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Efficacy of Top Down Audits and Community Monitoring

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ABSTRACT

In this paper we survey the recent literature on top down audits and community monitoring. While in the case of top down audits the efficacy of audits depends on the type of punishment- electoral punishment vs legal punishment, the literature finds that electoral punishment is less effective than legal punishment. Moreover, electoral punishment depends on whether voters are aware of audit reports. The type of service being audited - the opportunity for corruption and the clarity of rules and regulations effect the success of audits. However, even when top down audits succeed in cutting down corruption, they may not always lead to better outcomes. Social audits are effective when collective action problems are less salient e.g. when groups are homogeneous, when the design is such that community participants feel empowered e.g. through elections to the monitoring committee, information is not useful by itself unless accompanied by tools to influence outcomes, and finally there is not a clear map between finding corruption and improving ultimate outcomes. We suggest that a fertile area for future research is the design of optimal audit schemes that take account of the opportunities for corruption and the motivations of both the providers and the auditors.

KEYWORDS: Corruption, Electoral Competition, Third party Audit, Accountability, Social Audit.

JEL CLASSIFICATION: D72, D73, D82, H75, O43

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1 INTRODUCTION

Corruption is a global phenomenon with varying effects, both on the economy and society. It inhibits economic growth (Li et al. (2000), Mauro (1995)), affects business operations, employment and investments (Colonnelli and Prem (2017), Shleifer and Vishny (1993), Hanousek and Kochanova (2016)) and reduces tax revenue along with the effectiveness of a variety of financial assistance and public programs (Tanzi and Davoodi (2000)). The IMF has recently put governance issues at the forefront of its macroeconomic policies.¹ The 16th SDG has emphasized the importance of effective governance. The World Bank, recognizing that Covid 19 has created new opportunities for corruption which will become manifest only later, has released a report on enhancing government transparency (Myers and Bajpai (2020)). Therefore the need for anti-corruption policies and evidence has never been more apparent. In this survey we focus on monitoring - whether centralised or decentralised, and the evidence on these as anti corruption strategies.

Top down or Third party audits are based on the idea of a specifically assigned independent organisation to audit the activities of other institutions in the economy. An alternative to top-down interventions is a form of a bottom-up approach, which is based on the idea of allowing the community to collectively monitor the performance of an activity, a programme, a policy or an organisation in social welfare sector. Mansuri and Rao (2013) suggest that one way to look at community participation schemes is as a solution to "civil society failure" when people who live in geographical proximity to each other are unable to solve collective action problems. In their framework, local development policy acts at the intersection of market, government and civil society failures and success depends very much on local social and cultural context.

Most countries have some form of a Supreme Audit Institution to perform top down (third party) audits, but until recently the data to study the efficacy of such audits in developing countries has not been available to researchers. One of the main constraints has been the measurement of corruption outcomes (Olken and Pande (2012)). A new literature is emerging (e.g. Ferraz and Finan (2008), Avis et al. (2018), Ferraz and Finan (2011) among others) based on a few selected countries like Brazil which have made data available for research- this has spawned some exciting findings. One of our main objectives with this survey is to generate interest in the academic community on innovative ways to study the effectiveness of third party audits especially in relation to governments as service providers in developing countries. On the other hand, decentralised monitoring has also been acquiring increasing importance- over the last decade, the World Bank has dedicated about \$85 billion towards local participatory developments. While there have been some reviews and meta analyses of community monitoring (e.g. Mansuri and Rao (2013), Molina et al. (2016)), there is as yet no comprehensive survey of the relationship between the two approaches and the similarities (or otherwise) in the findings. Our main contribution will be to present the important studies on both types of monitoring, their design and the similarities in questions asked as well as results. We believe that an overview of both together will enable scholars to advance the literature in more useful ways. Papers are selected for the survey mostly on the basis of being able to provide credible causal evidence and will be restricted mainly to developing countries (there is not the same type of interest in community monitoring in developed countries).

Our review of selected papers suggests that the literature on community monitoring is based mainly on experimental evidence while the literature on top down audits is based on observational data. In contrast to studies on top down audits which are focused on corruption outcomes, the studies on community monitoring are focused less on corruption, and more on outcomes, with some exceptions.

¹<https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/04/20/pp030918-review-of-1997-guidance-note-on-governance>

Based on our survey, we find that electoral incentives can be a powerful force in reducing corruption via voters information on politicians' corruption. However, the effects of electoral punishment are short lived, and weaker than non electoral (judicial) punishment. Audits have more of a disciplining effect in reducing corruption rather than a selection effect. The effects of audits on corruption vary by the nature of the service being audited - e.g. procurement is more responsive to threat of audit compared to say absenteeism of workers due to both the rules being defined much more clearly and the punishment being higher. In terms of effects on ultimate outcomes, there is some evidence that audits may not help in improving outcomes due to the problem of the auditees not willing to take the risk of being caught inadvertently. This is especially interesting due to recent interest in outcome based auditing². Most studies of top down audits have been in Brazil apart from two studies- in Puerto Rico and Indonesia respectively.

Community Monitoring has been studied much more in the literature, perhaps because of the difficulties in getting audit data. There is also less consensus on the findings, but the robust results suggest that what works in community monitoring is not just information by itself, but the task being monitored - how complex it is, whether it is a private or public good, what support is given in negotiating with the service providers, whether community monitors feel empowered enough to change things, what punishment is available for being caught, the composition of community monitoring committees. In contrast to studies on top down audits, the studies on community monitoring are focused less on corruption, and more on outcomes, with some exceptions.

Overall, some of the issues that arise in top down audits also arise in community monitoring such as the effects on corruption not translating into outcomes for similar reasons, the type of service being monitored, the punishment available. However the collective action problem is unique to community monitoring as well as the lack of empowerment vs the authority and power of the central audit agency.

The paper is organised as follows: Section 2 provides a conceptual framework to understand how different types of audits can help in reducing corruption. Section 3 is on third party audits, Section 4 is on community monitoring, Section 5 is on the literature which combines both top down and bottom up monitoring and Section 6 concludes with some open questions.

2 Conceptual Framework

In this section we present a framework to classify the different types of research on the role of audits in preventing corruption. We use a principal agent framework broadly speaking but allow for various informational/coordination/ enforcement failures within.

Consider a set of agents who are applying for a job. Agents can be Honest (H) or Dishonest (D) types. The job they apply for creates a revenue stream X out of which δX can be skimmed off in corruption (δ measures the opportunity for corruption). The agent gets paid a fixed wage w for the job. The actual amount of revenues lost due to corruption is private information to the agent who is in the job. However with some probability, audits take place after the corruption has taken place. Audits can be third party audits (top down) which are assumed to be done by an independent regulator or can be social audits (or both). We assume the probability of third party audits is p , while social audits have probability q . Audits have two consequences: they can expose corruption with some probability e_i , where i can be top down or social audit. This affects the perception of the agent by the audience which we assume to be the principal- either citizens or the private sector firm's shareholders. When corruption is caught, the agent can be punished - either via a legally mandated punishment F which could be a fine or jail term (there may or may not be limited liability), which is enforced with some

²See e.g. <https://timesofindia.indiatimes.com/india/cag-to-introduce-outcome-based-audits/articleshow/64482292.cms>

probability f . The agent can also be removed from the job. An alternative punishment for corrupt agents is reputational loss/ self image loss due to exposure. Top down auditors face a cost C of high effort in uncovering corruption and get a fixed wage w (assumed to be the same for all actors), while the social audit team is composed of users of the service provided by the agent. They can put in costly effort (cost is c) to uncover corruption, and get a per capita benefit with present value B in terms of reduced corruption in future though they do not get benefits in the current period. Moreover, the benefits can be private or public to capture coordination and collective action problems.

Given this framework, we ask what are the main factors that affect corruption by the agent? It is apparent that the agent's decision to apply for the job will depend on the wages and other intrinsic factors, but also the opportunity for corruption as well as the probability of being caught for corruption and being punished for it. The selection argument would say that the lower the opportunities for corruption or the higher the chances of being caught for corruption, and the higher the punishment for it, the more honest the applicant pool would be. Second, once in the job, the degree of corruption will depend on future chances of being caught for corruption, on the type and level of punishment for it (including loss of wages). Thus the perceived efficacy of audits in period $t + 1$ can affect the level of corruption in period t . In turn the perceived efficacy of audits depends on the whole link: design of audits, availability of information on audit findings and punishment for it. Audit design may also depend on opportunity for corruption or other factors that affect corruption. From the point of view of third party auditors, incentives to find corruption depend on their wages, their reputational or monetary gains from catching corrupt acts and their ability to collude with agents to get bribes. For social audit, the per capita benefit matters as well as whether the corruption is something that affects all of the audience, or whether it affects the individual social auditor. In case of the former we may expect coordination and free riding to be factors that lower the effectiveness of social audit.

In the following sections, we organise the literature according to our framework above. Section 3 looks at third party audits and the impact on corruption.

3 Third party Audits

The first set of papers that we review relates to the case where the agent is an elected politician, the audience is voters, the punishment is electoral losses via reputational loss or legal punishment. Audits are top down and help to expose corruption to voters/judiciary. Sections 3.1 and 3.1.1 are only indirectly about audits- they use random audits as a way to vary information on corruption to voters exogenously and as a way to measure corruption objectively. Rather than asking whether audits reduce corruption they assume audits provide information on corruption which voters use in their voting decision and incumbents respond to in their corruption decision. So the question is about the efficacy of a possible mechanism through which audits affect corruption.

3.1 Do top down audits reduce corruption?

Do politicians reduce corruption in response to anticipated punishment at the ballot box? Theoretically, Persson and Tabellini (2002), Besley and Prat (2006), have shown that more information available to voters leads to better accountability via re-elections. In order to test this, exposure to information should be exogenous, otherwise e.g. an observed correlation between high exposure and low re-election could simply be capturing a larger presence of media in places which are also more competitive, or where voters are more aware or where voters are more likely to be affected by corruption and therefore put more effort in finding out about corruption.

3.1.1 Do voters punish corruption exposed by audit?

Ferraz and Finan (2008) use audits are used to provide objective measures of corruption as well as provide an exogenous source of variation in information about corruption to voters. In the paper they show that there is unlikely to be collusion between auditors and politicians, nor do they find evidence that more politically powerful mayors get "preferential" treatment by auditors.

Ferraz and Finan (2008) exploit the randomised timing and public dissemination of the audits conducted in Brazil. The anti-corruption audit program in Brazil - which started in 2003, is implemented through the autonomous *Controladoria Geral da União* (CGU, henceforth)-Office of Comptroller-General, involves random auditing of government's expenditures at the municipality level. CGU randomly chooses municipalities every month from a sample of all Brazilian municipalities with less than 450,000 inhabitants. CGU auditors inspect the chosen municipality's accounts and also carry out physical verification of public works and service delivery. The auditors also meet with local officials and members of the community. Based on their findings, a report is prepared, which is presented to higher authorities³ for action. A summary of the principal findings of the audited municipalities is released to the media and posted on the Internet(Ferraz and Finan 2008, 2011).

Ferraz and Finan (2008) compare the electoral outcomes of mayors eligible for reelection⁴ between municipalities audited pre & post-2004 election (July, 2003 to June, 2005). If information on corruption is a salient factor affecting re-election, then there should be a significant difference between re-election rates of those municipalities that are audited before the election vs those audited after the election. The municipalities where audits take place after the election count as a control group- in the sense that audit findings are not able to effect the previous election while the treatment group is those that have audits before election. They measure corruption as the number of violations associated with the sum of fraud in procurements, diversion of public funds and/or over-invoicing. Media sources (measured using the number of locally present radio stations in a municipality) allowed the authors to test if the audits made any differential impact across areas with or without the presence of local media. They show that the impact of audits also depends upon the severity of the reports. In order to assess the impact of reelection incentives on their performance, the authors restrict their sample to only the first term mayors who are the ones eligible for reelection in 2004, in Brazil.

Overall, they find on average the electoral performance of mayors audited before elections was not significantly different from those audited after the election. However, once they compare mayors with the same corruption levels, they find a 17% reduction in the probability of re-election if the audit was done before the election rather than after. This probability reduces more when corruption is higher and in cases where no corruption is found through audit, the chances of re-election increase for incumbent mayors audited before elections. These effects were more prominent in municipalities where local radio was present. The evidence is consistent with a narrative where voters have a prior belief about incumbent corruption and then revise it upwards or downwards based on the reports.

But do voters really care about corruption per se? Do they understand the effects of corruption? In Brazil evidence suggests that voters reward politicians for providing goods and services in a clientelist exchange. ? uses the reduction in discretionary funds allocated to municipalities whose mayors are found to be corrupt to show that rather than exposure to information, voters actually punish politicians who are responsible for a reduction in transfers to their municipality.

³CGU office in Brazil, Brazilian federal accountability office, public prosecutors and municipality legislative branch.

⁴Mayors in Brazil face a two-term limit wherein, a mayor who gets elected for the first time serves their first term and becomes eligible to stand for reelection. If reelected, the mayor who is in his/her second term faces a term limit of standing for further elections.

3.1.2 Do politicians respond to threat of electoral punishment?

Ferraz and Finan (2011) argue that politicians do respond to re-election incentives in local governments in Brazil.

The level of corruption in the municipality is measured by the share of centrally transferred resources of a municipality associated with frauds in public procurement, over-invoicing of goods and services and diversion of funds. They use the political agency framework of Besley (2006) as a conceptual framework. The model is based on the decision of the voters to reelect an incumbent, without observing his type or actions, but based on a signal of their own payoffs which are affected by actions of incumbents. The model predicts that mayors who face reelection incentives will be less dishonest than those who do not because corrupt (type) mayors, facing reelection incentives, can benefit from the information asymmetry by behaving like a non-corrupt mayor by not indulging in rent-seeking activities. Therefore mayors who are audited and face re-election should turn out to be less corrupt than those who are audited but do not face re election.

The identification strategy relies on using the variation from municipalities which were audited at the same time and in the same state. The empirical findings that the mayors with reelection incentives are significantly less corrupt than those without it turn out to be consistent with the theoretical model. Municipalities with mayors in their first term had a lower percentage of stolen resources as compared to those with mayors in their second (and hence) last term.

These findings can be a result of differences in the unobserved characteristics of the municipality which can simultaneously determine both corruption and reelection like the ideological preferences of voters or the political ability of incumbents. To rule this out they use a regression discontinuity design (RDD) which compares municipalities where incumbent mayors barely won reelection in 2000 (and thus served as a second-term mayor) to municipalities where the incumbent just lost the election and was replaced by a new mayor (who then served as a first-term mayor)- this design creates a comparison between only those first and second term mayors who are randomly chosen. Second, it is possible that the different levels of experience of first and second term mayors can potentially overestimate the actual effect of reelection incentives if learning and corruption were to be positively correlated. A comparison between the second-term mayors with first-term mayors who got elected but had already been in power before 2004 helps in ruling this out. A subtle point is that if audits happen before an election, then exposure increases in those municipalities leading to a selection effect- voters throw out very corrupt incumbents so the pool that survives in the second term is likely to be less corrupt. This would lead to an underestimate of the actual difference between first and second term mayors. Similarly, lower levels of electoral competition will reduce the disciplining effects of elections. Their evidence therefore complements Ferraz and Finan (2008), who show that voters make use of the publicly available information to punish corrupt politicians. Together, the authors say, these results imply that electoral accountability acts as a powerful tool to align politicians' actions with the voters' preferences. In terms of our conceptual framework, the link from audits to information exposure to punishment at the ballot box to incumbents then reducing corruption in response to re-election motives is complete.

3.1.3 Do past audits help to reduce corruption?

While the focus of the literature on audits and politician accountability has mainly been on punishment via the ballot box, Avis et al. (2018) is one of the few papers that looks instead at punishment via legal means. Their main question is whether past audits help to reduce corruption.

As before, they use publicly available audit reports of municipalities from Brazil's CGU. They compare municipalities that received an audit for the first time (control group) vs those that had been audited in the past (treatment group). The question is whether being audited in the past leads to lower

corruption in future. Theoretically being audited in the past should have an effect on future corruption if there is an associated punishment. If leaders who are caught in the audit suffer as a result then not only their behaviour but the behaviour of those who observe such punishment may change as a result. They find that municipalities who have been audited in the past have 8% lower corruption levels than others. Past audits also effect the behaviour of neighbouring municipalities with local media who get to know about the results of audits- their corruption levels go down by 8% due to an additional neighbour being audited.

The publicly available audit reports along with the political outcomes of elections are used to code the dependent variables: corruption (calculated as the log of number of irregularities classified as either moderate or severe in audit reports), mismanagement (measured as the number of irregularities registered under administrative and procedural issues) and legal (coded as indicator variable if legal action has ever been taken against a mayor in a municipality). A comparison of municipalities audited in the past (treatment group) to those audited for the first time (control group) facilitates the estimation of the impact of a past audit on all three dependent variables. The findings are suggestive of lower corruption levels and higher chances of experiencing legal action in municipalities which had an audit in the past as compared to those which did not. Irregularities associated with mismanagement remain unaffected by the history of audits in a municipality. The history of audits in a municipality helps in disciplining the mayors and lowering their corruption levels. This is a result of the perceived increase in their legal and electoral incentives. Having had an audit in the past increases the chances of legal action being taken against the mayor by 20%.

Their structural model allows them to run some alternative policy simulations to understand which policies would help to reduce corruption most effectively - increasing audit probabilities, improving exposure of corruption to voters via audit reports, increasing the legal costs of corruption, and improving the educational/occupational background of candidates running for office. Out of these they find the largest effects for increasing the legal costs of corruption. Interestingly, they do not find much evidence of selection effects.

3.1.4 How long are the effects of exposure of corruption?

Bobonis et al. (2016) employ similar measures of corruption as Ferraz and Finan (2008, 2011) to answer whether monitoring corrupt activities (audits) induces a sustained reduction in corruption. Indeed the research question is the same as Avis et al. (2018)- whether past audits help to reduce corruption. However they find the opposite result. The difference in the two studies is that audits are pre-determined as opposed to random and they look at the long run effects of audits on corruption.

They use the timing of municipality audits in Puerto Rico between 1987-2005. In Puerto Rico, municipalities are audited by an autonomous audit authority (Office of the Comptroller of Puerto Rico-OCPR) in a pre specified order which was determined in the 1950s. Once an auditing round is completed the next one follows the same order. The empirical strategy in this paper exploits the differences among municipalities who are audited before an election (timely audit) and those audited after an election (untimely audit). A timely audit report is made public in the two years before the relevant election⁵ year whereas an untimely audit report is the one which is disseminated in the two years following the election. Audit reports are widely disseminated publicly. As one would expect, the former is more important than the latter in informing the voters about incumbents' activities because the release of information before elections allows them to make immediate use of this information to make a more informed decision in the upcoming election.

⁵The elections in Puerto Rico are held every four years.

The hypothesis is that timely audits lead to sanctioning effects where voters punish incumbents who are shown to be corrupt. Incumbents, expecting an audit before election will then reduce corruption in response implying lower irregularities when there are timely audit reports. However this sanctioning effect is pre-determined and temporary, so this sanctioning effect cannot explain long term outcomes. If there is positive selection of less corrupt politicians then the lower corruption for municipalities with timely audits would lead to lower corruption in the long run as well.

The short run impact of of timely audits on corruption is measured by regressing irregularities in year t on whether audits were carried out in the two years prior to election. The long run impact is measured by regressing irregularities in year $t + 1$ (four years later) on audits in year t .

Finally they test for the impact of the timeliness of audits reports on re-election rates (coded as an indicator variable for the reelection of incumbent mayor in a given election year).

Results show that even though the timing of dissemination of audits findings does not significantly affect the current and future levels of corruption, it does have an impact on reelection rates. There is a higher chance of an incumbent getting reelected in the next election in municipalities where the audit's findings were previously disseminated on time. In the longer term incumbents who are shown to be less corrupt are more likely to be re-elected so there is a selection effect - however such politicians are no less corrupt in the longer term than those with untimely audits. Therefore the results suggest timely audits lead to the selection of more competent but not more honest politicians. Therefore, timely audits alone are not sufficient to deter corruption amongst politicians. The idea is that once a politician has built a reputation for being honest via a timely audit, he can cruise on the reputation for the next period and be more corrupt in periods when reports are not timely.

3.2 Which factors affect the efficacy of top down audits in reducing corruption?

3.2.1 Frequency of audits, Type of service being audited

The paper by Zamboni and Litschig (2018) contributes further to this strand of research, by designing a randomised policy experiment to test if a higher probability of getting audited discourages rent extraction by local government officials in Brazil- they ask if the impact of higher audit frequency is the same across all types of corruption. They focus on three sectors: procurement, cash transfer targeting, and health service delivery. They hypothesize that the responsiveness of corruption in procurement to higher audit risk would be higher because punishments for such corruption types is higher in Brazil- involving long jail terms and fines relative to the health service delivery where the type of corruption is in the nature of absenteeism from work, and targeted cash transfers where corruption is highly visible.

The experiment involves the randomisation of 120 municipalities into two groups, a high audit risk ⁶ group, exposed to an audit risk of 25 percent and a low audit risk group (control group), exposed to an audit risk of 5 percent, respectively. The randomisation experiment is run jointly with the Comptroller General of the Union (CGU)⁷. Results show that corruption is affected the most in procurement especially in those programmes that allowed greater discretion for the officials (opportunities for corruption in our conceptual framework).

The authors argue that the differential response to audit risk in procurement and health service delivery can be due to the difference in punishments and the probability of detection. In the case of service provision (i.e. not procurement) it is challenging to detect the inconsistencies in service provision (health, targeted transfers) through a CGU audit, and even if they are detected, punishment

⁶High audit risk means a higher probability of getting audited.

⁷As mentioned earlier, CGU is the organisation which carries out random auditing of government's expenditures, as a part of anti-corruption audit program, at the municipality level in Brazil.

involves at most the loss of the job. This is because public complaints are not recorded on paper anywhere, and the officials are able to dispute these complaints. This makes it difficult for the auditors to verify which of the competing claims is true.

However, it is much easier to detect irregularities in procurement with audits as local officials are required to document the purchasing process in a detailed manner, and their punishments are relatively severe and include not only job termination, but fines and a jail term too. Thus, these findings suggest that increasing the possibility of an audit alone is not sufficient to deter rent-taking and it might prove futile for programs that are targeted based on easily observable individual or household characteristics like the cash transfer program.

Kleven et al. (2011) study the role of audits on tax evasion in Denmark. Similarly to Avis et al. (2018) and Bobonis et al. (2016), this paper provides further evidence of the efficacy of audits. They study the effects of past audits as well as anticipated audits on tax evasion. Their main contribution is to show that audits affect only corruption in discretionary income- in terms of the model - this suggests that audits have a greater effect when the opportunity for corruption- δX is higher. Thus they echo the results of Zamboni and Litschig (2018).

The authors base their theoretical model on the tax evasion model of Allingham and Sandmo (1972)⁸. The model assumes that audit probability depends on the level of evasion- higher evasion leads to higher detection.⁹

The authors design a field experiment which imposes different audit regimes on randomly chosen taxpayers. Their sample consists of forty thousand individuals who duly file income tax. The first stage involves the random selection of half of these taxpayers for unannounced audits of tax returns filed in 2007. The rest of them remain unaudited. The first randomisation exercise allows for the estimation of the impact of past audits on future reported income, which is carried out as a comparison of the two groups in the subsequent year. The second stage of the experiment is based on an arbitrary selection of employees in both audit and no-audit groups for pre-announced audits (letters of tax returns filed in 2008 are sent out to announce the audits in advance). The authors examine the threat as well as the no-threat group to study the impact of the possibility of an audit on the reported income. The experiment results in an almost negligible tax evasion rate for income subject to third-party reporting, while tax evasion rate is substantial for self-reported income. Prior audits and threat-of-audit letters have a significant impact on the tax evasion associated with self-reported income.

3.3 Corruptible audit agency

In all of these papers, the audit agency is assumed to be independent (and evidence is provided to show that it is) and non corruptible. It is still an open question under what conditions audit can make outcomes worse due to bribing of auditors. However, ? do this for a private sector firm - they show that when firms pay for their own audits the conflict of interest results in underestimation of irregularities.

⁸The model by Allingham and Sandmo (AS model) focuses on studying the choice of a taxpayer who trades off the benefits from tax evasion and the risky costs and fines from detection.

⁹Their innovation is to incorporate the different types of income which may have very different costs of evasion. Income can either be third-party income (wages, salaries, interest income which are all reported by employers or other third parties on behalf of income tax payees) or it may be self-reported income. The model predicts that even with 0 penalties evasion will be low because the higher the evasion the higher the probability of detection.

They can therefore explain the puzzle of why tax compliance rates are so high in Denmark, even with low audit probabilities and low penalties. The model also predicts that self-reported income witnesses higher levels of evasion as compared to third-party reported income and is more responsive to audits. Moreover, individuals with high levels of self reported income evade less as a share of their total income as compared to those with low levels of self reported income. This is because it is hard to evade third party reported income due to the extra information the tax authorities have relative to self reported income. For our purposes the relevant finding relates to how previous experience of audit and higher anticipated audit can lead to lower evasion.

Chander and Wilde (1992) explore this question theoretically and show that tax audits can reduce tax evasion when auditors are honest but when that is not the case, audit design can lead to surprising results.

Chander and Wilde (1992) were amongst the first to explore this idea theoretically. They build a game-theoretic model, an extension of the Graetz et al. (1986) model ¹⁰, to allow for corruption in tax administration and see how audit rates influence it.

The model allows for collusion between tax payers and auditors. The audit agency is treated as a separate player who is interested in maximizing expected tax revenue net of costs of audit. Tax payers who are audited pay the additional tax due plus a penalty. Tax payers will be willing to pay bribes (dishonest evaders) to auditors when the cost of paying tax plus the fine is higher than the expected cost of bribing the auditor and being caught with some probability. Auditors are willing to accept bribes when the private costs to them of being caught are lower than the bribe income. The model shows that dishonest evaders are more likely to evade taxes than honest evaders. Since the returns from evasion increase when tax rates go up, and the returns from bribing also go up, it is likely that higher taxes lead to higher audit and lower revenues for the tax authority. In some cases the tax agency may prefer to forgo auditing altogether as it is costly and collusion leads to too low tax collections. We do not know of any empirical work on collusion between audit agency and auditees.

3.4 Do top down audits lead to improved outcomes?

Ultimately, the primary purpose of reducing corruption via audits is to improve economic performance. Colonnelli and Prem (2017) evaluate the impact of audits on firm performance and local economic activity. They use the extensive audit data available in Brazil, with a particular focus on government procurement records. The anti-corruption program in Brazil, apart from making for easy availability of data, also allows them to address issues of measurement (corruption is hard to detect and measure) via audit measured corruption and endogeneity (firm-level activity, economic activity and corruption are simultaneously determined), taken care of by the random audits.

They combine audit reports and the administrative matched employer-employee data (as well as some censuses on retail and service sector firms) on the Brazilian formal sector. This data is used to compare the economic outcomes of randomly audited municipalities (treatment) with either later randomly audited or never audited municipalities (control). Results suggest that treatment municipalities experience higher levels of economic activity, improved access to finance, and more entrepreneurship as compared to the control ones. These findings imply that the anti-corruption crackdown positively affected the local economy and thus lend empirical support to the "sand in the wheel" view (reduction in corruption increases economic activity). They complement their results with a firm-level analysis. Like the municipal level analysis, the firm level analysis is based on a comparison between firms involved in dubious government procurement ("corrupt firms") and similar firms operating in the same sector which are situated in never audited municipalities (control group). A dynamic difference in difference specification is used to show that corrupt firms who are audited perform better than the control group. Their results show that it is precisely those firms that rely on government (procurement) that benefit the most from the anti-corruption crackdown. Overall, the results of the paper consistently support the "sand in the wheel" argument, i.e. corruption acts as an institutional fail-

¹⁰Graetz et al. (1986) formulate a model with two income levels- one low and one high- which are randomly and independently distributed across taxpayers with some positive probability. The taxpayers are expected to report their income levels and pay taxes honestly. The high-income player has an incentive to under-report. The model also has a tax agency which collects tax revenue and can conduct an audit with a particular fixed cost. In case, there is a discrepancy found in the audit; the player ends up paying a fine. The model predicts a unique nash equilibrium for the probabilities with which a taxpayer with high income reports low income and a low-income report is audited.

ure, while suggesting costs and distortions to firms dependent on government as the primary channel through which corruption hinders overall economic growth and firm performance. Moreover they find no support of a politician selection channel (at local level) from audits but rather a disciplining channel.

3.4.1 Negative effects of audits

In contrast Lichand et al. (2016) find a negative impact of audits on health outcomes in Brazil. The main idea is that audits and the punishment from audits might lead bureaucrats to take fewer decisions and to reduce procurement. They analyse the effects of audits both on corruption within the health sector and on downstream outcomes in Brazil's health sector. Their data is on the incidence of corruption in health transfers between 1997-2007, captured extensively in the audit reports. They employ a difference in difference (pre and post audit, procurement related transfers vs other transfers) strategy to tease out the causal effects of audits on corruption in procurement related transfers in the health sector. Moreover they use the effects of announced audits on neighbouring municipalities to tease out the effects of announcement of audit vs actual audit. If officials react to audits in nearby areas, they attribute it to a behavioural response.

Results show that both corruption and procurement irregularities within health transfers came down as a result of the audit program in Brazil. On the other hand, public spending witnessed a decline, as a result of which infrastructure and medication suffered. At the same time, linked to the reduction in corruption, mismanagement rose, especially in problems linked to the stock of medication and quality of health infrastructure. Thus, the program brought about a reduction in procurement purchases, either because bureaucrats could no longer capture rents or because they were scared of being caught and punished. Consistent with the impact of the program on bureaucratic performance, a detrimental impact on the health indicators is also seen. A comparison between the indicators directly concerned with municipalities' health spending like preventable deaths to those that are not, like the deaths caused by external causes shows how the audit program, despite reducing corruption, considerably worsened the quality of health services over the long term. Overall the paper provides evidence that anti-corruption programs might have an adverse consequence for social welfare

4 Community Monitoring

Community monitoring is a part of the broader concept of community participation. Mansuri and Rao 2013 suggest that one way to look at community participation schemes is as a solution to "civil society failure" when people who live in geographical proximity to each other are unable to solve collective action problems. Thus local development policy acts at the intersection of market, government and civil society failures and success depends very much on local social and cultural context. In their survey, they find (1) Capture of the process by elites - higher incomes, better educated, better politically connected - is more likely when the community is remotely situated, is less educated, poorer and where there are high inequalities on social and economic indicators. (2) Projects located within existing government delivery systems seem to do better as the role of government in sustaining community participation is crucial to continued success. Projects are more likely to be successful when local governments are empowered and are downwardly accountable. (3) project design should be informed by political and social analysis in addition to economic analysis and should have robust systems of monitoring and evaluation.

Our survey however, is more focused on the third aspect i.e. community monitoring. Enhancing grassroots participation by enabling the community to monitor can sometimes improve upon top-down monitoring in curbing corruption for three reasons: recipients have better information on cor-

ruption, they have stronger incentives to watch the service providers in order to avoid any costs generated by corruption and higher non-monetary costs (the fear of social disapproval and sanctions) faced by the officials when their community monitors them (Ahmad et al. 2004, Bank 2007). Community monitoring has been interpreted in different ways in the literature- we interpret it as including (1) Information on service delivery by local governments (2) Training in monitoring.

Molina et al. 2016 is a meta-analysis of a 15 studies (until 2013) on a large number of Community Monitoring Interventions (CMI) including information campaigns, citizen score cards and social audits. They analyse the effects on corruption outcomes as well as service delivery. On average they find positive effects of CMIs in reducing corruption and improving service delivery but there is a lot of heterogeneity. The interventions that had the biggest impact seem to be those which aim at increasing citizen participation and specifically include tools to monitor politicians (e.g Olken 2007). Other reasons for failure include collective action problems - citizens may not participate due to lack of information about their entitlements (Banerjee et al. 2010), free riding incentives, pessimistic beliefs about the auditors incentives (Afridi et al. 2014), about the response of service providers or about the beliefs of other citizens to participate which may depend on the degree of inequality or ethnic fractionalisation (e.g. Björkman and Svensson 2010). We discuss these in detail later.

We use their classification of types of community monitoring schemes: (1) Information campaigns on what to expect from service providers including training on how to interpret the information and how to monitor providers (2) Scorecards or citizen report cards - providing quantitative evidence on delivery (3) Social audits which are like third party audits but conducted within the community via trained citizen auditors (4) Grievance redressal mechanisms such as complaint books and other means of feedback to government.

The main findings from community monitoring studies are discussed below.

4.1 Does community monitoring improve outcomes?

4.1.1 Information and training: Health service outcomes

This section focuses on two types of interventions: Information provision to the stakeholders and training and tools to help them use the information. The first such study showed how report cards on Performance together with community monitoring lead to changes in health outcomes. Björkman and Svensson 2009 (known as the P2P -Power to the People- study) analyses the impact of a randomised field experiment conducted in all four regions of Uganda on the quantity (as measured by daily patient registers, immunization cards etc.) and quality of health care provision by focusing on local community-based monitoring of public health care providers. Fifty public dispensaries, and the respective users of health care services in nine districts were randomly assigned into the treatment and control group. Two surveys of the selected sample were conducted to get primary data for the experiment- one before the intervention and one after the initiation of the project (a year later). Data on the weight of infants and under-5 mortality was also collected.

Each treatment facility and its community had a unique report card, through which information on the quality of services, comparisons vis-a-vis other health facilities etc. was disseminated based on the surveys in their areas. Local nongovernmental organisations (NGOs), called the community-based organisations (CBOs), promoted village and staff meetings. These meetings were crucial in making the communities in charge of establishing ways of monitoring the provider after a series of initial meetings.

A significant improvement in the weight of infants, decline in under-five mortality rate and higher utilisation of healthcare services was observed a year later, in the treatment groups as compared to the control group. These results imply that changes in quality and quantity of health care providers

can be attributed to the behavioural changes of the staff. The treatment communities became more involved and began monitoring the health unit extensively as a result of the intervention. In contrast to these positive effects of community monitoring on provider behaviour, in Brazil, Zamboni and Litschig (2018) had shown that top down audits did not improve health service delivery because of the lower punishments involved. ? go back to the field to study the long run impact of the intervention. They present evidence to show long run benefits of the intervention and also that a *crucial part of the intervention was the provision of information on performance*.

The results of the P2P study have recently been challenged by a larger study in the same setting of the Ugandan health sector (Raffler et al. 2019) and found modest positive effects on treatment quality and patient satisfaction over 20 months but no changes in utilisation rates or health outcomes used in the P2P study. Moreover they found that the effects of community monitoring were negligible by themselves but did have a significant impact on change when coupled with top down oversight. This might also plausibly be explained by very different (and improved) baseline measures.

An interesting study that shows how important it is to interpret outcomes with caution is that by Christensen et al. 2020 who look at West Africa's response to the Ebola crisis. Based on an experiment they run two years before the outbreak in Sierra Leone, they looked at two treatments aimed at improving the quality of service delivery by health workers - one was community monitoring and the other was status rewards for health workers. They found that while before the outbreak the quality improved, it also led to higher reporting of cases with lower mortality from Ebola.

4.1.2 Information and training: Education delivery outcomes

Banerjee et al. 2007 and Banerjee et al. 2010 focus on educational services in India. The paper describes the findings from a survey in a rural district in Uttar Pradesh, India. The authors survey village education committee (VEC) members¹¹, rural households, parents, and teachers, regarding the educational services and their own participation in the delivery of educational outcomes. VEC members were surveyed about the status of education services, the role of public action for improving outcomes, and parents perceptions about children's learning achievement. These interviews provide primary data for their experiment.

The survey shows that students between the age of six to fourteen were unable to do basic arithmetic operations, read simple texts and write a basic sentence correctly. Furthermore, teachers, parents, and VEC members do not seem to be fully aware of the range of the problem. Parents and VEC members are unaware of the essential roles they play within the academic system. The baseline findings of the survey point to a significant gap in knowledge regarding the status of education in the village.

Banerjee et al. 2010 then study the impact of public action campaigns on local participation in VECs and analyse whether information and participation in VECs improves the learning outcomes of children in the schools. Thus, the authors design three interventions and assess their impact on local participation and whether they can improve school functioning.

Pratham, a country level education NGO, evaluates and compares the results of the three interventions, designed to enhance community participation in UP. Pratham teams facilitated the village meetings and encouraged discussions as a part of the first intervention. They convinced village administrators to share information about the structure of local service delivery at these meetings. Pratham activists distributed pamphlets post meetings. These pamphlets described the responsibilities of VEC members and training of individual VEC members. The second intervention also provides the same

¹¹The VECs exist in every village in Uttar Pradesh. They consist of the elected head of village government, the headteacher of the government school, and three parents of students enrolled in government schools in the village.

information as the first one, along with the training of the community members to take a simple reading test for children. This intervention requested the community members to prepare report cards on the state of enrollment and learning in their village. The village-wide meetings involved the presentation of these report cards. The idea of this intervention was to provide citizens with tools to measure learning which could improve participation and effectiveness. The third and the final intervention included the first two and added the recruitment of one or more volunteers per village. They were given a week's training in a pedagogical technique for teaching necessary reading skills developed and implemented by Pratham. The trained volunteers were responsible for holding reading camps in the villages, with classes daily outside of school for two months. This intervention allowed individuals to improve learning among children directly.

The results from the evaluation of surveys conducted post interventions show that none of the intervention methods could lead to a significant increase in the involvement by any of the players (the parents, the VEC, the teacher). They failed to improve school performance (attendance of children and teachers or community participation in schools). It is hard to say why, because the mobilisation did not entirely fail. Almost everybody turned up for the meetings planned by Pratham. Moreover, the third intervention led to a massive volunteer mobilisation, followed by a great response by the parents outside the school system. The results from the third intervention show that teaching children how to read is not an impossibly difficult task. These results imply that, in the context of UP, providing information on the status of education and the existing institutions of participation alone is not sufficient to promote beneficiary involvement in public schools.

On a positive note, the results suggest that information combined with the offer of a right course of action can result in collective action and improve outcomes. There was a greater willingness of individuals to help improve the situation (via volunteer teaching) rather than collective action to reform institutions and systems. The authors suggest that this could be explained by pessimism on the part of community members in being able to influence outcomes. In the one part of the intervention that did not require official functionaries, they found positive results.

Following on from this study, Pandey et al. 2009 however run a community based information campaign on health and school performance from a cluster randomized control trial in 610 villages across three Indian states and find notable positive impacts on teacher effort, and delivery of entitlements with less effect on educational outcomes. They reach similar conclusions as Banerjee et al. 2010 in the delivery of final learning outcomes which is a puzzle since teacher effort went up and one year later they found an increased demand for services in U.P.

Andrabi et al. 2017 in contrast find that providing information on children's test scores relative to a mean test score across the village via report cards not only had positive effects on parental awareness about public school quality, leading to positive outcomes on learning as well as reduced prices for private school fees suggesting that *comparative* information on childrens' test scores within and across schools is useful in encouraging participation and accountability. Afridi et al. 2020 conduct a randomized report card campaign where contiguous village councils in the Indian state of Rajasthan are randomly assigned to either a control or one of four treatment groups in which student report cards on curriculum-based tests are provided to schools, parents or both. They find no changes in academic performance in public schools but student performance in private schools improves by one-third of a standard deviation when parents and schools can simultaneously place themselves in the distribution of scores in the community. There is no systematic change in performance for any treatment that involves only schools, or where households are not informed about the relative performance of all schools in the community. They reconcile the divergent findings of Banerjee et al. 2010 and Andrabi et al. 2017, suggesting that the design of information campaigns - i.e., ensuring common knowledge of relative (rather than absolute) school quality - *and provider incentives* can play a critical role in improving learning outcomes.

Barr et al. 2012 run a lab in the field experiment based in Ugandan schools to tease out the reasons why scorecards/informational interventions succeed in some cases but not in others. They find that treatments that encourage the community to develop their own goals and objectives/ plans on monitoring (designing the score cards) are more likely to succeed because they encourage cooperation, which they test using a public goods contribution game, and therefore improve collective action. They conclude that small changes in the design of participatory interventions can have large effects.

Pradhan et al. 2014 is an innovative RCT to improve educational outcomes in Indonesia by instituting elections to the school committee members and facilitating deliberations between committee members and the village council (linkage) in addition to the traditional ways of improving community participation such as grants and training. To the credit of the government in Indonesia they were able to experiment with institutional reform and found an increase in Indonesian test scores by 0.23 standard deviations for the elections and linkage intervention relative to insignificant effects from grants and training.

4.1.3 Which factors affect the efficacy of community monitoring

Björkman and Svensson 2010 builds on the P2P study to show that ethnically fractionalised communities did much worse than homogenous communities in generating participation and monitoring. Björkman Nyqvist et al. 2017 conducts a survey of the treatment villages after 4 years and finds persistent effects of the information treatment- they conclude that a necessary condition for building participatory community monitoring is to provide both information and the tools to use information to monitor providers (the traditional tools to encourage community participation).

How much do citizens actually participate in social accountability? Despite the hype, participative democracy and community engagement agendas may not be very useful if citizens are not empowered enough to make their views known. There may be many reasons for this- e.g. the bureaucrats responsible for encouraging such accountability are the ones who have the least incentives to do so. The large inequalities in status between different participants is another constraint. This question been studied by Parthasarthy et al. 2019 using natural language processing techniques on a corpus of village assembly transcripts from rural India. They find that women are significantly less likely to speak in these meetings, and conditional on speaking, much less likely to be heard. When women are leaders however this dynamic changes.

4.2 Monitoring and Corruption

Banerjee et al. 2018 studies the impact of providing information to targeted beneficiaries in a redistribution program in Indonesia. In a subsidized rice program they test the impact of providing information on whether they were eligible and on the amount of the subsidy they were entitled to. Eligible households received a 26% increase in subsidy despite imperfect implementation. Indeed, the more relevant information they gave (such as co-pay amounts) the better off the households were. Moreover when the list of eligible households was made publicly available, the benefits increased further. This study shows how design of information to recipients is important to reduce corruption.

Similar to this is the study by Fiall and Premand 2018 which also partners with the Inspectorate General (IG) of the Ugandan government to provide training in social accountability and provide information on project performance for the same large scale public development plan. The IG of Uganda is an independent arm of the government responsible for fighting corruption. Training was provided on how to monitor and report mismanagement while information was provided on the quality of services across different communities. They find that the combined effect of both the training and the informational treatment was significantly better than individual treatments. Moreover, they found

the impact to be much higher in the areas which local officials report as being highly mismanaged or corrupt.

4.2.1 Social Audits, Corruption and final outcomes

Social audit is a special form of community monitoring as it combines elements of top down audits with elements of community monitoring.

Since social audits have a long history in India starting with the MKSS (*Mazdoor Kisan Shakti Sangathan*, a voluntary organisation in Rajasthan in 1990, we focus first on a few studies based in India. Below we describe the process in some detail to show how it combines elements of information, community participation and top down audits.

Most studies of social audits focus on Andhra Pradesh, one of the large states in India which has had exceptional performance in conducting social audits. Although the efforts of a majority of states in carrying out social audits have been disappointing, the SSAAT (Society for Social Audit Accountability and Transparency) in Andhra Pradesh has successfully institutionalised this process (Aakella and Kidambi 2007, Aiyar and Mehta 2015). This arm of the department of rural development conducts regular social audits of MGNREGA projects in all districts of AP.

Social audit is a process of public vigilance which is held at least once in every six months in all the districts of AP with ongoing MGNREGA projects. The dates are announced thirty days in advance, in a quarterly calendar prepared by the State Government appointed bureaucrats called State Team Monitors (STMs). The eight to ten-day process includes informing (usually done by the STMs) the relevant *mandal*¹² in a district and organising a meeting later to inform the *mandal* about the next social audit in their villages. This is followed by the recruitment of at least five village social auditors, two of whom should be women, one from a lower caste group, and at least one MGNREGA worker, to carry out the audit. Completing a hundred days of work under MGNREGA is an important consideration while choosing the worker. The two-day training provides information about MGNREGA and the Right To Information Act which empowers citizens to get information from the state. The trained auditors, over the next three days, cross-verify the official labour and material expenditures and other irregularities like ghost projects by interviewing other labourers, inspecting the worksites and collecting evidence in case of any discrepancy. SSAAT equipped each *mandal* in AP with a computer centre. All the essential transactions like issuance of a work order, measurements of the work done, payment orders are supposed to be computerised (Singh and Vutukuru 2010). This makes for easy availability of information in a consolidated form.

The complaints and audit findings along with issues resolved at the village *panchayat* meeting find a place in the draft 'Decision Taken Format'. The final day of social audit ends with a *mandal* level public hearing to address the complaints and allow the accused individuals to defend themselves. The officials¹³, workers, village social auditors and other villagers attend this meeting. The meeting comes to an end with the finalisation of the Decision Taken Report (DTR). The concerned department/authority is supposed to take appropriate follow-up action over the complaints appearing in the DTR within the next seven days. The vigilance office then issues an Action taken Report (ATR) which lists the action taken against corrupt officials in the DTR.

Aiyar and Mehta 2015 use a large employment guarantee program in India (MGNREGA) to answer the question of effectiveness of social audits on reducing corruption. The sample consists of two

¹²A *mandal* is a subdistrict. It facilitates local self-government in the *panchayat* system.

¹³Officials like the Programme Officer (PO) and District Programme Coordinator (DPC) ensure that the required information and records of all implementing agencies are properly collated in the requisite formats and provided for auditing. They are also responsible for ensuring that time-bound corrective action is taken on the social audit report. They take necessary steps to recover the amount improperly utilised and issue receipts or acknowledgements for the amount so recovered

mandals-Medak and Papanappet out of which four villages were chosen. Three rounds of social audit reports between 2006 and 2010 along with the information on different types of complaints and details of officials with any background of complaints against them in the two *mandals* form a significant part of the data set. They also conduct interviews with MGNREGA officials at the village level and *mandal* level and social audit staff and a household survey with 206 labourers who were employed on MGNREGA.

The villages chosen witnessed a significant increase or decrease in the corruption levels across the three rounds of social audits. Indeed, fraud of around Rs 1410 million had been unearthed over the 7 year period out of which Rs 230 million has been recovered and 27% of the officials punished. The scale of punishments has been quite small and this has been attributed to administrative failure in the sense of different functionaries being accountable to different departments who do not coordinate or communicate. Their analysis reveals increased interactions and public pressure as a result of social audits which successfully contributed to increasing state accountability. There was a positive impact on the degree of enforcement, although not the elimination of wage-related thefts.

Even if not specifically focused on corruption, social audits may help to improve performance outcomes. Singh and Vutukuru 2010 carry out a similar analysis to study the impact of social audits on the size of MGNREGA as well as its payment process. The demand for MGNREGA drives its size, which means that the state has to employ all those who register for the scheme for up to 100 days. It is a wage employment program, and the guidelines make it clear that workers should receive their wages every week or not later than fifteen days of completion of work. The authors therefore look at timely payments by comparing the percentage of workers who received their payments on time (within 15 days) versus those with due payments. They also follow up on the change in these proportions after one round of audit, assuming that the impact would fully reflect in the next year. Fifty-five treatment *mandals* are selected based on the timing of the social audit. These *mandals* had a round of social audit in the latter half of 2006-07 (Dec 2006 to March 2007). This is followed by the selection of control *mandal* for each treatment *mandal*. The control *mandals* were the ones where social audit was conducted after September 2007, which means that they had no social audit in 2006-07.

The use of the difference in difference (DID) estimator allows the authors to isolate the impact of social audits which is otherwise difficult to do because the selection of *mandals* is not random. They compare the difference in performance before and after the social audits between the treated and control *mandals*.

The results show significant improvement in the person-days generated, which is a measure of the size of the program. However, social audits failed to have an impact on the proportion of timely payments. Singh and Vutukuru 2010 suggest that the high demand for employment from MGNREGA put enormous pressure on the delivery system for payments.

They also conduct a qualitative analysis followed by a quantitative one, to examine if social audits results are good indicators of the overall quality of program implementation in Andhra Pradesh (AP). The beneficiaries who participate in the audit in AP rate the program from -2 to 2 based on various aspects like maintenance of the muster rolls, financial irregularities and other such factors. These qualitative reports provide valuable inputs on the things which are usually missing in the quantitative reports like the performance of functionaries, maintenance of muster rolls etc. The final result is that social audits are indeed a vital tool in building social awareness, both the quantitative findings and the qualitative reports and that AP's social audit methodology can be replicated elsewhere in the nation, provided learnings are internalised, and political concerns are handled well.

Afridi et al. 2014 relates to some of the findings of Singh and Vutukuru 2010 and Aiyar and Mehta 2014. This paper uses a much larger sample to study the impact of social audits on employment generation and complaints on irregularities registered under MNREGA. Since audits are not randomly made, they rely instead on a strategy of changes in irregularities found by the audit teams over suc-

cessive rounds of audit for the same sub district. The original social audit reports (three rounds) from Andhra Pradesh (AP) are used for the years 2006-2010. The authors narrow down the sample to three hundred Gram Panchayats (GPs) in eight districts of AP¹⁴ where they focus on different types of complaints (related to labour, materials and provision of worksite facilities) and the program and employment expenditure under the program.

The dependent variables are social audit findings of a particular GP, and NREGA performance measures such as the program expenditure and employment generation in a GP while the independent variables are an audit variable¹⁵, *mandal* level dummies, year variable to capture linear trends and interaction of the year and *mandal* level dummies and a vector of time-invariant GP level characteristics. The regression estimates suggest an insignificant impact of social audits on both employment generation and the total number of irregularities. There is however a marginal and insignificant decline in the complaints related to the labour-related irregularity is found, it is matched by an increase in the material-related irregularities. Although social audits are useful in detecting irregularities, it is hard to say if they can help deter malpractice in any way. Thus, there is a need for a process which ensures follow up of social audit findings and punishes the transgressors strictly.

Afridi et al. 2020 then uses the same setting to ask if electoral punishment is a suitable deterrent to corruption. They use data on village elections in 2006 and data on irregularities over the 5 year electoral term of incumbent village heads. Similar to the findings of Avis et al. 2018 they find that not electoral punishment is not a sufficient deterrent- while the labour related irregularities respond to electoral competition increasing, the material related irregularities are not responsive. Moreover when elections are very stiff then even labour related irregularities go up.

5 Top Down v/s Social Audits

The first paper in this section makes a clear comparison between the two techniques and compares their final impact on corruption levels in Indonesia. Olken 2007 conducted randomised fields experiments for both top-down and bottom-up monitoring in six hundred villages for a year (September 2003- September 2004). The timing of the experiment matches the nationwide village-level infrastructure project (construction of roads) in Indonesia which allows Olken to randomly select villages who will be subsequently audited by the central government audit agency for their road project. The probability of audit for treated villages went up from 4% to 100%. The villages were informed regarding the audit treatment only when they received the funding for construction and before it began so that the project funding and design remain exogenous to the experiment. The first part of the experiment captures the impact of top-down or external monitoring. The second part of the experiment is further sub-divided into two smaller experiments. These experiments were designed to increase grassroots participation in the monitoring process and analyse the overall impact on corruption. The idea of the first sub-part of the second experiment was to encourage direct participation by sending out invitations to the village level accountability meetings where the project officers account for how they spend the project funds. The second part added anonymous comment forms which were distributed alongside the invitations to meetings¹⁶. The idea was to allow villagers to convey information related to the project without any fear. Of course note that if numbers in a village are small, anonymity might not be perfect even with such forms. Two different forms of distribution of forms were used- one where the village government distributed forms and one where the schools did so.

¹⁴These eight districts were Mahbubnagar, Medak, Nizamabad, Warangal, Khammam, Anantpur, Kurnool, and Guntur

¹⁵The first round of audit is considered as a reference point.

¹⁶The comment forms were filled by the villagers and submitted before the village meetings. They were summarised and read out during the meeting

The process of data collection involved four different surveys: a key-informant survey, a meeting survey, a household survey and a final engineering field survey. These surveys ¹⁷ helped estimate the project cost of constructing a road in a village. A comparison between the estimated amount and the officially recorded amount ¹⁸ gives an estimate of the percentage of missing expenditures, which is the dependent variable.

There is a significant reduction in missing expenditures associated with external monitoring (first experiment). However, the evidence suggests that it was more the threat of audit than the audit itself that had the effect since the audit reports were mainly on procedural issues rather than corruption per se. The second experiment (two sets of the experiment to enhance grassroots participation) was successful in gearing up community participation in the monitoring process. However, the change in the attitudes of villagers in treatment villages did not translate into a reduction in missing expenditures. What was striking however was that the reduction in missing labour expenditures but had no effect on missing materials expenditures. Olken speculates that distribution via schools bypasses the local government and also keeps a check on the village elites to ensure that they do not direct the funds to their supporters. Thus, for bottom-up monitoring to lower corruption it is important to prevent elite capture and problems of free riding in monitoring.

Another paper which captures the effectiveness of a combined accountability system (bottom-up monitoring can trigger top-down auditing) is by Serra 2011. The bribery experiment ¹⁹ in the paper captures the strategic interaction between private citizens and public officials for the provision of a public good under different (anti-) corruption systems like no monitoring, top-down auditing (external controls in the form of a fine applied with a low probability) and combined monitoring (citizens report corrupt officials which leads to top-down auditing). The game is played by a total of 180 Oxford University students where they randomly take up the roles of private citizens and public officials in groups of fifteen and fill a questionnaire after participating in the experiment. Public officials have a choice of demanding or not demanding a bribe from the private citizens, and if they choose to demand it, they can also choose to demand any bribe amount they wish. The private citizens also have the option of deciding whether and how much to pay as a bribe. The payoffs generated by a bribe make the briber and the bribee better off making others in the society worse off.

The analysis of data collected from the questionnaires shows that combined monitoring reduces bribe-demanding behaviour by the public officials in the game which ultimately lowers corruption. In contrast, top-down auditing alone does not significantly reduce the officials' tendency to demand bribes. Suggested explanations include the extra risk of social approbation with the bottom up method, the risk of betrayal by the bribe giver and erroneously ascribing higher probabilities to being caught. This result provides a preliminary evaluation of different policies by suggesting that a system in which bottom-up monitoring triggers top-down auditing (with some probability) could be efficient in curbing corruption.

6 Conclusion

This survey has presented some of the seminal and recent research on monitoring both by third party audits and social audits. The main findings from the literature can be summarised as follows: Top down audits have been found to causally reduce corruption in Brazil via electoral accountability- in-

¹⁷A team of engineers were hired to dig samples in each road to estimate the quantity of materials used in constructing a road. Similarly, another team of surveyors estimate the price of materials used and wages paid by interviewing local suppliers and villagers.

¹⁸Records of the amount spent by the village while constructing a road

¹⁹It is easier to measure corruption directly through lab experiments.

cumbents who are corrupt are less likely to be re-elected and this motivates them to reduce corruption. Past audits reduce corruption not only when the electoral punishment is higher but more so when judicial punishment is used. However, in Puerto Rico, anticipated audits did not significantly reduce corruption- audits seem to lead to a selection of more competent politicians rather than more honest politicians. The type of public service also matters- procurement responds more to audits due to the presence of clear rules and regulations in procurement, more discretion in the use of funds, as well as higher punishment for violators. In contrast, in services where punishment is lower and the financial aspects of irregularities is lower (absenteeism rather than outright theft), audits have less of an effect on corruption. Audits might also have negative effects when they lead to demotivated bureaucrats.

The findings on social audits are less clear. In India social audits have had positive effects in reducing some types of irregularities, where stakeholders are directly effected but in terms of performance outcomes the jury is still out. In terms of more broadly defined community participation, there have been mainly two types of interventions studied in the literature: Informational treatments and information with tools to encourage participation. Results have confirmed that collective action problems are pervasive, agents who are not empowered do not engage unless they have some control on the final decisions. More fractionalised groups have more severe problems and even within groups, women are less likely to speak up. Elite capture and intimidation by elites is another important problem. As in top down audits, successful social audits may also lead to worse outcomes when there is too much interference in the working of the service providers. The role of project design has also been highlighted as a potential policy response to the heterogeneous effects of community monitoring- less complex tasks may respond better to community monitoring. This insight carries over to the work on combinations of top down and social audits.

Hollyer 2012 is a thoughtful review of the shortfalls of experimental and quasi experimental literature on both top down and bottom up monitoring. A review of the existing literature indicates that both top-down and bottom-up anti-corruption interventions are successful in some instances and fail at some. The author points out that in fact despite causality being established credibly in many interventions, the causal chains are quite long and it is therefore hard to identify why the intervention worked in some conditions but not in others. Variation in formal and informal institutions may affect the effectiveness of such interventions. The effectiveness of both types of interventions is dependent on the composition of institutions which regulate the relationship between politicians, bureaucrats, and citizens. The competitiveness of political contestation, nature of civil service rules and independence of oversight institutions are some of the crucial ones. The efficiency of the attempts to combat corruption is contingent on factors that tend to vary across countries, regions, municipalities, and villages. Thus, the author suggests two ways of overcoming the problems faced in measuring the nature of the impact of anti-corruption interventions. The first is a design-based approach. Theory can supervise experimental design and case selection to allow for stronger tests of the effects of the treatments. The second involves meta analysis or aggregation across multiple studies.

We end with some open questions for further research. One question for both top down and social audits to resolve is the gap between finding irregularities/corruption and finding improvements in outcomes which are the ultimate goals of audit- not only did studies fail to find effects on outcome variables, sometimes they found them in the wrong direction. Understanding the conditions and processes for which top down audits work well and those under which social audits work well seems a first order question. This is especially important as many SAIs are moving towards a system of outcome oriented audits. Secondly, the literature on the efficacy of audits in relation to punishments is sparse, this may also be related to which types of processes are more suitable for top down audits. In the case of community monitoring there is a much greater wealth of information on outcomes while in top down audits there are only limited studies most of which are focused on South America with heavy representation of Brazil! This may be due to the fact that it is much easier to get NGOs to collaborate on research than Supreme Audit Institutions. The most promising lines of enquiry here seem to be

on the composition and design of audit teams when the objective is to get representation, voice and impact. Similar to top down audits, here too outcome orientation is important.

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