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Enforcement in Value Added Tax

Is third party
verification effective?



Shekhar Mittal
Aprajit Mahajan

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Enforcement in Value Added Tax: Is Third Party Verification Effective?*

Shekhar Mittal[†] Aprajit Mahajan[‡]

March 22, 2017

Abstract

A key stated advantage of the value-added tax (VAT) is that it allows the tax authority to verify transactions by comparing seller and buyer transaction reports. However, there is little evidence on how these paper trails actually affect VAT collections particularly in low compliance environments. We use a unique data set (the universe of VAT returns for the Indian state of Delhi over five years) and the timing of a policy that improved the tax authority's information about buyer-seller interactions to shed light on this issue. Using a difference-in-difference strategy we find that the policy had a large and significant effect on wholesalers relative to retailers. We also document significant heterogeneity with almost the entire increase being driven by changes in the behavior of the largest firms. We also find suggestive evidence that information and enforcement are complementary. Finally, we discuss the details of the policy implementation and argue that this policy which seems simple in principle, faces substantial hurdles in execution, particularly in a system with limited resources. JEL codes: H26, H32, O38

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[†]Anderson School of Management, UCLA; 110 Westwood Plaza, C502, Los Angeles, CA 90095. shekhar.mittal@anderson.ucla.edu

[‡]Dept. of Agricultural & Resource Economics, UC Berkeley, Giannini Hall, Berkeley, CA 94720-3310. aprajit@gmail.com

1 Introduction

Improving the state’s ability to tax effectively is increasingly seen as central to the development process,¹ and the value added tax (VAT) has been proposed as a key tool towards accomplishing this goal. However, micro-empirical evidence on its effectiveness is relatively limited.²

VAT is a broad-based tax levied at multiple stages of production (and distribution) with taxes paid on purchases (inputs) credited against taxes collected on sales (output). Firms collect taxes on sales (output tax) and claim credits for taxes paid on purchases (input credits). Thus, revenue is collected throughout the production chain (unlike a retail sales tax) but without distorting production decisions (unlike a turnover tax).³ Note that credits can only be claimed for purchases from registered firms which is an important qualification in a low compliance environment (e.g. India) where many firms are not. Finally, by requiring both sides of a transaction to report the transaction and providing them with opposed incentives, VAT has also been viewed as a tool to improve collections.

In this paper we evaluate the impact of a policy that increased the tax authority’s information about firm transactions. The VAT was introduced in Delhi in 2005. However, until the first quarter of 2012-13 (Year 3 of our data) firms were only required to file a single aggregated return (known as a consolidated return). The consolidated return contained no information on firm-level transactions so the tax authority could not match buyer reports with the corresponding seller reports using these consolidated returns. They could only do so by instituting an audit and requesting this information from the audited firm and all firms it had transacted with. Starting in 2012-13:Q1, all registered firms were mandated to file additional, detailed information about transactions with other registered firms. Specifically, firms were required to provide information on all purchases made from registered firms and include their tax identification numbers. Similar information also had to be provided for all sales to registered firms. The tax authority could now relatively easily cross-check information provided by registered buyers with the information from corresponding registered sellers directly on its own servers without initiating an audit. In case of a mismatch between buyer and seller reports, automatic notices are now sent out to both firms who are then required to amend their respective returns so that they are in agreement. These notifications mark the first time that third-party information was used in a systematic way by the tax authority

¹Besley and Persson (2013)

²Pomeranz (2015) and Naritomi (2016) discussed below are notable exceptions.

³International Tax Dialogue (2005)

and is likely to become more common world-wide. The intended goal of the policy was to reduce evasion by reducing input credit claims, increase output tax liability and thereby improve tax collections.

Anecdotal evidence (from bureaucrats, accountants, and firm owners) suggests that tax evasion is quite high in Delhi (and India more generally) and firms report only a fraction of their revenues (conventional wisdom holds this to be around one-third). In such a low compliance and limited enforcement environment where many firms remain unregistered – and hence are not in the tax net, it is not clear whether one should expect the reforms described above to be particularly effective. Collusion between buyers and sellers can attenuate the power of the opposed incentives, particularly if the revenue disclosed to the tax authority is itself a choice variable.

We evaluate the effect of the policy by focusing on wholesalers and retailers. On the purchase (input) side both wholesalers and retailers face comparable incentives. Both can claim input credits only if they make purchases from registered firms and post-reform these claims can be checked against the corresponding counter-claims relatively easily on the tax authority’s server. However, by virtue of being higher up in the production chain a wholesaler is more likely to sell to registered firms whereas a retailer is more likely to sell to final customers – who are observationally equivalent to unregistered firms and from whom no verification is possible.⁴ Therefore, on the output side, the self-enforcing mechanism of the VAT is more likely to break down for retailers relative to wholesalers. As a result, we would expect the policy to have a stronger effect on wholesalers relative to retailers. Using a difference-in-difference strategy we show that the policy led to a 49.3% increase in average tax collections from wholesalers. This increase was largely driven by an increase in output taxes collected by wholesalers with no differential reduction in input credits.

However, focusing on averages masks significant heterogeneity, about 90% of the increase in collections comes from the top 1 percent of the wholesalers (ranked by money deposited at baseline). A potential explanation lies in the structure of the tax authority monitoring mechanism and the low compliance environment. 96% of the top 1 percent of wholesalers are monitored by a special tax unit called the Key Customer Service (KCS) ward which focuses solely on high value taxpayers. We do not find a comparable increase in tax collections for the top 1 percent of retailers – 80% of these firms are also monitored by the KCS but unlike wholesalers the bulk of their sales are to unregistered firms (equivalently final consumers). This suggests that targeted state capacity by itself may be insufficient but when combined

⁴See [Naritomi \(2016\)](#) for an innovative program in Brazil that attempted to address this problem.

with increased information can improve collections even in a low compliance environment.⁵

Economists are increasingly focused on policy execution details to better understand the frequent slippage between stated intentions and on-the-ground implementation. The richness of our data allows us to investigate the implementation details of this verification policy and its effects on tax filing effort. First, we find that firms are substantially more likely to revise their returns after the policy and it seems reasonable that, at the very least, firms' tax filing efforts have increased. Finally, details of the execution mechanism matter. In the first year of the policy, firm returns were not required to be internally consistent in that the amounts reported on the consolidated returns were not matched by the server against (the sum of the) corresponding firm level amounts reported in the disaggregated returns (the annexures). As a result, the consolidated returns and the transaction data do not coincide and, perhaps expectedly, firms claim more credit in the aggregated returns than is justified by the more disaggregated information provided in the annexures. The authority subsequently subsequently rectified the oversight (in year 4 and 5 of our data) by forcing internal consistency before accepting returns. To the best of our knowledge, this is the first time such implementation details have been analyzed in this fashion rendering it somewhat difficult to compare it to implementation specifics in other contexts but our results are consistent with the idea that even relatively small details matter for policy success, particularly in low compliance environments.

The remainder of this paper is as follows: Section 2 reviews the relevant literature, section 3 provides background of the VAT in Delhi and the policy change of interest, section 4 describes the data, and section 5 describes the empirical strategy. Section 6 presents our results with the analysis of VAT collections in Delhi as well as the effect of the third party verification policy. In section 7, we describe some relevant stylized facts of the policy implementation and section 8 concludes.

2 Related Literature

Researchers have argued that VAT is harder to evade than a general sales tax⁶ for several reasons. First, invoices are submitted by both "intermediate good" purchasers and input sellers and this provides a reliable audit trail to tax authorities who can cross-check buyer reports against seller reports. Second, the VAT has a self-enforcing aspect as an input

⁵ See [Almunia and Lopez Rodriguez \(2015\)](#) for a related discussion

⁶e.g. [Agha and Haughton \(1996\)](#).

purchasing firm has an incentive to request an invoice in order to claim tax credits and reduce its tax burden. Finally, taxes are collected at all stages of production rather than only at the retail level (as in sales tax) which is thought to render VAT less vulnerable to evasion relative to a single point of sale tax. These arguments have proved compelling to policy makers and VAT has expanded rapidly world-wide with about 150 countries currently deploying this system (India introduced it in 2005). Despite this rapid expansion, there is limited micro level research on whether and how a VAT system alters firm incentives and whether tax collections do indeed increase.

In an influential paper, [Pomeranz \(2015\)](#) uses a randomized experiment in Chile that increases the perceived audit probability for a group of treatment firms. She finds that the treatment had a much smaller effect on firms with paper trails relative to firms without such trails. We view our work as complementary in several ways. First, Pomeranz’s experiment holds the tax authority’s information set constant⁷ while increasing the audit probabilities (or the perception of such probabilities) while our study holds the audit probabilities constant changing instead the information set available to the tax authority. Second, as Pomeranz notes Chile has one of the highest tax compliance rates world-wide while our study takes place in a low compliance environment. This difference in contexts potentially helps explain some of the differences in our results – e.g. for larger firms – as we discuss below. Third, the policy change in our study is a permanent change in the tax-regime which may result in different firm responses and we are able to examine resulting changes at a two-year horizon.

[Almunia and Lopez Rodriguez \(2015\)](#) show that firms in Spain strategically bunch below a regulatory threshold to avoid stricter tax enforcement and argue that the bunching response is stronger in sectors with richer paper trails, suggesting that the effectiveness of monitoring effort is higher when tracing firms’ transactions are easier. Our effects, consistent with this argument, are driven in large part by the increase in tax collections from the top 1% of wholesalers who, as noted earlier, are near-universally monitored by a special government cell.

In addition, our work is also related to the recent literature on third party verification. [Carrillo et al. \(2016\)](#) find that when notified about revenue discrepancies in their corporate income tax returns, firms increase reported revenues, matching the third-party estimate when provided. However, they also increase reported costs by 96 cents for every dollar of revenue adjustment, which then results in only a minor increase in tax collection. Similarly,

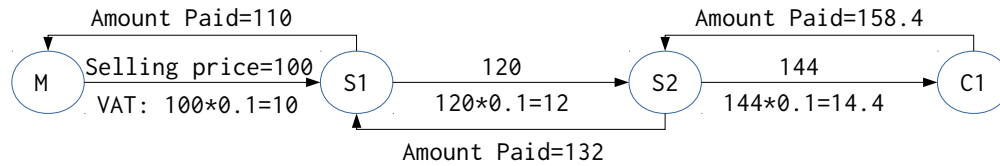
⁷In terms of cross-checking ability the Chilean tax-regime was the same as the pre-policy regime in Delhi. The Chilean tax authority could only cross-check buyer and seller reports accurately via an audit (except for a small fraction of firms filing on-line).

Slemrod et al. (2015) investigate the effect of providing credit card sales information to the Internal Revenue Service for small businesses which operate as sole proprietorships. They find that this increased reported revenues by 24%. However, taxpayers offset the increased receipts by increasing reported expenses, a margin which is not reported – and thereby reduced taxable income. Kleven et al. (2011) conduct large field experiments in Denmark and show that tax evasion rate is close to zero for income subject to third-party reporting, but substantial for self-reported income. Then, using the large kinks present in the income tax schedule, they find that marginal tax rates have a positive impact on tax evasion for self-reported income. Finally, they find that prior audits and threat-of-audit letters have significant effects on self-reported income, but no effect on third-party reported income. In an earlier paper, Slemrod et al. (2001) sent out audit threat letters to a group of taxpayers in Minnesota and found increased tax payments compared to a control group. Similar to the latest papers, this result was driven by taxpayers that had self-employment or farm income. A common theme across these papers is that firms are often able to circumvent monitoring policies by changing behavior along margins not visible to the authorities. Therefore, the eventual intended effect of the monitoring policy on tax collections is relatively muted. Our work is related to this literature since the policy change we examine has differential effects on firms whose activities are less visible to the authorities relative to firms whose transactions are more visible and that in addition firms can use a margin unavailable in high-compliance environments – selling to unregistered firms.

3 Background

We next outline a simple example to explicate the working of the VAT to highlight features relevant for a low compliance environment. Consider a production chain as outlined in Figure 1 consisting of four firms – starting with M at the “top” of the chain on the left through to the final customer C1 at the “end” of the chain. Under a standard sales tax regime with a tax rate of 10%, M and S1 do not collect any tax. C1 pays \$14.4 (10% of 144) to S2 as tax and S2 is presumed to deposit the entire amount to the tax authority. Now under a VAT regime, M collects \$10 in tax from S1 (10% of 100), S1 collects \$12.2 in tax from S2, and S2 will collect \$14.4 in tax from C1. Finally, M1 will deposit \$10 to the tax authority. S1, however, will declare that it has already paid \$10 as tax to M1 and will deduct that amount from the \$12.2 it collected and will deposit only \$2.2, and similarly, S2 will deposit only \$2.4. The amount that should finally be deposited to the the tax authority is still \$14.4.

Figure 1: Toy Model



	M	S1	S2	Sales Tax(S2)
Selling Price	100	120	144	144
Input Credit	0	10	12	0
Output Tax	10	12	14.4	14.4
Net Tax	10	2	2.4	14.4
Total Tax			14.4	14.4

An illustrative example describing how a value added tax system is different from a sales tax regime. Both the systems are revenue equivalent. In a sales tax system, the tax revenue is collected only from the point at which sales are made to the final customer. However, in a VAT system, the revenue is collected across all stages of production.

Therefore, in a system with full compliance, the VAT system generates the same tax revenue as a standard sales tax.

There are two key points worth emphasizing here. First, S1 (and S2) gets a "tax credit" (also called "input credit") only if M (and S1) is registered with the tax authority. This, theoretically, should push firms which sell to registered firms to register themselves and thereby reduce informality in the system. However, in practice the effectiveness of this incentive is far from clear given the difficulties faced by developing countries in monitoring the VAT system⁸ and in persuading firms to become formal. In such a situation, every node in the chain can plausibly claim to transact with unregistered firms which drastically reduces the authority's ability to cross-check reports. Second, as is standard in VAT systems, each firm has incentives to under-report sales and to over-report inputs so that a buyer and the

⁸Bird et al. (2005).

corresponding seller have opposed incentives. For example, in the transaction between M and S1, M has an incentive to under-report the transaction to avoid transferring to the state any tax it has collected while S1 wants to report the entire amount as a tax credit. Therefore, S1's incentives should act as a check on behavior of M particularly if the tax authority can credibly commit to cross-check S1's reports with M's reports.

In practice, there are many challenges in designing such a system effectively particularly in low-compliance environments. Since returns are self reported, a strong cross-checking and auditing system (or at least a system that is perceived as such by firms) is important, particularly in environments where off-the-book transactions are pervasive and firms may collude with each other. In terms of the example above, firms at each step in the production chain can sell to unregistered firms at which point the third-party verification system breaks down. Further, two registered firms can collude to report the entire transaction as being one between unregistered firms which will also be difficult to detect.

3.1 VAT in Delhi: Policy change

From 2012-13:Q1 (year 3 of our data) firms were required to file two annexures in addition to their usual consolidated returns (which is referred to as Form 16, [Appendix A](#)). The main change for our purposes is that the additional forms required firms to provide transaction details (i.e. sales and purchase information) disaggregated at the firm and tax-rate level⁹ for all registered firms.

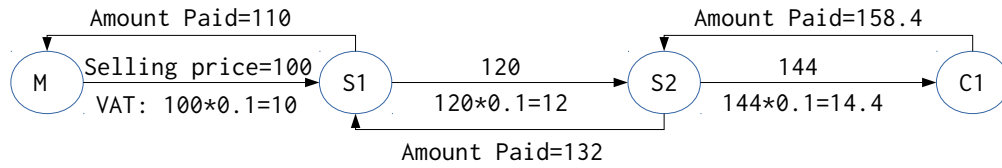
One annexure (known as Form 2B) recorded all firm sales in the past tax period disaggregated at the buyer level for each tax rate. The second annexure (known as Form 2A) recorded purchases also disaggregated at the seller level for each tax rate (refer to [Appendix B](#)). All firm level entries in Forms 2A and 2B had to include the tax IDs of the firms involved in the transaction thus enabling the tax authority to easily cross-check reports. The only across firm aggregation that was permissible was for unregistered forms (i.e. firms with no Tax-IDs) who are also observationally equivalent to final consumers. The new forms meant that for the first time the tax authority could cross-check buyer and seller reports (for aggregated transactions) from the submitted returns alone (i.e. without having to resort to an audit).

To continue our illustrative example (see [figure 2](#)), M would now have to report total sales (\$100) to S1 and total tax collected (\$10) in its sale annexure (or 2B). The purchase

⁹Different commodities are taxed at different rates. Firm A reporting transactions with Firm B would group together all transactions for commodities taxed at the same rate into a single transaction report.

annexure (or 2A) of M would be blank since it did not have any purchases from registered firms. Form 2B for S1 in turn will record total sales to, and total tax collected from, S2 and in its 2A will record total purchases of \$100 from M and tax paid to M of \$10. Finally, Form 2B for S2 will record total sales made to final consumers (equivalently unregistered firms) and will record total purchases made from S1 (and taxes paid) in its 2A.

Figure 2: Third party verification



	SOLD TO	PURCHASED FROM
M	S1	NOT VERIFIED
S1	S2	M
S2	NOT VERIFIED	S1

Description of information declared by firms. For example, M will have information about S1 in its SOLD TO annexure and will have no information in its PURCHASED FROM annexure. Correspondingly, S1 will declare information about M in its PURCHASED FROM annexure, which can be used to verify sales made by M.

With this change to the filing system, M's report of sales to S1 (in M's sales annexure) can now be directly compared to S1's report of purchases from M (in S1's purchase annexure). Similarly, S1's sales annexure can now be matched to the purchase annexure of S2. Note that under the new policy the ability to cross-check breaks down at the end of the supply chain – the sale records of S2 can not be verified against any other reports – or more generally whenever a registered firm reports transactions with unregistered firms. In terms of our

subsequent identification strategy we make two points: first, any input credit claimed by M will generate a discrepancy when cross-checking since no registered firm reports any sales to M. Second, S2's sales to final customers continue to remain unverifiable.

The requirement of these additional annexures significantly improved the state's information capacity to cross-check firm reports. Before the policy change, from 2005-2012, firms did not have to provide firm-level reports of purchases or sales but instead were only required to report total sales aggregated across all registered firms (and total sales aggregated across all unregistered firms) and correspondingly total purchases aggregated across all registered firms (and the corresponding figure for unregistered firms). They were required to maintain firm-level information for their own records in case of an audit – though based on the audit notice data that we have, probability of getting audited is extremely low (less than 1%).

4 Data

We have detailed tax data from the government of New Delhi for 5 years (from 2010 to 2015) which we describe in greater detail below.

4.1 VAT returns

We have de-identified VAT returns for the entire universe of registered firms for 5 years - 2010-11 (Y1), 2011-12 (Y2), 2012-13 (Y3), 2013-14 (Y4), 2014-15 (Y5). While the firms have been de-identified so we cannot link them with any publicly available data, they are assigned identifying numbers so that we can follow a firm over time as well as track its presence in other firms' returns.

The data contains detailed information on the line items in the returns which are Form 16 throughout the study and after 2012-13:Q1 the Form 2A and Form 2B (refer to [Appendix A](#) for details). For the purposes of this paper, we use the following information from the Form 16 (which is available for all 5 years):

1. Total turnover (sales) disaggregated by destination – (i) local (within state) sales and (ii) inter-state or international sales. Note that total sales include sales to both registered and unregistered firms.
2. Total tax collected by the firm from local sales – this is referred to as the output tax liability. This is a tax liability and needs to be deposited with the tax authority after adjustments (deduction of input credits).

3. Total purchases disaggregated by destination – (i) local (within state) sales and (ii) inter-state or international purchases. Only local purchases are eligible for claiming input credits.
4. Total tax paid by the firm on local purchases from registered dealers – this is referred to as the input tax credit. The input tax credit is subtracted from the firms’ output tax liability when computing tax due.
5. Total purchases ineligible for tax-credit (e.g. purchases from unregistered firms) in aggregate form. Such transactions are not eligible for tax credit.
6. Finally, the total tax paid by the firm to the tax authority.

Each category of information is further broken down by tax-rates (since different goods are taxed at different rates) and additional information such as penalties, past tax credits and liabilities, is also available.

For the three post-reform years (Y3, Y4, Y5) we also have firm level quarterly information on sales and purchases from Forms 2A and 2B as described earlier ([Appendix B](#)). For each quarter and each tax-rate, sales made by a firm are disaggregated at (registered) firm and tax-rate level, and likewise purchases are disaggregated at (registered) firm and tax-rate level. Therefore, for each firm, items (1)-(4) are available at the firm and tax rate level.

4.2 Firm characteristics

In addition to tax return information we also have basic information provided by the firm at registration. We observe the date of registration, the revenue ward (i.e. the broad, largely, geographic categorization of the firm for revenue purposes), the nature of business (classified as manufacturer, wholesaler, retail trader, exporter, importer, interstate seller, interstate purchaser etc.), the legal status of the business (e.g. proprietorship, private limited company, public sector undertaking, government corporation) as well as the other tax schemes and acts the firm is subject to (e.g. the central excise act, service tax) and whether it is registered for international trade (import or export).

4.3 Audit notices

We have information (for Y4 and Y5) on which firms received audit notices. These dated notices identify the targeted firm and are usually the first step in a sometimes lengthy audit

procedure. We use this information to quantify the extent to which the tax authority checks on problematic returns.

In this paper we limit our analysis to firms present throughout the period of study. This sample, however, comprises 85% of all firms present in year 1 and 95% of all tax revenues in year 1. Thus, the sample consists of the near universe of revenue generating firms. (Refer to [Figure 3](#) and [Figure 4](#)). This means that we do not address the effect of the policy on firm entry and exit decisions (though we carry out a limited analysis of firm exit for those firms in Y1 that are present throughout the study).

5 Empirical strategy

We adopt a quasi-experimental approach to examine the effectiveness of the increased information available to the tax authority. In particular, we identify two groups of firms that appear to be evolving comparably prior to the policy but which are differentially affected by it.

5.1 Identification: Wholesalers vs Retailers

Compared to wholesalers, retailers are much more likely to sell to final consumers and conversely wholesalers are much more likely to sell to registered firms. The change in information requirements should therefore affect the two differentially. In particular, post-policy the tax authority can easily cross-check wholesaler sales to registered firms whereas previously this would only occur in the event of an extensive audit process. On the other hand, sales made by retailers to final consumers should remain unaffected by the policy change. On the other hand, purchases by both types of firms from registered dealers should be affected equally. This simple argument suggests then that if wholesalers find it harder to understate sales, then we should expect an increase in taxes paid by wholesalers driven by an increase in output tax liability.

5.2 Model

The main outcome variable is the amount of VAT deposited. However, as is typical in these settings the dispersion in tax deposited is quite large (refer to [figure 5](#)).¹⁰ At the same time a high percentage (roughly 49%) of firms have zero VAT deposits. This implies that the mean

¹⁰[Pomeranz \(2015\)](#) find similar dispersion.

may not be a representative measure of central tendency and mean regression estimates may be sensitive to outliers. We address this concern by using alternative outcome variables and estimation methods (in addition to using standard mean regressions). Specifically, we also look at linear probability models using an indicator variable if the VAT deposited is larger than two thresholds: (1) zero (for the extensive margin results), (2) VAT deposited in the same time period of the previous year (if filed quarterly) or VAT deposited in the previous year (if filed annually). In addition we also use quantile regressions and tobit type models (although incorporating fixed-effects for a large set of firms is a computational challenge for both methods) and also estimate regression models over sub-samples. Finally, for strictly positive VAT outcomes we can also use a logarithmic transformation though we lose all firms that deposit no VAT.

We estimate the following regression function:

$$y_{it} = \alpha_i + \nu_t + \beta * \text{Post}_{it} + \gamma * \text{Post}_{it} * \mathbb{I}\{\text{Wholesaler}_i\} + \epsilon_{it}$$

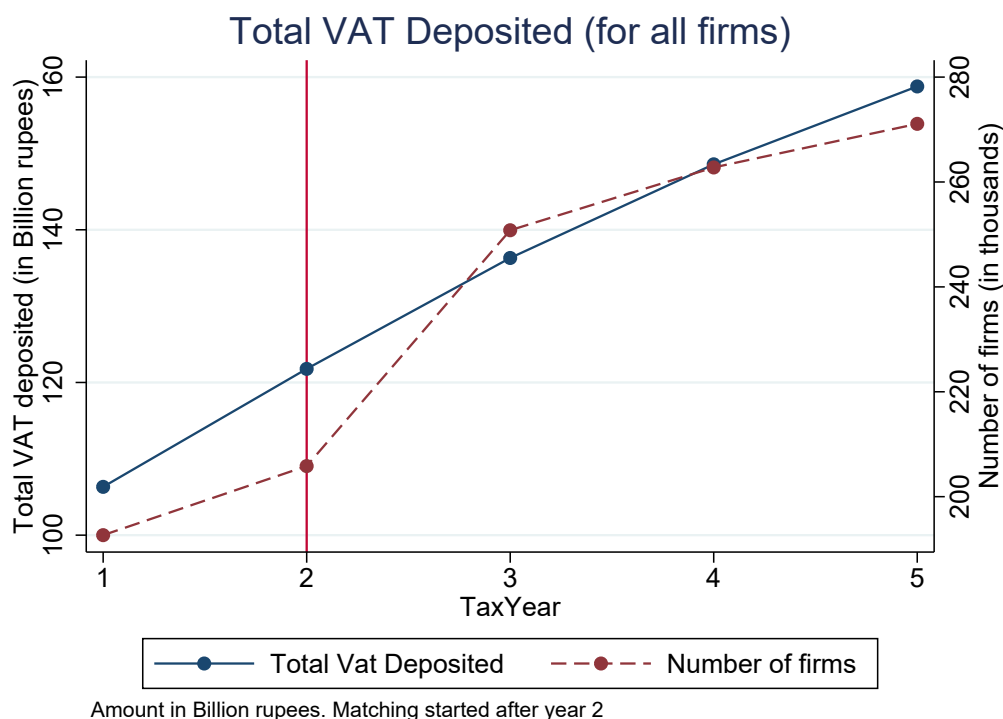
We restrict our analysis to firms who self-report as being exclusively wholesalers or retailers and are present throughout the 5 year period. Post_{it} is equal to 1 if the observation for firm i comes from years 3,4 or 5 (the post-policy period). Wholesaler_i is a binary variable equal to 1 if firm i self-reports as being exclusively a wholesaler and 0 if the firm self-reports as a retailer. The ν_t are a full set of time dummies and α_i are firm fixed-effects. The main outcome variables of interest are (a) an indicator for whether the firm deposited any positive amount of VAT, (b) an indicator for whether the VAT deposited was greater than VAT deposited in the same time period last year. (c) the amount of VAT deposited. To dig deeper into whether the effect of the policy is coming from the input side (i.e. by reducing input tax credits) or from the output side (i.e. by increasing the output tax liability) we also estimate regressions using input credit claimed and total output tax liability as outcomes. The object of interest is the coefficient γ which (under the no parallel-trends assumption) captures the differential effect of the policy on wholesalers. Throughout, We cluster standard errors at the firm level.

6 Results

6.1 Overall analysis

In this section, we describe the distribution of the firms registered in the Delhi VAT system. In [Figure 3](#), we plot the total VAT collections and the total number of firms registered for VAT across the 5 years.

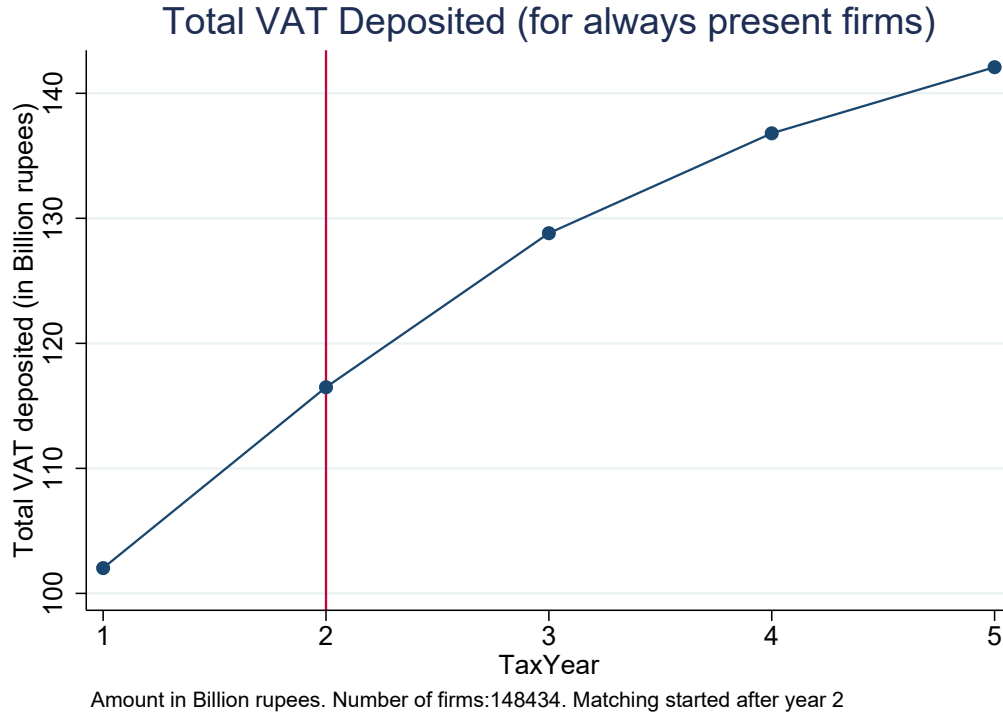
Figure 3: Total VAT deposited (for all firms)



The information (or third-party verification) policy was implemented at the beginning of year 3. We note that the number of registered firms go up sharply after the policy change while average collections per firm actually decrease. VAT deposits increase from 106.33 billion rupees in year 1 to 158.77 billion rupees in year 5. This is an average annual growth rate of 8.34% in nominal terms as compared to a nominal state level GDP growth rate of about 15%.

In [figure 5](#) and [figure 6](#), we plot the Lorenz curves for total turnover, VAT deposited, and a dummy for firm depositing a positive amount of VAT. Across the years, inequality is

Figure 4: Total VAT deposited (for firms that are present in all years)

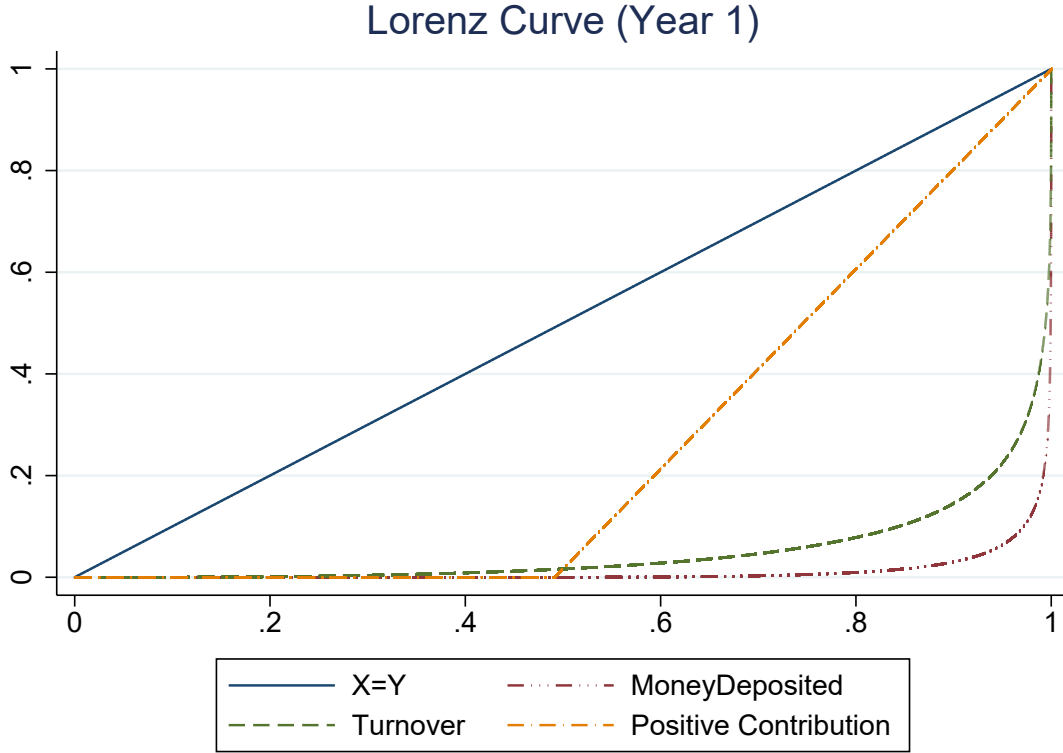


very stark with 5% of the firms depositing roughly 95% of the VAT collected. The number of firms that deposit a positive VAT amount is surprisingly low, with the number hovering around 50% across the 5 years.

The number of firms filing returns increases from 192,664 in year 1 to 271,090 in year 5. There is a wide variation in the amount deposited. To begin with, only about 50% of registered firms file any VAT in any given filing period. Further, between 7 and 15% of the firms (depending upon the tax period) that file a return report turnover of zero. Furthermore, between 5 and 9% of the firms declare their entire turnover to consist of interstate (or non-local) sales and about 32% firms declare their entire turnover to be purely local (refer to [table 1](#)). Note that the third party verification mechanism breaks down for inter-state sales since the counterparty's returns are submitted to a different tax authority and to date there has been little coordination between different tax jurisdictions on such cross-checking.¹¹

¹¹The GST bill proposed by the government should make it much easier to cross-check inter-state transactions.

Figure 5: Lorenz Curve for all firms in Tax Year 1



Only 50% of firms deposit a positive VAT, and 5% of the firms provide 95% of the VAT.

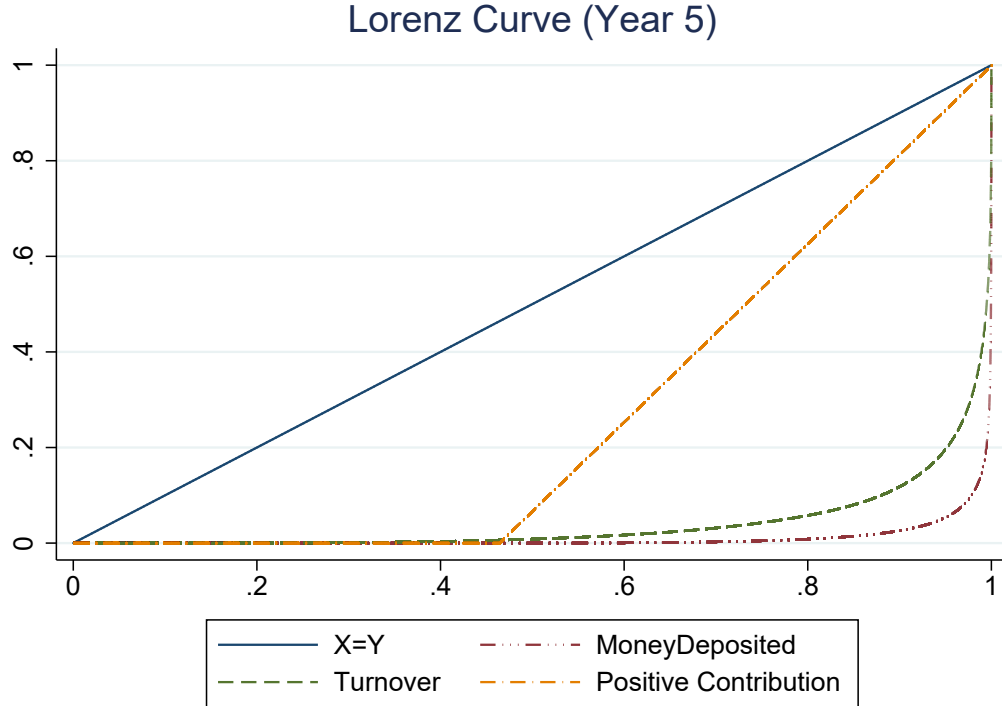
Table 1: Summary stats: All firms

Year	No. of Firms	VATDeposited	I{VATDeposited>0}	I{Zero Turnover}	I{Turnover==Interstate}	I{Turnover==Local}
1	192664	106330.3	.5088133	.071046	.0903334	.3126324
2	205832	121783	.487174	.0950532	.0771503	.3139696
3	250805	136310.4	.4756803	.1505233	.0593569	.316772
4	262775	148579.1	.4969537	.13679	.0570146	.3269261
5	271090	158777.2	.5360102	.1397506	.0600354	.3264304

Summary of all the firms that filed a return in the given year. VATDeposited is in million dollars.

In figure 4, we focus our attention on firms which are present in all 5 years of our dataset i.e. we drop firms that enter or exit during our time-frame of interest. There are 148,434 such firms which deposit roughly 95% of our total tax collections in year 1 and 90% of the tax collections in year 5. VAT deposits for these firms go from 102.02 billion rupees in year 1 to 142.09 billion rupees in year 5 (for a nominal growth rate of 6.85%). In this set of firms, the percentage of firms depositing a positive amount goes up marginally to about 57%. The

Figure 6: Lorenz Curve for all firms in Tax Year 5



percentage of firms that declare a turnover of zero is between 2.5 to 8.5% across the 5 years. The percentage of firms doing only interstate sales and only local sales is also comparable to the entire sample (refer to [table 2](#)). To conclude, our estimation sample comprises the bulk of the tax collections for the state throughout the study period.

Table 2: Summary stats: Always present firms

Year	VATDeposited	I{VATDeposited>0}	I{Zero Turnover}	I{Turnover==Interstate}	I{Turnover==Local}
1	102024.5	.546007	.0250077	.069701	.3075508
2	116489.3	.5408801	.0308689	.0595484	.3113774
3	128810.6	.5719714	.0388321	.053384	.3060889
4	136801.3	.575003	.053512	.0517941	.3045394
5	142092.1	.6049221	.0849536	.0522118	.2974251

Summary of firms that filed a return in all the given years. VATDeposited is in million dollars. Number of firms is 148434

6.2 Description: Wholesalers vs retailers

There are 32979 firms that self-report as being exclusive retailers, and 19515 firms which classify themselves solely as wholesalers. The pre-program means for these two groups is

shown in (Table 3). In general, the averages between the 2 groups is statistically different. As expected, wholesalers have a much higher turnover than retailers – 80.80 million versus 24.27 million rupees. Wholesalers deposit 1.3 million rupees on average whereas retailers deposit 0.641 million. If we normalize the input credit claimed and the output tax collected by the total turnover, then we see that retailers claim more credit and collect more output tax.

Table 3: Summary stats: Wholesalers and Retailers

Variables	Retailers	Mean	Wholesalers	Mean	MeanDiff
I{MoneyDeposited>0}	32979	0.589	19515	0.533	0.056***
MoneyDeposited	32979	0.641	19515	1.309	-0.668***
TotalTurnover	32979	24.27	19515	80.80	-56.525***
LocalTurnover	32979	18.43	19515	49.72	-31.288***
CreditClaimed	32979	0.950	19515	1.414	-0.464**
Tax Declared	32979	1.528	19515	2.630	-1.102***
MoneyDeposited/Turnover	32028	0.0120	18994	0.0110	0.002***
Credit/Turnover	32028	0.115	18994	0.0730	0.0420
OutputTax/Turnover	32028	0.0530	18994	0.0380	0.016***
NonlocalTurnover/TotalTurnover	32028	0.247	18994	0.374	-0.127***

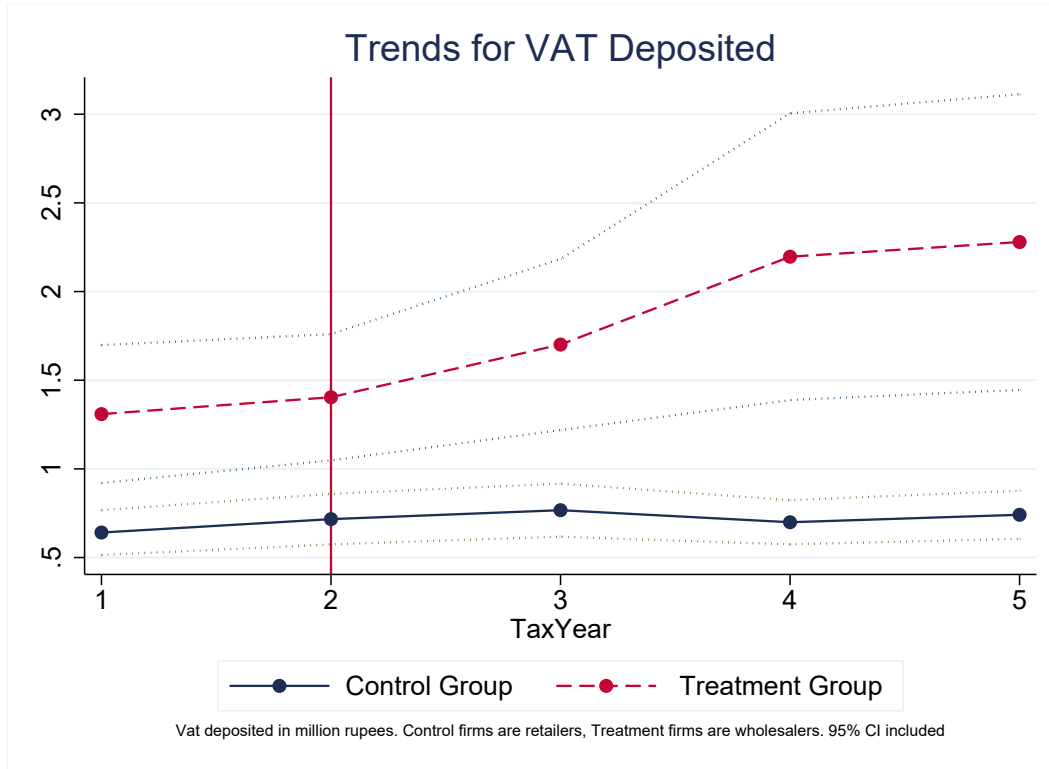
Summary statistics of wholesalers and retailers in the year 1 of our dataset. Value is in million rupees

As mentioned earlier, these two groups account for a substantial part of the VAT deposits. In year 1, they contribute 45.8% (46.684 billion rupees) of the VAT collections from the firms that are present in all 5 years of our sample. In year 5, they contribute 48.5% (68.912 billion rupees) of the VAT collections for the same sub-sample. In total, they account for 55.5% of the increase in the VAT collections in the sample of firms present in each of the 5 years.

6.2.1 Evidence for the Parallel Trends Assumption

Figure 7 and figure 8 show the pre-trends of VAT deposited at the annual as well as the quarterly level for the two groups (we also include the 95% confidence intervals in these graphs). We are unable to reject the null of the pre-trends being similar both at the quarterly as well as annual time periods. This gives us some confidence that the key (untestable)

Figure 7: Wholesalers vs Retailers: Annual pre-trends with confidence intervals

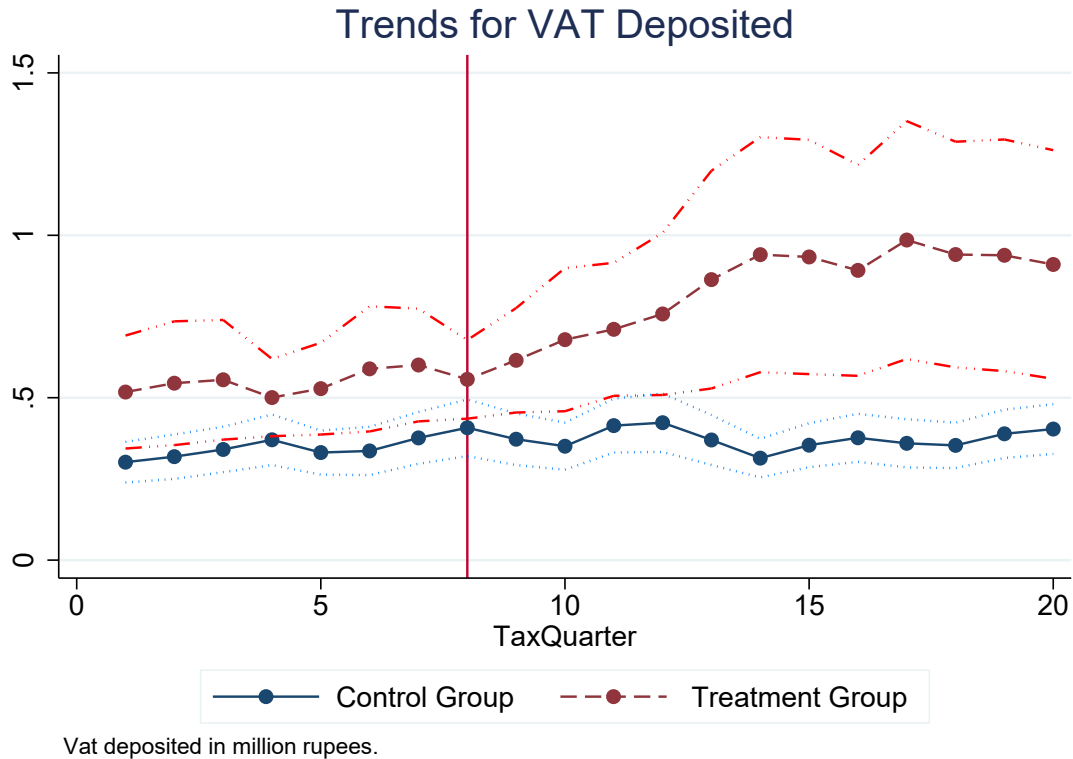


assumption of parallel trends may be satisfied in our context. It is also clear from the graphs that the wholesaler VAT deposits increase considerably post-policy while retailer VAT deposits remain more or less unchanged. The regressions below formally confirm these conclusions.

6.3 Results

Table 4 shows the results of the difference-in-difference mean regressions at the firm-annual level. Column (1) presents the extensive margin results with the outcome being a binary variable equal to 1 if VAT deposited is positive. The proportion of wholesaler firms depositing a positive amount goes down by a statistically significant 2.23%. However, given that the baseline proportion was 53.3%, the effect relative to the baseline is a relatively modest 4.19% decrease. Column(2) examines whether VAT deposited in the current year is greater than the amount deposited in the previous year. The proportion of wholesalers with VAT growth measured in this manner goes down by 1.66% due to the policy. Given that the expected effect of the policy is an increase in the tax deposited by the treatment group, this result is

Figure 8: Wholesalers vs Retailers: Quarterly pre-trends with confidence intervals



Wholesalers are treatment firms and retailers are control firms. Number of wholesalers is 11482 and number of retailers is 15337. Sample smaller than the annual frequency sample because in year 1 and year 2 firms with turnover less than 5 million had to file at annual or semi-annual frequency

surprising and we will try to explain it in the subsequent subsection.

Next, VAT deposited (column 3), increases by a statistically significant .646 million for wholesalers. The Post variable indicates almost no increase in the VAT collections for retailers in the post period. Given that wholesalers deposited 1.3m Rupees in the first year of the study, this is a substantively large number indicating an almost a 49.3% increase over baseline levels.

Table 4: Diff-in-Diff: Wholesalers and Retailers (Annual)

VARIABLES	(1) I{MoneyDeposited>0}	(2) I{VatIncreased}	(3) MoneyDeposited	(4) TaxCredit	(5) OutputTax
Post	0.0361*** (0.00241)	0.0319*** (0.00334)	-0.0151 (0.0565)	0.382*** (0.0509)	0.347*** (0.0498)
Post*Wholesaler	-0.0223*** (0.00312)	-0.0166*** (0.00455)	0.646*** (0.192)	-0.0412 (0.125)	0.592*** (0.148)
Observations	262,470	209,976	262,470	262,470	262,470
R-squared	0.633	0.327	0.853	0.855	0.961
Number of Firms	52,494	52,494	52,494	52,494	52,494

Robust standard errors in parentheses.

Number of wholesalers is 19515 and number of retailers is 32979.

*** p<0.01, ** p<0.05, * p<0.1

Importantly, the increase is driven by an increase in output tax liability as predicted by our initial argument. Further, there is no differential change in input credits across the two groups of firms (column (4) and (5)). This again is consistent with our initial hypotheses regarding the differential effect between the wholesalers and retailers.

Table 5: Diff-in-Diff in Levels: Wholesalers and Retailers (Quarterly)

VARIABLES	(1) I{MoneyDeposited>0}	(2) I{VatIncreased}	(3) MoneyDeposited	(4) TaxCredit	(5) OutputTax
Post	0.0136*** (0.00334)	0.00117 (0.00358)	-0.0345 (0.0435)	0.136*** (0.0262)	0.0990** (0.0459)
Post*Wholesaler	-0.0140*** (0.00316)	-0.00421 (0.00359)	0.273*** (0.0816)	-0.0308 (0.0502)	0.240*** (0.0596)
Observations	536,380	429,104	536,380	536,380	536,380
R-squared	0.549	0.256	0.826	0.802	0.949
Number of Firms	26,819	26,819	26,819	26,819	26,819

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Number of wholesalers is 11482 and number of retailers is 15337.

Table 5 replicates the results presented in Table 4 but at the quarterly frequency. The sample now consists only of 11482 wholesalers and 15337 retailers, as firms with less than 5 million in turnover had to submit returns only at an annual or semi-annual frequency in the first two years of our data. The results are consistent with the results described at the annual frequency and so we do not discuss them here.

6.3.1 Heterogeneity in results

Column (1) in Table 4 indicates that the extensive margin effects of the policy were mildly negative. On the other hand, the mean tax deposited by wholesalers after the policy reform increases sharply relative to retailer deposits. These results suggest that it may be useful to examine heterogeneity in the estimated treatment effects. We next carry out the difference-in-difference regression using the natural logarithms of VAT deposited, input tax credits and output tax. To keep a consistent sample, we only look at firms which have positive values for all three outcome variables. In Table 6, the coefficient for $\log(\text{MoneyDeposited})$ is negative (although not statistically significant), and the coefficient for $\log(\text{TaxCredits})$ and $\log(\text{OutputTax})$ are both positive and significant at the 5% level implying that the positive results in the earlier tables are potentially driven by the tails of the distribution.

Table 6: Diff-in-Diff in Logs: Wholesalers and Retailers (at annual level)

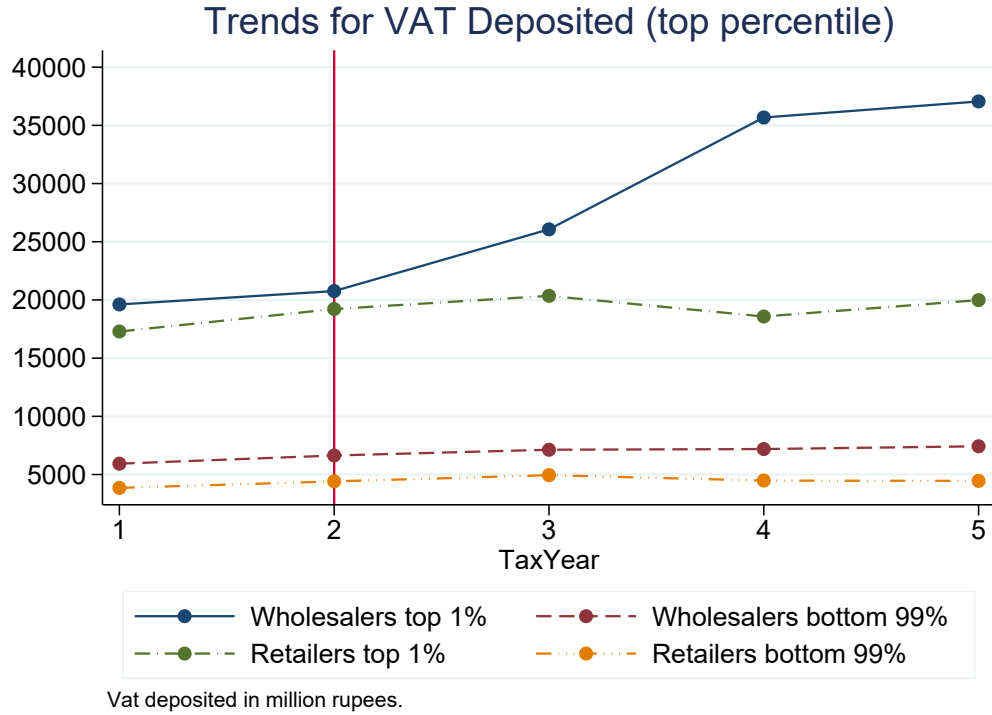
VARIABLES	(1) log(MoneyDeposited)	(2) log(TaxCredit)	(3) log(OutputTax)
Post	0.284*** (0.0117)	0.234*** (0.00949)	0.216*** (0.00706)
Post*Wholesaler	-0.0165 (0.0187)	0.0359** (0.0166)	0.0283** (0.0121)
Observations	72,075	72,075	72,075
R-squared	0.864	0.895	0.936
Number of Firms	14,415	14,415	14,415

*** p<0.01, ** p<0.05, * p<0.1

Number of wholesalers is 4502 and number of retailers is 9913. We do this set of regression on a common sample.

This hypothesis finds further support in Figure which plots total VAT deposited by the top percentile (cross section, in terms of VAT deposited) of firms compared to the rest of the 99%. We do this for both the wholesalers as well as the retailers. The VAT deposited by the top percentile of wholesalers goes up from 19.61 billion in year 1 to 37.05 billion rupees in year 5 whereas the VAT deposited by the retailers go up from 17.29 billion rupees in year 1 to 19.98 billion in year 5. Hence, almost the entire increase in tax collections is driven by the increase in the top 1% of the wholesalers.

Figure 9: Money Deposited by top percentile of firms



To confirm our intuition, we redo the difference-in-difference but this time, only with firms who were at the top decile of wholesalers as well as retailers in year 1 (table 7). In column (1) and column (2), we see that the dummy for positive VAT deposited and the dummy for VAT increased from previous year are now positive and statistically significant. The results in column (3), (4) and (5) convey a similar story as in table 4, just that they are much bigger in size, which is in line with the stated heterogeneity. The money deposited for the top decile wholesalers goes up by 5.887 million which is a 46.5% increase over the baseline VAT deposit of 12.655 million rupees by wholesalers (in top decile) in year 1. The gain again is coming from the increase in output tax declared.

Table 7: Diff-in-Diff for top decile: Wholesalers and Retailers (at annual level)

VARIABLES	(1)	(2)	(3)	(4)	(5)
	I{MoneyDeposited>0}	I{VatIncreased}	MoneyDeposited	TaxCredit	OutputTax
Post	-0.0563*** (0.00362)	0.00616 (0.0112)	-0.445 (0.559)	2.188*** (0.460)	1.630*** (0.448)
Post*Wholesaler	0.0243*** (0.00549)	0.0378** (0.0162)	5.887*** (1.899)	-1.892 (1.183)	4.114*** (1.404)
Observations	26,240	20,992	26,240	26,240	26,240
R-squared	0.413	0.284	0.853	0.862	0.965
Number of Firms	5,248	5,248	5,248	5,248	5,248

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Wholesalers are treatment firms and retailers are control firms.

7 Policy execution

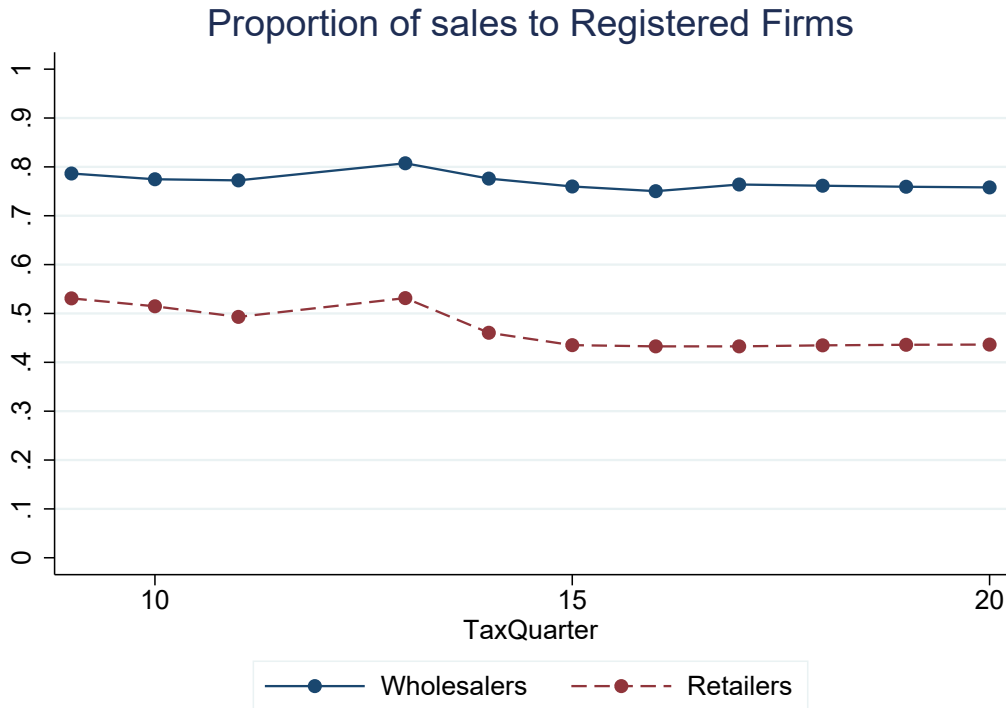
Dufo (2017) in her 2017 Ely lecture at the AEA has highlighted the importance of economists getting into the plumbing details of a policy. In this section we show some evidence which sheds light on how the policy was actually executed on the ground.

7.1 Sales to registered firms

In figure 10, we show the proportion of sales that a firm is declaring to have made to registered firms who can then subsequently claim it as an input tax credit. This analysis can be carried out only for the post policy period of our dataset as the consolidated returns do not require firms to categorize their sales based on whether they were made to registered firms or unregistered firms/final customers. For a wholesaler, the average proportion of sales made to registered firms is around 78%. For retailers, the average proportion of sales made to registered firms is around 43%.

Then in figure 11, we do this for our comparison groups and focus on the 99th and 90th percentile of each. Two points are worth mentioning. One, the proportion of sales that the top wholesalers make to registered firms goes up to more than 90% in all the quarters. This hints towards the push factor that the large tax paying wholesalers feel towards declaring their sales as the buying firms would want to claim these purchases as input credits. Secondly, firms which classify themselves as sole retailers also make a non-negligible proportion of sales to registered firms. The 90th percentile of retailers make roughly 50% sales to registered

Figure 10: Sales to registered firms



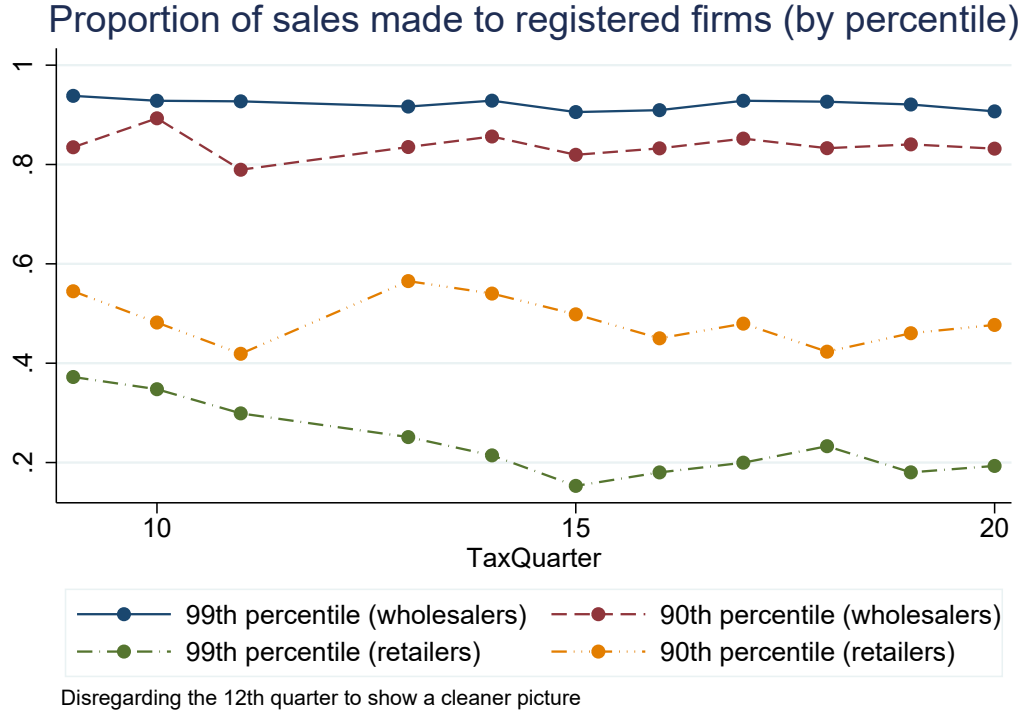
Describing the proportion of sales made to registered firms. Comparing the declarations by all wholesalers and all retailers.

firms and this proportion goes down to 20% for the top percentile of retailers in the 20th quarter of our dataset.

A general consensus in the economic literature is that the third party verification incentive in a value added tax system breaks down for retailers as they make sales to unregistered firms/final customers only. In that context our second result is surprising and encourages us to investigate it in greater detail. There are two potential reasons why this could be happening. One, a big retailer could be making these sales to a smaller retailer which then subsequently sells to the final customer. This is a reasonable behavior and should not be a cause for any alarm but implies that there is heterogeneity amongst retailers and that third party verification should work in a decent proportion for retailers as well (which we don't find).

Second, and a more worrisome possibility is that these retailers create fraudulent sale transactions to firms that are in need of input credits and there by cause revenue loss to

Figure 11: Sales to registered firms



Describing the proportion of sales made to registered firms. Comparing the declarations by top percentile of wholesalers and retailers with the 90th percentile.

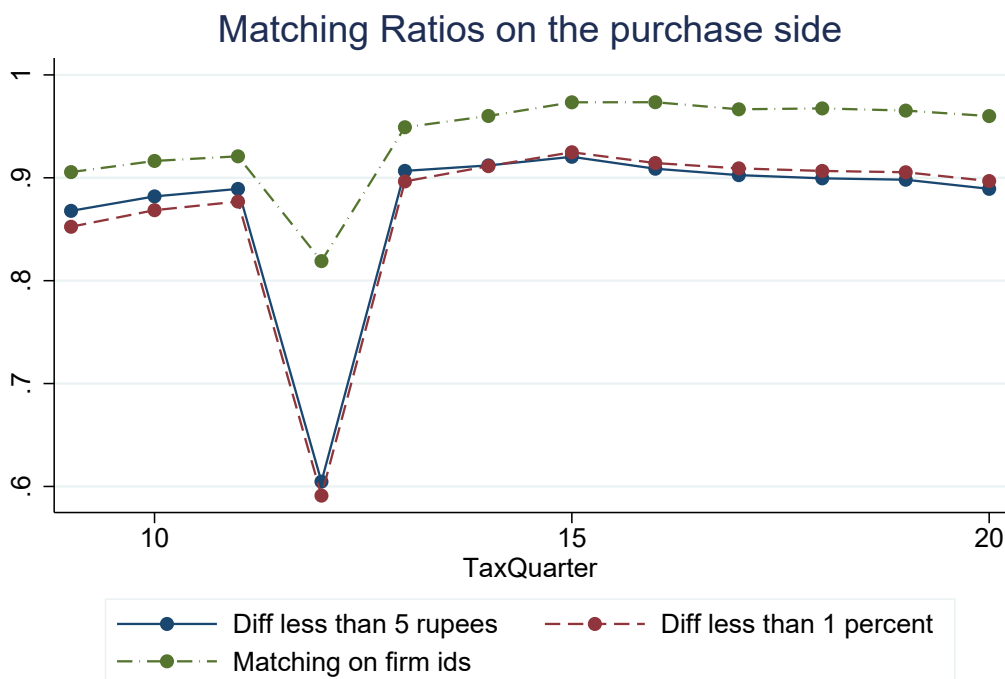
the tax authority. A retailer (firm A) needs to declare a positive sales to not get flagged to the tax authority and as a result colludes with a firm (firm B) which is in need of input credits to declare a proportion of his (firm A) sales to the colluding firm (B). This results in a loss to the tax authority as firm A diverts a part of the sales which it make to final customers/unregistered firms to firm B who can then claim it as input credit for a rent. In our future work, we intend to investigate this hypothesis further. Our transaction data allows us to carry out network analysis to investigate this.

7.2 Matching

In [figure 12](#), [figure 13](#), [figure 17](#), and [figure 18](#) we show the accuracy with which the sale and purchase transactions of firms match. Our ex-ante expectation was that after the policy was mandated, the transaction records will perfectly align. However, this does not seem to be the case. [Figure 12](#) shows the average matches of the purchase declarations of a firm

with the corresponding sale declarations of the selling firm. If we match only at the firm-id level, without considering the amount and tax rate declared, the most generous specification possible, the matching started around 90% in the first year (Y3 of our dataset) and is around 96% in year 5 of our analysis. 4% of transactions are still unaccounted for ex-post.

Figure 12: Matching on the purchase side for all firms



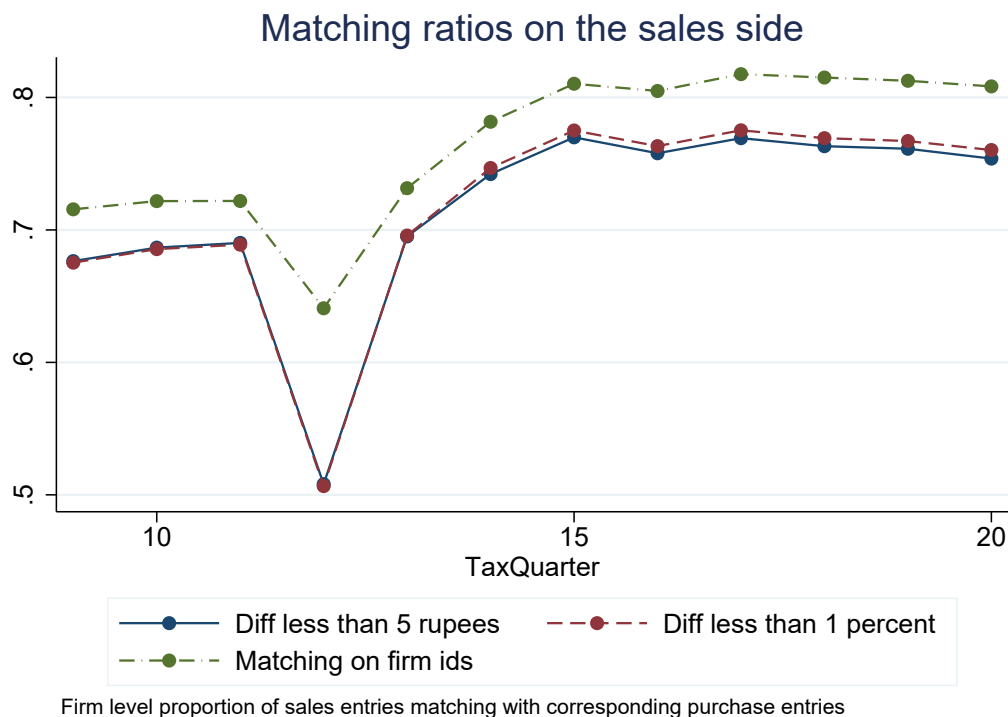
Firm level proportion of purchase entries matching with corresponding sale entries

Firm level mean of purchases transactions matching with transactions declared by selling firms

We further narrow our analysis and consider the differences in amount. We try two specifications and the results are similar in both the specifications. We classify a transaction as a match if the difference in the total purchases declared by a firm (A) and the total sales declared by the corresponding firm (B) is less than 5 rupees or 1% of the total purchases made by the firm A from firm B. One can assume that the mismatches that happen within this classification, are mostly driven by human error as the revenue implication is minimal. With this specification, the matching rate goes down to roughly 90% across all the quarters. Therefore, roughly 10% of the purchase declarations do not match in our sample in a serious manner. [Figure 13](#) repeats the analysis but now we are comparing the sales transactions declared by a firm with the corresponding purchase transactions of the buying firms. The

results are similar except that now the firm-id level matching has gone down to 80% across quarters.

Figure 13: Matching on the sales side for all firms



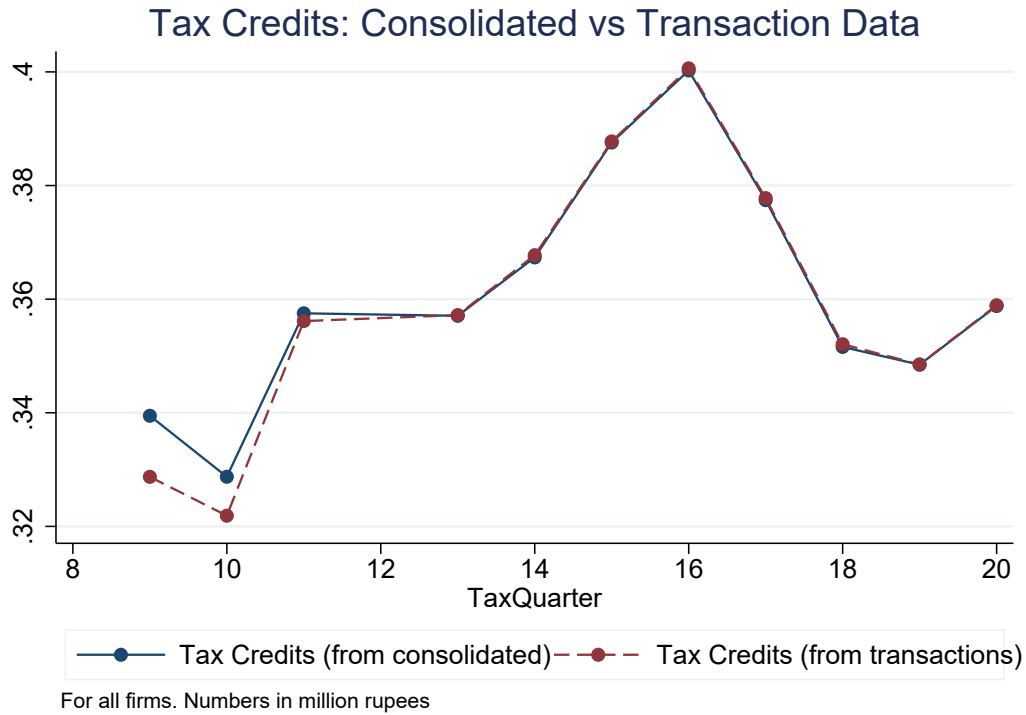
In [figure 17](#) and [figure 18](#), we repeat the purchase and sale matching analysis but limiting ourselves only to our difference-in-difference sample of wholesalers and retailers. An interesting insight that is clearly visible is that matching for 90th percentile firms for both wholesalers as well as retailers is higher than the matching for the 99th percentile for the corresponding group. This is unexpected and further highlights that just the third party verification information may not be sufficient to reduce evasion and increase tax collections. Some sort of human monitoring effort on top of it is also needed, as despite this lower matching, most of the tax deposit growth is coming from the top percentile of wholesalers.

7.3 Consolidated vs transaction data

It is important to think through the specifics of how the policy will be executed. In the first year of the third party verification policy (Y3), the transaction records were required to be

filed independently from the consolidated returns by the tax authority i.e. it was possible that the transaction records do not add up to the information entered in the consolidated returns. And this is exactly what we find in the data. The credit claimed in the consolidated forms is not completely accounted for in the annexures. The authority soon realized it and fixed it in the subsequent years (Y4 and Y5) (Refer to figure 14).

Figure 14: Consolidated vs transactional data



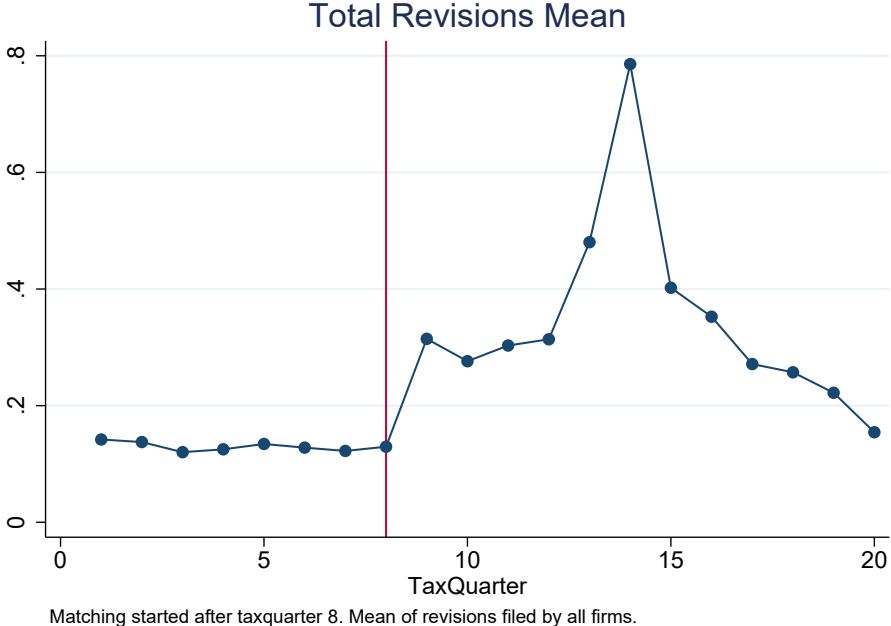
In the first year, transaction data was not matched with the consolidated returns. Firms were clearly fudging, which was fixed in the subsequent years. We drop Q12 as unexplained behavior (possibly unrelated) is skewing the image.

7.4 Revisions

After filing their returns, firms are allowed to revise them till the end of next financial year. Before the start of the monitoring policy the average revision rates were around 13% i.e. the mean of the total number of times a firm filed its returns was 1.13 (in Y1 and Y2). This revision rate was constant in the pre-period with there being no time trend. However, immediately after the introduction of the policy, the revision rates shot up to 30% i.e. the

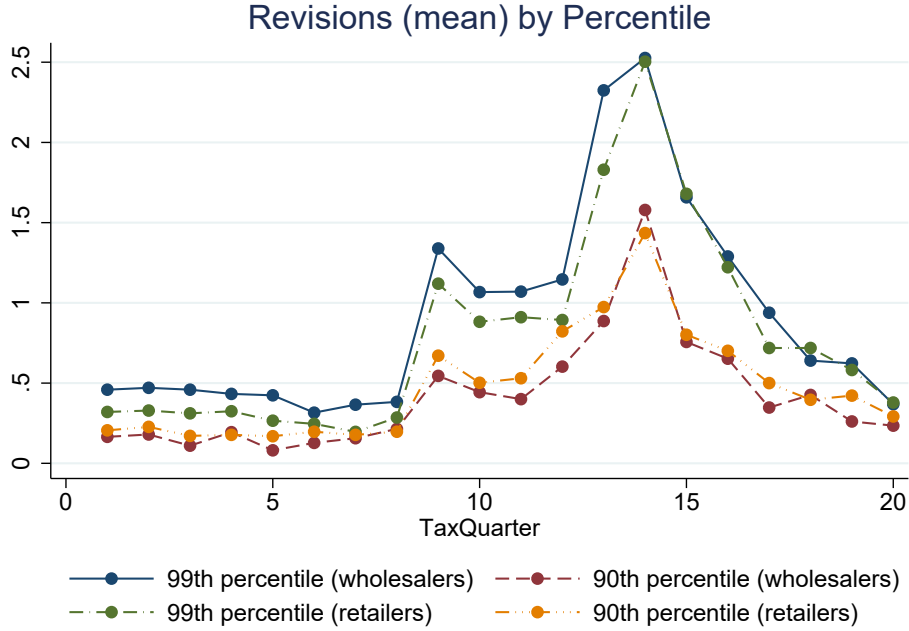
mean of the total number of returns filed by a firm was now 1.3 (in Y3). As the issue mentioned between the consolidated and transaction returns was fixed in Y4, this number further shot up temporarily in Y4 (Q13) up to 78% in Q14 and subsequently started coming down but remained higher than the average amount in Y1 and Y2. This happened as now the firms had to file transaction level as well as the consolidated information (Refer to [figure 15](#)). This behavior points towards two scenarios. Either the cost of complying with the tax policy is going up, or the firms are colluding and the increase in revisions is due to coordination costs. Either ways, it is important to think through the efficacy of the third party verification policy. Specifically, if most of the gain in revenue is from the top percentile of firms, then increasing the cost of compliance for firms across the board may not be cost efficient, both for the firms as well as the tax authority.

Figure 15: Mean revisions for all firms



There seems to be size based variation in the revision trends as well. When we compare wholesalers and retailers, we see that the 99th percentile (in terms of VAT deposited) of both the wholesalers and retailers revise their returns at a greater frequency than the 90th percentile firms (Refer to [figure 16](#)). This again hints towards the increase in revisions being driven by the increased cost of compliance.

Figure 16: Mean revisions of wholesalers and retailers



Describing revision trends by percentile. Comparing the firms in the top percentile with the firms in the 90th percentile

8 Conclusion

In this paper we evaluate the effect of a policy reform that implemented a key pillar of the VAT system - increasing the tax authority’s ability to easily cross-check buyer reports against seller reports. Under the previous regime such cross-checks could only be accomplished by auditing one of the parties and requesting corroborating documents from all firms transacting with the audited party, a relatively rare and time consuming activity.

We evaluate the effect of the policy by comparing two groups of firms likely to be differentially affected by it - wholesalers and retailers. In particular, wholesalers are more likely to sell to registered firms relative to retailers who are more likely to sell to consumers (who are indistinguishable from unregistered firms which are common in this setting). The requirement that returns include tax identifiers and amounts transacted for registered firms should affect wholesalers more strongly than retailers, implying that we should see stronger responses from wholesalers than retailers and that this response should come via increases in reported output tax liability.

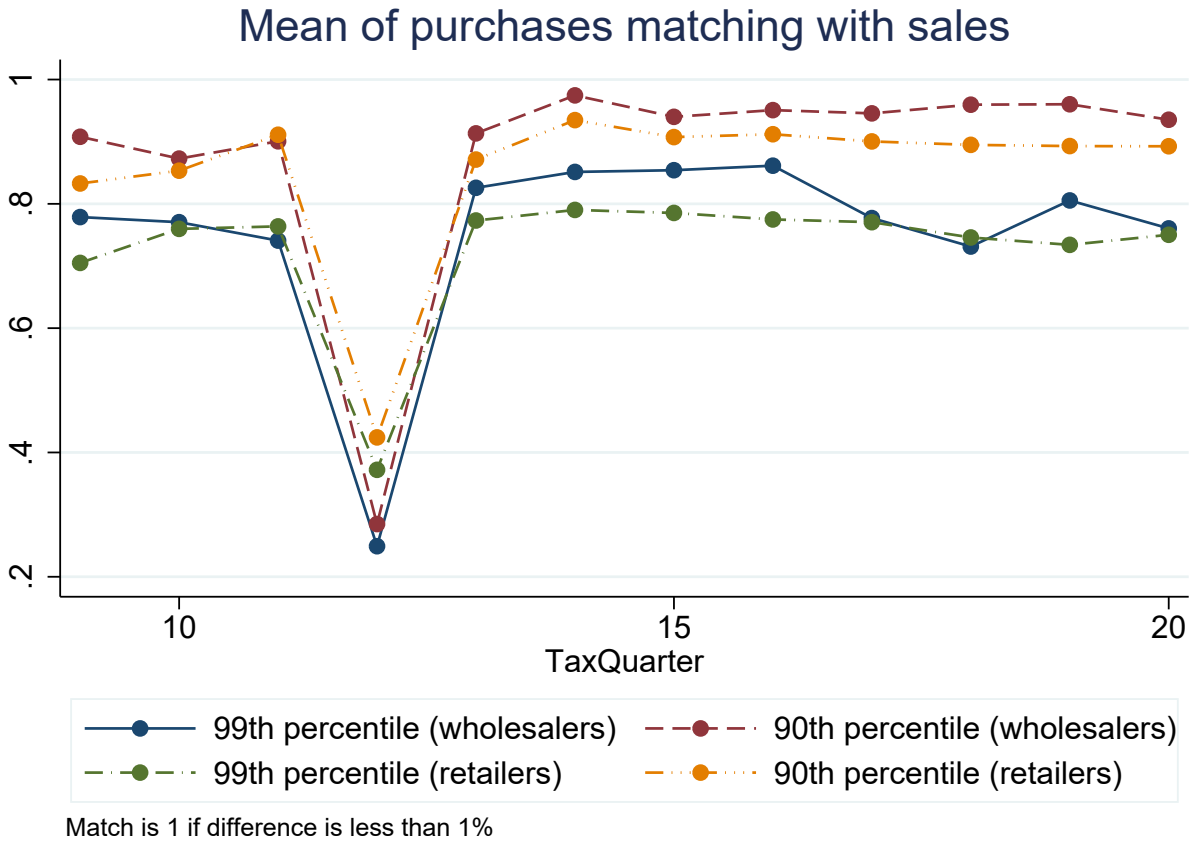
Our results confirm this hypothesis with tax deposited by wholesalers increasing on av-

erage by Rs. 0.646 million, a baseline increase of 49.3% relative to the pre-policy period. We find that the increase is largely driven by large wholesalers, with the top 1% (of VAT deposited) of firms accounting for 89.3% of the increase in tax deposited. We further document that 96% of the firms in the top 1% are under the jurisdiction of a special unit of the tax authority which focuses exclusively on high tax revenue firms. We do not see a similar increase in the top one percent of retailers (80% of whom are monitored by the special tax team). Our results then suggest that information and monitoring may be complements. These results also suggest a more nuanced picture of the state's capacity to tax in low compliance environments in particular. The findings are consistent with the hypothesis that the tax authority uses its new cross-checking capacity to differentially target large firms and is doing so at least somewhat effectively.

We also document the importance of the details of policy execution, which is especially relevant when the enforcement and execution capacity is weak. First, we show that a loophole that allowed firms to enter mutually inconsistent data appears to have been used by firms to minimize their tax obligations. Second, we see that the average number of tax form revisions increases sharply after the policy. Third, we find that the matching of purchases and sales ex-post is around 90%. We also find that retailers declare a significant proportion (roughly 43%) of their sales to registered firms. At the very least, all this can be considered as evidence of increased compliance costs for firms or alternatively as evidence of collusion.

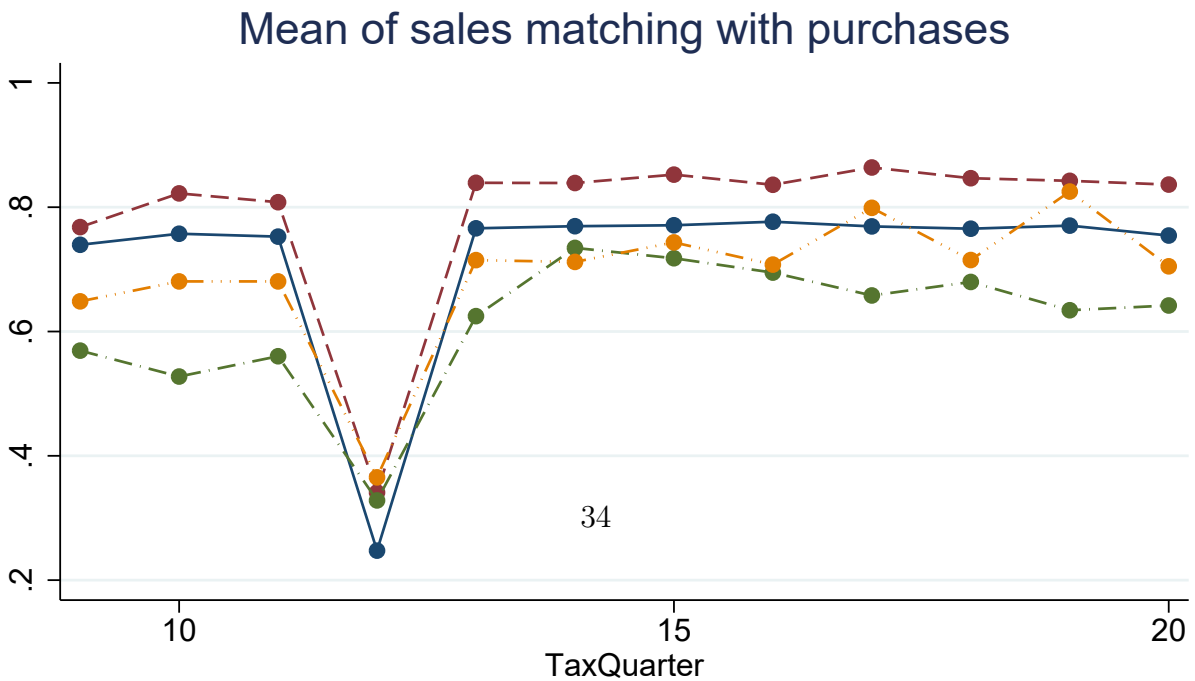
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Figure 17: Matching Analysis: Retailers Vs Wholesalers (Purchases)



Describing revision trends by percentile. Comparing the firms in the top percentile with the firms in the 90th percentile

Figure 18: Mean revisions of wholesalers and retailers



Appendix A Consolidated Form

Refund Claimed?
<input type="checkbox"/> Yes
<input type="checkbox"/> No

Department of Trade & Taxes
Government of NCT of Delhi

Form DVAT 16
[See Rule 28 and 29]
Delhi Value Added Tax Return

Original/Revised
If revised –
(i) Date of filing original return _____
(ii) Acknowledgement Receipt No. _____
(iii) Date of discovery of mistake or error _____
Specify the reasons for revision

R1 Tax Period	From		/		/		T		/		/		
		Dd		mm		yy	O	dd		mm		yy	

R2.1 TIN														
R2.2 Full Name of Dealer														
R2.3 Address of Principal Place of Business														
R2.4 Mobile No.														

R3 Description of top items you deal in <i>(In order of volume of sales for the tax period or till the aggregate of sale volume reaches at least 80% - 1- highest volume to 5-lowest volume)</i>	Sl. No.	Commodity Code	Description of Goods	Tax Rate	Tax contribution
	1				
	2				
	3				
	4				
	5				

R4 Turnover details													
R4.1 Gross Turnover													
R4.2 Central Turnover													
R4.3 Local Turnover													

R5 Computation of output tax	Turnover (Rs.)	Output tax (Rs.)
R5.1 Goods taxable at 1%		
R5.2 Goods taxable at 5%		
R5.3 Goods taxable at 12.5%		
R5.4 Goods taxable at 20%		
R5.5 Works contract taxable at 5%		
R5.6 Works contract taxable at 12.5%		
R5.7 Exempted Sales (Tax Free)		
R5.8 Charges towards labour, services and other like charges		
R5.9 Charges towards cost of land, if any, in civil works contracts		
R5.10 Sale of Diesel & Petrol as have suffered tax in the hands of various Oil Marketing Companies in Delhi.		
R5.11 Sales within Delhi against Form 'H'		
R5.12 Output Tax before adjustments	Sub Total	
R5.13 Adjustments to output tax (Complete Annexure and enter Total A2 here)		
R5.14 Total Output Tax (R5.12 + R5.13)		

Total A2 from Annexure

R6 Turnover of Purchases in Delhi (excluding tax) & tax credits	Purchases (Rs.)	Tax Credits (Rs.)
R6.1 Capital goods		
R6.2 Other goods		
R6.2(1) Goods taxable at 1%		
R6.2(2) Goods taxable at 5%		
R6.2(3) Goods taxable at 12.5%		
R6.2(4) Goods taxable at 20%		
R6.2(5) Works contract taxable at 5%		
R6.2(6) Works contract taxable at 12.5%		

R6.3 Local purchases not eligible for credit of Input Tax									
R6.3(1) Purchase from Unregistered dealers									
R6.3(2) Purchases from Composition dealers									
R6.3(3) Purchase of Non creditable goods (Schedule-VII)									
R6.3(4) Purchase of Tax Free Goods (Exempted)									
R6.3(5) Purchases of labour and services related to works contract									
R6.3(6) Purchases against tax invoices not eligible for ITC									
R6.3(7) Purchase of goods against retail invoices									
R6.3(8) Purchase of Diesel & Petrol taxable in the hands of various Oil Marketing Companies in Delhi									
R6.3(9) Purchases from Delhi dealers against Form 'H'									
R6.3(10) Purchase of Capital Goods (Used for manufacturing of non-creditable goods)									
R6.4 Tax credit before adjustments						Sub Total			
R6.5 Adjustments to tax credits (Complete Annexure and enter Total A4 here)						Total A4 from Annexure			
R6.6 Total Tax Credits (R6.4 + R6.5)									

R7.1 Net Tax			(R5.14) – (R6.6)		
R7.2 Interest @ 15% if payable			(B)		
R7.3 Penalty, if payable			(C)		
R7.4 Tax deducted at source (attach TDS certificates (downloaded from website) with Form DVAT 56)					
S.I. No.	Form DVAT-43 ID No.	Date	Amount		
R7.5 Tax credit carried forward from previous tax period					
R7.6 Adjustment of excess balance under CST towards DVAT liability					
R7.7 Balance payable [(R7.1+R7.2+R7.3) – (R7.4+R7.5 +R7.6)]					
R7.8 Amount deposited by the dealer (attach proof of payment with Form DVAT-56)					
S.No.	Date of deposit	Challan No.	Name of Bank and Branch	Amount (Rs.)	
R8 Net Balance*				(R7.7-R7.8)	

* The net balance should not be positive as the amount due has to be deposited before filing the return.

IF THE NET BALANCE ON LINE R8 IS NEGATIVE, PROVIDE DETAILS IN THIS BOX					
R9 Balance brought forward from line R8 (Positive value of R 8)					
R9.1 Adjusted against liability under Central Sales Tax					
R9.2 Refund Claimed					
R9.3 Balance carried forward to next tax period					

IF REFUND IS CLAIMED, PROVIDE DETAILS IN THIS BOX (Also fill Annexure-2E)					
R10 Details of Bank Account					
R10.1 Account No.					
R10.2 Account type (Saving/Current etc.)					
R10.3 MICR No.					
R10.4					
(a) Name of Bank					
(b) Branch Name					

R11 Inter-state trade and exports/ imports	Inter-state Sales/Exports	Inter-state Purchases / Imports
R11.1 Against C Forms (Other than Capital Goods)		
R11.2 Against C+E1/E2 Forms		

Appendix B Annexures

Annexure – 2A

(See instruction 6)
SUMMARY OF PURCHASE / INWARD BRANCH TRANSFER REGISTER
(Quarter wise)

(To be filed along with return)

TIN: _____ Name of the
 Dealer: _____

Purchase for the Tax Period: From _____ to _____

Summary of Purchase (As per DVAT-30)

(All amounts in Rupees)

Sr. No.	Quarter & Year	Seller's TIN	Seller's Name	Rate of Tax under DVAT Act (for all columns)
1	2	3	4	5

Inter-State Purchase/Stock Transfer/Import not eligible for credit of input tax									
Import from Outside India	High Sea Purchase	Capital Goods purchased against C-Forms	Goods (Other than capital goods) purchased against C-Forms	Purchase against H-Form (other than Delhi dealers)	Purchases without Forms	Inward Stock Transfer (Branch) against F-Form	Inward Stock Transfer (Consignment) against F-Form	Own goods received back after job work against F-Form	Other dealers goods received for job work against F-Form
6	7	8	9	10	11	12	13	14	15

Local Purchases not eligible for credit of input tax									
Purchase From Unregistered dealer	Purchases from Composition Dealer	Purchase of Non-creditable goods (Schedule-VII)	Purchase of Tax free goods	Purchase of labour & services related to Works Contract	Purchase against tax invoices not eligible for ITC *	Purchase of Goods against retail invoices	Purchase of Petrol & Diesel from Oil Marketing Companies in Delhi	Purchase from Delhi dealers against Form-H	Purchase of Capital Goods (Used for manufacturing of non-creditable goods)
16	17	18	19	20	21	22	23	24	25

Local Purchases eligible to credit of input tax					
Capital Goods		Others (Goods)		Others (Works Contract)	
Purchase Amount (excluding VAT)	Input Tax Paid	Purchase Amount (excluding VAT)	Input Tax Paid	Purchase Amount (excluding VAT)	Input Tax Paid
26	27	28	29	30	31

Note: - Data in respect of unregistered dealers may be consolidated tax rate wise for each Quarter.

* will include purchase of DEPB (for self-consumption), consumables goods & raw material used for manufacturing of tax free goods in Column No.21.

Signature of Dealer /
 Authorized Signatory

Annexure – 2B
(See instruction 6)
SUMMARY OF SALE / OUTWARD BRANCH TRANSFER REGISTER
(Quarter wise)
(To be filed along with return)

TIN: _____ Name of the Dealer: _____
Address: _____ Sale for the Tax Period: From ____ to _____

Summary of Sales (As per DVAT-31)
(All amounts in Rupees)

Sr No.	Quarter & Year	Buyer's TIN / Embassy/Organisation Regn. No.	Buyer/Embassy/Organisation Name	Tax Rate (DVAT) (for all columns)
1	2	3	4	5

Turnover of Inter-State Sale/Stock Transfer / Export (Deductions)												
Export	High Sea Sale	Own goods transferred for Job Work against F-Form	Other dealers' goods returned after Job work against F-Form	Stock transfer (Branch) against F-Form	Stock transfer (Consignment) against F-Form	Sale against H-Form	Sale against I-Form	Sale against J-Form	Sale against C+E-I/E-II	Sale of Exempted Goods [Sch. I]	Sales covered under proviso to [Sec. 9(1)] Read with Sec. 8(4)	Sales of Goods Outside Delhi (Sec. 4)
6	7	8	9	10	11	12	13	14	15	16	17	18

Turnover of Inter-State Sale (Taxable)					Turnover of Local Sale						
Rate of Tax (CST)	Sale against C-Form excluding sale of capital assets	Capital Goods sold against C-Forms	Sale without forms	Tax (CST)	Turnover (Goods) (excluding VAT)	Turnover (WC) (excluding VAT)	Output Tax	Charges towards labour, services and other like charges, in civil works	Charges towards cost of land, if any, in civil works contracts	Sale against H-Form to Delhi dealers	Sale of Petrol/Diesel suffered tax on full sale price at OMC level
									contracts		
19	20	21	22	23	24	25	26	27	28	29	30

Note:- Data in respect of unregistered dealers may be consolidated tax rate wise for each Quarter. Data of Embassies/Organisations listed in Sixth Schedule shall be provided entity wise.

Signature of Dealer /
Authorized Signatory

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London School of Economic and Political Science,
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