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Is transparency an effective anti-corruption strategy? Evidence from a field experiment in India

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Abstract

Can freedom of information laws be harnessed by underprivileged members of society and used to obtain greater access to basic public goods that are otherwise attainable only through bribery? Drawing on a field experiment on access to ration cards among New Delhi's slum dwellers, we demonstrate that India's recently adopted freedom of information law is almost as effective as bribery in helping the poor to secure access to a basic public service. We find support for the theoretical proposition that greater transparency and voice lowers corruption even in highly hierarchical and unequal societies.

Keywords: corruption, field experiment, freedom of information, India, public goods, transparency.

1. Introduction

Corruption, defined as abuse of public office for private gain (Nye 2001), is a prominent feature of the political economy of developing states. Policy prescriptions for combating corruption range from proposals to streamline the state's administrative apparatus to suggestions for new laws and institutions to inject competition and reduce incentives for bureaucratic corruption (cf. Rose-Ackerman 1999; Bardhan 2006). However, as Kaufmann *et al*. note, many existing recommendations for anti-corruption strategies are questionable because they are based on cross-national survey data on *perceptions* of corruption (Kaufmann *et al*. 2002). Furthermore, most survey analyses fail to explicitly address the endogeneity problem inherent to non-experimental studies of corruption: it is often difficult to disentangle the nature of the causal relationship between administrative reform and changes in the public's behavior purely on the basis of survey findings.

In this article we propose an experimental test of the effectiveness of increased transparency as an anti-corruption strategy. Of course, the idea that greater availability of information concerning the government's activities will likely result in a drop in corruption is not new. For instance, Becker and Stigler's model of malfeasance (Becker & Stigler 1974) implies that the incidence of crime will decrease once potential victims are better

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informed about the circumstances under which crime is most likely to occur. There is also a growing empirical literature demonstrating that greater levels of information bring about a reduction in graft levels (for an overview see Rose-Ackerman 2004, pp. 316–322). For instance, Reinikka and Svensson (2004) show that 60% more budgetary allocations reached Ugandan schools after the government started publishing information on public spending on education in national and local newspapers. Likewise, Gentzkow *et al.* (2006) demonstrate that the rise of independent media is generally associated with a decrease in corruption. More generally, Kaufmann *et al.* argue that "voice-related variables have a larger effect on corruption and the quality of services than institution[al reform]" (Kaufmann *et al.* 2002, p. 3).

However, it is far from given that greater transparency should always result in a drop in corruption levels. For instance, it seems reasonable that in highly hierarchical societies where the power gulf between the poor and government officials is very wide, greater transparency should benefit first and foremost the middle classes, while the underprivileged keep paying the same bribes. After all, the poor often have very little leverage against government officials, and civil servants might not care about the fact that underprivileged members of society are able to expose their malfeasance. In this article we test the proposition that even the poorest and least privileged social actors can benefit from increased transparency in local governance. Specifically, we make use of the fact that India adopted a freedom of information statute in 2005 – the Right to Information Act (RTIA) – and ask whether New Delhi's slum dwellers can use the RTIA to secure access to a basic public service without having to pay a bribe. The RTIA is of course a regulatory tool that, at least on paper, seeks to make policymaking more efficient by giving the citizenry greater access to information about government activities at all levels. In observing the urban poor apply for a ration card – a document that entitles the holder to subsidized foodstuffs and serves as a universally recognized form of identification – we are able to determine exactly how effective recourse to the RTIA is by comparison to bribery. Following Reinikka and Svensson (2004) we are therefore able to assess the exact effectiveness of greater transparency as an anti-corruption strategy.

In this study we tracked a population of New Delhi's slum dwellers assigned to three experimental groups and a control. The dependent variable is the length of time that elapses before the applicant is issued a ration card. Those people randomly assigned to the first experimental condition – the information experimental group – submitted an information request under the RTIA shortly after filing their ration card applications. Confederates in the second experimental group – the civil society experimental group – presented a letter of support from a local non-governmental organization (NGO) with their application. Those randomized into the third group – the speed money treatment – paid a bribe to a local official via a middleman. The control group consisted of individuals who applied for the ration card in the standard prescribed manner. The results were striking: while those paying speed money predictably had the lowest median processing times, approximately two and a half months, virtually all those who filed an RTIA request received a ration card in a median time of approximately four months. Very few confederates in the other two experimental groups received a ration card during the one-year window when data collection was ongoing. If we discount various non-obligatory waiting periods, recourse to the RTIA is almost as effective as bribery.

This article proceeds as follows. Part 2 begins with a summary of the structural conditions that have contributed to entrenchment of corruption in many areas of India's

public life; the specific case of corruption in the Public Distribution System (PDS) is then explored in some detail. Part 2 closes with a recounting of the story of the bottom-up politics that gave birth to the RTIA. In Part 3 we go over the hypothesized mechanisms by which the RTIA operates to improve public service delivery outcomes. Part 4 elaborates on the experimental design and the ethics of field experimentation. In Part 5 we present our findings and discuss the causal mechanisms behind them, and conclude by discussing the strengths and limitations of this study.

2. Corruption in India, the Public Distribution System, and the Right to Information Act

2.1. Administrative corruption in India

India is commonly perceived as one of the more corrupt countries in the world. In 2009, Transparency International gave India a score of 3.4 out of 10, placing it a little below China on its Corruption Perception Index (Transparency International 2009). India's corruption is deeply rooted in the country's complex history. In the immediate post-colonial period, India's government was not able to deliver on its pre-colonial promises of wealth redistribution, and only those with money or political connections received benefits from the state (Khan 2002). Constrained by limited material resources, the ruling Congress Party had to devise a way to ensure its political survival. The "Congress System" – a union of party and state held together by the glue of patronage politics and illegal transfers from the bureaucracy to the Congress Party – was the answer (Singh 1997). Large-scale corruption persisted even after the Congress System collapsed in the late 1980s and economic liberalization started to take root (Das 2001). Furthermore, the notion of extensive accountability to the public is culturally alien to the Indian Administrative Service (IAS) and its various dependent branches. Protected by the law, and often possessing a significant advantage in education and social status over those they administer, India's bureaucrats continue to enjoy many of the anti-liberal and anti-democratic prerogatives possessed by their colonial predecessors.

2.2. The Public Distribution System

India's Public Distribution System (PDS) – the institution responsible for the provision of subsidized food and core commodities to the public – is highly corrupt and functions more in the interest of civil servants and affiliated business owners than the poor. Foodstuffs like wheat, rice, sugar, and cooking oil are purchased from farmers by government contractors and are then shipped from procurement centers to regional depots and from there to approximately 500,000 "fair-price shops."[1] Overall, between 15% and 61% of all subsidized food managed by the PDS goes missing on its way to the consumer.[2] The central government spends more than 5% of its total budget on procurement of subsidized foodstuffs, up from 2.5% in the early 1990s (Jenkins & Goetz 2002). Ration card holders can obtain free or subsidized food from fair-price shops in cities or from specialized stores in the countryside. Provincial politicians regularly promise to have ration cards issued to potential voters in exchange for their electoral support. As a result, strict eligibility criteria for different types of ration card are commonly disregarded, and certain communities are oversupplied with cards, whereas many individuals in dire need of subsidized food never receive theirs. The government estimates that there are

223.2 million ration cards in circulation, although only 180.3 million households are eligible for them (Government of India Planning Commission 2007).

2.3. Genesis of the Right to Information Act[3]

Some of the earliest demands for greater government transparency came from villagers in rural Rajasthan as they struggled against local bureaucrats' attempts to lower centrally mandated minimum wages in the early 1990s. A "social audit" movement was born out of these efforts (Jenkins & Goetz 1999, pp. 614–615) and became institutionalized in state-level freedom of information statutes in Tamil Nadu (1997), Goa (1997), Rajasthan (2000), Karnataka (2000), and later in five other states. In 2002, under pressure from civil society and India's Supreme Court, a government led by the Indian People's Party (BJP) hurriedly adopted the country's first freedom of information (FOI) law. This statute contained no penalty provisions for failure to furnish information and excluded whole swathes of government policy from the purview of public scrutiny. At the end of the day, India's first FOI law never fully came into effect. During the 2003 election campaign, the Congress Party promised the country a more effective FOI statute. Following lengthy wrangling between civil society drafters of the new FOI Act and high-level civil servants, India's second FOI law was adopted on 15 June 2005 as the Right to Information Act. The RTIA came into effect fully on 13 October 2005 and became the most advanced regulatory tool on India's statutory books that seeks to improve public policy outcomes via greater information disclosure.

2.4. How the Right to Information Act works

The RTIA mandates that "all citizens shall have the right to information" (Act no. 22/2005, Section 3) and that all government institutions must take the necessary steps to enable information disclosure. Specifically, the Act demands that "every public authority shall . . . designate as many officers as Central or State Public Information Officers . . . in all administrative units or offices under it as may be necessary to provide information to persons requesting information under this Act" (Section 5). In practical terms, this means that every office in India's behemoth civil service (more than 17 million individuals are employed in the central government, with a further 40 million at the state level) has had to appoint a Public Information Officer (PIO) to deal with public queries.

Requests for information are filed in writing, and now increasingly over the telephone, and must be accompanied by a processing fee of Rs.10 (US$0.25). The PIO handling the request must respond within 30 days or refuse information disclosure on grounds of national security. If the supplicant receives an incomplete or no response, she has the right to file a complaint with a state-level Information Commission. Information Commissions are powerful quasi-judicial bodies with the authority to impose a range of penalties (including fines), staffed by retired senior public officials, politicians, and journalists. At least on paper, the RTIA is a well-designed statute, and it compares favorably to FOI laws globally.

3. Hypotheses

In developing countries (and often in developed states as well), there is a substantial gap between the theory and the reality of political life – an excellent statute on paper might be completely ignored in practice. In India, human rights legislation, environmental

protection laws, and statutes regulating employment practices, to mention only a few examples, are either completely ineffectual or only partially implemented. Anti-corruption initiatives are among India's oldest and least effective laws. The Prevention of Corruption Act (POCA), the cornerstone of India's anti-graft legislation, was introduced in 1946 and updated in 1988), and the Representation of Peoples Act (1975) and the Companies Act (1985) regulate political corruption. A special body, the Central Bureau of Investigations, is charged with implementing POCA's provisions. However, despite a plethora of statutes and the existence of a nominally powerful institution to combat corrupt practices, corruption remains deeply entrenched in all walks of life. We drop the assumption that a well-designed law must necessarily have its intended effect and instead set out to test the actual effectiveness of the RTIA. We hypothesize that those subject to the RTIA treatment will do better than applicants assigned to the standard procedure.

- *Hypothesis 1:* Applicants in the RTIA treatment will be more successful in obtaining ration cards than applicants randomized into the untreated control.

But how effective will the RTIA treatment be compared to the civil society and speed money treatments? We hypothesize that the RTIA treatment and the NGO intervention are two different "voice" options. Filing a request for information under the RTIA, the applicant sends a direct signal to the civil servant that he has some leverage over the bureaucracy. A letter of support from a locally influential NGO is an indirect signal that the applicant has a certain amount of influence. The relative effectiveness of the NGO support letter will vary depending on the extent of the NGO's local clout and on the nature of the penalty provisions enshrined in the FOI law. Tentatively, we expect that the RTIA intervention and the NGO treatment should be roughly equally effective.

- *Hypothesis 2:* Applicants submitting a letter from an NGO with their ration card applications will do just as well as applicants assigned to the RTIA experimental group.

Finally, the RTIA is probably unlikely to be more effective than bribery. First, immediate extra-legal income is likely to motivate government officials more than the threat of potential future sanctions. Second, officials processing ration card applications are likely to follow standard procedures when dealing with applications in the RTIA experimental group, whereas it seems reasonable to presume that a few otherwise standard administrative steps might be omitted in the processing of applications greased with speed money.

- *Hypothesis 3:* Applicants who paid speed money will do better than applicants randomized into the RTIA experimental group.

4. Research design

4.1. Selection of confederates

In this section we describe how we selected confederates for this experiment and we discuss some important ethical issues pertaining to our study. The first step was to locate a suitable slum in New Delhi. The Central Government defines a slum as "a compact urban area with a collection of poorly built tenements . . . crowded together usually with

inadequate sanitary and drinking water facilities in unhygienic conditions" (Government of India Planning Commission 2007). More than two million people currently live in Delhi's slums (Jha *et al.* 2005). Our objective was to locate a slum roughly representative of Delhi's slums in general, but where local residents were not already clients of a political movement or completely beholden to a local NGO. Choosing a slum on this basis involved a necessary element of selection bias. However, this bias is unlikely to lead to overestimation of treatment effects – if the RTIA works for individuals who do not have powerful political patrons, then it is likely to be even more effective for those who do. We settled on the first slum where our interactions with local residents were not immediately subject to mediation from NGO or community workers. The experimental slum is situated along the bank of the Yamuna River. As we show in Table 1, it is similar to other Delhi slums in all key physical characteristics.

Table 1 The slum area selected for the study compared to other slums in Delhi and India

Characteristic	Slum selected	Representative sample of all slums in India		Representative sample of Delhi slums	
		Notified slums	Non-notified slums	Notified slums	Non-notified slums
Number/type of slums	Non-notified	360	332	2	20
% of slums by type		52	48	9	91
Land ownership					
% publicly owned	100	64	63	70	100
% privately owned	0	36	35	0	0
% unknown	0	0	0	30	0
Type of tenement					
% pucca	40	65	30	100	27
% semi-pucca	40	30	40	0	40
% katcha	20	6	30	0	33
Source of drinking water					
% tap	60	84	71	100	71
% tube well	40	10	22	0	29
% other	0	6	7	0	0
Type of available electricity connection					
% households and street	40	84	53	70	39
% households only	60	2	27	31	61
% street only	0	14	19	0	0
Waterlogging during monsoon					
% waterlogged during monsoon	100	36	54	100	72
Toilet facilities					
% with septic tank/flush latrine	75	66	35	70	22
% no latrine	25	17	51	31	52
Sewage					
% with open sewage	Yes	60	43	70	76
Schools and hospitals					
% with primary school within 1 km	Yes	93	91	100	68
% with hospital within 1 km	No	48	46	0	61

Sources: Slum selected: data collected by Aftab Alam and Aftab Alam in the slum area where the field experiment took place.
Representative sample of slums in India: Government of India NSSO (2002).
Representative sample of slums in Delhi: Jha *et al.* (2005).

The next step was to recruit confederates. Locals in possession of an electricity bill, a driving license, or a voter identity card and therefore able to confirm their residential address were invited to participate. Going door-to-door in the slum, the research team enlisted the help of about 100 individuals who consented to participate in the study. These individuals were then randomly assigned to one of the three experimental groups or the control. We present demographic information for all the confederates by experimental group in Table 2.[4] Sixteen of the 102 recruited individuals withdrew from the study, leaving 86 participants. All but one person who dropped out were discovered not to possess the requisite documents to go through with their application. All attrition occurred before ration card applications were filed.

The average income of the individuals who remained in the experiment was only Rs.21,216 or $530 per year, or approximately $1.50 per day. Most of the confederates were poorly educated men, which is consistent with the experience of other researchers working with slum populations in New Delhi (Jha *et al.* 2005; Bertrand *et al.* 2006). Ninety-eight percent of our confederates were Muslim, because the slum area where we

Table 2 Summary statistics by experimental group

Variable	Bribe	RTIA	NGO	Control	Jha *et al.* (2005)†
No. confederates	25	26	25	26	
No. confederates who dropped out	1	3	7	5	
Net no. confederates	24	23	18	21	
Demographics					
Income (thousands Rs.)	21.96	20.04	21.06	18.90	
	(8.19)	(8.52)	(6.81)	(10.51)	
Male (%)	0.83	0.83	0.78	0.76	0.95
	(0.38)	(0.39)	(0.43)	(0.44)	Na
Age	37.13	38.91	39.72	36.81	38.01
	(10.14)	(8.49)	(8.47)	(9.47)	(11.04)
Years education	2.88	3.65	1.78	2.67	4.45
	(3.64)	(4.40)	(2.84)	(3.21)	(4.58)
Occupation	1.71	1.26	1.67	1.52	
	(0.86)	(0.69)	(0.91)	(0.87)	
Years lived in city	17.00	16.17	16.28	19.19	19.54
	(4.84)	(4.46)	(5.21)	(5.64)	(10.86)
Muslim (%)	1.00	1.00	0.94	0.95	0.11
	(0.00)	(0.00)	(0.24)	(0.22)	(0.31)
Eligibility documents					
Residence certification	0.13	0.26	0.06	0.24	
	(0.34)	(0.45)	(0.24)	(0.44)	
Driver's license	0.04	0.04	0.06	0.10	
	(0.20)	(0.21)	(0.24)	(0.30)	
Electricity bill	0.96	0.91	0.94	0.90	
	(0.20)	(0.29)	(0.24)	(0.30)	

Demographic and eligibility data displays mean value with associated standard deviation in parentheses. Occupation = 1 if unskilled labor, 2 if semi-skilled labor, and 3 if skilled labor.
†Representative sample of 802 individuals drawn from 30 slums in Delhi as part of a study on urban slum politics by Jha *et al.* (2005).

were working is predominantly Muslim. Although Muslims make up only 15% of all slum residents in Delhi, we are not concerned about the fact that our sample is almost entirely Muslim. There is a consensus in the literature that India's Muslims are subject to major discrimination and are among India's most underprivileged populations. It stands to reason that if the RTIA treatment is effective for Muslims residing in urban slums, it is likely to be even more effective for their Hindu neighbors. Finally, it bears noting that all of our confederates were long-term Delhi residents and comparable to an average slum-dweller on all characteristics other than religion.

4.2. Treatment implementation

All ration card applications were filed at a local PDS office responsible for a "circle," a large area encompassing both urban slums and more prosperous middle class areas. Interviews with middlemen at Delhi's PDS offices and with senior Food and Civil Supplies Department bureaucrats confirm that our PDS office is no different from other such offices. Every municipal office of the Food and Civil Supplies Department is staffed by a Food and Supply Officer (FSO), an Assistant FSO, several inspectors and clerks, and a guard. Administrative officials at these offices, including the office responsible for our circle, are generally upper caste Hindus with a college education who are rotated between offices and also across municipal departments every three years.

Applications were staggered over the course of one month to ensure that local PDS officials would not grow suspicious.[5] Confederates randomized into the RTIA experimental group filed a request for information under the Act shortly after submitting their ration card application. In their RTIA requests, confederates asked the PIO for information about the status of their applications and about the average processing time for ration card applications in this district. Ration card applications were filed through July and early August 2007; all RTIA requests were sent over three days in early August. As a result, while some applicants waited only a few days for their RTIA requests to be mailed, other confederates had to wait for as long as five weeks. This discrepancy will affect our interpretation of the effectiveness of the RTIA, and we will return to this issue in the Discussion section.

Applicants in the NGO experimental group submitted a letter of support from a local NGO with their ration card application. This letter noted that the applicant was eligible for a ration card and urged prompt administrative action. In fact, the NGO that assisted us was not very well entrenched in the local community, which likely affected the outcome for confederates assigned to this intervention. PDS officials accepted NGO support letters only from the first six applicants. Officials demonstratively disposed of the letters brought in by the remaining 12 confederates on the grounds that such letters were not required.

Confederates in the speed money experimental group submitted their paperwork to a middleman active at the office instead of leaving their applications directly with PDS officials. The middleman, a solicitor by trade, requested a bribe of Rs.800 ($20) with each application. These bribes were paid in several large installments so that our confederates did not have to make any illicit payments themselves. Payment of bribes in bulk is standard practice at PDS offices as it is the way business owners obtain official papers for their employees. The applications that the middleman received from us were mixed in with all the other applications that he secured that day.

For most applicants, with the exception of the confederates randomized into the speed money experimental group, the application process was troublesome. They had to come to the PDS office two or three times before their applications were accepted, and officials demanded to see additional documents, like expired ration cards, affidavits confirming residential address, and so on, which are not legally required. Interviews with NGO leaders in urban slums suggest that this is a standard strategy that local government officials employ to force applicants to start offering bribes.[6] Finally, all 86 applications were accepted, and the wait began for residence verification, which is the mandatory first step in the processing of ration cards. The process of residence verification was put in place to limit ration card fraud because it entails a visit by the inspector to the applicant's home, but in practice it is yet another opportunity for PDS officials to solicit bribes. Almost all of the confederates invited the inspector in for a meal, although none of them offered an illicit payment.

4.3. The ethics of experimentation

The direct intervention of a researcher into society in the process of data acquisition makes the ethics of experimentation an issue of paramount importance. Researchers must ensure proper treatment of all individuals involved in a given study and must also remain in compliance with the laws and norms of both the society in which the experiment is conducted and their home institution. We use the core ethical principles underlying US federal guidelines for the appropriate treatment of human participants in experimental research (the Common Rule: Title 45, Section 46 of the Federal Code of Regulations) – respect for persons, beneficence, and justice – as a framework for thinking through the ethical concerns involved in this study.[7]

Respect for persons is demonstrated by providing individuals with all necessary information for autonomous decisionmaking with regard to participation. In this experiment, all potential confederates were fully informed of the scope and purpose of the experiment as well as all possible risks and potential rewards at recruitment. Those not fully comfortable with any of the experimental procedures were free to refuse to participate or to drop out of the study later on. Our research team on the ground consisted of two Indian graduate students (themselves from modest backgrounds) who relied on the help of a local community worker to recruit confederates. Having built up a valued reputation over the years, the community worker had no interest in pressuring any of his constituents to participate in an exercise that might jeopardize their wellbeing, and took pains to fully inform them of all potential risks and rewards. Although it is true that the confederates in this experiment have low levels of income and education, this did not prevent them from leveraging their local knowledge and their relationship of trust with the community worker to control their participation in the experiment.

Beneficence comprises the responsibility to "do no harm" but also the obligation to "maximize possible benefits and minimize possible harms" (Morton & Williams 2009, p. 461). Confederates randomized into the bribery experimental group were particularly at risk in our study. Although none of the individuals in the bribery intervention paid bribes directly, their identities were known to the middleman, and they were therefore theoretically exposed to legal risk. We spent a substantial amount of time learning about the culture of corruption in Delhi and arrived at the conclusion prior to recruiting confederates that the legal risks were minimal given the pervasive nature of bribery for services in the Department of Food and Civil Supplies. Preparatory fieldwork, interviews, schol-

arly research, and journalistic accounts together paint a picture of an inverted local institution which has substituted illicit rent-seeking in place of the provision of a public good. Indeed, a well-functioning system of middlemen has replaced the main office window as the primary locus of activity. In this context, bribe-making and bribe-taking are relatively minor transgressions precisely because the officials have made them so by setting up an alternative and perhaps dominant system of payments. We found no record of the government having ever persecuted applicants for paying bribes to PDS officials. To accurately reflect this "inverted" process of ration card provision, we thus felt it necessary to include a speed money experimental group. It bears noting that the risks to the confederates were shared with the research team because the speed money treatment was furnished in bulk by the team, with no money changing hands between any of the confederates and the middlemen. We took on this risk because of our belief that devising robust solutions to corruption requires a firm understanding of the phenomenon, which in turn calls for more rigorous measurement, part of which can be accomplished through experimental research. Of course, those assigned to the bribe group were apprised of potential risks and assured that legal assistance was available if necessary. Confederates themselves did not regard bribery as something that was risky because graft is embedded into the culture of obtaining public services. There was no measurable risk to confederates in any of the other experimental conditions.

Justice is the third principle informing ethical treatment of human participants in experimental research. An "injustice occurs when some benefit to which a person is entitled is denied without good reason or when some burden is imposed unduly" (Morton & Williams 2009, p. 462). The fact that confederates in the RTIA and bribe groups received their ration cards more quickly disadvantaged those who were randomized into the NGO and control treatments. We were mindful to redress this imbalance in comparative welfare among the study participants. RTIA requests were filed for all those who had not already received a ration card at the end of the one-year experimental window. We also implemented a dietary survey among the confederates to determine if a significant gap in food consumption was attributable to possession of a ration card. Compensation in the form of extra rice was paid to those who had to wait for an additional period of time to receive a ration card.[8]

There is also an issue concerning the researchers' responsibilities toward the laws and norms of both the experimental site and their home country. As US-based scholars, we had to adhere to US legal and ethical standards. The legal issue is relatively straightforward. The Foreign Corrupt Practices Act of 1977 explicitly forbids American corporations and institutions from paying bribes, *except* in cases where these bribes are for "facilitating or expediting payment to a foreign official, political party, or party official the purpose of which is to expedite or secure the performance of a routine governmental action" (FCPA, 78dd-2b). The question of our obligations toward Indian laws is more complex. The payment of bribes in this case was for an academic purpose in which confederates paid to gain access to a document for which they qualified under the law. The bureaucracy was thus being paid money to perform its legal duty rather than to change the legal process to reward a particularistic interest. Although it could be argued that we somehow entrapped Indian public officials, the unfortunate reality is that the officials in question would probably have been surprised to consider their money-taking activities as anything other than standard bureaucratic practice. This leaves the issue of what right scholars have to violate the law of another country while conducting research.

This is a complicated issue in instances where certain local laws (like anti-corruption statutes in India) are not implemented across all social strata, and when the very failure of these laws is the subject of scholarly inquiry. In sum, we did our best to comply with all the relevant legal and ethical requirements while operating in a context of institutionalized corruption, and made efforts to avoid disrupting the norms and practices of the society where our research took place.

While researchers' intervention into social reality clearly gives rise to ethical concerns, it also provides analytical leverage that is simply not attainable via alternative modes of research. A recent review of the empirical literature on corruption by Treisman acknowledges the contributions of the dominant mode of analysis – survey-based cross-national research – but finds that conclusions based on survey work are subject to substantial biases. Treisman concludes that more "experience-based measures of corruption" are necessary to advance the state of the field (Treisman 2007, p. 213). This experiment is a step toward achieving that goal because we rely on behavioral evidence that is dependent on neither perceptions nor recollections. Simply put, survey respondents are often hesitant to discuss their direct encounters with corruption in part because of possible legal concerns, but also because experiences with corruption are of a sensitive nature. Another advantage of using experiments is their pedagogical value as tools to guide policy and as social experiences capable of galvanizing communities. A series of experiments such as this one offer policymakers and civil society activists a more scientific basis for the allocation of scarce resources to combat corruption and give local communities an example of how the law can be used to defend their rights. Our experiment led to increased political awareness and activism among the confederates, and the findings of this study will be widely circulated among the NGO community in India as further evidence of the efficacy of the RTIA.

Some readers might ask whether this study is an example of academic neo-colonialism, the practice of implementing studies on controversial topics in developing countries with weak regulatory environments and poor populations. Responding to this concern, we should stress that we reject the dichotomy often drawn between corruption in developed and developing countries with its attendant subtext of cultural prejudice. Corruption is a regional and sector-specific phenomenon, with great degrees of variability within as well as across societies. For example, there are many noncorrupt institutions within polities that are highly corrupt according to Transparency International's corruption index, viz. the Indian Supreme Court. Conversely, polities that are widely viewed as less corrupt, such as Switzerland, often have high degrees of corruption in certain sectors (see, for instance, the close relationship between the Swiss government and the investment bank UBS in the recent scandal over offshore tax evasion). The relevant comparison, as we see it, is between individual settings of corruption within or across developing or developed nations. These settings of corruption are characterized by an equilibrium where the main actors have effectively normalized a certain course of conduct that transgresses some prior legal or moral standard. We selected India for this study primarily because of the recent passage of the RTIA in 2005, which offered an attractive opportunity to test a new, robust regulatory instrument designed to improve transparency.

5. Results

In the remainder of the article we present our findings and discuss their implications. The presentation of experimental results is somewhat complicated by the fact that when we

stopped collecting data one year into this study, 34 out of 86 confederates still had not received their ration cards, meaning that many observations in our data are truncated. To get around this issue we turn to duration analysis, which allows us to model the relative likelihood of an individual receiving a ration card in the future. For ease of interpretation, we also present our data using standard difference-of-means tests. To run difference-of-means analyses, we must very liberally assume that the 34 cardless confederates were issued ration cards on the last day of data collection. We also deal with the issue of non-compliance among a few of the confederates by reporting gross (intent-to-treat) and net (treatment-on-treated) results by experimental group.

Our key finding is that 94% of the confederates randomized into the speed money and RTIA experimental groups received their ration cards over the course of one year, as opposed to 21% in the NGO and control conditions. While recourse to the RTIA is not quite as effective as bribery, it is considerably more effective than the standard application procedure or reliance on NGO support. The summary of these findings is reported in Figure 1 and Table 3. If we make the liberal assumption that everybody was in possession of a ration card by the time data collection finished, we find that those assigned to the speed money treatment received their cards in a median of 82 days, compared to 120 days for those in the RTIA experimental group. Median processing times for confederates randomized into the NGO group and control were identical at 343 days. A Wilcoxon–Mann–Whitney non-parametric difference-of-means test confirms that processing times in speed money and RTIA experimental groups are statistically different at the standard significance level.

In the bottom half of Table 3 we present data on an intermediate measure of the dependent variable – the number of days elapsed between the filing of the application and the inspector's visit to the applicant's household to confirm her residential address. All confederates bar one in the control group had an inspector visit their home. This is a

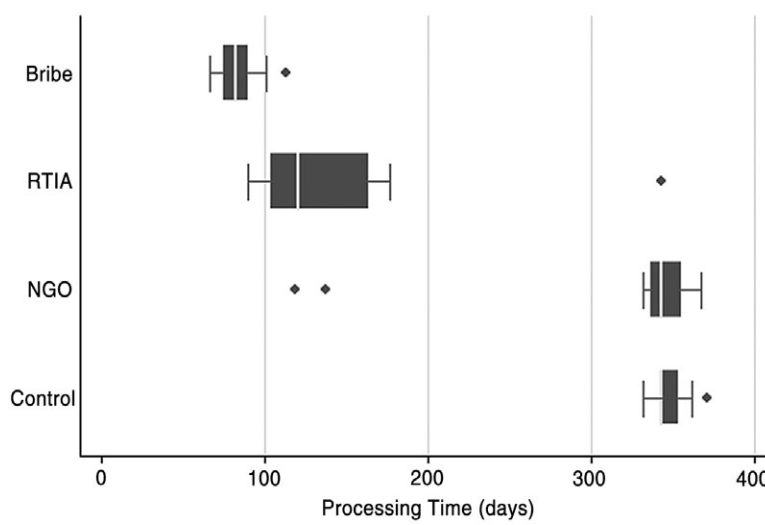

Figure 1 Ration card processing time by experimental group.
Note: White line within the shaded box indicates the median value; lower and upper bounds of the box are the 25th and 75th percentiles; box whiskers represent the 5th and 95th percentiles; outliers are shown as individual dots.

Table 3 Experimental results by treatment group

	Bribe	RTIA	NGO	Control
Number of confederates	24	23	18	21
No. confederates who received a ration card	24	20	3	5
Median ration card processing time (days)	82	120	343	343
Mean ration card processing time (days)	83.75	150.39	322.83	348.48
	(2.21)	(16.56)	(16.91)	(2.32)
No. who had residence verification	24	23	18	20
Median residence verification time (days)	17	37	37	37
Mean residence verification time (days)	16.00	37.34	36.94	51.24
	(0.85)	(0.99)	(1.63)	(14.61)

Standard deviation shown in parentheses.

useful test of procedural validity as it confirms that all confederates submitted their applications as requested. While median time to residence verification was identical for the control group, the NGO experimental group, and the RTIA experimental group at 37 days, confederates randomized into the speed money treatment had to wait only 17 days for the inspector's visit. This suggests that applicants resorting to bribery are placed on a fast track right away, whereas the effect of the RTIA intervention is not felt until after residence verification.

We now drop the constraining assumptions and consider the data through the prism of duration analysis. The duration model estimates the probability of a confederate receiving a ration card at some point in the future given that a number of other individuals in the experiment have already received their cards. In this instance we use the Cox proportional hazards model, the most flexible of the duration models, because it makes no assumptions about the functional form of the rate at which cards are being issued. The Cox duration model is specified as follows: $H_i(t) = H_0(t) \exp[\beta_1(\text{Bribe}_i) + \beta_2(\text{RTI}_i) + \beta_3(\text{Control}_i)]$, where Bribe_i, RTI_i, and Control_i are indicator variables that take on the value of 1 if confederate *i* is a member of that experimental group. The model generates values for β_1, β_2, and β_3 that represent the difference in hazard rate for an applicant in a given experimental group from the baseline hazard rate (in this case, the rate for the remaining group, the NGO group).[9]

The results of the duration analysis are presented in Table 4. In the first column we compare the effectiveness of the control, speed money, and RTIA treatments to the baseline NGO treatment, whereas in the second column we compare the speed money treatment to the RTIA treatment. Confederates assigned to the bribe group are exp(5.347), or 210 times, more likely to receive a ration card within the timeframe of the study (one year) than those in the NGO treatment. Those who were randomized into the RTIA treatment are 16 times more likely to obtain a ration card than their counterparts in the NGO treatment. Processing times for those in the control group are statistically indistinguishable from processing times for the NGO treatment. Finally, those who bribe are 12 times more likely to obtain a ration card than individuals who seek recourse to the RTIA. In short, the more sensitive duration analysis confirms the results of the difference-of-means comparisons, and both demonstrate that confederates randomized into the RTIA and speed money treatments obtain their ration cards considerably faster than those assigned to the NGO treatment and the control group. Bribery results in the shortest processing time.

Table 4 Duration model results: ration card processing time

Group	NGO as comparison baseline	RTIA as comparison baseline
Bribe	5.347*	2.524*
	(0.841)	(0.449)
RTIA	2.770*	
	(0.749)	
Control	−45.267	
	(.)	

Coefficients and associated standard errors were generated using a Cox proportional hazard model.
* indicates statistical significance at $p = 0.01$ level.
(.) indicates noncoverging standard error.

Before we consider the implications of these results, we need to establish the magnitude of the treatment-on-treated effect.[10] Not all confederates followed their assigned treatments. Specifically, we had five non-compliers out of the total 86 confederates. Six confederates in the RTIA experimental group were informed by PDS officials that their applications had been lost and that they had to reapply to obtain a ration card. Of these six, three followed our advice and did not resubmit their applications until we completed the data collection process; we consider these three confederates to have complied with the treatment. However, the other three decided to act independently: two of them paid a bribe of Rs.1,000, and the remaining confederate resubmitted his application. In the NGO treatment, two confederates were offered lucrative jobs in Saudi Arabia, and they bribed PDS officials because they urgently needed their ration cards to apply for passports. These two non-compliers are the two left-most points against the NGO label in Figure 1. By the usual experimental standards, the non-compliance rate in this study is low. As a result, treatment-on-treated effects are not considerably different from intent-to-treat effects. Specifically, the treatment-on-treated effect for the RTIA experimental group is 121 days (in contrast to the intent-to-treat effect of 150 days), and for the NGO group it is 320 days (compared to the intent-to-treat effect of 323 days). In short, in practice, recourse to the RTIA is even more effective than suggested by earlier analyses.

6. Discussion

6.1. Principal findings

Our main finding is that the RTIA can be used effectively by India's most underprivileged citizens – in this study, Muslims residing in a Delhi slum and surviving on an income of about $1.50 per day – to gain access to public goods like ration cards. The fact that only 20% of the confederates in the control and NGO groups received their cards underscores how unattainable even basic public goods are for citizens who are unable to offer bribes to obtain services. While bribery still appears to be the fastest way to obtain the desired public good, the RTIA is nevertheless impressively effective. The difference in processing time between the speed money and RTIA experimental groups was 37 days. If we discount the time that we lost while waiting to file the RTIA requests – a median of 26 days – then the difference between the two groups was only 11 days.[11] In short, recourse to the RTIA is

considerably more effective than standard application procedures and is almost as effective as bribery. Our finding confirms the emerging consensus in the literature on good governance that any action that increases local participation in political and administrative processes and that exposes the work of civil servants to public scrutiny inevitably improves the underprivileged citizens' chances of obtaining public goods and decreases corruption.

The relative ineffectiveness of the NGO treatment is somewhat surprising. Confederates randomized into the NGO experimental group did just as poorly as those in the untreated control group, despite our expectation that a support letter from an NGO should serve as a signal to PDS officials that the letter-bearer has political connections and should be treated solicitously. It is perhaps prudent to treat this finding as tentative at best, given that the NGO that assisted us is a middle-tier organization without an established presence in the local community. Thus, further work is necessary to assess the effectiveness of NGOs in helping the urban poor to secure access to public services.

6.2. Why is the RTIA so effective?

Now that we have established that the RTIA works surprisingly well, it might be wise to ask how and why it works so well. Unfortunately, one of the weaknesses of the present study is that it does not shed much light on the actual operation of the RTIA within the black box of a PDS office. What we can learn from this field experiment about the mechanism by which the Act operates is that RTIA requests require some time before taking effect. Confederates in the RTIA experimental group had their residence verification at the same time as those assigned to the control group and the NGO treatment, 37 days into the application process. Those in the RTIA group were thus treated as standard applicants until some point after residency verification had been completed, presumably after the office had had more time to study the RTIA requests.

Further research is needed to illuminate the specific mechanisms that make the Act so effective. At this time, we can speculate based on existing literature on Indian administrative politics (cf. Wade 1985) that RTIA requests frighten public officials into action. This happens not so much because of the Act's penalty provisions, which are rarely used, but rather because in India's ultra-competitive bureaucracy, any blemish on a public servant's career can negatively affect his chances of promotion. Senior officials at state Information Commissions and India's Chief Information Commissioner said as much in interviews: they feel that the public stigma of falling afoul of the RTIA can put a damper even on a promising bureaucratic career. In the context of bureaucratic politics in Bolivia, Kaufmann *et al.* found that public officials are generally fearful of being found out even when exposure of corruption does not carry any immediate tangible costs: "Often, accepting bribes involved . . . also the danger of being sacrificed as a villain in a political crisis, and disapproval and censure from the public" (Kaufmann *et al.* 2002, pp. 9–10). Likewise, in their study on the impact of greater transparency on corruption in medical procurement in Buenos Aires, Di Tella and Schargrodsky (2003) established that medical personnel siphon off considerably less money when monitoring begins, even though the oversight initiative does not envision any penalties.

6.3. The RTIA's current performance and future prospects

The RTIA has been in existence since 2005, and NGO publications, media reports, and government assessments suggest that although it has established a significant and growing foothold in the Indian system of distributive politics, its impact has been limited

because of the purposeful passivity of politicians and civil servants. Today, the Act is an effective instrument in the hands of those who know about its existence and are able to use it. However, the failure of the government to spread public awareness and the reluctance of the Information Commissioners to impose penalties have circumscribed its transformative power.

Substantial evidence indicates that the government is failing in its legal responsibility to spread basic awareness of the RTIA. To date, neither central nor state governments have organized concerted campaigns to advertise the RTIA as required under Section 26 of the Act. Awareness thus remains relatively low – just 33% of urban citizens and 15% of disadvantaged communities such as women or scheduled castes are aware of the Act's existence. The government's own audit shows that civil society and the media, not the government, are responsible for current awareness levels (PricewaterhouseCoopers 2009). Low awareness has led to low (although growing) usage rates (Fig. 2): the 263,000 total requests for information in 2007–2008 represent participation by just 0.023% of the population. By comparison, this is about an order of magnitude less than the comparable figure for Ireland five years after the passage of the Freedom of Information Act there. Penetration also varies widely by state, with Maharashtra and Goa enjoying an active culture of RTIA usage that contrasts starkly with the moribund state of affairs in West Bengal and Orissa (Government of India Central Information Commission 2006). We present data on RTIA usage in 2008 for a selection of states and also for the Central Information Commission in Table 5.

Furthermore, retired civil servants who are active as members of Information Commissions have demonstrated a marked reluctance to use the RTIA's most powerful provision, its penalty clause. The Central Information Commission imposed penalties in only 1% of all cases that it decided in 2008, and that year few state commissions imposed penalties in more than 5% of cases. Finally, some government offices have created procedural barriers to deter potential RTIA users. For example, the government's audit noted that while the current system is structured to encourage citizens to apply for information under the RTIA at their local government office, many offices provide no signage or notices to assist with the application process and require multiple visits for the submission of right to information requests (PricewaterhouseCoopers 2009).

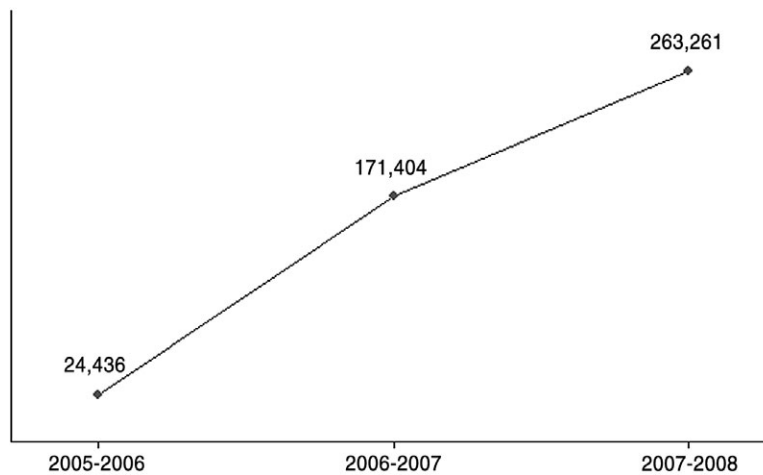

Figure 2 The total number of RTIA petitions filed before all central government authorities.

Table 5 Performance of the RTIA at the national and state levels in 2008

Information commission appellate statistics	Total no. cases disposed	Orders in favor of disclosure	Penalties imposed	Penalties (%)
Central Information Commission	7,626	4,938	92	1.2
State information commissions				
Goa	254	158	18	7.1
Maharashtra	13,477	5,875	249	1.8
Punjab	3,207	2,969	45	1.4
Haryana	1,586	1,388	52	3.3
Bihar	5,951	4,530	378	6.4
Chhattisgarh	1,272	1,212	54	4.2
Kerala	1,560	1,342	19	1.2
Himachal Pradesh	272	241	1	0.4
Rajasthan	2,005	1,650	33	1.6
Jharkhand	897	748	1	0.1
Gujarat	1,443	1,033	22	1.5
Madhya Pradesh	1,663	1,477	3	0.2
Andhra Pradesh	1,685	541	0	0.0

Source: Public Cause Research Foundation (2010).

Against this troubling backdrop, it is encouraging to find evidence that the Act is used effectively by those who know about its existence. For instance, in a study on RTIA effectiveness in rural India, NGO workers found that 65% of all applications dealing with corruption in the local PDS in Uttar Pradesh received positive responses from government officials (Development Alternatives 2007). Initiatives to facilitate the filing of requests by allowing citizens to phone in their RTIA complaints are currently underway in a number of states and at the national level. In short, RTIA awareness and usage levels have been increasing steadily, albeit slowly, since 2006, and the Act might yet prove to be transformative. The challenge currently facing India's civil society is to maintain the Act's efficacy while at the same time expanding its user base in the face of rising opposition from civil servants.

6.4. The limitations of this study

This study's contribution to the burgeoning literature on the provision of public goods in developing countries is the high level of certainty with which we can claim that an increase in transparency and greater availability of "voice" options results in better access to public goods for the poor. Another positive aspect of our work is that we are able to go beyond anecdotal evidence and demonstrate quite conclusively the relative effectiveness of various strategies that the poor use to obtain public services.

However, this study suffers from a number of limitations common to most field experimental research. First, we cannot shed much light on the specific mechanisms by which the RTIA operates within the bureaucracy. Second, this article provides only a snapshot in time from the organic life of the RTIA. We cannot tell whether the Act will always be as effective as it is now or whether its effectiveness will change over time, particularly when RTIA usage becomes so high that it starts to eat into civil servants' illicit revenues. Third, the snapshot that we present here is also bounded geographically. We cannot readily prove that our findings have a high level of external validity, or that they

can be applied across India or to other developing countries. Based on existing literature and on our qualitative research,[12] we feel that ration cards are representative of other public goods (cf. Bertrand *et al.* 2006 on driving licenses and Peisakhin 2010 on voter identification cards) and that the RTIA is likely to be similarly effective elsewhere in India. Yet these intuitions remain to be confirmed through further research in both India and other contexts.

7. Conclusion

We have successfully demonstrated that underprivileged citizens can use a well-designed regulatory tool that seeks to improve public policy outcomes via provision of more information concerning government activities, in this instance a freedom of information law, to gain access to public goods, which are unattainable by most means other than bribery. Specifically, we have shown that New Delhi's urban poor who use the RTIA are much more likely to receive a ration card than those who follow the standard application procedure. Our experimental findings also suggest that recourse to the RTIA is almost as effective as bribery. This means that information can be used as a substitute for wealth when poor and underprivileged citizens attempt to obtain services from a corrupt and inefficient government, which is a finding that deserves further attention in the context of both developing and developed societies.

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Notes

1 Interview with senior official in the Food and Civil Supplies Department (FCSD) of West Bengal (13 June 2007).
2 Interview with West Bengal FCSD officials (13 June 2007).
3 Interviews with NGO activists, information commissioners, and journalists (June 2007).
4 We tested for a relationship between treatment assignment and demographic covariates. No such relationship exists, which confirms the success of the randomization procedure. The results of this analysis are available on request.
5 In fact, this precaution proved unnecessary because the volume of ration card applications at PDS offices in Delhi is very high.
6 Interviews with NGO activists and community leaders in Mumbai and Delhi (May and June 2007).
7 This research project was approved by the Yale University Institutional Review Board in December 2006.

8 Multiplying the processing time difference (25 weeks) by the average weekly consumption gap of rice (0.6 kg/person per week) yields a compensation figure of 15 kg of rice per person. Ten kilograms of rice per confederate was offered to minimize distributive concerns within the community.
9 The NGO group is used as the baseline given that we do not have any censored observations in the control group (i.e. nobody in the control group received a ration card).
10 For the distinction between "intent-to-treat" and "treatment-on-treated" effects see Angrist *et al.* (1996).
11 Regression of card processing time on right to information filing lag indicates no relationship between the two quantities. The results are available upon request.
12 We interviewed slum dwellers, middle class activists, NGO leaders, and government officials in the states of West Bengal, Maharashtra, Karnataka, and New Delhi.

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