruption in the audit reporting for plants in the control group—that is, those plants that are audited by firms selected and paid for by the plants themselves. When auditors were hired and paid by the firms they were auditing, 29% of auditors falsely reported pollution below the regulatory standard (even though actual emissions were above the standard). For control group emitters, auditors reported that only 7% of plants violated the government standard, when in reality 59% were emitting more than the standard.

To our knowledge, only one rigorous empirical study documents corruption in public sector procurement practices. In the context of a study on the introduction of electronic procurement, Lewis-Faupel, Yusuf, Olken, and Pande (2013) examine the tendering process for manual procurement drawing on a random sample of road contracts issued by the state of Uttar Pradesh. As the authors note, manual procurement is subject to corruption on several grounds. Because documentation is not public and exists only in the written form, the government can provide private information to favored bidders that would give them a competitive advantage or use its discretionary authority to disqualify bidders on spurious grounds. Indeed, the authors find there is little competition for public sector road-building contracts because many firms are disqualified on "technical" grounds. In 95% of cases, the government only ended up evaluating a single firm's financial bid. Where there are multiple initial bidders, in the case of any technical disqualification, the authors report that "all but one bidder are disqualified 100% of the time." The pattern of disqualification is consistent, the authors argue, with corrupt officials rigging the procurement process to favor a pre-determined winner.

At least one study (Kapur and Vaishnav 2015) has drawn a link between collusive corruption and India's broken system of financing elections. The motivating premise of their study is that politicians often turn to private

firms for illicit election finance in sectors where the discretionary powers of the state are large, in line with our discussion of one of the two "deep" drives of corruption in India. Firms operating in highly regulated sectors are natural targets as election donors since politicians can exchange policy discretion or regulatory forbearance for campaign contributions.

The authors specifically focus on the role of the construction sector, which depends heavily on the availability of land, an input that is tightly controlled by state authorities. Kapur and Vaishnav hypothesize that builders operating in the sector will experience a short-term liquidity crunch as elections approach because of their need to re-route liquid funds to campaigns in the form of election payments. Using a novel monthly level dataset that captures variation in the state-wise demand for cement—the indispensable ingredient of the modern construction sector—the authors confirm the presence of an electoral cycle in cement consumption in India, confirming the original prediction. Consistent with their theoretical predictions, the negative shock in cement consumption is more intense for state elections (states have primary regulatory responsibility for land), urban states, and in especially competitive elections.

Finally, there is a burgeoning literature on politicians manipulating the targeting of goods, services, licenses, jobs, or other transfers in order to reap electoral benefits (see Golden and Min 2013 for a broad review). Whether these activities are "corrupt" in a narrow sense can be debated; distributive transfers in this realm are variously referred to as pork, clientelism, or patronage. While such transfers can entail a misallocation of public resources, we consider these as part of the political process, and difficult to define as "corruption," thus do not explore the literature in this area.

3.3. Extractive Collusion

This third category of corruption is variously described as leakage, diversion, or embezzlement. In its simplest form, the government tries to send benefits of some kind (money, food, medicine) to recipients, and officials in charge of delivery simply steal them rather than delivering them to the poor. Late Prime Minister Rajiv Gandhi once famously estimated that only 15% of benefits disbursed by the government of India actually reach the poor. In addition, overbilling the government for benefits in the name of fake recipients also falls under this category. Thus, theft can be from both beneficiaries, which directly harms them (underpayment), and from the government, which harms taxpayers in general (overreporting).

Embezzlement has distortionary consequences for optimal public finance. First, it might make seemingly progressive public programs regressive, if officials are generally richer than beneficiaries and taxpayers (Olken 2006). Second, it affects optimal rules for the allocation of public funds: without corruption, governments would simply equate the marginal social costs of raising funds to the marginal social benefits of delivery, but with embezzlement the marginal social benefits need to be adjusted by the fraction of funds that actually reach the poor (Niehaus and Sukhtankar 2013b).

In addition, leakage may have systemic negative consequences too: officials may allocate time towards activities focused on embezzlement (Murphy et al. 1991) rather than implementing public programs as they are meant too. However, one line of argument suggests these rents may keep officials incentivized to implement programs.

Recent empirical work provides evidence on leakage from at least the two largest welfare programs, NREGS and TPDS. The methods used in these studies are straightforward: they involve comparing official records of disbursements of benefits against beneficiary surveys. Of course, beneficiary recall and misreporting are concerns with this methodology, so precise levels must be viewed with caution.

Niehaus and Sukhtankar (2013a, 2013b) surveyed about 3,000 listed NREGS beneficiary households in three districts in Orissa and one in Andhra Pradesh (AP), comparing official records of disbursements of NREGS wages against beneficiary reports in original surveys. The results are disheartening, to say the least: about 70–80% of the NREGS labor budget is embezzled before it gets to beneficiaries. This corruption directly hurts beneficiaries, as the work they do is not correctly remunerated, and their wages are underpaid. It also hurts taxpayers, through over-reporting of work done, as the exchequer pays out far more than intended.

In addition, government efforts to increase benefits—the statutory wage in this case—are entirely thwarted, as *none* of the increase is passed on to beneficiaries. The authors show that with this kind of corruption, a program that is meant to set market wages instead ends up being a price-taker: beneficiaries are just paid the prevailing market wage in the area.

It is important to keep in mind that these results, although representative for the areas surveyed, correspond to districts that are likely more backward and corrupt than the median district in India.

Khera (2011) highlights heterogeneity across India in embezzlement from public programs while examining diversion of food grains from the TPDS. Comparing state-level offtake for TPDS (i.e., the amount of grains that states

obtain from the Food Corporation of India (FCI)) of rice and wheat to NSS survey reports of grains received by beneficiaries from Fair Price Shops (FPS, or ration shops), she finds that the overall rate of diversion in India in 2007–8 was about 44%. Estimates range from essentially no diversion in Chhattisgarh to almost 90% diversion in Bihar. These estimates are likely to be the upper bound of pure leakage, since some of the grains that do not reach beneficiaries may simply be due to losses in transport or spoilage or other mismanagement.

These estimates are very close to the Government of India's own estimates of diversion in the TPDS. A report by the Planning Commission (Programme Evaluation Organization 2005) finds that 58% of food grains issued by the FCI do not reach the poor (defined as BPL families), which is comparable to the 54% figure that Khera estimates for 2004–5. The report also monetizes the magnitude of the loss and the cost of delivery, calculating that for every Rupee transferred to the poor, the government spent ₹3.65. In other words, the poor obtain only 27% of the benefits they are meant to receive.

In addition to pure theft, an insidious type of corruption involves public sector employees not showing up to work when they are supposed to, or, more broadly, shirking on the job. It is, in a way, similar to embezzlement, since it effectively equates to theft of time from the government. However, the causes, consequences, and strategies to combat this form of corruption differ significantly. Absence or shirking on the job is common in the public sector across the world, since disciplining public sector employees proves to be difficult given strong unions and other political economy factors.

The consequences of absence could include long-run harm to human capital, mainly through education and health, in the country. As Chaudhury, Hammer, Kremer, Muralidharan and Rogers (2006) point out, absent health and education workers basically mean closed hospitals and schools in developing countries, since there are no substitutes and many of them have single providers. The unpredictability of absence may also discourage users from attempting to access these services in the first place. Moreover, alternatives to public schools and hospitals may be too expensive and/or just as ineffective.

Chaudhury et al. (2006) conducted a representative survey across India to measure absence amongst teachers and health care workers in government schools and health centers. After conducting random checks of schools and clinics during working hours, they found that the rate of absence of teachers is 25% and health care workers 40%. This compares to 5% in developed countries. Other work corroborates these absence findings in smaller samples: Banerjee et al. (2010a) find 27% teacher absence in Jaunpur district in Uttar Pradesh, and Banerjee, Duflo, and Glennerster (2008) find 54% health care worker absence in Udaipur in Rajasthan. An updated survey conducted by Muralidharan et al. (2014) returned to the same schools surveyed by Chaudhury et al. (2006), and found that little had changed: teacher absence rates were 23% across India.

What is worse is that these absence rates are likely a lower bound, since Chaudhury et al. were conservative in what was counted as an absence: e.g., they did not count part-time employees, and took the head of the school/ clinic at her word if she said an employee was not supposed to be working. In addition, the authors also find that even when teachers are present, they are teaching only 45% of the time. This is in spite of also being conservative in defining teaching activity to include any time a teacher was in the classroom. Similarly, health care worker absence is compounded by the fact that even when they are present, public doctors treat patients much worse in public clinics than they do in their own private practices (Das and Hammer 2007).

The depressing news continues, as Chaudhury et al. also find that absence rates are higher in poorer areas: a doubling of per capita income is correlated with absence rates that are 6 percentage points lower. Health care also suffers: the quality of care is such that in poor areas, unqualified private doctors tend to perform better than qualified public doctors (Das and Hammer 2007). Further, hiring additional teachers only leads to greater absence: hence effective marginal rates of absence were even greater than average rates (Muralidharan et al. 2014b).

The causes of education and health worker absence are fairly straightforward to understand. Given political economy constraints, these civil servants rarely, if ever, face any sort of punishment for shirking. Chaudhury et al. found only one instance of an employee firing out of 3,000 cases where a teacher was absent. Further, they also find that in more powerful positions, occupants were more likely to shirk: e.g., doctors were more likely to be absent than nurses, men more likely than women, and head teachers more likely than ordinary teachers.

The consequences of absence are, of course, poor health and education outcomes. For example, while enrollment rates are almost 100% amongst children aged 6-14, only 56% of children in rural India can read a simple story by grade 5. Duflo, Hanna, and Ryan (2012) find that reducing teacher absence from 42% to 21% in rural Rajasthan improved student test scores by 0.17 standard deviations, which is a very large effect in this literature.

Finally, there is a large fiscal cost to the government: Muralidharan et al. (2014) estimate this to be \$1.5 billion a year, or 60% of the revenues raised by the special education tax.

4. Strategies and Legislation to Combat Corruption: What Might Work?

The previous section catalogued the categories of corruption scholars have rigorously studied in India and their impacts on society more broadly. In this section, we turn our attention to solutions. We begin with a categorization of broad strategies to combat corruption. We use this schema to classify the current set of reforms, and to examine what evidence there is on the potential effectiveness of each strategy.

The broad categories of tools to combat corruption are as follows:

- 1. Information/ bottom up monitoring
- 2. Technology
- 3. Financial incentives/ performance pay / efficiency wages
- 4. Electoral reform/ political incentives
- 5. Legal reform
- 6. Policy reform

4.1. Information/Bottom-up Monitoring

Information is seen as a basic pillar of the fight against corruption worldwide. According to Transparency International, "access to information and a strong civil society are essential for good governance and public accountability."10 Remarkably, India's RTI Act (RTIA) that was passed in 2005 is ranked as the second best right to information law in the entire world by the Center for Law and Democracy, placing it above every single OECD nation in this regard.11

Of course, having a law on the books is one thing, and implementing it is quite another. India also has laws that guarantee employment for rural

^{10.} http://www.transparency.org/whatwedo/activity/action, accessed June 25, 2014.

^{11.} The universe of eligible laws is not limited to developing countries, or emerging nations, but only to countries that have an existing law on the books. The ranking is based on overall score in the categories of Right of Access, Scope, Requesting Procedures, Exceptions and Refusals, Appeals, Sanctions and Protections, and Promotional Measures: http://www. law-democracy.org/live/wp-content/uploads/2012/08/Chart.pdf, accessed June 25, 2014.

dwellers (NREGA), access to basic education (Right to Education), and the right to food (National Food Security Act), yet their implementation leaves much to be desired. The good news, however, is that two very similar studies suggest encouraging effects of the RTIA on citizens' ability to obtain public services.

Peisakhin and Pinto (2010) examined the process of obtaining ration cards in one slum in Delhi. The study randomized 86 applicants into four groups: the main treatment group was assisted in preparing RTIA requests, and outcomes of this group were compared to groups who either: (a) paid a middleman to obtain cards through (ostensibly) bribing officials; (b) presented a letter of support from an NGO; and (c) a control group that simply submitted the necessary paperwork. The RTIA request in the intervention asked the relevant official "for information about the status of their application and about the average time for ration card applications in this district." The letter from the NGO noted that "the application was eligible for a ration card and urged prompt administrative action."

Remarkably, 94% of applicants in both the bribe and RTIA groups received their ration cards within a year, while only 21% received them in the NGO and control groups. The bribe and RTIA groups also both had much shorter median processing times: 82 days for the bribe, 120 days for the RTIA, and 343 days for the control.

A related experiment compared RTIA requests, bribes, and a control group in the process of registering 121 applicants for a voter ID card, with an additional element that distinguished between applicants from a middleclass university area and in a slum in Delhi. Again, the bribe and RTIA groups performed significantly better than the control group, in both poor and middle class areas.

The very small sample sizes and the fact that the studies were done in small urban areas in Delhi means the results must be viewed with caution.¹² While the results are encouraging, the mechanism through which the RTIA works for these requests is not clear. In particular, it hardly seems like the binding constraint for receiving the service is "information on the status of the application," and further, penalties for noncompliance with RTIA requests are extremely rare and not very large. Interestingly, the authors themselves speculate that the RTIA requests work "not so much because of the Act's penalty provisions, which are rarely used, but rather because

^{12.} For example, Roberts (2010) reports that awareness of the RTIA in urban areas is three times that in rural areas.

in India's ultra-competitive bureaucracy, any blemish on a public servant's career can negatively affect his chance of promotion."

Thus, it appears that the RTIA is less about information than shifting the bargaining power to applicants, and giving them a threat which they can use credibly to potentially sanction the official. This interpretation fits our framework above, and also helps explain why no other study which provides information to applicants or beneficiaries finds any effect of providing this information, whether in public works or education.

In the case of NREGA, e.g., Ravallion et al. (2013) conducted a largescale randomized trial in Bihar to test for the effects of providing information to actual and potential program participants on their rights under the act. Baseline levels of information about and participation in NREGS were very low. While 56% of the rural population was BPL, only about 10% participated, even though more than 75% of those surveyed—5,000 rural individuals in 150 villages spread across rural Bihar—had heard about NREGS. In the control group, only 22% knew how many days they are allowed to work, 32% knew the wage rate, 29% knew about receiving unemployment insurance if work is not provided within 15 days of applying, and almost no one knew that applicants are supposed to get work within 15 days.

To test whether this situation could be remedied, the authors showed a randomly selected treatment group of villages an educational, emotionally captivating film about NREGS to the village. The intervention increased knowledge of the program: a 53% increase in knowing about number of days allowed to work, a 36% increase in people who know about wage rate, a 33% increase in knowing about unemployment insurance, and a 70% increase in knowledge of getting work within two weeks. Despite this increase in awareness, however, reported survey outcomes on actual or desired participation, wage rates or days worked remained entirely unchanged. While the NREGA guarantees employment, on average participants said they would like 44 more days of work, so rationing was evident.

These results are also consistent with evidence from Orissa presented in Niehaus and Sukhtankar (2013b). They survey a large sample of listed NREGS participants in three districts in Orissa, and ask about days worked and wages received around a time during which the official minimum wage rate increased from ₹55 per day to ₹70 per day. While over 80% of respondents knew about the wage change, and over 70% could accurately name the new wage, on average almost no one working on NREGS received a wage increase. The only exception to the rule was that villages where an NGO was active received modestly higher wages after the wage change, perhaps because these NGOs helped keep local officials accountable.

Providing information as well as encouraging community-based monitoring was also largely ineffective in other contexts in India. Community-based monitoring is fast becoming a buzzword in the development community around the implementation of public programs (Björkman and Svensson 2009). The enthusiasm derives from the idea that local communities have easier access to information regarding the performance of local government officials, and hence involving these communities in program management might improve the functioning of programs. Worldwide, there are mixed results on the performance of community-based monitoring, with Björkman and Svensson (2009) finding improved health outcomes in Uganda but Olken (2009) finding no effects on public works in Indonesia.

In the context of NREGS, "social audits" have been touted as a means to tackle corruption. The state of AP is the leader in implementing these audits, in which a team of district and state auditors train local villagers in auditing techniques and conduct a week-long exercise together whereby official expenditure records on NREGS are tracked in villages. At the end of the exercise in each subdistrict, a public hearing is held in the presence of NREGS officials as well as local beneficiaries, and complaints and testimonies are read out.

Afridi and Iversen (2013) analyzed social audits in AP by collecting a panel dataset on three rounds of social audits in 300 villages across 8 districts between 2006 and 2010. They find that these audits largely do not have a deterrent impact on corruption: having an initial audit does not change the number of easy-to-detect irregularities in round two, and it actually increases the number of hard-to-detect irregularities. There are no effects on other important program outcomes such as employment generation. The authors suggest that a leading explanation for the lack of effect is that once discovered, official malpractice is rarely punished.¹³

In rural Uttar Pradesh, village education committees (VECs), which include parents of children in local schools, are mandated by law to serve as intermediaries between the village and educational authorities. Banerjee et al. (2010a) conducted a randomized trial in 280 villages in the Jaunpur district, in which an NGO provided information on the roles and responsibilities

13. Less than 1% of corrupt officials are actually removed from office or face serious action; even mild punishments such as suspensions are meted out in fewer than 3% of cases; and amazingly officials seem to be able to get away scot-free with their earnings, since over 87% of embezzled amounts were not recovered three to seven years after the audits.

of the VECs, invited villagers to create "report cards" on the status of education in villages, and trained volunteers in teaching basic reading skills to primary school children. None of these treatments were successful in encouraging increased involvement in public schools.

Overall, our assessment is that information and encouragement of community participation, on their own, will have little effect in addressing corruption. Instead, putting more bargaining power in the hands of beneficiaries and applicants is more likely to result in greater impact. In this regard, the various "Right to Service" bills which have been passed in many states and are being considered in several others as well as Parliament, have the potential to reduce corruption in public service delivery provided they include effective penalties for misbehaving officials. As of January 2012, at least nine states had passed "Right to Service" laws. While the specific provisions of the respective states laws differ, they all guarantee the right to a specified list of services to citizens in a time-bound fashion and institute penalties for government officers who fail to comply (see Raha 2012 for a review).

A central act, The Right of Citizens for Time Bound Delivery of Goods and Services and Grievance Redressal Bill, was introduced in 2011 and is pending in the Lok Sabha (PRS Legislative Research 2012). This bill in, its current form, seems promising. It forces public authorities to detail timelines for delivery for all goods and services that it provides, and allows citizens to file complaints if these are not delivered on time, or if they experience misconduct from a government officer of the authority. The bill also mandates the appointment of a Grievance Redressal Officer (GRO) and State and Central Grievance Redressal Commissions, which can judge appeals. Complaints must be addressed within 30 days, and multiple appeals are possible to higher authorities. Most importantly, the bill allows for fines up to ₹50,000 on the GRO or officers guilty of misconduct, and also allows some of this fine to be awarded as compensation to the complainant.

These provisions of the bill have the potential to both reduce ability of bureaucrats to arbitrarily restrict public services in order to extract bribes, and increase bargaining power of applicants for public services. Of course, it remains to be seen how central and state government authorities and officials respond to the provisions, whether loopholes can be exploited, and whether fines and penalties are actually assessed.

The recent history of the RTIA provides us with some cautionary fodder. A 2010 review of the law suggested that the "use of the law has been constrained by uneven public awareness, poor planning by public authorities, and bureaucratic indifference or hostility" (Roberts 2010). Furthermore, recent attempts have been made to reduce the number of entities under its purview, most importantly the Central Bureau for Investigation (CBI) and political parties.¹⁴

While these attempts prove that the act has some bite, actual cases of penalties and sanctions imposed are rare. For instance, several studies (quoted in Roberts 2010) have found that State Information Commissions are often reluctant to levy penalties on noncomplying officers since that would unfairly penalize officers who lack training or experience or who have to deal with systemic shortcomings. Meanwhile, anecdotal evidence grows that the RTIA can be misused for competitive or personal gain; overall, a serious analysis of the impact of this act is imperative.

A final transparency mechanism, which does not yet exist but is awaiting parliamentary approval, is a central procurement portal, embedded within the Public Procurement Bill (2012). 15 The bill mandates the establishment of a "Central Public Procurement Portal," which would serve as a repository for materials related to government procurement, such as documents related to prequalification, registration and bidding, as well as participation details and final decisions or appeals. While such a move is a good first step, a real breakthrough could be achieved if the government were to consider publishing actual government procurement contracts. Kenny and Karver (2012) have argued that such "Publish What You Buy" provisions can not only reduce corruption but also lower the costs of contracting to the benefit of governments, contractors, and citizens.

4.2. Technology

Given the emergence of information technology services as a dynamic sector of the Indian economy, state and central governments have often looked towards technology as a potential silver bullet for tackling corruption. The recently defeated UPA government embarked on an ambitious initiative— Aadhaar—to deliver biometrically authenticated unique IDs to all residents of India. Authorities believed that this initiative would revolutionize the delivery of government services, with the Unique ID Authority claiming that "Aadhaar will empower poor and underprivileged residents in accessing services such as the formal banking system and give them the opportunity

^{14.} Parliament exempted the CBI from the RTI in 2011, while political parties are in a pitched battle with the CIC, which ruled parties to be "public authorities" subject to RTI in June 2013. We discuss the latter dispute in greater detail in Section 4.4.

^{15.} The bill is pending before the Lok Sabha. More detail can be found in PRS Legislative Research (2013)

to easily avail various other services provided by the Government and the private sector."16 Former UPA Finance Minister P. Chidambaram called it "a game changer for governance" (Harris 2013). After some murmurings to the contrary, the NDA government, shortly after taking power in May 2014 decided to fully implement Aadhaar.

State governments have also embarked on their own initiatives to deliver services, in particular online services for applying for ration cards, certificates of various kinds, obtaining land records, etc. (commonly referred to as "e-sewa" initiatives).

The academic evidence on the impact of technology to reduce corruption, however, is somewhat mixed across various sectors. For example, on the e-sewa initiatives, Bussell (2012) writes that "while there was considerable initial enthusiasm to use new technologies, the actual benefits offered to citizens are constrained in many cases by persistent efforts to retain access to a rich source of corruption: the bribes citizens pay to get the services they are promised by the state." Nonetheless, the studies provide some obvious and clear lessons that can be used to inform future policy.

A first set of interventions using technology involve attempts to reduce shirking and absence by teachers and health workers. Duflo et al. (2012) worked with an NGO in the Udaipur district to employ digital cameras to monitor attendance, along with financial incentives to reduce absence, in single-teacher rural schools run by the NGO. Baseline absence rates of 44% were higher than all-India averages. In the randomly assigned treatment group, teachers were given tamper-proof cameras and asked to have students take date-stamped photos of the teacher and other students at the beginning and end of each school day. This provided proof of attendance, and teacher salaries were based on the number of days attended.

Comparing attendance for teachers who were given cameras and incentives with a control group who did not receive either, the authors found that absence was reduced by 50% in the treatment classrooms. More importantly, teacher attendance actually translated into improved educational outcomes for students: test scores were 0.17 standard deviations higher in the treatment group after a year of the program.

Unfortunately, the promise shown by this intervention has not been replicated in other settings. Banerjee et al. (2008) attempted a similar intervention with nurses in government-run rural health centers, also in Rajasthan. Again, baseline absence rates were very high, at around 60%. In this case, assistant

^{16.} http://uidai.gov.in/index.php?option=comcontent&view=article&id=58&Itemid=106, accessed 3 October 2013.

nurse midwives in the treatment group were given locked and passwordprotected time-stamp machines and asked to stamp cards at various points during the day, again with financial incentives for attendance. The expectations for attendance were very low: the only monitored days were Mondays, and pay was docked only once attendance dipped below 50%.

Initially, the intervention appeared to be successful, as absence rates almost halved. However, nurses soon found a way to co-opt the system. Official excuses for absence started going up, and 16 months after the program started, there were no differences between treatment and control group attendance.

A similar program attempted by Dhaliwal and Hanna (2014) in Karnataka also showed the limitations of technology. While initially outcomes improved, eventually the state health system found it increasingly difficult to attract nurses to work at rural outposts. This suggests that another constraint is the lack of human capital in rural areas.

One of the main differences between the teacher and health worker studies was that the teachers worked for NGO-run schools, and the NGO was willing to enforce penalties for absence. Governments face political economy constraints arising from the power of teacher and health care worker unions and their ability to help local politicians win elections, and hence interventions that succeed in small scale pilots may not easily scale up when run by the government (Acemoglu 2010).

Bold, Kimenyi, Mwabu, Ng'ang'a, and Sandefur (2013), e.g., conducted a contract teacher intervention in Kenya where half of the sample was devoted to a trial run by an NGO and the other half run by the government, and find that while outcomes improved under the NGO, they did not under the government. In sum, larger systemic constraints matter.

Other technological incentives, even those run by the government, show more promise. Muralidharan et al. (2014) study the AP Smartcard initiative, which used biometrically authenticated Smartcards to make payments under NREGS and Social Security Pensions (SSP), the latter of which makes monthly payments to elderly, widowed, and disabled individuals. Smartcards were a functional precursor to the integration of UID/Aadhaar with these programs. The evaluation was conducted in partnership with the Government of AP using one of the largest randomized controlled trials ever done, and featured a randomized rollout of the program across 19 million beneficiaries, which enabled an empirically rigorous evaluation of the new payments system.

Previously, payments were made in cash to beneficiaries, often by the same officials who implemented these programs. The new system made

payments through local customer service providers (CSPs) who were employees of banks contracted by the government to manage payments, and added fingerprint authentication to ensure that actually intended beneficiaries received the money. This large-scale initiative faced both vast implementation challenges and pushback from local officials who stood to lose rents. Despite the best efforts of the government, only about 50% of payments in treatment areas were made via Smartcards after two years.

Nonetheless, the results are extremely promising. The poor gained significantly from the reform, through improvements in the payment processes that reduced both the time to collect payments and delays in transferring payments. There was also a significant reduction in NREGS and SSP leakage, about 40% for both programs, with most of the effect coming from reductions in overcharging the government for benefits that recipients never received. Despite the reduction in leakage, there was no reduction in access on either program. Smartcards were highly cost effective: time savings to beneficiaries alone exceeded the entire cost of the program for NREGS; further, the reduction in NREGS leakage was nine times greater than the cost of program implementation. Finally, beneficiaries strongly supported the program: 87% of NREGS and 92% of SSP beneficiaries prefer the new payment system over the old one.

These results are highly relevant to understanding the likely impacts of UID-integrated benefit transfers in India and similar programs in the developing world, and suggest that investing in secure authentication and payment infrastructure can significantly enhance "state capacity" to effectively implement a broad range of programs.

Given our framework, the reasons why this intervention worked become clearer. First, the electronic benefit transfer through CSP bypasses the local officials who are the source of hold-up and asymmetric information, or at least forces them to collude with CSPs. Further, live biometric authentication forces the presence of beneficiaries while collecting money, increasing their bargaining power. Previously, officials could simply collect money on behalf of beneficiaries even when they were not around (or in some cases did not even exist).

Finally, using technology in government procurement also shows some promise. A study by Lewis-Faupel et al. (2013) examines the impact of electronic procurement (henceforth, e-procurement) on public works projects in India and Indonesia. As the authors point out e-procurement seeks to address three common shortcomings associated with standard procurement practices: information asymmetries, collusion among bidders, and corruption. There is, however, the possibility of negative impacts should there be

large variation in access to Internet technology or the continued existence of coercive tactics by powerful firms.

In India, the authors examine procurement practices between 2000 and 2006 in the central government rural roads scheme, Pradhan Mantri Gram Sadak Yojana. Although the authors only have observational data, they rely on the phasing in of e-procurement over time, which allows for a difference-in-difference empirical strategy. In both countries, the study finds that e-procurement actually increases the probability of the winning bidder coming from outside of the region where the project is to be implemented. This suggests that e-procurement improves competition in the market given that it reduces the barriers to entry for firms to participate without being physically present.

However, the authors found no statistically significant evidence that e-procurement lowered prices paid by the government in India. They did find declines in Indonesia, although they were modest in size and not statistically significant. When it comes to quality improvements, e-procurement yielded positive gains on at least one measure in India. On the one hand, the authors found no evidence in India of an improvement or reduction in project delays although they found large declines in Indonesia. However, for India they also had access to data on an independent audit on construction quality. E-procurement was responsible for a 13% improvement in quality grades compared to projects with standard procurement norms.

In sum, e-procurement did not drive prices down through greater economic competition. It did, however, improve competition by attracting new firms—often from other regions—which were often of a higher quality. Furthermore, there was a positive impact on the actual quality of road construction, as assessed by an independent quality audit.

Overall, the lessons from technological interventions are similar to those from the information interventions, with one important caveat. Technological interventions that rely on enforcement from higher authorities will necessarily be constrained by political economy considerations, but those that simply bypass middlemen bureaucrats or those that transfer bargaining power to beneficiaries will be more likely to succeed.

4.4. Financial Incentives/Performance Pay/Efficiency Wages

While not quite as fashionable as technological interventions, financial incentives are one of the most straightforward methods that governments might use to combat corruption. Incentives could include simple bonuses based on outcomes or penalties if public officials are caught engaging in corruption. Indeed, many of the technological interventions described in the previous section are combined with financial incentives, and, thus, we do not discuss these studies in this section. The main lesson from these studies is straightforward: high-powered incentives work, as long as they are enforced.

While financial or performance-based incentives for undertaking specific actions may indeed work, there is also a potential concern that they may also lead to negative consequences. For example, nurses may now show up to work but put in less effort at work. Teachers paid on the basis of student test scores may "teach to the test" at the expense of encouraging "real" learning.

Fortunately, evidence from a large-scale randomized experiment of government teachers in AP suggests that these types of concerns are perhaps overblown (Muralidharan and Sundaraman 2011). Teachers in 300 government schools in AP were randomly allocated incentive programs that gave them bonuses of up to 3% of their salary based on the performance of students on tests. After two years, student test scores improved significantly in the subjects whose test results counted for bonuses: math and language. Importantly, however, test scores also improved in subjects whose test results did not count towards bonuses—science and social studies —suggesting that enhanced teaching effort spilled over into these subjects. Moreover, results were positive across the distribution of students, suggesting that teachers did not just concentrate on the best or worst students.

In addition to the specific incentives described above, there is a longstanding idea that government officials need to be paid more overall: they are only corrupt because they are so poorly paid and need to supplement their income through illicit activities. More generally, the idea that "efficiency wages" could prevent corruption is very old, going back to at least the seminal work by Becker and Stigler (1974). In practice, however, there is little evidence that such measures will be effective.

Niehaus and Sukhtankar (2013a) indirectly test if efficiency wages matter for corruption, by checking whether increased illicit rents in the future can reduce corruption today. Taking advantage of a change in wages in the NREGS in Orissa that increased the possibility of higher rents to corrupt officials in the future, they find that corruption indeed was significantly lower today in areas that expected more lucrative projects to be forthcoming. While on the one hand this provides support for the efficiency wage hypothesis, the magnitudes of wage increases necessary to reduce corruption are out of the range of what might be deemed feasible: they find that corrupt rents were 100 to 1,100 times official wages.

A corollary to providing disincentives to engaging in corruption is to provide incentives to uncover corruption, by both protecting and incentivizing

whistleblowers. The Whistleblowers Protection Act (which came into force in May 2014), however, appears to fall short in this regard. In balancing the rights of potential whistleblowers against the rights of officials to do their jobs free of harassment, the current provisions seem to tilt the balance towards officials. For example, there is no penalty for victimization of complainants, the Central Vigilance Commission (charged with investigating complaints) has no power to impose penalties, and—unlike the comparable US law, for example—there is no provision for the whistleblower to be compensated from any funds recovered as a result of the complaint (PRS Legislative Research 2011).

A final intervention in this category is the introduction of independent, third-party auditing. Duflo et al. (2013) implement a field experiment in Gujarat in which they introduce the random assignment of auditing in two heavily industrial regions of the state with the universe of "audit-eligible" plants. The intervention has several components. First, the researchers randomly assigned a third-party auditor to treatment plants who were paid from a central pool rather than by the firm directly. Second, the researchers verified a random sample of each auditor's pollution readings with follow-up visits. Finally, halfway through the study, treatment auditors were told that their pay would be linked to the accuracy of their audit reporting.

The treatment resulted in more truthful reports by auditors for treated firms. In terms of actual pollution outcomes, the treatment also succeeded in reducing emissions with the "dirtiest" plants reducing emissions the most. Finally, the authors demonstrate nonexperimental evidence that the financial incentives for reporting accuracy, implemented mid-way through the study, had an independent positive effect on reporting quality.

Hence, the introduction of independent "third-party" auditing resulted in more accurate reporting, less "cheating," and improved environmental outcomes. The random assignment of independent auditors was clearly a key component of the intervention, but equally important is the fact that the auditor was paid from a central pool of funds rather than directly by the audited firm. One could imagine a scenario in which the two are not delinked, which could potentially undermine the benefits of a third-party audit.

4.4. Electoral Reform/Political Incentives

When it comes to electoral reform, there are two distinct pathways through which policymakers seeking to curb the influence of corrupt or criminal politicians can operate. The first is to address the supply of "tainted" candidates into the electoral domain, while the second is to tackle the demand-side incentives.

To curtail the entry of candidates associated with illegal activity in the electoral domain, the Supreme Court issued two important judgments in 2013.

The first found that any MP or MLA currently holding office, if convicted by a court of law (for charges listed under Sections 8(1), 8(2), or 8(3) of the Representation of the People Act, 1951) would be immediately disqualified from the date of conviction (unless he or she obtained a stay on the conviction). Under prior statute, convicted lawmakers could hold on to their seat as long as an appeal on that conviction was pending before the courts.¹⁷

The Supreme Court's order disqualifying convicted legislators has already had some impact. Shortly after the judgment, Bihar MP (and former Chief Minister) Lalu Prasad Yadav was forced to give up his seat in Parliament after the prosecution obtained a conviction in the fodder scam case. More recently, the chief minister of Tamil Nadu, Jayalalithaa, was forcibly removed from office after being convicted on graft charges. According to an analysis by ADR, there are 53 members of the 16th Lok Sabha who are at risk of being disqualified and, hence, vacating their seat should pending cases against them result in a conviction (and should they fail to obtain a stay on that conviction). However, converting charges framed by a court into a conviction is no small task. Of the 76 MPs serving in the 15th Lok Sabha who faced ongoing criminal action, the average case faced by this group had been pending for seven years (with some cases pending for 25 years or more).

The court also ruled, in a separate judgment, that any candidate who was either in jail or in police custody could not stand for elections (on the logic that such a candidate is not an eligible *elector* in the election). Political parties across the spectrum alleged that the ruling provided perverse incentives for the government to falsely imprison or detain political opponents. In response, parliament swiftly passed a bill that clarified that that a person does not cease to be an elector even if he or she cannot vote due to police custody or incarceration. This effectively nullified the court's ruling.

In addition to judicial action on removing convicted legislators, the Election Commission and many good governance campaigners have also suggested preventive action. For instance, the ECI has formally

17. In order to counteract the court's move, the UPA government quickly introduced a bill in parliament that would nullify the ruling, but it was later forced to withdraw the bill under harsh public criticism. The government also considered promulgating an ordinance to the same effect, but again had to retreat in light of public outrage.

recommended that candidates against whom charges have been framed by a Court should be disqualified from contesting elections. In order to guard against politically motivated charges, the ECI has suggested two additional caveats: that only cases filed at least six months prior to the election and those involving offences punishable by imprisonment of five years or more should be considered (on the premise that cases which meet these criteria are less likely to be subject to political motivation). Odisha MP Jay Panda has introduced a private member bill which, if passed, would subject such politicians to a newly created "fast track" tribunal to handle cases facing politicians. Recently, Prime Minister Modi rhetorically backed the idea, requesting that the Supreme Court set up a judicial mechanism to expedite cases against "any Members of Parliament upon whom an FIR is lodged," and reach a verdict within one year.

There have also been numerous steps either initiated or proposed to crack down on "black" money in politics (see Gowda and Sridharan 2012; Sridharan 2006 for a review). There is, as we discussed above, a wellestablished link between illicit election finance and criminality in politics, or what is referred to in common parlance as "money and muscle."

One basic remedy would be to improve the transparency of political party finances, which is sorely lacking. To this end, in June 2013, the Central Information Commission (CIC) ruled that for the purposes of the Right to Information Act, political parties were to be considered "public authorities" and, as a consequence, subject to provisions of the Act. Parliament quickly introduced a bill to remove political parties from the ambit of the RTI Act, but the bill was not passed during the 15th Lok Sabha. The CIC's ruling is controversial even for proponents of enhanced transparency, who contend that it is the ECI, not the CIC or the RTI, which should have jurisdiction over the affairs of political parties. However, in March 2015, the issue became moot as the CIC effectively threw up its hands, declaring that its decision was not implementable since parties had simply refused to cooperate with the agency and it had no mechanisms by which to compel the participation of the parties (Shrinivasan 2015).

Going forward, the ECI has proposed that it be granted greater authority to regulate political parties. For instance, the ECI has no ability under existing law to de-register political parties who flout democratic norms or who set up parties with the sole purpose of exploiting tax loopholes. One longstanding suggestion, also supported by many civil society organizations, is that political parties submit annual, independent audits of their finances to the ECI for public dissemination. To date, parties have resisted this move.

A second remedy under consideration is to enhance the ECI's authorities with respect to election-related disclosures. For instance, the ECI has also been in a pitched legal battle with the Government of India to bring charges against candidates who knowingly file false affidavits detailing election expenditures. The UPA-2 Government openly challenged the commission's power to disqualify a candidate for falsifying election finance filings, stating the Commission has the power to sanction candidates who do not file disclosures but not necessarily those who file incorrect ones (Hindu 2013). In a closely watched case in July 2014, the ECI framed charges against Congress MP Ashok Chavan, the former Maharashtra Chief Minister, for filing false election expenditure disclosures, accusing him of willfully hiding the fact that he paid off journalists to write positive news articles about him during a 2009 election campaign. The proceeding was seen as a test case of the agency's powers, but in September 2014, the Delhi High Court exonerated Chavan in the paid news case before the announcement of the state assembly elections in Maharashtra (Garg 2014). In order to avoid future legal uncertainty, the ECI has asked that the law be amended to clarify the ECI's authorities to sanction those who file false disclosures. In a similar vein, the ECI has suggested that "paid news," the practice of politicians paying journalists for favorable media coverage masquerading as "news," be explicitly classified as an "electoral offence" and made punishable under the Representation of the People Act.

All of these proposed reforms deal with reducing the supply of potentially "tainted" politicians into electoral politics. They work by changing the incentives of political parties to give tickets to such politicians, reducing the flow of illicit money in politics, or simply disqualifying politicians from contesting elections or holding office. Yet, there is a "demand" side to the equation as well, which relates to voter incentives and the electoral popularity of allegedly criminal or corrupt candidates. None of the remedies described above on the supply side grapple with the basic notion that, at the end of the day, "tainted" legislators would not be in office were it not for voters electing them.

When it comes to voter motivations and support for criminal candidates, there are broadly two schools of thought. The first believes this is an issue about information asymmetries and "ignorant voters." The second, in contrast, believes that the appeal of criminal candidates is related to their credibility to act as effective representatives. According to this view, voters support such criminal candidates because, rather than in spite, of their criminality.

There are a few studies that have explicitly tested the proposition that improving the awareness of voters through the provision of information reduces support for criminality. Banerjee, Kumar, Pande, and Su (2011) conducted an experiment with Delhi slum dwellers in advance of municipal elections in which a local NGO distributed newspapers containing report cards on politicians to randomly selected residents. The report card presented information on the performance of the incumbent legislator and the qualifications of the incumbent and two main challengers. The report card contained information on legislative activism, legislator performance, and expenditures from the incumbent's local constituency development fund. In addition, the report card contained data, gleaned from candidate affidavits, on educational qualifications, criminal records, and financial assets. Relative to control slums, the researchers find that treatment slums (which received the report card) experienced higher voter turnout, reduced vote buying (measured directly through participant observation), and increased support for better performing and more qualified incumbents. Interestingly, however, information on criminality seems to have no impact. The results indicate that neither information on the criminality of incumbents nor on that of challengers have any statistically significant impacts on incumbent vote share.

A paper by Banerjee, Donald, Green, and Pande (2010b) reports on a voter mobilization, as opposed to information, campaign in Uttar Pradesh. In a set of randomly selected villages, an NGO conducted meetings and puppet shows to mobilize voters. In the first treatment, the NGO urged people in the village to vote on Election Day but to do so responsibly by *voting on issues, not on caste*. The second treatment involved an abstract plea, by the same NGO, to vote for "clean politicians." The treatment imparted the message: "Corrupt politicians steal money set aside for development funds and do nothing for you. Vote for clean politicians that care about your development needs."

The results of the first treatment indicate that it both has a positive impact on raising voter turnout and also reduces the extent of caste-based voting (as measured by a follow-on survey). The reduction in caste-based voting is linked to a significant decline in support for candidates charged with heinous crimes (although not those deemed to be "corrupt," as measured by a survey of local journalists). The authors conclude that low-information voters who are urged not to vote on the basis of caste will consider alterative evaluative criteria (such as past criminality). They surmise that support for criminal candidates, then, is a by-product of caste-based voting.

The null result on the corruption measure, however, complicates the picture. The second treatment, urging voters not to elect corrupt candidates, had no impact on voter turnout or vote share of corrupt or criminal candidates. The authors reconcile these divergent findings by arguing that the nonpartisan anticorruption campaign may have been too abstract and failed to provide sufficient information needed to reshape voter preferences. On the other hand, the anti-caste/pro-development messaging directly addressed an important voter "heuristic," while simultaneously offering voters a new evaluation criterion (i.e., development).

It should be emphasized that the latter study relies on a voter mobilization, rather than voter information and treatment; and the two are not identical. Voter information had no impact on support for criminal candidates while the anti-caste voter mobilization campaign did have an impact. This latter finding is in line with Chauchard's (2013) work, which finds that support for criminality is not necessarily support for "criminals" per se, but a byproduct of ethnic voting.

The second school of thought regarding the success of criminal politicians treats the issue of criminality in politics not as an information problem but one of credibility. Criminality in this case, researchers have shown, is often expressed through the language and symbolism of identity politics. This is consistent with a growing qualitative and ethnographic literature on criminality in Indian politics.

Recent survey data analyzed by Sircar and Vaishnav (2015) finds that at least 26% of respondents admitted that they would vote for a candidate with serious criminal charges but who delivers benefits to them. What is especially intriguing is that there is a strong association—at the state level between support for criminality and expressions of caste bias (as measured through a list experiment from the same survey). This finding is in line with the "criminality as credibility" hypothesis.

Thus, the prospects for addressing the demand for criminal politicians are mixed. On the one hand, Banerjee et al. (2011) find that updating voter information on the criminal records of incumbents and challengers has no impact on voter behavior in Delhi. This is consistent with the literature that downplays the role of information; perhaps telling voters about criminal antecedents is not actually updating their beliefs in a meaningful way. Yet Banerjee et al. (2009), in their study from Uttar Pradesh, seem to suggest that while voters may not be susceptible to the provision of factual information on candidate criminality, they might be influenced by a hortatory voter mobilization campaign. The literature reveals that there is clearly a linkage between identity politics and support for criminality; what remains unresolved is whether this connection is incidental or represents something deeper. In other words, do voters support candidates who are co-ethnics and hence deemed more credible (in which case, criminality is incidental) or is the credibility of co-ethnicity in some way conditioned by criminality? Clearly, more research is needed on the "demand" side before we can disaggregate these nuanced relationships.

4.5. Legal Reform

This category of anticorruption remedies involves enacting new laws to curb corrupt activities. There is, indeed, a large legislative agenda—comprised of several bills already introduced in parliament—on this score.

As mentioned previously, the Right of Citizens for Time Bound Delivery of Goods and Services and Grievance Redressal Bill (2011) seeks to create a mechanism to ensure the timely delivery of publicly provided goods and services to citizens. The Bill requires all public authorities to appoint officers to redress grievances and, if grievances are not redressed within 30 days, financial penalties are imposed on the relevant bureaucrat. Many states have set up identical mechanisms, raising questions about duplication as well as jurisdictional authority given that many goods and services are state subjects and involve state-level bureaucrats (PRS Legislative Research 2012). The central bill, much like its various state-level incarnations, is meant to address acts belonging to the first category of corruption mentioned in Section II, "facilitative corruption."

The Public Procurement Bill (2012) could help curb abuses in the category we call "collusive corruption," such as kickbacks from government procurement, by regulating central government procurement and improving its transparency. The bill establishes an open competitive bidding process as the default for public procurement (unless otherwise justified). The bill also mandates the publication of all procurement-related information on a central portal.

The Public Procurement Bill, as well as the Prevention of Corruption (Amendment) Bill (2013) and the Prevention of Bribery of Foreign Public Officials and Officials of Public International Organizations Bill (2011), all contain provisions on bribery. For example, the Procurement Bill criminalizes the acceptance of a bribe by a public servant as well as the offering of a bribe or exerting "undue influence" on the procurement process by prospective bidders. The Prevention of Corruption Bill criminalizes the act of bribegiving and expands the definition of bribe-taking (which is already illegal under Indian law). The latter bill makes giving bribes to, or receiving bribes

from, foreign public officials or international public officials a criminal act (PRS Legislative Research 2014). This bill, if passed, would also ratify the United Nations Convention against Corruption, which India signed nearly one decade ago in 2005. This highlights the role that external anchoring, whereby membership in an international body incentivizes domestic reform, can play in India's fight against corruption (Morlino 2005).¹⁸

On the specifics of India's bribery laws, the idea of criminalizing bribegiving, long part of the received wisdom, has recently been contested. In a well-known paper, Basu (2011) argues that, insofar as "extractive corruption" is concerned (or harassment bribes ordinary citizens must pay in order to receive what they are legally entitled to), the act of bribe giving should be deemed "legitimate." Basu argues that this will result in a sharp decline in the incidence of bribe giving, and the reasoning is actually quite simple. To quote the author: "[O]nce the law is altered in this manner, after the act of bribery is committed, the interests of the bribe-giver and the bribe-taker will be at divergence. The bribe-giver will be willing to cooperate in getting the bribe-taker caught. Knowing that this will happen, the bribe-taker will be deterred from taking a bribe."

A paper by Abbink, Dasgupta, Gangadharan, and Jain (2014) experimentally tested Basu's theoretical proposal, using a lab experiment conducted with university students in India. The authors find that when the bribe-giver is provided legal immunity, reporting of bribe demands increases while the demand for bribes declines (compared to a scenario in which both bribegiver and bribe-taker are held liable). This core finding is consistent with Basu's theoretical predictions. The authors, however, extend the analysis in two important ways. They authors test how bribe-givers react when bribetakers can retaliate and when the bribe-giver's payment is not refunded (hence eliminating monetary incentives). Their findings suggest that strict financial incentives do not overwhelmingly influence reporting behavior. However, when retaliation is an option, bribe demands and reporting are roughly on par with the baseline case (when both bribe-givers and takers are legally liable). The authors thus conclude that asymmetric liability alone may not reduce corruption. Legitimizing bribe giving must proceed hand in hand with implementing procedures to limit retaliation.

18. Similarly, India's decision to join the Financial Action Task Force (FATF), an international collective of nations dedicated to combating money laundering and terrorist finance, helped to galvanize a series of reforms to modernize India's financial and regulatory regime in order curb the flow of illicit funds. These alterations, many of which were contained in The Prevention of Money Laundering (Amendment) Bill, 2009, were stipulated as pre-conditions to India's joining the group as a full member in 2010.

In addition to legislation specifically designed to take action against corruption, there are also legal changes that structure (or restructure) economic interactions in ways that might minimize corruption. For instance, in the lucrative domain of natural resources, the NDA government has already taken steps to enact legal changes that will act to curtail collusive corruption. During the decade of the 2000s, on account of skyrocketing commodity prices, growing Chinese demand, and the booming domestic economy, India's natural resource sector was rife with rent-seeking. One of the gravest abuses was the arbitrary and wholly discretionary power of government authorities to allocate resources (such as spectrum, mining licenses, and land) to hand-selected proprietors. The discretion inherent in allocation rules paved the way for several of the biggest corruption scandals of the 2000s. Although the government's hand was forced by series of tough Supreme Court judgements, in March 2015 the NDA successful obtained parliamentary approval for two reform bills: the Coal Mines (Special Provisions) Bill (2015) and the Mines and Minerals (Development and Regulation) Amendment Bill (2015). Both bills compel the government to allocate mining leases via auction. 19 As scholars have argued and history has confirmed, auctions can be an improvement but in and of themselves are no panacea (Klemperer 2002). Indeed, in March 2015 media reports surfaced suggesting the Government might cancel newly auctioned coal licenses on suspicion that private firms may have colluded in the auction process to artificially lower bid prices (*Economic Times* 2015).

4.6. Policy Reform

The final category of strategies to combat corruption involves simple reforms in rules and regulations. Under this heading, we discuss user fees, streamlining of permissions, and the rule of law.

A straightforward fix to many types of day-to-day corruption, particularly the type described in Section 2.1, is to institute user fees for faster delivery of public services. This would simply take the place of "speed money" bribes, hence redistributing these resources from wayward officials to government coffers, while at the same time reducing inefficiency by removing uncertainty and not taxing honest citizens who may refuse to pay bribes. Such systems are common all around the world, and have been successfully implemented in India through the implementation of "tatkal" (immediate)

^{19.} The one exception relates to the 204 coal leases cancelled by the Supreme Court in August 2014 on the heels of the "Coalgate" scandal. The government can provide licenses for these coalmines either through allotment or auction.

schemes for obtaining train tickets, passports, phone services, etc. As one former academic who is now a senior member of government noted tatkal has basically eliminated bribes in obtaining railway tickets.

Another example of low-hanging fruit when it comes to policy reform is the streamlining of permission to minimize the prevalence of harassment bribes. In October 2014, Prime Minister Narendra Modi announced the creation of a new online portal that would allow more than 600,000 firms doing business in India to essentially "self-certify" their compliance with 16 different labor laws currently in force (Yadav 2014). This is a measure many leading business groups had been clamoring for, and a step some investorfriendly states have already pursued (FICCI 2014). Under the status quo, each of the 16 laws provided an opportunity for government inspectors to harass firms and seek bribes in exchange for filing favorable compliance reports. Under the new system, the feared "Inspector Raj" will not completely disappear, but instead be replaced by a system of random audits to ensure that participating firms are truthfully reporting compliance. While the new regime allows for some discretion on the part of the government, it significantly constrains it.

A final area deserving of greater attention is the rule of law. Intellectually, the rule of law is a slippery concept to pin down because there is, of course, no single institution that is charged with protecting the "rule of law." As Kapur and Vaishnav (2014) have argued, it is more useful to conceive of the rule of law as a set of linked activities in a supply chain. On one end, there are the laws on the books and the lawmakers who write them. Further along the chain come the courts, which are in charge of adjudicating the laws. At the opposite end sit prosecutors and the police, who are the frontline functionaries of the state in charge of enforcement. Weaknesses or shortcomings in any single link have obvious repercussions for the entire chain. For instance, what good are sterling laws on paper if the police do not have the capacity to enforce them?

Without reforming the rule of law in India, it will be impossible to deter corrupt acts before they take place or to take action once corrupt acts eventually come to surface. Any strategy to reform the rule of law must begin with reforming India's legal undergirding. In the previous section, we discussed several new laws that could have a salutary impact on the corruption environment. But just as important as adding new laws on the books is eliminating outmoded and outdated ones. The regulation of labor, for instance, is a domain badly encumbered with onerous and excessive laws that do more to provide venal government officers with tools to extort businesses than to protect the rights of workers.

With regards to the remaining links in the chain, under-capacity is a major constraint. As we discussed in Section 2, India's rule of law institutions are woefully undermanned in personnel terms. Even leaving aside the possibility that contractors or private sector employees might be able to correct for an under-provision of public sector workers (think, for instance, of the booming labor market for private armed guards), the strength of most law enforcement entities is well below where it should be. For instance, back-of-the-envelope calculations suggest India boasts just 16 judges per million citizens, while there are 101 for the equivalent population in the USA. Even after boosting alternative justice mechanisms or systems of grievance redressal, there are limits to the progress that can be achieved short of hiring more judges. One solution which has been recommended by the Law Commission of India is to create an all-India judicial service, akin to the other all-India civil services (like the IAS). This idea was first mooted in the 1960s, and was endorsed as recently as 2012 by a Committee of Secretaries chaired by the Cabinet Secretary, but has yet to see the light of day due to continuing differences among the various state governments and high courts (*Times of India* 2015).

Even if political disagreements could be overcome, the crunch of financial resources poses a considerable obstacle to boosting the capacity of the public sector. While resources are a major consideration, one should not overestimate their role as the binding constraint. Recent experimental work by Banerjee, Hanna, and Mullainathan (2012) on police reform in Rajasthan demonstrates how relatively costless policy changes can greatly aid the capacity of existing public sector agencies. Using a randomized design, the researchers implemented a series of recommendations repeatedly suggested by various police reform panels over the years, including limiting arbitrary transfers, enforcing the rotation of duty days and days off, increasing community involvement and training, and deploying "decoy" visits. Due to the autonomy of middle managers, many of the interventions were not effectively implemented. However, the researchers did detect significant impacts from training and decoy interventions.

Of course, a final impediment to reform is political will. In many instances, politicians prefer the status quo to pushing for reform because it protects their ability to use (and abuse) their discretionary authority to benefit themselves. Consider the consequences for the main parties involved in recent high-profile corruption scandals. On the one hand, it appears as though the state is fairly good at taking obvious action upon discovery of the scam: canceling contracts or licenses, starting investigations, and even arresting the main parties involved. True, many of these actions reflect the

will of the courts rather than incumbent politicians, but nonetheless some action is taken.

When the dust settles, however, the news is quite depressing. Referring back to our inventory of corruption scandals since the year 2000, the most powerful actors—defined as serving or having served at the level of Chief Minister of a state or above—who are implicated in alleged wrongdoing are never actually found guilty (none out of the 12 cases in our sample). Instead, the pattern is to arrest involved parties and file a CBI case as soon as the scam breaks, but following up on this is practically impossible in the cases of such big players, and each of them is out on bail.

On the other hand, those with limited political protection, particularly those involved in financial scams defrauding other parties, are much more likely to actually serve jail time, as the experience of Ketan Parekh, Abdul Kareem Telgi, and even Harshad Mehta in the past suggest. The recent conviction of two former chief ministers (Lalu Prasad Yadav in Bihar, Om Prakash Chautala in Haryana) and one sitting chief minister (Jayalalithaa in Tamil Nadu) presents a hopeful sign that the culture of impunity may be coming to an end, but it is too early to declare a new trend.

It is precisely because of weaknesses of existing agencies tasked with combating corruption that good government campaigners lobbied for Parliament to create a *Lokpal*, or anticorruption ombudsman with enhanced powers to go after malfeasance in government. The bill, which was passed in December 2013-45 years after it was first discussed on the floor of Parliament—also mandates that states establish state-level ombudsmen, or Lokayuktas, to curb corruption at the subnational level. Even before Parliament passed the bill, at least 18 states already had such agencies up and running.

It is too soon to tell whether the Lokpal will be more effective than India's existing graft-fighting institutions because, at the time of writing, the agency is still in the process of being established and the government is still framing the rules that will guide the new agency. However, there are a number of contentious issues, yet to be resolved, that will determine the new body's effectiveness (see also Kapur and Vaishnav 2014).

After nearly one year in office, the NDA government has not yet initiated the process of appointing a chairperson and the various subordinate members who will manage the new agency. In addition, there are numerous procedural issues regarding the Lokpal's investigative powers that have not been finalized. For instance, there is no clarity regarding how the Lokpal will receive complaints from those who are affected by, or who witness, corrupt acts. If the new agency requires approval by state governments in order to investigate central government officials on state deputation, as is widely understood to be the case, the end result will be a continued lack of a unified body to decide all cases of sanction for prosecution. Furthermore, while the Lokpal Act gives the new agency broad powers of superintendence over the CBI, how the lines of authority actually operate in practice remains to be seen.

5. Political Economy of Reform

In this penultimate section, we reflect on some of the deeper political economy considerations related to fighting corruption in India. We begin by addressing the question of the political conditions under which anticorruption reforms take place. We then discuss the thorny issue of relying on politicians associated with criminality and corrupt conduct to actually implement anticorruption reforms. We end by discussing new research on voter behavior and whether shifts among the electorate might alter the prospects of politicians linked with corruption.

5.1. Conditions for Reform

We begin by documenting some of the most frequent conditions under which anticorruption reforms gain traction. Our core motivation here is to get a better handle on the circumstances under which political space can be created in democratic societies to enact serious anticorruption remedies. To what extent, for instance, can India learn from the example of other societies that have evolved out of patronage politics and toward a pro-development equilibrium?

5.1.1. POLITICAL RETRIBUTION

The most obvious response to the question of when political space arises to address corruption is when the incumbent can use the issue to attack its political opponents. Unfortunately, such an approach is likely to fail because it is opportunistic and reeks of arbitrary enforcement or manipulation. Consider, for instance, the farcical case of former Uttar Pradesh chief minister and Samajwadi Party (SP) President Mulayam Singh Yadav, who the CBI first charged with corruption (in Indian parlance, "accumulating disproportionate assets") in March 2007 (Srivastava 2013). In July 2008, the SP provided outside support to the UPA government in New Delhi when it was facing a vote of no confidence over the contentious US–India civil

nuclear bill. Months after the SP bailed out the UPA government, the CBI withdrew the case against Yadav, claiming it possessed insufficient material to prosecute. Yet a little more than two years later, in the spring of 2011, the SP and the Congress Party were at loggerheads over a potential seatsharing agreement in the coming Uttar Pradesh assembly elections. Months later, the CBI reversed its stand and reintroduced charges against Yadav. In December 2012, the SP once again came to the aid of the Congress central government by allowing a controversial bill involving foreign direct investment in multi-brand retail to sail through Parliament. By September 2013, the CBI had once more closed its case against Yaday, citing "grossly insufficient evidence." Clearly, using the state machinery to prosecute alleged corrupt acts on the basis of political motivations has inherent shortcomings.

5.1.2. Access to Alternative Sources of Rents

A second condition under which political elites can take on corrupt activities is when they have access to other financial flows that can compensate for foregone rents. For instance, one hypothesis about why retail corruption has declined in states such as AP and Tamil Nadu compared to Bihar is that in the former states, the rents politicians (and bureaucrats) used to extract from service delivery or entitlement programs have been replaced with rents (often larger in magnitude and less cumbersome to collect) from infrastructure or contracts. While such hypotheses are difficult to test, this view is backed up by multiple conversations the authors have had with senior IAS officers, politicians, and academics.

Moreover, it is also possible that at least some of these big-ticket rents have less of an impact on the economy than regular corruption. For example, it is apparently more and more common to pay officials and politicians via equity stakes rather than bribes. This type of quid pro quo more closely aligns officials' and businessmen's incentives in support of the eventual success of the project. In their work on political finance, Kapur and Vaishnav (2015) provide one such case: "a builder constructing a hotel in Mumbai told the authors that the government told him it would only issue building permits if there was a quid pro quo. The quid pro quo sought was not cash but a 5% equity stake in the hotel in the name of a firm connected to a local politician."²⁰ In other interviews conducted by one of us (Vaishnay), several builders in the state of Gujarat claimed that it was common knowledge that the state finance minister insisted on a 5% equity stake in any new major

^{20.} Kapur and Vaishnay cite an interview with a builder in New Delhi, dated December 3, 2012.

construction project in the city of Rajkot, where his constituency is located (Author interview, Ahmedabad, December 2012).

Academic evidence, albeit limited to one article, also supports this view. The much-publicized 2G scam apparently had no effect on wireless telecom markets, basically because the illegally acquired licenses were then sold off to legitimate telecom operators at a large cost to the government but not necessarily at the cost of consumers (Sukhtankar 2015).

5.1.3. POPULAR ANTICORRUPTION MOVEMENTS

Another condition under which anticorruption reforms can come to the fore is when strong movements create political space for reformers to push through pivotal changes. This is what transpired in the decades following the Gilded Age in the USA, one popular historical example of political corruption, as the country transitioned toward what later became known as the "Progressive Era," a period spanning from roughly 1890 to 1920.²¹ During this three decade-long stretch, the USA saw a number of major reforms to the structure of American government and society, underpinned by a new conception of the state's role in private affairs. The Progressive Era was a product not of any single reform movement but at least four separate ones: the "business regulation" movement, which fought to introduce competition in industries that had reaped the benefits of consolidation and monopoly; the "good government" movement, which tackled the corrupt machines that held sway during the Gilded Age and sought to introduce new managerial practices into governance; the "social justice" movement, which was motivated by upgrading the quality of life for the urban poor (especially immigrants and factory workers); and, finally, the "social control" movement, which was imbued with a moral imperative to inculcate middle-class Christian values into society.

In India, reformist anticorruption movements have been episodic to date. The most recent example is the India Against Corruption (IAC) movement, launched by Anna Hazare, Arvind Kejriwal, and their colleagues and supporters, which shot to prominence in 2010 following revelations of massive corruption scandals in the final years of the UPA-2 government. IAC was narrowly focused on pressuring the government to enact what it called the "Jan Lokpal" bill, which was more sweeping that the government's draft Lokpal bill. Although the government eventually passed a revised version

^{21.} The authors are especially grateful to Alec Sugarman for his research on the American historical case.

of its original bill in 2013, IAC's leadership fractured, with Kejriwal leading the faction that would eventually morph into a new political party, the AAP. After its initial 49 days running the Delhi government, in which it aggressively pushed anticorruption legislation, AAP's majority government in Delhi (formed in December 2014) has been less insistent. Whether AAP can make headway on corruption remains to be seen, as does its ability to scale up to other geographies outside of the immediate National Capital Region. Outside of winning four seats in Punjab, the party performed poorly in the 2014 Lok Sabha election. To date, it has not succeeded in creating a pan-Indian organization that could expand its footprint outside of Delhi. Furthermore, judging by the high degree of internal party conflict it is experiencing at the time of writing, there is some evidence that the party is possibly sacrificing its fervent anticorruption modus operandi for political expediency (Joshi 2015). There have been similar instances in India's post-Independence history of movements coming to the fore (the JP movement in the 1970s or the example of V.P. Singh in the 1980s) motivated by an underlying obsession with fighting corruption only to quickly dissipate or be overtaken by other issues once they entered the political domain.

By and large, IAC, AAP, and other such groups are in line with the "good government" strand of the Progressive Era reform movement. India has also seen elements of the "social justice" movement discernible in many of the rights-based movements of the 2000s around issues such as the right food, water, employment, shelter, etc. Unfortunately, these movements were far more effective in advocating for new legislation to enshrine these rights than in the actual design of social programs that emerged out of this rights-based agenda. Notably weak is the "business regulation" movement, which in the USA helped push landmark legislations such as the Interstate Commerce Act of 1887, the Federal Trade Commission Act of 1914, or the Clayton Anti-Trust Act of 1914. But while this strand of the movement is weak, it is not totally absent. Many of the corruption scams we have documented in Table 1 (6 of 28, or 21%) are from the financial services sector, typically involving private parties or entities conning other private parties. Indeed, there are likely direct correlations between the creaky regulatory structure, outmoded laws and gaps in consumer protection, and corruption in the financial sector. Partially in reaction to this, the Government established the Financial Sector Legislative Reforms Commission (FSLRC) to revamp India's archaic legal and regulatory framework governing India's financial sector. The effort, described by Patnaik and Shah (2014), serves as a potential template for future reform initiatives.

5.2. Voting for Corruption and Criminality

One difficulty in enacting anticorruption reforms is a practical one: many politicians currently in power are suspected of engaging in criminal or corrupt acts. As Section 4.4 has shown, there is a burgeoning literature on the criminalization of politics in India.

Because "criminality" is a broad category, encompassing a range of potential criminal activity, it is worth noting that descriptive analyses suggest that the picture is not qualitatively different if one looks at a more narrow definition of "corruption."

To illustrate the point, drawing on the affidavits submitted by candidates contesting the 2014 general election, we isolate those candidates who declare pending criminal cases in which they are specifically charged with committing readily identifiable acts of "corruption" (Table 3). These charges include violations of the Prevention of Corruption Act or any other cases overtly related to vigilance or anticorruption charges, as identified by the candidate on his or her affidavit. We identify 24 such candidates contesting the 2014 general elections, representing a range of parties and a wide diversity of states. Of these 24 candidates facing corruption cases, the median candidate finished in second place, earning 37% of the constituency vote. These candidates performed impressively, when considering that the median candidate in the 2014 election finished in ninth place and eared less than 1% of the vote. Indeed, nine of the "corruption-tainted" candidates (37.5%) actually won their elections. When we examine a smaller subset of seven candidates who had won in 2009 and stood for reelection as incumbents in 2014, we see that corruption-accused candidates endured only modest penalties for their alleged transgressions (Table 4). Three of seven candidates claimed victory while five increased the number of votes they won (indeed, 2G accused former Union Telecommunications Minister A. Raja won nearly 42,000 more votes than 2009 even though he lost his reelection) and the median vote share penalty was around 5%.

This data starkly portrays the dilemma facing India's anticorruption reformers: a significant proportion of the politicians they must rely on to pursue reforms that might curb malfeasance are themselves suspected of engaging in illegal activity. For obvious reasons, such politicians might not be the most aggressive anticorruption reformers. But an even more fundamental problem is that voters are affirmatively electing (and often reelecting) such individuals.

In this vein, one encouraging development worth highlighting is the significant shift underway in Indian voter behavior in recent years. The vast

Electoral Performance of Candidates with Declared Corruption Cases, 2014 Lok Sabha Elections TABLE 3.

Candidate	Constituency	State	Party	Rank	Vote Share	Elector Share
Captain Amarinder Singh	Amritsar	Punjab	INC	-	0.48	0.33
Patil Nitin Suresh	Aurangabad	Maharashtra	INC	2	0.37	0.23
B. Sreeramulu	Bellary	Karnataka	BJP	_	0.51	0.36
Rakesh Dhar Tripathi	Bhadohi	Uttar Pradesh	BSP	2	0.25	0.13
N. Dharam Singh	Bidar	Karnataka	INC	2	0.38	0.23
Natubhai G. Patel	Dadra & Nagar Haveli	Dadra & Nagar Haveli	BJP	_	0.49	0.41
Anbumani Ramadoss	Dharmapuri	Tamil Nadu	PMK	_	0.43	0.34
Rakesh Sachan	Fatehpur	Uttar Pradesh	SP	က	0.17	0.10
Anurag Singh Thakur	Hamirpur	Himachal Pradesh	ВЈР	_	0.54	0.36
Agrawal Kunjbihari Jugalkishor	Jalna	Maharashtra	SP	=======================================	0.00	0.00
Prem Chand Vishavkarma	Kangra	Himachal Pradesh	ONI	7	0.01	0.00
Lalit Mohon Suklabaidya	Karimganj	Assam	INC	က	0.26	0.19
Anosh Ekka	Khunti	Jharkhand	JKP	2	0.24	0.16
Mohammed Faizal.P.P	Lakshadweep	Lakshadweep	NCP	_	0.50	0.43
Paresh Baishya	Mangalldoi	Assam	AIUDF	4	90'0	0.02
Ayodhya Rami Reddy Alla	Narasaraopet	Andhra Pradesh	YSRC	2	0.47	0.39
Gokaraju Ganga Raju	Narsapuram	Andhra Pradesh	ВЈР	_	0.50	0.41
A. Raja	Niligiris	Tamil Nadu	DMK	2	0.38	0.28
Pongalur Palanisamy.N	Pollachi	Tamil Nadu	DMK	က	0.25	0.18
Bandhu Tirkey	Ranchi	Jharkhand	AITC	വ	0.04	0.03
Ganesh Singh	Satna	Madhya Pradesh	ВЈР	_	0.41	0.26
B.S. Yeddyurappa	Shimoga	Karnataka	ВЈР	_	0.54	0.39
Atiq Ahmed	Shrawasti	Uttar Pradesh	SP	2	0.27	0.15
Churchill Alemao	South Goa	Goa	AITC	က	0.03	0.02

Source: Author's calculations based on affidavits submitted to Election Commission of India by candidates contesting the 2014 general election.

Electoral Performance of Re-contesting Candidates with Declared Corruption Cases, 2014 Lok Sabha Elections TABLE 4.

Candidate	Constituency	State	Party	Rank 2009	Rank 2014	Change, # votes	Change, vote share	Change, elector share
Lalit Mohon Suklabaidya	Karimganj	Assam	INC	_	က	-33155	-0.123	-0.049
Rakesh Sachan	Fatehpur	Uttar Pradesh	SP	_	က	-39229	-0.145	-0.043
A. Raja	Niligiris	Tamil Nadu	DMK	-	2	41958	-0.062	-0.033
N. Dharam Singh	Bidar	Karnataka	INC	-	2	29111	-0.051	0.000
Anurag Singh Thakur	Hamirpur	Himachal Pradesh	BJP	_	_	74437	0.002	0.044
Natubhai G. Patel	Dadra & Nagar Haveli	Dadra & Nagar Haveli	BJP	-	_	29548	0.024	0.079
Ganesh Singh	Satna	Madhya Pradesh	BJP	-	_	180664	0.116	0.096

Source: Author's calculations based on affidavits submitted to Election Commission of India by candidates contesting the 2009 and 2014 general elections.

literature on Indian elections suggests that Indian voters have traditionally conditioned their electoral choices on parochial issues such as ethnicity, patronage, or clientelism, rather than issues concerning governance and development (Chandra 2004). These priorities, in turn, have had an adverse impact on the nature of political selection, providing the electoral basis for politicians associated with criminal or corrupt backgrounds to thrive (Banerjee and Pande 2009). There is some evidence to suggest that the situation is gradually changing. For instance, a study by Gupta and Panagariya (2014) finds that, contrary to the received wisdom, voters in the 2009 Lok Sabha elections rewarded candidates associated with strong economic records, with incumbents in "high-growth" states significantly outperforming those from states that experienced either "moderate" or "low" growth. In the 2014 general elections, post-poll survey evidence suggests that economic issues, such as inflation, economic development, and lack of employment, weighed heavily in voters' minds as they cast their ballots on election day (CSDS 2014).

The shift toward economic voting, which has been commonplace in many advanced industrial democracies for many years, is discernible in state elections as well. Vaishnav and Swanson (2015) study the relationship between economic growth and electoral returns in more than 120 state elections held between 1980 and 2012. While they find little association between economics and elections in the 1980s and 1990s, they find a robust, positive relationship in the post-2000s era. In the most recent period, the authors document statistically significant electoral returns to those state governments able to deliver faster rates of economic growth.

The rise of economic voting is encouraging from the perspective of accountability, but the fact that economic voting coexists with a large prevalence of suspected criminal and/or corrupt elected representatives suggests that there is not a one-to-one relationship between economic voting and a decline in the salience of "parochial" interests. How do we square these seemingly contradictory impulses—a shift toward retrospective economic voting and a penchant for electing candidates with "tainted" backgrounds?

One possibility is that, in some circumstances, voters can simultaneously vote on the basis of the macro-economy and for tainted politicians if their vote choice is being driven by the identity of a chief ministerial or prime ministerial candidate or a party label. Likewise, voters could have differing preferences for who they want to run the state or country as opposed to represent them as an MLA or MP in their constituency.

A second, more troubling possibility is that voters are voting for better governance, but tend to view tainted politicians in this light as well. In other words, referring back to the notion that criminals often are deemed more "credible" representatives, it could be that voters are selecting so-called tainted politicians precisely because they view them to be effective representatives in the context of a weak state. However, to the extent criminal or corrupt politicians gain strength by filling a governance vacuum, they face incentives to purse temporary, rather than lasting, solutions. If criminal representatives, for instance, serve a useful role resolving disputes or providing security, they have every reason to undermine lasting governance solutions that risk making their services irrelevant.

6. Conclusion

The overall objective of this paper is to bring the research on corruption and the policy discourse into the same conversation. Because the literature on corruption in India is, to put it mildly, voluminous; our aim is to provide a framework for thinking through the many issues raised by this body of work. To that end, this paper offers a stylized framework for thinking through the underlying drivers of corruption in contemporary India, provides a rubric for classifying corrupt acts, and discusses broad strategies for combating corruption and what the literature tells us about their relative effectiveness. To embed our overall discussion in India's political context, we have also offered some parting thoughts on India's political economy of reform when it comes to fighting corruption. To make our task manageable (and coherent), we have made two important choices in this paper: to focus narrowly on public sector corruption and to draw primarily from academic studies that combine analytical rigor with causal analysis and rich sources of data. In an effort to provide guidance to policymakers and other agents of change addressing India's corruption challenge, we conclude by highlighting five principles that should guide future reform efforts.

First, information provision is an important tool in the toolbox, but, on its own, it is not always an effective anti-graft strategy. Our review of the literature reveals that information works best when accompanied by investments in enhancing the bargaining power of ordinary citizens, improving coordination and collective action, or strengthening the state's ability to punish impunity. Social audits and information campaigns that uncover malfeasance in a context of weak public sector enforcement institutions can have limited impact, as demonstrated by Afridi and Iversen (2013) in their study of social audits in AP.

In the case of criminal or corrupt actors in electoral politics, there is compelling evidence that the factors which give rise to this nexus are perhaps less related to information asymmetries but instead have more to do with social divisions embedded within India's weak rule of law society. This is not to say improving the information environment is not a laudable goal; to the contrary, improving the availability of information on criminality in politics has been essential to both diagnosing the challenge as well as forging social pressure. The key take-away, however, is that the absence of information may not the binding constraint.

Second, technological solutions to curb corruption have limited effectiveness unless they are able to bypass the local machinery that hampers status quo solutions. Technological innovations that require higher level authorities to provide enforcement risk falling prey to the usual principalagent dilemmas that plague public service delivery. Instead, interventions such as the one involving smart cards in AP evaluated by Muralidharan et al. (2014a), which can transfer bargaining power to citizens and circumvent the broken local state machinery, hold significant promise. To this end, the new NDA government in Delhi has an opportunity to build on the Aadhaar program launched by the prior regime and further marginalize middlemen in service delivery.

Third, there is a sensible and wide-ranging legislative agenda to reduce corruption that the 16th Lok Sabha should pursue with renewed vigor. Measures such as the "Right to Services" and the "Public Procurement" bills contain important provisions that can constrain abuses of government discretion while shifting bargaining power in favor ordinary citizens. To be clear, these bills, as they stand, are imperfect; for instance, the "Right to Services" bill would create a dedicated grievance redressal mechanism in a context where there are legitimate concerns about the multiplicity of grievance redressal mechanisms already in existence (on paper at least if not always in practice). Parliament must debate and discuss these details and forge reasonable compromise.

Reformers should also take heed that as meritorious as these bills may be, passing news laws must be accompanied by a renewed effort to repeal outdated or archaic old ones. Of course, it is natural for agents of change to focus their attention on enacting new laws given the inherent benefits for mobilization; yet such an approach is shortsighted. As Kapur and Vaishnav (2014) argue, in India "the multiplicity and complexity of laws make compliance, deterrence, and effective enforcement difficult and, in many cases, impossible." Statutes regarding corrupt practices are no exception.

Finally, while the state in India is often perceived to be the problem when it comes to corruption, it is no doubt also part of the solution (Kapur 2010). There is a strong case to be made that the state, particularly the local state, has historically preyed on the *aam aadmi* (common man), rather than worked on its behalf (Pritchett 2009). Yet, there are limits to how much can be achieved to reduce its corruption by circumventing, rather than strengthening, its capacity.

At the end of the day, even the most immaculate laws require effective state institutions to enforce them and judicial officers to adjudicate disputes. Yet police vacancy rates in India hover around 25% and existing forces are poorly trained, starved of resources, and the subject of constant political interference. Similar shortcomings plague the judiciary at the same time that the volume of litigation is rapidly increasing. The pioneering Right to Information Act gives average Indians greater recourse to redressing grievances than ever before, but if government information officers remain in short supply and appeals processes drag on, empowerment could turn into disenchantment.

The anticorruption agenda in India is massive but the enormity of the task should not dampen the spirits of reformers. To be clear, the stakes are high; this is not only because corruption can hamper India's ability to grow its economy and manage the enormous task of providing opportunities for its young, growing population, but also because corruption can negatively color popular perceptions of democracy and faith in the rule of law. Having said that, reformers should take heed of the fact that the literature is replete with successful examples of logistically simple solutions that can be implemented at minimal cost. While the ability of these solutions to circumvent weak public sector institutions has its limits, the potential gains from reform suggest that such an agenda should be pursued with alacrity.

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Comments and Discussion

Devesh Kapur

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This is a carefully argued and impressively documented paper on a complex and contentious subject. Any analytical work in this area faces severe data and measurement challenges given the illegality of the subject on the one hand and the data requirements to establish magnitudes, effects, and precise causal mechanisms on the other hand. Yet given the importance of the issue, the authors' are to be commended for taking on this difficult challenge in a lucid and comprehensive manner. As is the case with all good papers they help stimulate further thinking and my comments are in that spirit.

The paper defines corruption as "the misuse of public office for private gain" (which it attributes to Pranab Bardhan). A sharp definition is essential not just for analytical clarity but also for tractability given the vast terrain the issue entails. But what do the two core components of this definition—"public office" and "private gain"—imply for understanding the nature of the problem? Take the example of two faculty, one of who teaches at a private university and the other at a public university. Now, if both give grades in exchange for money, by definition only the faculty in the public university is corrupt because he is a public official but the one in the private university is not. The latter might be guilty of something else but not corruption even though the actions are identical.

By defining corruption in a particular way it means that our understanding of corruption-like activities in the large—and growing—terrain of economic activity in the private sector is severely constrained. In the example cited above—higher education—the private sector is the dominant actor and its operations are rife with fraudulent activity. In the case of "grand corruption" in particular the private sector is integral to public corruption. Two decades ago when a minister took a bribe of ₹2 crores, he could hide it in suitcases. But when bribes run to many multiples of this amount it cannot be hid in suitcases. It must be laundered and the mechanism of laundering is the private sector.

Widespread malfeasance in the private sector often ricochets back to the state. The sordid affairs of statutory regulatory bodies of self-governance such as the Medical Council of India or the Bar Council of India, none of which are state run institutions, have had severely pernicious consequences for the medical and legal professions. This is also true of many NGOs which are often seen as heroically battling against the depredations of the state. Many indeed play that role but equally many non-profits are conduits for money laundering.

The other part of the definition which also needs a deeper understanding is the idea of "private gain." What exactly is private gain? Is private gain equivalent to pecuniary gain? So let us take a hypothetical country with a hypothetical prime minister who is completely honest but decides to look the other way when her or his ministers are engaged in patently corrupt activities in order to hold on to power. Is that an act of commission or an act of omission? If we care about welfare should we worry more about someone who takes 50 crores in illegal money or someone who has the power to stop such activities and allow certain policies that cost 500 crores to the public exchequer? If the ambition in public organizations to stay in power can sometimes cause a lot more damage than someone taking cash, then it begs the question of what exactly is "private gain" and what types of "private gain" should we focus on?

Needless to say expanding the definition of corruption would mean an entirely new paper. But it would be good to at least examine the implications of defining corruption in a very specific way for our understanding of this complex issue.

The main thrust of the paper is addressing four big questions:

- 1. The underlying causes of corruption with the authors' identifying the mismatch between regulatory complexity and weak enforcement capacity as the root institutional factor shaping India's corruption environment and election finance and weaknesses in public sector recruitment and transfers as more "proximate" causes.
- 2. Different types of corruption—facilitative, collusive, and extractive and the magnitudes, causes, and consequences of each of these types of corruption.
- 3. Strategies for combating corruption, ranging from introducing new technologies to legal changes.
- 4. India's political economy of reform which might shape how India addresses this scourge.

On the first question—the severe mismatch between regulatory complexity and enforcement capacity—there are two axes of variation that future work could exploit: variation across the principal domains of activity of a modern state and variation on each of these domains across states and between the center and states. There are four key domains of activity of the modern state: the *public goods and welfare state* where leakages have been galore and have been the subject of numerous studies ranging from PDS to NREGS etc.... The second is the regulatory state which has been the source of "terrestrial rents (from the allocation of land), subterranean rents (from the allocation of rights to coal mining and oil and gas exploration) and ethereal rents (from the allocation of spectrum)" (Subramanian 2012). The consequences have been both distributional (with the consumer picking up the costs) as well as efficiency costs, with severe adverse effects on the supply capacity of the economy. The third domain of state activity is the extractive state at the heart of which lies taxation. Although there is a widespread belief that there is large-scale rent seeking in this domain, it is not addressed in the paper.

The fourth (which is addressed in the paper), is the *law and order state*, in particular the police and courts. The paper emphasizes how the weakness in enforcement has hampered India's ability to address corruption. If addressing corruption requires competent investigative and prosecutorial machinery, asking the very group that is amongst the most corrupt parts of the Indian state—the police—to address corruption, is unlikely to bear fruit. Quis custodiet ipsos custodies—who guards the guardians?—is a conundrum intrinsic to all power, but in India the dilemma has been made more acute by the virtual absence of serious reforms in the law and order institutions of the state (especially the police) since independence. While the paper draws attention to this reality, it raises a deeper question on why this issue has remained unaddressed for so long. The politician-bureaucrat-police nexus is the usual answer, but it raises the question why in such a highly competitive democracy as India's, police reform has not had much issue salience among voters.

The paper draws attention to the distributional and efficiency costs of corruption. But it is noteworthy that when the major corruption scandals under UPA-II came under scrutiny—by the media, the courts, and the Comptroller and Auditor General—growth declined as policy paralysis in the government brought decision making in the government to a halt. Indeed the costs stemming from the ensuing decline in growth rates far exceeded the costs of all the corruption scandals. Obviously this does not mean that the two were directly causal or even if they were that corruption is a price worth paying for higher growth rates given the likelihood of severe long-term institutional costs. The paper points to the reality of a certain type of democratic accountability in the Indian system. When major corruption scandals erupt in the

public view, the decisions are often reversed. But the resulting slowdown in decision making not only significantly raises costs (especially in capital intensive projects) but has troubling non-pecuniary costs such as the effects of the paralysis in defence procurement on India's defence preparedness.

This points to an issue that needs better understanding in the Indian context: the difference between "efficient" and "inefficient" corruption, often seen as the difference between corruption in East Asia and Africa, or in the Indian case between a Tamil Nadu and Uttar Pradesh. It is not that corruption is less in Tamil Nadu but things actually get done there unlike Uttar Pradesh. Corruption in public contracts in India when coupled with a rigid adherence to L1 (lowest) bidding in procurement results in low-quality public infrastructure. In East Asia corruption results in higher procurement costs while maintaining quality and the resulting longer life-span of the product means that long-term costs are much less. In recent years (as the paper mentions) there are reports of politicians taking equity stakes in projects (instead of upfront cash payments). This is a form of credible contracting that aligns the incentives of the politician with that of the project promoter and ensures better project outcomes compared to cash bribes. Given the strong resistance of politicians to curbing corruption, even moving from "inefficient" to "efficient" corruption is likely to bring substantial efficiency gains.

The paper relies heavily on a wide range of survey experiments to come to broad conclusions. They are for the most part ambiguous not just for external validity reasons but even their internal logic. It is not just that most of these experiments are over very small samples. Even where they are impressively large, the policy implications are ambiguous. Take the case of salary incentives. Higher salaries in principle appear to have a positive selection effect on who joins public service (on measures such cognitive skills, personality traits, and motivation) (Ernesto Dal Bó and Rossi 2013). Yet, what they do after they join is a function of host of other institutional and organizational factors. If public teachers in India who are already paid much more than their private school counterparts are offered further financial incentives for performance and their performance improves (as in the case of teachers in AP), it is unclear if this is a new equilibrium or will it slide back as time passes and researchers (and scrutiny) have moved on and whether other parts of the public sector will demand similar deals without commensurate long-term improvements in performance. In other cases experiments that try and gauge the impact of information on say voter behavior simply cannot distinguish between the information given by the surveyor and the actual understanding of that information by the respondent.

It is an open question whether the analytical methods relative to the issue being addressed are a bit like a garden hose for a large forest fire, and how meaningful they are to address an issue as deeply systemic and which requires systemic policy options. Researchers tend to develop partisan stakes in their results which often closes them to thinking about changes over time. To take an example, amidst the many contentious debates on leakages in the PDS, several papers argued that there had been a turn around, singling out the case of Chhattisgarh which emerged as the poster state for the public distribution system. And yet in early 2015 stories emerged of vast corruption in the Chhattisgarh State Civil Supply Corporation (the nodal authority for the public distribution system in the state) with an estimated 14 lakh fake ration cards issues since the enactment of the state's much-acclaimed Food Security Act in January 2013 (Indian Express 2015).

The paper focuses on six broad categories of tools to combat corruption: (a) Information/ bottom-up monitoring, (b) Technology, (c) Financial incentives/ performance pay/efficiency wages, (d) Electoral reform/political incentives, (e) Legal reform, and (f) Policy reform. The authors' are rightly skeptical whether information and community participation on its own will make a dent on addressing corruption and advocate putting more bargaining power in the hands of beneficiaries through measures such as the passage of "Right to Service" bills. But by focusing on information provided by researchers to respondents the paper misses out on the big picture, namely the role of the media. While the media's coverage of corruption "scams" may indeed be "sensationalist" (as the paper argues), the counterfactual—whether the government would have acted in the absence of the media's watchdog role—is very unlikely. Indeed the role of the electronic media—and increasingly social media—in shaping political responses to ensuring some accountability and enforcement is a rich research area.

Yet all of these might matter only so much in the absence of far greater penalties on erring officials. There is a need for better research on the structure of penalties in public service, from fines to career paths to dismissal, and the institutional changes required to make them more onerous. But redesigning public institutions is more than simply a matter of incentives such as salaries and penalties. It is about designing better systems of screening and selection, training and work culture, improving organizational cohesion, and autonomy from political pressure. Here again, ethnographic case studies of specific organizations are needed to better understand organizational behavior.

Finally there is a big puzzle. Everyone knows that corruption in India is ubiquitous and recognizes that it is a serious problem. So why isn't much

done about it? Is it because corruption is an inevitable penalty that India must pay to accommodate and sustain its democratic system? On the one hand this generates ever growing needs for election financing, which like a gigantic tornado sucks in enormous amounts of resources which have to be generated from corruption. On the other it might simply be that a rigidly hierarchical society in the process of complex changes provides the structural conditions for the tornado to sustain itself. Coalition governments are seen to be more susceptible to corruption. But coalition governments are a reflection of political fragmentation, which in turn is (at least to some degree) related to India's social heterogeneities. Hence, if the roots of the problem lie not so much in politics or business but in Indian society itself, the solutions might lie in the nature and pace of social change.

Karthik Muralidharan

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It is a pleasure to be here. I think that this is a very nice paper and as Devesh said there is a very vast and disconnected body of evidence that it makes a valiant attempt at bringing together, and it does a good job putting these things in one place and I think some sections are particularly strong. For example, I particularly like the discussion on the effectiveness of providing information, and the discussion of why this may not always be enough. There is also this nice additional section that creates a list of major scams and organizes by sector just to help better understand the areas that are most vulnerable to corruption. But I think like I mentioned to Sandip it kind of sits a little orphaned between Section II and Section IV. So maybe that can almost go in the beginning.

I think the paper has the potential to be a go-to reference for those wanting to get up to speed on the rapidly growing literature for both academic and policy audiences but I think it needs a fair bit of work. The good news is that most of this is organizational and conceptual and I am at least not going to ask or expect you to go collect more primary data which is kind of not realistic but I think based on what you have you can make the paper a lot more punchy by doing some more organizational stuff. I am going to have three classes of comments.

The first is on organization and framework. The second is on topics covered and excluded and the third is on interpretation of some of the results that I think right now reads a little bit too much like a laundry list: putting them together in a framework that helps make sense in a more first principles kind of way.

There is also one thing I didn't mention here because Devesh did. So let me just mention that this is important and is almost worth having a little section on what I would call forensics. So the fact that corruption is really, really hard to measure means that there is a class of papers that is important just because they manage to measure convincingly the fact that corruption takes place. Ray Fisman's Indonesia Political Connections paper (Fisman 2001) is probably the best example of this, but even your sugarcane paper (Sukhtankar 2012), and Devesh and Milan's cement paper (Kapur and Vaishnav 2015) are important papers even though they are not like super well identified, just because they get at this very difficult task of measurement. So I think calling this section "forensics" is a useful way to do this because it is really about measurement and detective work as much as it is about theories and causality.

But coming to the economics of this I think the one really important paper that you are missing in terms of helping organize your thoughts is the Bandiera et al. (2009) AER paper on active and passive waste in government. The main insight of this paper is that while most of the attention goes to big headline grabbing scams—they estimate that about 80% of the waste in government is because of what they call "passive waste" which is not the kind of corruption that is directly going into somebody's pockets but the waste that happens because of systemic inefficiencies, and of the waste that happens because there is no residual claimant in government to internalize the returns to improving effectiveness of governance and functioning. Normally, I would say maybe this is too much and this might be biting off more than you can chew (and that you should stick to corruption defined as "active" waste above).

But because you have chosen to discuss both scams as well as the dayto-day (or annual) losses, you almost certainly want this framework because the policy implications are quite different. So I think having that would be useful.

There is also a second distinction that is similar but subtly different. This is the difference between a corrupt state and a nonresponsive state, and so it is related active and passive waste and they are correlated but you can see why there is a different policy implication. For example, I think when you think about the RTI/RTS, the problem that these acts are trying to solve at some deep level is not necessarily corruption as much as just a nonresponsive state. It is true they might be correlated because there might be deliberate denial of service to create the bottlenecks to create the rents in the first place. But the policy implications are different: For example, once you put in place a "Right to Service" act and monitor progress with electronic tracking of files, one of the things it helps identify is cases of genuine staffing shortages in the system or cases that can be improved by simple operations improvements.

So for instance, the former collector of Hyderabad would talk about a very simple example about how students would want income and caste certificates at the time of college applications, and they know that 10 months of the year there is no demand and two months of the year there is this absolute peak demand. So even if nobody is corrupt the service is going to be very slow at the point of peak demand, which is the time when the typical beneficiary interacts with the government for this service. So the nonresponsive state might just be reflecting understaffing or mismatch of average and peak demand/supply, which can be improved a lot with just simple operational efficiencies. If you look at police, e.g., they are chronically understaffed and under-resourced, and I will come back to the connections between corruption because there is this issue of *deliberate* under-investment in state capacity which I think is really important point. But I think your discussion of RTS/RTI will really benefit from this distinction.

A final point, which is not made, is distinguishing between the class of studies and recommendations that you would make to a motivated policy-maker who says: "I want to reduce corruption" versus discussing the political incentive constraints for reducing corruption in the first place. This important because the binding constraint is often not whether policy X works but whether policy X was allowed to be implemented in the first place. So we understand this and your review again has elements of each of these. But if you make the distinction clear and highlight the connections where relevant I think it will make the whole thing much more coherent and I will come back with concrete examples of this.

So choice of topics I think Devesh has talked about this. Some sections really do not belong in this review. Section 2.4 we have talked about this. It is like seven pages and it is really like calling democracy corruption, means like it was thrown in there because there is evidence in that place but I don't think it belongs at all. The one place I think where it might belong is if the motivation of that section is to use the existence of tainted politicians as a reason for *why* anticorruption policies might never get implemented. I think it was Chitra Subramaniam in the context of Bofors who once famously said every politician loves corruption scandals only to the extent that it helps show the other guy in a bad light but nobody is actually interested ever in

doing anything about it and I think that is the one area where those two get connected. But otherwise it is mostly a different literature.

The other important topic is not covered and to me the single biggest omission is corruption in public sector recruitment and I think it is important both at the highest levels, and at the entry level, and not just in terms of recruitment scams which are not in your taxonomy. The recruitment scams are not in your list and we now have several prominent examples including the Madhya Pradesh scam, or fake certificates for teacher recruitment in Bihar, there is the teacher recruitment scam in Haryana, where a former Chief Minister (Om Prakash Chautala) actually got convicted, and not to mention the recent resignation of the Railway minister on similar charges. So we have evidence of these scams but actually theoretically this might in fact be the most pernicious form of corruption, more so than individual scams and that is because you can write a very simple overlapping generation model to show how once you get a bad egg into the system in a senior place that this is going to perpetuate into eternity because the guy who has bought his way into the job has to recovery money and so it is much worse than an individual kind of corruption because you get negative selection and so if you want to think about what is that causes institutions to decay at some level, it fundamentally, in my view, comes down to corruption in public sector recruitment.

So you get negative selection in terms of who comes in, and you change the norms, because if you paid for your job, serving the public interest is going to be lower on your priority list than recovering your "investment" through corruption. Sometimes Hindi movies have a way of capturing insight better than most academic seminars. How many people have seen the movie Gangajal? There is a great scene, where you have got this corrupt cop, holding up highway traffic and extorting money and then when this honest SP catches him red handed and tries to take action he comes back and cries "Saheb I have paid ₹3 lakh for this job." I have taken a loan for this job and I have no other option. It just kind of in a very visceral way shows how the public sector recruitment, in my view at least, is probably the foundation of almost all of these problems in linking corruption and poor service delivery. I think there is a different set of issues at the top which is the discretion that officers have at the top. So when people are willing to pay to become DGPs and members of railway board, that is a different kind of corruption than for jobs at entry level where I think the real problem is just that the wages are too high. So we have got a wage compression in the public sector where over 95% of public sector employees are paid massive multiples of what the open market wages are but the very senior public sector employees (in terms

of skills) are massively underpaid relative to their private sector opportunity cost and this leads to distortions at both ends of the salary distribution.

Here is just one presentation to illustrate this. This is from my work on contract teachers where the education establishment thinks that these contract teachers (who are hired in the village —young women, less educated, less trained, paid 1/6 of a civil service teacher is paid) are all being exploited relative to government teachers. But if you then look at the private sector wage, if anything the private salaries are even lower. So it is not like contract teachers are being exploited but that there are massive rents in the civil service job. In the past, I used to just think this was fiscal inefficiency because what my work shows is that contract teachers are equally effective as regular teachers paid many times more. If anything, they appear even more effective because they do not have civil service tenure and they are connected to the village. In the past, I just used to feel irritated that this is a fiscal waste but I increasingly think it is worse than waste and that is because of this negative selection problem. You can never really hide from the market. The market will come back and bite you even though you don't expect it. So when you have this kind of wage premium what is going to show up is there is market for getting these jobs and so that is what all these teacher recruitment scams are about and people are willing to pay these huge premia but you just are capitalizing upfront, a lifetime of rents that is above the market clearing wage and so you cannot really hide from the market and that is why I think this issue of wage compression is so important.

The second key topic which I have already alluded to is this: The great value of adding a political scientist to a paper on corruption is the possibility of a more nuanced understanding of the political conditions under which anticorruption reforms actually can take pace and I will come back to that.

My last presentation: some connections and interpretations which I think are really useful to make. The first connection is between technology and incentives. I think it is important to make connection because I think technology makes it easier to measure and implement incentives but you still need the incentives. The most illustrative case of this is the empirical journey from first draft to publication of the famous "Cameras paper" (Duflo, Hanna, and Ryan 2011). So everybody thinks about this as the "Cameras paper," that you put cameras in school and teacher attendance went up. Actually that is wrong. So if you look at the working paper version of this paper it had the title *Monitoring Works* in 2005. By the time it got published in the year 2012 the title had changed to *Incentives Work* and the subtle difference is that the intervention combined a camera and a wage schedule that was paying you every day for valid days in which you showed up and so eventually what happens is they can use certain structural features of the compensation formula to isolate whether the impact is from the monitoring or from the fact that you are actually paid for each day you show up and once they do that the action shifts completely from the monitoring, to the incentives itself.

This is not to say that technology does not matter but the important point the technology is doing from a contract theory perspective is it is making the effort not just observable but verifiable. So the difference between an individual inspector who goes to the school and finds the teacher is not there but then has to prove that in a court of law (at which point it is his word against the teacher's word) is that the camera makes it verifiable to a third party that the teacher was absent, which reduces the cost of taking the follow up action. So technology is a really important facilitator for reducing the cost of implementing incentives, sort of like George Baker's work on efficiency in the trucking industry. Once you are able to track the movement of trucks that reduces the rents that truck drivers were getting from long periods of slack because now you can track exactly where the truck is going. So the technology is an enabler in terms of reducing the measurement and monitoring cost but you need the incentives on top of that to improve service delivery.

So the other important point that has come up in this discussion this difference I think between NGO implementation versus government implementation of pilots. So we have now got multiple studies by Abhijit Banerjee and coauthors, and a similar study in Kenya, and a common thread is that when you have pilot projects implemented by researchers and non-profits they seem to work. But then when you try to transfer this to government implementation it kind of breaks down. I think it is a little more nuanced than that because this is in contrast to kind of two sets of studies we have.

One is the example of our recent work with the Government of AP where they randomized the deployment of biometric Smartcards to make NREGS payments across 20 million people. This was implemented by the government and we find big positive effects on reducing corruption. Second is our recent work on teacher absence which we just released yesterday and we are not touching any program. We are just looking at the impact of good old monitoring by the government machinery (measured by whether your school was visited in the past three months) and we find that that has a big correlation with reduced teacher absence. So what I think is going is very simple. The difference in each of these cases is that in the earlier cases, the impetus for the change came from outside the government from researchers and maybe one motivated IAS officer and then once that guy got transferred there was no institutional desire to implement the change whereas in these two cases both of these studies are evidence from cases where the government had made a policy decision on its own to implement a certain kind of improved implementation capacity intervention and there we find systematic effect. So the good news is that when you do these things in a way that the "system has bought in" it does seem to work and so that begs the question of what it takes for the "system" to buy in to implement an anticorruption initiative. To be fair, I think the smaller NGO studies have gotten a bad rap but the way to think about them is very much like in medicine. We have efficacy trials and effectiveness trials. So the efficacy trial is testing whether something works under good implementation, and then the effectiveness trial is when you take that to implementation under "typical conditions" and see whether it works. So the smaller scale studies give us the first step, but then you need systems to adopt the findings and embed them into practice.

The last point is what this really does is it begs a different question about what are the kind of political incentives for investment in anticorruption and I think the last piece that I would really think the paper would benefit from is a discussion of the political incentives deliberate under-investment in state implementation capacity and the fact that this creates scarcity which then makes the politician the arbitrator of who in fact gets access to scarce public resources. I think this is a key connection between political corruption and service delivery. Some of the best work on this has been done by former IAS officers who have then gotten PhD's. So whether it is Santosh Mathew or Anirudh Krishna they have done work on deliberate underinvestment by the state. Anirudh had this wonderful terminology to describe political incentives to develop what he calls "pooch" and "pahunch," which roughly translate into "recognition" and "influence" respectively. So, what a politician cares about is "who is coming to me for favors?" and that is his *poonch* and the *pahunch*" determines the extent to which he can deliver on that request. So the response of the politician to ideas that may improve service delivery (with say new technologies) is to say: "Meri poonch kahan rahegi?" that translates into worrying that "nobody is going to come to me for anything if the system is going to deliver these services".

I think this is a very useful point to keep in mind, and it raises the question about the conditions under which states will choose to invest in improved capacity for lower corruption and better service delivery, and to ask what can be learnt from the historical evidence of how societies move from a politics of patronage to a politics of service delivery. Then the research we have on interventions and their effectiveness work that might feed us inputs into politicians who want to make that change.

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General Discussion

Pranab Bardhan started by noting that the paper could be tighter on definitions of corruption, even though they would inevitably overlap. The definition he himself used focusing on public corruption only was useful because it allowed him to confine himself to just one kind of corruption. He then referred to two other aspects he felt are important: the impact of competition from private providers contracted to provide public services (e.g., passports) on reducing corruption; and, second, wholesale versus retail corruption (e.g., some East Asian countries versus India) where the former is more "efficient" and does not affect the decision at the margin, but of course leads to political and institutional problems.

Dilip Mookherjee noted that the some societies deal with corruption by institutionalizing it, e.g., US campaign finance laws that require disclosure but legally allow contributions in an institutionalized form that many might consider corruption. On looking for remedies, he asked if they were studies in India that looked at the impact of a scam on the political career of the politician involved even if they were not convicted. He also wondered whether greater decentralization would be a solution, citing his own work in West Bengal with Pranab Bardhan. He noted that reducing the political discretion enjoyed by bureaucrats and politicians would be good for reducing corruption, citing the example of the USA. Finally, he noted that the evidence is still out on whether community monitoring and provision of information could curtail corruption.

Sanjeev Ahluwalia noted that while the paper had a lot of useful insights on corruption he felt that many of them were too generic. He felt the paper would gain from looking at measures that strengthen the social compact between the state and citizens, e.g., broad basing taxes and increasing usage

charges. These sorts of measure would allow people to understand better that corruption is simply the theft of their own money.

Amartya Lahiri said that corruption in India has possibly become so endemic to society that it is simply accepted as a way of doing business. Narrow, programmatic interventions working on a specific dimension of corruption might therefore not work well since the problem may be so systematic. Simple interventions would likely lead to multiple equilibria, with spillovers from the public to the private sectors and vice versa.

Ashok Lahiri said that we could and should look at the Singapore model, where bureaucrat salaries are high, but would raising salaries alone solve the problem in India? What about recruitment and hiring and firing practices?

Nirvikar Singh questioned the notion that corruption was just a transfer payment and redistributive and therefore may have no resource allocation costs. He suggested that when there is a misallocation already then corruption can have serious resource allocation costs and in that situation it would also have a long run impact on growth, though it is hard to estimate that impact. He suggested that corruption also eroded trust and degraded social norms, therefore substantially increasing its cost to society. This is not easy to estimate but is nonetheless very important.

Mihir Desai seconded Karthik's comment that the paper had the potential of being a go-to reference, but, apart from policy recommendations, wanted to see it end with many larger questions that researchers should address and on which we don't really know enough. He also cautioned against viewing mismanagement as corruption, because otherwise almost everything would be corrupt. For example, in his view, teacher abstenteeism was mismanagement and not corruption. He disagreed with Devesh Kapur that measurement of corruption was important in itself and we could stop there, and suggested that measurement should be complemented by theory if we are to look for solutions. Finally, while routine day-to-day corruption was more costly than imagined, he urged the authors not to discount the costs of high-level corruption because of its systematic effects, which Nirvikar had also referred to.

Arvind Panagariya also emphasized the need for a unifying theme. He suggesting looking at policy induced corruption that goes away when policies are changed. He felt that technology offered solutions that could reduce corruption dramatically, as for example in the case of railway ticket booking when it was computerized. He suggested that one way of organizing the paper might be to look at the difficulty of enforcement in India, an important cause of corruption.

Anupam Khanna felt hat this was the most informative and useful discussion of corruption that he had heard in 20 years. He felt that a lot of corruption in India was now at the government-to-business and the businessto-business interfaces. On G2B, there is a real need to understand better how corruption happens and then what to do about it. The popular perception of the IT sector is that it is very clean, and in many ways it is, but there are payoffs there too, and while it is hard to clearly classify this as corruption, there is something wrong with it, and it is important to understand what and why.

Rajnish Mehra (Chair) said that it would be useful to have a sense of the magnitude of the seven categories of corruption noted in the paper: what is first order, what is second order? On strategies to combat corruption, he felt that it would be good to see how they are matched to corruption categories. He felt that corruption distorted the investment-consumption tradeoff, which then affects an economy's growth rate, and that this impact was far more important than suggested in the paper. So, one implication of this way of thinking would be to see which of the seven categories in the paper are likely to change growth rates and others that are more redistributive in their impact.

Karthik Muralidharan noted the massive wage compression in the public sector: relative to the private sector, the top 2% of government employees are massively underpaid and the vast majority of government employees are paid a massive multiple. The Singapore model is about paying higher salaries but with immediate exit if you are corrupt, so that it creates an efficiency wage model. The reason why efficiency wage models do not work in India is that one never gets fired. So, it is not just the level of pay but the structure of pay that matters. He pointed to his work in Indonesia where they doubled teacher pay across the board and there was absolutely zero impact on learning outcomes, but when there was a tiny performance pay, just 3% of their salary, now linked to performance, then they got dramatic results.