"The Driving Analysis System through Wireless Network"

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Abstract: *This paper studies the process of obtaining a driving license in INDIA. On the average, individuals pay about twice the official amount to obtain a license and very few take the legally required driving test, resulting in many unqualified yet licensed drivers. The magnitude of distortions in the allocation of licenses increases with citizens' willingness to pay for licenses. 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 licenses at other RTOs.*

Our project avoids paper cost, identifies correct driver who is eligible for driving, If our product made mandatory to all vehicles Traffic management becomes easier, E-tolling: Eliminates the delay on roads by collecting tolls electronically, Applying for driving license becomes much more convenient, Bring consistency in test drive process, Reduce man power.

As our survey, around 1500 RTO centers are there in India. Actual cost for applying driving license is Rs250, most of people go through mediator to get their DL and pay about RS1000 to mediator. Daily 30000 people register for DL in India add total amount paid to mediator is RS 30L per day and It turns into Rs100Crores per year.

According to times of India 1300 people are dying due to accidents per day in India, most of them(10%) are got their DL from mediator who are unfit for driving.

Keywords: *RTO, Licenses, Unqualified, Corruption, India, Accidents.*

I. Introduction

The government of India has made fighting corruption a central component in its development strategies. How- ever, 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 licenses may be allocated to the undeserving. We elm- partially illustrate this thesis using an extensive data collection exercise for the case of driving licenses in INDIA. Between October 2004 and April 2005, the International Finance Corporation (IFC) followed 822 individuals through the process of obtaining a driving license. 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 licenses were chosen because its bureaucratic process is analogous to the processes of many other common services – business licenses, export licenses, 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 ob- tained a license, as well as detailed micro data on the specific procedures, time, and expenditures involved. After survey par- tic pants obtained a license, 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 license candidates were given a bonus to obtain the license in the mini- mal 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 license. Other license candidates were given driving lessons to understand whether good drivers could more easily obtain a license. The results of this study show a deeply distorted bureaucratic process. The average license getter pays about Rs 1,080, or about 2.5 times the official fee of Rs 450, to obtain a license. More

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Importantly, close to 60 per cent of license 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 license.

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 licenses. These findings confirm that reformers could see significant social returns in the design and implementation of anti-corruption programmers. 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 com- phlebitis in the nature of corruption is necessary in order to de- sign effective anti-corruption programmers. 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 license. Agents appear to be more than just time-saving inter- mediaries. Instead, they institutionalize 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 con- text. Only more detailed micro data on the process and payments allowed us to document how corruption operates. Second, anti-corruption programmers 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 un- successful in practice as players manage to work around these anti-corruption measures. Specifically, enforcement against agents is much more stringent at the New INDIA licensing office than at the other offices included in our study. We find that fewer individuals obtain a license in New INDIA; instead, many individuals who live in the New INDIA district are able to overcome the residency requirement and obtain a license in another district. While individuals who obtain a license at the New INDIA office are better drivers, many bad drivers are able to obtain a license by hiring an agent elsewhere.

II.   Getting a Driving license

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 INDIA, the set- ting for this project, licenses are issued at nine regional transport offices (RTOs). Individuals must first obtain a temporary license, which grants the right to practice driving under the supervision of a licensed individual. To obtain the temporary license, 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 writ- ten 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 license, the individual may apply for a permanent license. The applicant must submit proof of age, proof of residence, a recent passport size photo, and his or her temporary license. 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 license. If the applicant fails the road test, he or she can reapply after a seven-day waiting period.

III.   Study Design

Between October 2004 and April 2005, the IFC recruited and ob- served individuals through the application process for a four- wheeler license. 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, randomization, 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).

3.1 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 INDIA: south-west, north-west, south and New INDIA. The recruiters intercepted men who were seeking to obtain a license 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 inter-ested individuals to attend an information session to learn more about the project.

3.2 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 license. 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 INDIA 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 license, 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 license, we also offered individuals in this group a

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Bonus of Rs 2,000 (on top of Rs 800 for completing the surveys) if the individuals could obtain their permanent license within 32 days of obtaining their temporary license (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 license 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 license. 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 license. This upfront payment was also made in order to increase the credibility of the final payment.

3.3 Follow-up

It takes between 30 and 180 days to obtain a license. 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 license, the project team administered a phone survey regarding the subject's experiences in the process of obtaining a temporary license. 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 license in order to understand the reasons why. Ninety individuals could not be contacted. Since we are unsure whether they obtained any type of license, we exclude them from the rest of the analysis. Upon earning a permanent license, 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 wait-ed 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 ad- ministered 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.

IV. Findings

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

4.1 Final Status of individuals

The majority of participants in the study (61 per cent) were able to obtain a permanent license during the course of the project. After acquiring the temporary license, it took them, on average, 42 days to obtain the permanent license (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 license. The two most startling findings from the survey were the prices individuals paid for their license and their driving ability after obtaining a license. Specifically, we find that license getters paid, on average, Rs 1,080 for their license – more than double the official cost of Rs 450. Only 41 per cent of the individuals that received a license took the legally required driving test at the RTO. This indicates license getters can easily bypass the socially most useful component of licensing regulation – the screening of driving skills. In fact, a large percentage of license getters were unable to drive at the time they received their licenses: 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 license 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 license in Miguel Hidalgo County in Mexico City. Frustrated by corruption in the system, the government eliminated the knowledge examination. Instead, to obtain a license, 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.

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After exploring these facts about the process, the next question is: Why do these distortions exist? Are bureaucrats simply allow- ing those that are willing to pay more to obtain a license without knowing how to drive? Do bureaucrats put any weight on ability to drive in their decision of whether to grant a license? 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.

4.2 Results from experimental Groups

Table 1 presents the results of the license 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 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 license (the bonus group) are able to achieve their objective: 71 per cent of the bonus group obtained a license 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 license in 32 days, while the comparison group obtained a license in 48 days. Hence, willingness to pay for a license 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 licenses: one's ability to drive.

Under an extreme view of a corrupt bureaucracy, the allocation of licenses may be solely determined by willingness to pay, and not by the quality of the license candidate. This is not the case: randomly helping individuals acquire better driving skills increases the number of license 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 license. While those in the bonus group did have a higher willingness to pay for a license, 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 licenses, such as by practicing

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 license fast. In fact, 71 per cent of the license 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 license 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 in- dependently administered by the IFC. In other words, in this bureaucratic system, a larger private willingness to pay for a license is associated with a larger number of individuals obtain- ing a license 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 license. All experimental groups spent much more than the official cost to obtain their license. Individuals in the comparison and bonus groups paid, on average, about twice the official amount to obtain their license. 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 licenses. What are these extra-legal payments? Very few license getters (1 per cent) paid direct bribes to bureaucrats at the RTO. In fact, 14 individuals who were unable to obtain a license 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 licenses 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?

V. Solution.

Web application, For applying divers license online.
Embedded system, Fixed at dashboard and keep track drivers action during test drive and determines whether driver is fit or unfit. The driver's heart rate also analyses.

Present Method,
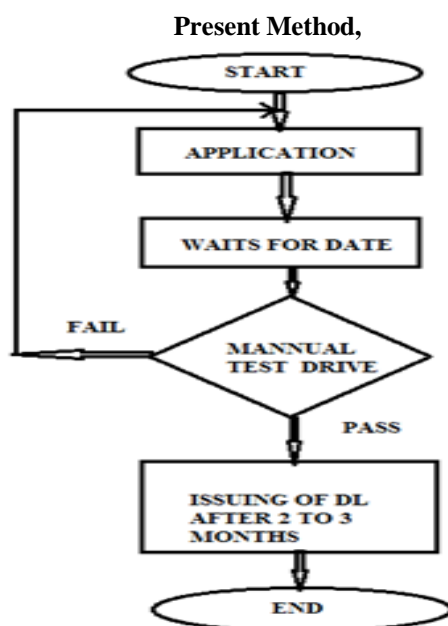
The above fig shows the flow chart of current process, the flow of obtaining a driving license in RTO. Here no evidence for result and the result is depends on the officer wish (they may give the result as pass or fail). There is no transparency in this method and it is manual system and time consumption to get the Driving License is more.

Automation Method Suggested Method,
Automated System For Driving License,
The procedure is completely automated and it has the transparency. There will be no mediators. Kickback will not act any role in the automated system. Main aim of this proposed project is to avoid the Kickback and provide a driving license for right person. Embedded system for vehicle driving analysis, driver as to undergo the test drive by wearing this pulse tracking belt, proposed system monitors the pulse rate of a driver by comparing with the threshold ECG rate of normal person database while driving, if the driver pulse rate is below/above and fails to maintain the other parameter properly then he/she will be disqualified to obtain the driving license and by analyzing the technical parameters. Issuing driving license for right person confirms enhanced road safety.

VI.   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 licenses 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 programmed, 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 centered on agents, who operate as intermediaries between bureaucrats and applicants.

We find that agent usage is associated with higher payments for license, lower testing of driving skills at the RTO, and more bad drivers obtaining licenses. 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 behavioral responses to regulation. While monitoring and audit programmed to combat corruption are becoming quite common, few of these programmed take into account the incentives of the monitor to look the other way.

Here we consider both the physical and technical parameters. The physical parameter is the heart rate of the driver. The technical parameters are speed, rpm of vehicle, indicators, and the status of the ignition. All these parameters are recorded at the GPS and GSM combination device and sends through server database to admin system. The analyzer admin PC will analyze and gives the result (whether pass/fail with acknowledgement).

GPS or Global Positioning System is a network of orbiting satellites that send precise details of their position in space back to earth. The signals are obtained by GPS receivers, such as navigation devices and are used to calculate the exact position, speed and time at the vehicles location. GSM (Global System for Mobile communications) is an open, digital cellular technology used for transmitting mobile voice and data services.

GSM supports voice calls and data transfer speeds of up to 9.6 kbps, together with the transmission of SMS (Short Message Service). Terrestrial GSM networks now cover more than 90% of the world's population. GSM satellite roaming has also extended service access to areas where terrestrial coverage is not available.

The parameters are received by the GPS system and all data's received by the GPS and 8sends through the GSM to the server. The admin PC will get the data from the server database and analyzed and gives the result.

Steps Involved In Automated Method:

The applicant will fill the application through the online for Driving License. Then applicant can check the availability of the appointment and select the appointment date and time through online. Directly go for the driving test with necessary document. Result will get on spot with acknowledgement. Details will send to applicant's mail ID The automated method is simple, riskless, corruption free and it consumes less time.
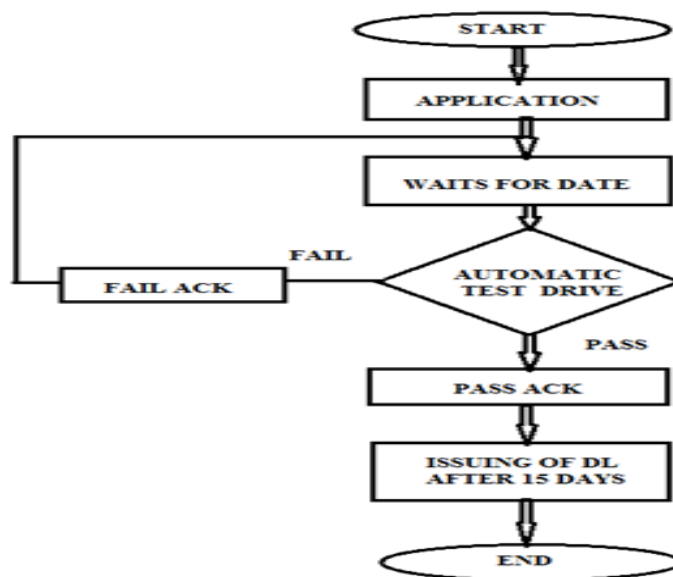
flow chart of proposed system, the flow of obtaining a driving license in RTO. Confirmation for result and the result is depends on driver's performance (they may get the result as pass or fail). This method is transparency and it is automated system and less time consumption to get the Driving License and it is more efficient method to obtain a Driving License.

Another
1. Mrs. Manju Devi , has presented a paper titled "Removal of Impulse Noise Using Pipelined ADC", at the International Conference on VLSI and Signal Processing(ICVSP-2012) held at KSIT,Bangalore on 4th and 5th of May 2012.
2. Mr.Manohar G S, Studying in Mtech 4th Sem in BTLIT College Banagalore.

References

Table 3: New INDIA rtO Obtained License Obtained License at New INDIA Elsewhere (1) (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 license at New INDIA. Sample in column 2 includes the 70 individuals who live in the New INDIA district, but obtained a license elsewhere.
Notes 1 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, over centralized, dishonest bureaucracy is one with a rigid, over centralized, 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). 2 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). 3 The existence of agents has been documented in other countries as well: Rosenn (1984) describes the role of facilitators ("despachantes") in obtain- ing various public services in Brazil, while Fisman, Moustakerski, and Wei (2005) find agents in the arena of international trade in Hong Kong.

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