

Corruption in Driving Licensing Process in Delhi

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This paper studies the process of obtaining a driving licence in Delhi. On the average, individuals pay about twice the official amount to obtain a licence and very few take the legally required driving test, resulting in many unqualified yet licenced drivers. The magnitude of distortions in the allocation of licences increases with citizens' willingness to pay for licences. These results support the view that corruption does not merely reflect transfers from citizens to bureaucrats but that it distorts allocation. The paper also shows that partial anti-corruption measures have only a limited impact because players in this system adapt to the new environment. Specifically, a ban on agents at one regional transport office is associated with a high percentage of unqualified drivers overcoming the residency requirement and obtaining licences at other RTOS.

The government of India has made fighting corruption a central component in its development strategies. However, in both academic and policy circles, there is debate on what exactly are the costs of corruption, and to what extent corruption hampers economic growth and development. Many claim that corruption is nothing more than a tax, with bureaucrats simply raising the price of obtaining particular services. The process may be unjust or frustrating but the end results (goes the argument) are still the same: everyone who needs the service obtains it. In fact, one could argue that corruption may even speed up an all-too cumbersome regulatory process.¹

This study provides evidence that corruption can distort policies so that they have very different consequences than what was intended by the government. For example, as a result of a corrupt system, resources aimed at assisting the poor may end up helping the well-off. Funds may be given to schools that waste resources. Business licences may be allocated to the undeserving. We empirically illustrate this thesis using an extensive data collection exercise for the case of driving licences in Delhi.

Between October 2004 and April 2005, the International Finance Corporation (IFC) followed 822 individuals through the process of obtaining a driving licence. The goal of the project was to collect in-depth micro data on a bureaucratic process in order to better understand how petty corruption operates. Driving licences were chosen because its bureaucratic process is analogous to the processes of many other common services – business licences, export licences, passport and visa services, etc. This process was also chosen due to the easy verifiability of the social costs of a misallocation: individuals could be tested for driving ability to understand whether corruption leads to more unsafe drivers on the road.

To this end, the IFC collected data on whether individuals obtained a licence, as well as detailed micro data on the specific procedures, time, and expenditures involved. After survey participants obtained a licence, the IFC gave them an independent, surprise driving test – simulating the test that is supposed to be given by the regional transport office – to determine how well these individuals could actually drive. In addition, some licence candidates were given a bonus to obtain the licence in the minimal legal time. This was done to understand whether those with a higher willingness to pay (the rich and/or impatient) could more easily obtain a licence. Other licence candidates were given driving lessons to understand whether good drivers could more easily obtain a licence.

The results of this study show a deeply distorted bureaucratic process. The average licence getter pays about Rs 1,080, or about 2.5 times the official fee of Rs 450, to obtain a licence. More

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importantly, close to 60 per cent of licence getters do not take the licensing exam and 54 per cent are unqualified to drive (according to the independent test we performed) at the time they obtain their licence. Clearly, corruption in this setting goes beyond simple redistribution from citizens to bureaucrats, as would be argued by those supporting an efficiency view of corruption. Instead, corruption results in a misallocation of public services, with many unqualified drivers obtaining licences. These findings confirm that reformers could see significant social returns in the design and implementation of anti-corruption programmes.

Given the large social costs of corruption, what can be done to reduce it? The study illustrates two important findings that can inform policy design. First, a detailed understanding on the complexities in the nature of corruption is necessary in order to design effective anti-corruption programmes. For example, we find no evidence of direct bribes to bureaucrats in our study. The extra-legal payments are mainly fees to “agents”, professionals who assist individuals in the process of obtaining their driving licence. Agents appear to be more than just time-saving intermediaries. Instead, they institutionalise corruption. Only 23 per cent of those who used an agent took the legally required driving test, as compared to 89 per cent of individuals who did not hire an agent. Also, 53 per cent of those who hired an agent failed the independent test versus 25 per cent of those who did not hire an agent. Had we simply collected data on bribes, we would have significantly underestimated the extent of corruption in this context. Only more detailed micro data on the process and payments allowed us to document how corruption operates.

Second, anti-corruption programmes designed in isolation will fail. We provide an example that illustrates how simple anti-corruption measures, such as a local ban on agents, may be unsuccessful in practice as players manage to work around these anti-corruption measures. Specifically, enforcement against agents is much more stringent at the New Delhi licensing office than at the other offices included in our study. We find that fewer individuals obtain a licence in New Delhi; instead, many individuals who live in the New Delhi district are able to overcome the residency requirement and obtain a licence in another district. While individuals who obtain a licence at the New Delhi office are better drivers, many bad drivers are able to obtain a licence by hiring an agent elsewhere.

1 Getting a Driving Licence

The Motor Vehicle Act of 1988 and its subsequent amendments stipulate the national official licensing process. State governments are responsible for administering this act. In Delhi, the setting for this project, licences are issued at nine regional transport offices (RTOs).

Individuals must first obtain a temporary licence, which grants the right to practice driving under the supervision of a licenced individual. To obtain the temporary licence, proof of residence, proof of age, a passport size photo, and a medical certificate must be submitted to the RTO along with the application form. There is an application fee of Rs 360. Then, the applicant must take a written exam with 20 multiple choice questions on road signs, traffic

rules, and traffic regulations. After 30 days (and within 180 days) of the issuance of the temporary licence, the individual may apply for a permanent licence. The applicant must submit proof of age, proof of residence, a recent passport size photo, and his or her temporary licence. The applicant must also pass a driving road test at the RTO. A Rs 90 fee is charged for the photograph and lamination of the licence. If the applicant fails the road test, he or she can reapply after a seven-day waiting period.

2 Study Design

Between October 2004 and April 2005, the IFC recruited and observed individuals through the application process for a four-wheeler licence. In order to better understand the social costs of corruption, an experimental design was added to the simple data collection exercise. The three main project phases – recruitment, randomisation, and follow-up – are described below. For a more in-depth description of the experimental component of the study, please see Bertrand and others (2007).

2.1 Recruitment

Recruitment began in June 2004 and continued through November 2004. Recruiting occurred on a two-week cycle. During each cycle, recruiters intercepted individuals who were entering one of the following four RTOs in Delhi: south-west, north-west, south and New Delhi. The recruiters intercepted men who were seeking to obtain a licence as they approached the office. The recruiters provided each potential participant with a short explanation of the project, offered an information sheet outlining the time frame and payment structure for the project, and invited interested individuals to attend an information session to learn more about the project.

2.2 Initial Session

An initial survey session was held at the end of each two-week recruiting cycle, near the office from which the subjects were recruited. There were 23 sessions, with a total of 822 project participants.² At this session, the survey team first administered an introduction survey to each participant. In addition to socio-demographic information, the survey included questions on previous experiences in obtaining government services, previous driving experience, as well as beliefs on the necessary procedures to obtain a driving licence. The survey concluded with a series of questions regarding driving laws and practices; these questions were drawn from a sample of practice test questions published by the Delhi office.

An experimental design was overlaid over the data collection exercise. After the survey, the project team gave each individual one of three possible instruction letters. The letters randomly allocated him to one of three groups:

Comparison group: Individuals in this group were simply asked to return, upon acquiring a permanent licence, for a second survey that documented their experiences. Each individual was offered Rs 800 upon completion of this survey.

Bonus group: This group received the same set of instructions as the comparison group. In order to generate a higher incentive for obtaining a licence, we also offered individuals in this group a

bonus of Rs 2,000 (on top of Rs 800 for completing the surveys) if the individuals could obtain their permanent licence within 32 days of obtaining their temporary licence (two days over the official minimum wait time).

Lesson group: In addition to being given the same set of instructions as the comparison group, the IFC offered individuals in this group free driving lessons, to be taken up immediately. Accredited driving schools were hired to provide up to 15 lessons.

By comparing the experiences of the bonus group and comparison group, we can learn whether individuals who have a financial incentive to obtain a licence more quickly can actually do so. If they can, we can determine how they do so: do they pay a bribe or do they learn how to drive. By comparing the lesson group and the comparison group, we can learn whether individuals who know how to drive well have an easier time obtaining a licence.

At the end of this initial session, the project team paid all participants Rs 200. This was done to help alleviate possible credit constraints in acquiring a licence. This upfront payment was also made in order to increase the credibility of the final payment.

2.3 Follow-up

It takes between 30 and 180 days to obtain a licence. During this period, the project team kept in close contact with all participants. Extensive phone calls were made to ensure that participants understood the instructions and payment structure, to arrange lessons for subjects in the lesson group, and to remind subjects in the bonus group about the bonus scheme and deadlines.

For the 497 individuals who obtained a temporary licence, the project team administered a phone survey regarding the subject's experiences in the process of obtaining a temporary licence. The data collected included detailed cost structure of all payments made, bureaucrats spoken to, exams taken, number of trips, and the time spent per trip.

The project team also attempted to administer a phone survey to the 325 individuals who failed to obtain a temporary licence in order to understand the reasons why. Ninety individuals could not be contacted. Since we are unsure whether they obtained any type of licence, we exclude them from the rest of the analysis.

Upon earning a permanent licence, each subject was invited to a final session. At this session, the survey team questioned each individual on his experiences. This included questions on the number of trips, skills tested for at the RTO, number of lines waited in, detailed cost structure, satisfaction with the process, etc. Then, under the supervision of the project team, an accredited driving school administered a surprise, practical driving test. The driving exam consisted of two parts. First, the test-giver administered an oral exam to judge whether a subject could operate a car. This oral exam included identifying the gears of the car, identifying the brake, etc. If a subject was unable to answer all of these questions correctly, he or she was deemed incapable of taking the practical driving test and automatically failed. If the subject adequately answered all questions, the test-giver administered a practical driving exam. Lastly, examiners gave participants their final payments and, for those in the comparison and

bonus groups, offered free driving lessons. The lessons came as a surprise to individuals, and were offered to ensure that all study participants could drive safely.

3 Findings

In this section, we first describe who obtained a licence, and what their experiences were while obtaining the licence. Then, we discuss how the data collection exercise enhances our understanding of the social costs of corruption and informs the design of anti-corruption programmes.

3.1 Final Status of Individuals

The majority of participants in the study (61 per cent) were able to obtain a permanent licence during the course of the project. After acquiring the temporary licence, it took them, on average, 42 days to obtain the permanent licence (12 more days than the legal minimum of 30 days). Many overestimated what the bureaucratic process would entail. For example, they thought that the process would take more than six trips to the RTO. In practice, they only spent about three and a half hours (202 minutes) over two and a half trips. During the course of the licensing process, they interacted with about five different officials. The perception that the licensing process is burdensome and time consuming hints at why individuals may choose to use extra-legal methods to obtain a licence.

The two most startling findings from the survey were the prices individuals paid for their licence and their driving ability after obtaining a licence. Specifically, we find that licence-getters paid, on average, Rs 1,080 for their licence – more than double the official cost of Rs 450. Only 41 per cent of the individuals that received a licence took the legally required driving test at the RTO. This indicates licence-getters can easily bypass the socially most useful component of licensing regulation – the screening of driving skills. In fact, a large percentage of licence-getters were unable to drive at the time they received their licences: 46 per cent failed the independently-administered oral driving test, where failing means that the individual knew so little about the workings of a car that the test-giver refused to take him or her on the road.

In summary, the experience of the participants shows large distortions in this bureaucratic system, with many individuals obtaining a licence without being screened for driving ability and many paying well above official fees. Anecdotal evidence suggests that this is a problem around the world. For example, Correa (2007) describes the situation of obtaining a licence in Miguel Hidalgo County in Mexico City. Frustrated by corruption in the system, the government eliminated the knowledge examination. Instead, to obtain a licence, the applicant must “sign a declaration stating that she or he knows the transit regulations and has the technical capacity to drive”. In other words, knowing how corruption undercuts the purpose of regulation, the local government chose to remove the regulations altogether. However, it is not clear whether society is better off with the removal of the regulations, or whether it would have been better to devise practical anti-corruption strategies to improve the enforcement of the regulation.

After exploring these facts about the process, the next question is: Why do these distortions exist? Are bureaucrats simply allowing those that are willing to pay more to obtain a licence without knowing how to drive? Do bureaucrats put any weight on ability to drive in their decision of whether to grant a licence? Or do they simply respond to willingness to pay? Studying the experiences of those in the various groups (bonus, comparison, and less) sheds light on these precise questions.

3.2 Results from Experimental Groups

Table 1 presents the results of the licence acquisition process, by experimental group. Columns 1 through 3 present the means for the comparison, bonus, and lesson groups, respectively. Column 4 gives the p-value of a difference in means between the comparison and bonus groups, while column 5 gives the p-value of a

Table 1: Results from Experimental Groups

| | Comparison (1) | Bonus (2) | Lesson (3) | P-values | |
|---|-------------------|--------------|---------------|----------------------|-----------------------|
| | | | | Comp vs Bonus (4) | Comp vs Lesson (5) |
| (a) Who obtained a licence? | | | | | |
| Obtained licence | 0.48 | 0.71 | 0.60 | 0.00 | 0.02 |
| Number of days between temporary and final licence | 47.99 | 31.71 | 53.30 | 0.00 | 0.20 |
| Took RTO licensing exam | 0.29 | 0.38 | 0.51 | 0.20 | 0.00 |
| Failed independent exam | 0.61 | 0.64 | 0.15 | 0.61 | 0.00 |
| (b) How did individuals try to obtain a licence? | | | | | |
| Did not learn to drive | 0.49 | 0.74 | 0.17 | 0.00 | 0.00 |
| Total expenditures | 1,120.68 | 1,140.11 | 964.25 | 0.33 | 0.01 |
| Paid direct bribe | 0.01 | 0.02 | 0.01 | 0.68 | 0.99 |
| Hired agent | 0.78 | 0.80 | 0.59 | 0.79 | 0.00 |

Sample includes the 409 individuals that obtained a licence.

difference in means between the comparison and lesson groups. The results in Table 1 suggest that individuals who have a greater need to get a licence (the bonus group) are able to achieve their objective: 71 per cent of the bonus group obtained a licence as compared to 48 per cent of the comparison group. This difference is significant (p-value=0.00). On average, the bonus group obtained a permanent licence in 32 days, while the comparison group obtained a licence in 48 days. Hence, willingness to pay for a licence plays a role in the allocation process.

The experience of the lesson group suggests that social considerations also play some role in the allocation process. The motivation for including a “lesson” treatment in the study design was to test whether the bureaucrats respond at all to the main social consideration in the allocation of licences: one’s ability to drive. Under an extreme view of a corrupt bureaucracy, the allocation of licences may be solely determined by willingness to pay, and not by the quality of the licence candidate. This is not the case: randomly helping individuals acquire better driving skills increases the number of licence-getters. Specifically, column 3 shows that individuals in the lesson group are 12 percentage points more likely than the comparison group to obtain a permanent licence.

While those in the bonus group did have a higher willingness to pay for a licence, perhaps they were more successful than the comparison group in the licensing process because they were the most deserving. For example, maybe these individuals exerted higher effort in order to obtain their licences, such as by practising

driving for longer hours. This does not appear to be the case. Learning how to drive was not the method used by individuals in the bonus group to obtain a licence fast. In fact, 71 per cent of the licence-getters in the bonus group reported that no one taught them how to drive. In contrast, only 49 per cent of the comparison group and, unsurprisingly, 17 per cent of the lesson group reported that no one taught them how to drive.

Most strikingly, only a small fraction of licence-getters in the bonus group (38 per cent) took the legally required driving test at the RTO and nearly 65 per cent of them failed the driving test independently administered by the IRC. In other words, in this bureaucratic system, a larger private willingness to pay for a licence is associated with a larger number of individuals obtaining a licence despite not knowing how to drive. This indicates a socially inefficient response of the RTO bureaucracy, which is letting through a large number of unqualified drivers due to their high willingness to pay.

The remaining rows of Table 1 focus on the payments made through the process of obtaining a licence. All experimental groups spent much more than the official cost to obtain their licence. Individuals in the comparison and bonus groups paid, on average, about twice the official amount to obtain their licence. Interestingly, individuals in the lesson group did not pay much less than those in the other groups, suggesting that even the “good drivers” had to resort to some extra-legal payments to obtain their licences.

What are these extra-legal payments? Very few licence-getters (1 per cent) paid direct bribes to bureaucrats at the RTO. In fact, 14 individuals who were unable to obtain a licence reported trying to pay a bribe and, in 12 of these cases, the bureaucrat turned them down. Instead, almost all of the extra-legal payments went to agents, professionals who “assist” individuals in the process of obtaining their driving licences and operate as intermediaries between citizens and bureaucrats. Eighty per cent of both the comparison and bonus groups hired agents, while about 59 per cent of the lesson group hired agents. But who are these agents? What exact “services” do they provide in this bureaucratic system?

3.3 The Agents

Agents play a large role in the licensing system. From the introduction survey, we learned that agent usage is also prevalent in the procurement of many government services.³ For example, of the 155 participants who obtained a ration card, 54 per cent reported being helped by an agent. Similarly, 47 per cent of the 47 individuals who obtained a land title, 15 per cent of the 104 who obtained a passport, and 20 per cent of the 58 who obtained a personal account number reported hiring an agent.

Despite their illegality, the agents for driving licences are easy to find and seem to operate in the open: 86 per cent of the licence-getters were approached by at least one agent when attempting to obtain a licence. On average, 2.6 agents approached each licence-getter. In addition to assisting with paperwork, the agents accompanied 91 per cent of the licence-getters to the RTO to help them obtain a licence.

It appears difficult to obtain a licence without the use of an agent. Forty-two per cent of the licence-getters hired an agent at

the start of the process; however, by the end of the process, a total of 71 per cent of the licence-getters had resorted to hiring an agent to assist in the licensing process. In fact, Bertrand and others (2007) find some suggestive evidence that bureaucrats create additional barriers within the system (for example, random failures of test-takers) to make it difficult to obtain a licence without an agent. Note, however, that individuals are either satisfied with the services agents provide or understand the difficulties of obtaining a service without an agent's help, as evidenced by 59 per cent of licence-getters stating that they would use an agent again in the future.

How do agents influence the process of obtaining a licence? We examine this question in Table 2, where we report the means of a set of variables for individuals that obtained a licence either with

Table 2: How Do Agents Affect Outcomes?

| | Hired Agent (1) | Did Not Hire Agent (2) | P-value of Difference in Means (3) |
|----------------------------|--------------------|---------------------------|---------------------------------------|
| (a) Expenditures | | | |
| Total expenditures | 1246.92 | 625.88 | 0.00 |
| (b) Procedures | | | |
| Days | 40.37 | 47.64 | 0.01 |
| No of trips | 2.39 | 2.75 | 0.00 |
| No officials spoken with | 4.28 | 6.33 | 0.00 |
| Total minutes spent | 182.51 | 255.02 | 0.00 |
| Took RTO licensing exam | 0.23 | 0.89 | 0.00 |
| (c) Driving ability | | | |
| Automatic failure | 0.53 | 0.25 | 0.01 |

Column 1 presents the mean for the 295 individuals who used an agent and obtained a licence, while column 2 provides the mean for the 114 individuals who did not use an agent and obtained a licence. Column 3 reports the p-value from the test of difference in means between the two groups, controlling for pre-experiment characteristics.

out agents, the total expenditures were Rs 625. In contrast, those who hired an agent paid about Rs 1,246 to obtain a licence. In exchange for these agent fees, individuals obtained a shorter and easier process at the RTO. Those that did not use an agent spent on average 255 minutes at the RTO, took on average 2.75 trips to the RTO, and spoke with about six bureaucrats (panel B). In contrast, agent-users spent 73 minutes less at the RTO, took about 0.5 fewer trips, and spoke on average to only four bureaucrats.

Hiring an agent is also very strongly related to the level of testing at the RTO. While 89 per cent of those who did not hire an agent took the legally required RTO practical test at least once, only 23 per cent of those who hired an agent ever took that test. This finding is consistent with two hypotheses. First, hiring an agent is the main channel through which bad drivers can obtain with a licence. Second, only the best drivers, for whom testing would be inconsequential, hire agents. The second hypothesis is clearly rejected in panel C of Table 2. Individuals who hire an agent to get their licence are about 28 percentage points more likely to fail the independent surprise driving test we administered.

Overall, this analysis suggests that there is a strong correlation between using an agent and being able to skip the legally required driving exam. There is an even stronger correlation between using an agent and the procurement of licences by unsafe drivers. Agents are not simply providing legal time-saving services. Instead, they appear to be working in "collaboration" with the RTO bureaucrats and undermining the primary reason for the

regulation of driving licences: the testing of driving skills to ensure that only good drivers are on the road. Qualitative interviews with several bureaucrats (in Delhi and Chennai) conducted by the research team revealed that agents handled most bribes to officials, and therefore, corruption operated through the agent system.

These findings suggest that for an anti-corruption programme to be effective, at least in this particular context, the programme must incorporate the role of the agent. For example, a programme focused on monitoring bureaucrats at the RTO to prevent bribe-taking would likely not succeed, since no bribes are paid directly to the bureaucrats.

This simple example further illustrates that, even in what appears to be a very straightforward bureaucratic process, corruption is often more than just a bribe. Thus, to adequately design anti-corruption policies, further micro-data collection efforts are needed to understand the avenues through which corruption operates. For more complex bureaucratic processes – with numerous stakeholders and players – the nature of corruption may grow even more complex, further exacerbating the difficulties in designing anti-corruption efforts. For example, Wade (1982) describes a very detailed data collection effort undertaken to study corruption in the distribution of water in south India. He illustrates that while low-level irrigation engineers collect large amounts of bribes, they in turn must compensate their senior officers to obtain and keep their postings. Therefore, petty bribes to irrigation officers are just part of a larger system of corrupt transactions that must be taken into account when designing anti-corruption policy. Policies that do not take into account these complexities may have low probabilities of success.

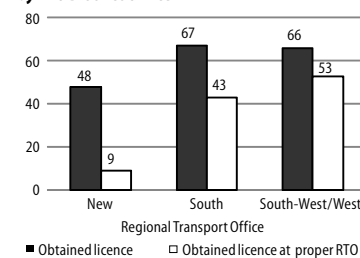
3.4 Agents and Implications for Anti-Corruption Policies

This case also provides an illustrative example of how simple but partial anti-corruption measures may fail in practice as key players in the system manage to work their way around these measures. Specifically, one of the RTOs covered in our study (the one in New Delhi) offers an interesting case study of the outcomes associated with imposing a local ban on agents.

Delhi has nine RTO offices. The jurisdiction of each office coincides with the corresponding police district, and individuals can officially only obtain a licence from their particular RTO. The New Delhi RTO is located near the main central government buildings; due to its highly visible location, very few agents can operate near this RTO. Therefore, it is interesting to ask how licences are allocated for those individuals that are assigned (based on their residence) to the New Delhi RTO.

Without agents around to provide "assistance", we find that fewer individuals are able to obtain a licence. The figure lists the percentage of individuals that obtained a licence and the percentage of individuals that obtained a licence in their correct district RTO, for example, the district in which their home is located. Only

Figure: Per Cent Obtaining Licences, by RTO District Office



48 per cent of the individuals who live in the New Delhi area obtained a licence as compared to 67 per cent in north Delhi and 66 per cent in south-west/west Delhi. Even more interesting is that very few individuals (9 per cent) actually obtained a licence at the New Delhi RTO. The rest illegally obtained their licences at other RTOs within the city. In contrast, 43 per cent of the south Delhi sample and 53 per cent of the south-west/west Delhi sample obtained a licence at the RTO appropriate to their place of residence.

Table 3 compares the outcomes for individuals who obtained a licence at the New Delhi RTO (column 1) and those who should have gone to the New Delhi RTO but instead acquired a licence at another location (column 2). Only 12 per cent of those who obtained a licence at the New Delhi RTO used an agent, as compared to 74 per cent of those who obtained it elsewhere. Given the relatively higher rate of

Table 3: New Delhi RTO

| | Obtained Licence at New Delhi (1) | Obtained Licence Elsewhere (2) |
|-------------------------|-----------------------------------|--------------------------------|
| Hired agent | 0.12 | 0.74 |
| Cost | 601.18 | 1157.65 |
| Took RTO licensing exam | 0.82 | 0.50 |
| Failed independent exam | 0.06 | 0.41 |

Sample in column 1 includes the 17 individuals who obtained a licence at New Delhi. Sample in column 2 includes the 70 individuals who live in the New Delhi district, but obtained a licence elsewhere.

by those who obtained a licence at New Delhi. Individuals who obtained a licence at the New Delhi RTO were more likely to be tested: 82 per cent of them took the formal licensing exam, as compared to 50 per cent of those who obtained it elsewhere. Those who obtained a licence at the New Delhi RTO are also better drivers: only 6 per cent failed the formal licensing exam, compared to 41 per cent for those who obtained their licences elsewhere. In other words, bad drivers manage to get their licences by going to other locations where they can still secure the assistance of an agent.

This provides a clear example that if one avenue of corruption is eliminated, individuals may adapt their behaviour in such a way that will defeat the anti-corruption effort. In this case, banning agents at one RTO is associated with higher rates of obtaining a licence at another RTO. Even if the ban on agents was enforced on all RTOs in Delhi, it is possible that individuals might

choose to obtain a licence from another state where agents still exist. Thus, this suggests that more coordinated anti-corruption efforts across locations are necessary.

This example also illustrates that behavioural responses must be taken into consideration when designing any anti-corruption regulation. For example, Hay and Shleifer (1998) document that when Russian policemen procured better guns to fight crime, they sold the new guns to the mafia at higher prices than their older weapons could garner. These types of examples raise doubts about the potential for success of many popular anti-corruption strategies, including monitoring and auditing programmes that do not allow for the corruptibility of the auditors.

4 Conclusions

The corruption we observe in this study appears to undercut the purpose of regulation, which is to keep bad drivers off the road. The study illustrates that corruption not only raises the price of services but also causes serious social distortions. This finding has implications not only for driving licences but also for many other types of public services where there exist competing private and social needs.

Our study also illustrates the difficulties in designing anti-corruption programmes, lending further evidence to why there have been few successful attempts at reducing corruption. First, the nature of corruption is complex and often hidden; corruption is much more than just direct bribes from citizens to bureaucrats. For example, the corruption we observe in this setting is centred on agents, who operate as intermediaries between bureaucrats and applicants. We find that agent-usage is associated with higher payments for licence, lower testing of driving skills at the RTO, and more bad drivers obtaining licences.

Second, anti-corruption policies that are implemented in isolation from one another may be less successful, as individuals use new corrupt methods to avoid these regulations. More generally, the study sheds doubt on the likely success of many popular types of anti-corruption campaigns that fail to take into account behavioural responses to regulation. While monitoring and audit programmes to combat corruption are becoming quite common, few of these programmes take into account the incentives of the monitor to look the other way.

NOTES

- For the "grease-the-wheels" view, see Leff (1964), Huntington (1968) and Lui (1985). For example, Huntington (1968) remarked that "[I]n terms of economic growth, the only thing worse than a society with a rigid, overcentralised, dishonest bureaucracy is one with a rigid, overcentralised, and honest bureaucracy." For arguments on how corruption can harm society, see Myrdal (1968), Rose-Ackerman (1978), Klitgaard (1991), Shleifer and Vishny (1992; 1993) and Djankov et al (2002).
- On average, survey participants were males, 24 years of age. Quite interestingly, about 88 per cent had driven illegally in the past and 20 per cent had paid a bribe in the past (conditional on obtaining a public service).
- The existence of agents has been documented in other countries as well: Rosenn (1984) describes the role of facilitators ("despachantes") in obtaining various public services in Brazil, while Fisman, Moustakierski, and Wei (2005) find agents in the arena of international trade in Hong Kong.

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