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**COMPLIANCE COSTS OF GST FOR SMALL  
BUSINESS ENTERPRISES IN TAMIL NADU**

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India

**August 2022**

# *Compliance Costs of GST for Small Business Enterprises in Tamil Nadu*

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# Compliance Costs of GST for Small Business Enterprises in Tamil Nadu

S. Vishnuhadevi and D. Hima Bindu

## Abstract

*The main objective of this study is to examine the level of compliance burden through estimating the GST compliance costs incurred by the small businesses in Tamil Nadu. Further, to estimate the aggregate GST compliance costs incurred by the business in absolute terms and relative to Gross State Domestic Product (GSDP) and GST revenue of Tamil Nadu for the year 2019-20, and finally to identify the factors associated with the GST compliance costs using classical regression analysis. The results reveal that the overall weighed mean of the GST compliance costs is Rs. 32091 and the aggregate GST compliance costs is Rs. 17844 million which is around 0.10 percent and 4.65 percent of GSDP and GST revenue respectively. Further, the GST compliance costs incurred by the smallest firms is 1.45 percent of their annual turnover, and the same for largest firms it is only about 0.02 percent, which shows the regressive nature of the compliance costs as reported in the previous studies. Lastly, the regression results reveal that the volume of business, sector of the business, size of the business, firms with refund claims, and the manner with which the GST returns are completed are the important factors that are associated with the GST compliance costs incurred by the small businesses in Tamil Nadu.*

**Keywords:** *tax compliance costs; GST compliance costs; VAT compliance costs; small businesses; India; Tamil Nadu*

**JEL Codes:** *H20, H25, H29*

## **Preface**

Madras School of Economics (MSE) established the Centre for Public Finance (CPF), which started functioning from April 1, 2021. This Centre is financed by the Government of Tamil Nadu. Its activities are guided by an Advisory Council (headed by me). The Centre focuses on both theoretical and empirical issues of public finance covering the following areas: deficit financing and public debt, monetary and fiscal interactions, tax policy and reforms, public expenditure management, public investment appraisal and cost benefit analysis, public enterprises reform, intergovernmental transfers, local finances and environmental issues.

Apart from general research activities, the Centre is committed (i) to review the Tamil Nadu Economy and State Finances every year, (ii) to conduct an Annual Conference on topics related to public finance and policy and (iii) to conduct Training Programs on public finance. It will also undertake specific studies on public finance funded by Government of Tamil Nadu and other National and International agencies.

During the academic year 2021-22, the Centre organized "Virtual Meeting on Improving the Presentation of Tamil Nadu Budget Document" on April 29, 2021 and conducted the 5-day Training Programs on Public Finance for (270) 15 batches of Groups A and Group B officials of Government of Tamil Nadu through online mode (from August 31, 2021 to December 31, 2021). It has also initiated about 10 research studies.

The study "Compliance Costs of GST for Small Business Enterprises in Tamil Nadu" by S. Vishnuhadevi and Dr. D Hima Bindu is a sixth working paper of the Centre for Public Finance. After estimating the compliance costs of GST incurred by small businesses and analysing the factors associated with the GST compliance costs, this study recommends simplifying the GST system by reducing the frequent changes in GST rules and reducing the number of tax slabs in the GST system to ease the compliance costs for small businesses.

**C.Rangarajan**  
**Chairman**

# **Acknowledgement**

This study is part of the first author's doctoral research. The authors are thankful to Dr. R. Srinivasan, Former Head and Professor, Department of Econometrics, University of Madras for his valuable comments. We are grateful to the Commercial Taxes Department, Government of Tamil Nadu for their support and assistance to conduct the field survey for this study. The authors are thankful for Madras School of Economics for publishing this paper as a working paper of the Centre for Public Finance, MSE. The views expressed in this paper are those of the authors.

**S. Vishnuhadevi**  
**D. Hima Bindu**

## INTRODUCTION

Prior<sup>1</sup> to the introduction of GST, the centre taxed the production of goods in the form of Excise duty, and the states levied Sales tax/VAT, and the services were also taxed by the centre by levying a service tax. Further, the centre levied Central Sales Tax (CST) on the inter-state transaction of goods which was collected and retained by the states. In addition, there were other taxes levied by the state and the local governments. The state level VAT was also complex with multiple tax rate structures, so the manufacturers' decision on inventory and distribution of goods were based on the tax avoidance instead of operational efficiency. There were too many taxes by the different level of governments with different tax rates which created a complex indirect tax system in India that led to severe efficiency and operating costs of tax.

Further, under the previous regime the Input Tax Credit (ITC) cannot be claimed between the Central VAT (CENVAT) and the State VAT, the input tax credit earned through CENVAT can be set off only against the CENVAT liabilities and the same for State VAT. So, this led to the cascading of taxes and there was no provision to claim ITC for the CST paid on inter-state transactions which again lead to further cascading of taxes. Besides, there were high and multiple tax rates, and additional levies imposed by the government to raise the tax revenue. The high tax rates encouraged the tax evasion and increased the pressure on the government to give more exemptions and concessions (Chakraborty, 2019). All this made the indirect tax system arbitrary and unpredictable which probably led to high compliance burden on the

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<sup>1</sup> The introduction in this paper is largely drawn from a paper written by the authors titled "Goods and Services Tax Compliance: A Reflection of Challenges faced by the Business Taxpayers in India" that has been presented at a conference titled "International Conference on Indigenous Practices in Business" organised by Department of Management Studies, G H Raisoni College of Engineering, Nagpur on 6&7<sup>th</sup> May 2022

taxpayers. This called for a much-needed harmonization of taxes, tax rates, process, and the procedures across the country under a new system.

On 1<sup>st</sup> July 2017, the GST was introduced as a destination-based, multistage value added tax on goods and services across the country. The power of levy of tax is vested with both the central government and state government at every stage of value addition. It is a dual levy by the centre and the states at every transaction on the same tax base with seamless input tax credit (ITC) across the supply chain. Under the GST regime every transaction will attract Central Goods and Services Tax (CGST) by the centre and State Goods and Services Tax (SGST) by the states. The inter-state transactions and imports will attract Integrated Goods and Services Tax (IGST) comprising the rates of both CGST and SGST. The revenue from the IGST will be adjusted against the ITC claimed and settled to the states based on final consumption over the clearing house mechanism (Rao, 2019).

Under GST the seamless flow of ITC across the tax jurisdiction is expected to reduce the cascading of taxes and better compliance due to the paper trail of the transactions. The consolidation of the taxes, regulation, process, and procedures are expected to improve the ease of doing business by reducing the compliance burden for the taxpayers. Here, though the burden of tax borne by the consumers, and the duty of tax remittances to the tax authorities is with the business enterprises, so the business enterprises are the taxpayers in case of the GST.

Therefore, the introduction of GST has been expected to simplify the compliance process and thereby ease the compliance requirements for the taxpayers, as more than 17 taxes and cesses have been subsumed under the GST, and all the process of taxation from registration, filing of returns and refunds have been made online. However, the research on tax compliance costs is limited in India focusing on the personal income tax (Chattopadhyay and Das-Gupta,

2002a) and the corporate income tax (Chattopadhyay and Das-Gupta, 2002b). The tax compliance cost studies are sparse in India, and they are not academic studies but government department level reports that are not accessible to the public. However, now that a country-wide GST has been implemented in 2017, it is vital to focus on the compliance burden and the compliance costs of GST. Thus, it is imperative to understand and study the tax compliance costs of GST incurred by small businesses, as high compliance costs may discourage the businesses to register for tax (Coolidge, 2012), and all studies on VAT/GST compliance costs show that it disproportionately affects the small businesses. Further, it might incentivise the small businesses with turnover around the VAT threshold to stay below the threshold by limiting their economic activity (Harju, Matikka and Rauhanen, 2016). In view of that, it is important to study the GST compliance costs. Hence, this study aims to estimate the GST compliance costs incurred by the small businesses in Tamil Nadu. The main objective of this study is to examine the level of compliance burden through estimating the number of hours spent on GST compliance work by the business owners and personnel, valuation of the same, and the external costs spent on fees paid to the tax advisors or tax practitioners. Further, estimate the aggregate GST compliance costs incurred by the business in absolute terms and relative to Gross State Domestic Product (GSDP) and GST revenue of Tamil Nadu for the year 2019-20, and finally to identify the factors associated with the GST compliance costs using classical regression analysis.

The paper is organised as follows. Section 2 briefly discusses the existing literature on VAT/GST compliance costs followed by the discussion on conceptual issues related to the study, the sample selection for the survey, and the implementation of the survey in Section 3. The results are presented in the Section 4, and Section 5 summarises and concludes the paper.

## REVIEW OF LITERATURE

The research on tax compliance costs is relatively new, which was started from the early 20<sup>th</sup> century<sup>2</sup>. One of the first studies on tax compliance cost was carried out by Prof R.M Haig in 1935 in the US. The history on the research of the tax compliance costs were discussed in detail by Sanford *et. al.* (1989). In any case, the contemporary research on tax compliance costs were pioneered by Sandford (1973) on income tax and later by Sandford *et. al.* (1981) on VAT compliance costs incurred by the businesses in UK (Lignier, Evans, and Tran-Nam, 2014). Since 1980s numerous studies have taken place on the tax compliance costs of all taxes or of a particular tax across countries (Evans, 2003). However, in India the studies on tax compliance costs are limited, which have focused mainly on personal income tax (Chattopadhyay and Das-Gupta, 2002a) and corporate tax (Chattopadhyay and Das-Gupta, 2002b).

Sandford (1973, 1981) defines tax compliance costs as “the costs which are incurred by the taxpayers or by some third party such as an employer, in meeting the requirements of the tax system, over and above actual tax liability itself and over and above any harmful distortions of consumption or production to which the tax may give rise”. The components of compliance costs of tax include money costs, time costs and the psychological costs. The money costs include the fees paid to the external assistance hired such as tax advisors or tax agents, and overhead costs such as expenses incurred on stationery, postage, travel, computers etc. to meet the tax requirements. The time costs include the number of hours spent on the tax compliance work by taxpayers such as individuals or business owners and their internal staff member such as office managers and accountants of the firms. These hours spent on the tax compliance work are then again converted into money costs by

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<sup>2</sup> The review of literature in this paper is largely drawn from a paper published by one of the authors. Vishnuhadevi, S. (2021). Administrative and Compliance Costs of Value Added Tax (VAT): A Review. *Review of Development and Change*, 26(2), 179–206. <https://doi.org/10.1177/09722661211058807>

multiplying the hours spent with hourly wage rate of the personnel. The psychological costs include stress and anxiety, which are associated with the complex tax system.

There are various studies that have focused on the VAT/GST compliance costs across countries. The ground-breaking research on VAT compliance costs were undertaken by Sandford *et. al.* (1981) in UK. They estimated the aggregate compliance costs at £ 392 million, which was 9.26 percent of revenue collected for the year 1977-78. Further, they estimated that on an average the small firm spent 1.17 percent of taxable turnover on compliance costs, whereas large firm spent only about 0.04 percent of taxable turnover. This shows the regressive nature of tax compliance costs. Again, Sandford *et. al.* (1989) examined the VAT compliance costs in UK and estimated at £791 million, which were around 3.69 percent of the VAT revenue collected. Further, the VAT compliance costs were about 1.48 percent and 0.05 percent of the taxable turnover of the small and large firms respectively. Rametse and Pope (2002) analysed the start-up compliance costs of GST in Australia and estimated it at AUD\$ 7626, of which 40 percent were spent on computers and software. The start-up costs also affect the small businesses disproportionately due to the fixed costs spent on the computers and software. Similarly, studies on VAT/GST compliance costs were carried out by various countries such as Canada (CFIB, 1991), UK (National Audit Office, 1994), New Zealand (Colmar Bruton, 2005), Australia (Glover and Tran-Nam, 2005), and Sweden (Skatterverket, 2006) in 1990s and 2000s.

Recently, Evans, Lignier and Tran-Nam (2013) conducted a large-scale survey to examine the tax compliance costs from all the business taxes in Australia for the year 2012. The authors found that the average compliance costs for a SME was AUD\$ 13,313, of which, AUD\$ 7,750 were internal time spent by owners and employees and AUD\$ 5,653 were costs spent to the external assistance. Further, the compliance burden measured as proportion to the turnover fell

disproportionately on the micro firms (AUD\$75.84 per AUD\$ 1000 of turnover) than for small firms (AUD\$14.09) or medium firms (AUD\$3.34). Among all the taxes, GST compliance was time consuming. Of the total internal time spent on tax related activities, GST compliance took around 33 percent for medium businesses and 50 percent for the micro businesses (Evans, Lignier and Tran-Nam, 2013). In addition, of all the taxes in UK the overall VAT compliance costs were high and of the total time spent on all tax compliance work, VAT compliance work had taken up 50 percent of the time spent by the internal staff members of the firms (Hansford and Hasseldine, 2012). Further, various compliance costs conducted in various countries uncovered that the compliance costs for the VAT/GST is the highest compared to the other taxes (Klun and Blazic, 2005; Evans et al., 2013; Gupta and Sawyer, 2014; Yesegat et al., 2017), VAT compliance work consumes disproportionate amount of time spent on tax compliance work by the internal personnel of the firms (Hansford and Hasseldine, 2012), and VAT compliance costs are highly regressive that weigh down the small businesses disproportionately. The regressive nature of the VAT compliance costs was confirmed by all the studies that have been carried out.

Along with estimating the compliance costs, it is vital to understand the factors associated with higher compliance costs for policy making. The literature has suggested various factors such as size of the firm, complexity of the tax implemented, frequency of changes in the tax rules, number of rates, tedious invoicing and record keeping, number of taxes a business must deal, all these will increase the compliance burden (Evans *et. al.* 2013; Yilmaz and Coolidge, 2013; Walpole, 2014). The size of the firm is one of the significant determinants of tax compliance costs (Hansford et al. 2003; Sandford et al.1981 and Sandford et al. 1989). In Sweden 73 percent of the VAT compliance costs for the year 2005 were incurred by the businesses having 0 to 4 employees (Skatterverket, 2006). This shows the regressive nature of tax compliance costs, as the small firms bear the higher burden of tax compliance. Hansford et al. (2003) investigated the factors that might determine the VAT compliance

costs for small and medium size businesses in UK. Not surprisingly the results revealed that the size of the firm had a positive impact on the VAT compliance costs. As the turnover increased the VAT compliance costs also increased in the absolute terms. Then the sector of the business also influenced the VAT compliance costs i.e., manufacturing and services sector firms had lesser compliance costs than the other sectors. The authors considered that this might be due to the degree of complexity of VAT laws for different sectors. Further, businesses with computerised accounting system had positive influence on the VAT compliance costs because of the fixed costs incurred on computers and software. In addition, hiring external assistance to do VAT compliance work significantly and positively influenced the VAT compliance costs.

Walpole (2014) reviewed the recent literature of tax compliance cost studies related to VAT/GST of various countries, to identify the features of VAT/GST that might contribute to high compliance costs. The author found some "trigger points" that are connected to the high compliance costs such as tedious invoicing and record keeping, calculation processes, tight time limits, special rules or schemes for certain supplies and sectors, complexity of information, frequency of change of rules and complexity of cross border transactions. Recently, Yesegat et al. (2017) examined the determinants of tax compliance costs for small businesses in Ethiopia and found that there exists a significant relationship between the magnitude of the tax compliance costs and certain factors such as the business size, legal structure of the business, sector of the business, computerised accounting system, and hiring an external assistance. The factors such as business size, computerised accounting system, and hiring an external assistance had positively influenced the tax compliance costs, and legal structure i.e., sole proprietorship form had lower tax compliance costs compared to other forms of businesses.

## METHODOLOGY

Tax compliance cost studies have adopted different survey methods such as mail survey, online survey, and interview-based survey administered through a structured or semi-structured questionnaire. The current study has also used the survey method administered through a semi-structured questionnaire with the help of the Commercial Tax Department (CTD) of Tamil Nadu. This section examines the conceptual issues such as the size classification of the businesses and the components included in measuring the GST compliance costs, the sample selection for the survey, and statistical analysis.

### **Classification of Businesses**

As mentioned in the introduction, the main objective of this paper is to estimate the GST compliance costs incurred by the businesses in Tamil Nadu particularly by the small businesses. According to Ministry of Micro, Small and Medium Enterprises Development, the small enterprises are defined based on the level of investment in plant and machinery or equipment and annual turnover. In accordance with that, the micro enterprises should have an investment of not exceeding Rs. 10 million and annual turnover of not more than Rs. 50 million. For small enterprises, the investment in plant and machinery or equipment should not be more than Rs. 100 million and the annual turnover should not be more than Rs. 500 million. However, for GST registration, a business enterprise with a turnover above Rs. 4 million for a dealer of goods and Rs. 2 million for a service provider must get registered for GST. Also, the business whose turnover is within Rs. 15 million can opt for either quarterly filing or the composition scheme<sup>3</sup>. Further, for the taxpayers whose turnover is less than Rs. 50 million can file GST returns quarterly

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<sup>3</sup> A taxpayer can opt for composition scheme whose aggregate turnover is below Rs. 15 million and needs to pay tax of 1 percent to 5 percent of the turnover. The composition scheme has been introduced by the government for the small businesses of supplier goods and restaurant services for easy compliance. Supplier of services with having annual turnover up to Rs. 5 million can avail composition scheme with the tax rate of 6 percent of the turnover. However, the composition taxpayers cannot avail ITC, and cannot make inter-state transactions.

and pay the tax every month. Hence, the definition of small business enterprise for the purpose of this study includes the businesses with turnover up to Rs. 50 million. Nevertheless, to analyse correlation between the size of the business and the tax compliance costs incurred, businesses with more than Rs. 50 million have also been included in the analysis.

### **Components and Classification of Compliance Costs**

Generally, the components of the compliance costs include the money costs paid to the external advisors, value of time spend on the tax compliance work by the taxpayers that is either the business owners and/or their internal staff members, and the overhead costs such as computers, stationery, travel etc. Moreover, the compliance costs also include the psychic costs such as the anxiety and stress caused to the taxpayers in completing the tax activities. However, the psychic costs are highly subjective and difficult to measure quantitatively, hence excluded from the scope of this study.

In this study the estimates of GST compliance costs emphasis on the measurable recurrent costs for the year 2019-20. These are classified into internal and external costs.

- The internal costs comprise of the value of the time spent on the GST compliance by business owners and their staff members which is otherwise known as personnel costs. Further, internal costs include overhead costs or non – personnel costs such as cost of computers, stationery, travel, telephone etc.
- The external costs include the direct monetary outgoings incurred as fees paid to external tax advisors or tax agents to comply with the GST requirements.

The measurement of the external costs is rather straightforward, as it is represented by the direct monetary expenditure paid to the external tax advisors by the taxpayers. Similarly, non-personnel costs or

the overhead costs are also represented by direct cash expenditure incurred by the taxpayers, hence measurement of the overhead costs is also straightforward. However, difficulties arise in measuring and valuing the compliance time spent on the GST compliance work by the taxpayers and their internal staff members. The taxpayers were asked to provide monthly hours solely because most taxpayers file their GST returns every month, so it would be easier for the taxpayers to recall the monthly hours spent on GST work accurately. Further, the value of time spent by the internal personnel can be derived based on their hourly wage rate, but same for time spent by the owners is the concern. According to Sanford et al (1989) the value of time spent on the tax compliance work by a business owner is the opportunity cost to the business, i.e., the return that could have been gained by the owner if the person had spent the time in doing the business affairs. Hence, the appropriate amount would be the average earnings by the business owner. However, that may include an element of profit which is also an equally valid measure (Sandford, *et. al.* 1989). In this case the problem arises in determining an appropriate figure for the business owners to value the compliance time spent in the tax work.

Therefore, in the current study the value of time spend on GST compliance activities are derived from multiplying the number of hours spend with hourly wage rate as reported by the respondents including business owners. The respondents were asked to provide the monthly wage for the year 2019-20, then the hourly wage rate was derived from it. Subsequently to check the accuracy of the valuation of time, previous studies (Sandford *et. al.*, 1981; Evans at. al., 1997) have compared the hour value provided by the respondents with the market salary or wage rates. However, official data on market salary or wage rate seem to be unavailable in India, only minimum wage rates are available for office administrative and accounting personnel.

Therefore, this study uses the valuation provided by the respondents, but to increase the reliability of the estimates due care has

been taken by the authors. The question enquiring the internal personnel costs were framed in a way that respondents were asked to provide number of hours spend on GST activities per month and the monthly salary for the personnel involved. Hence, the monthly salary provided for the office manager and accounting staff by the respondents were cross checked with the tax consultants and other respondents to know the market salary. Further, the data provided by the respondents on fees paid to the external tax advisors were also checked with the tax consultants.

The tax compliance costs can be classified into transitional costs (commencement costs and temporary costs) and recurring costs (Tran-Nam et al., 2000). The transitional cost is incurred by the taxpayers when there is a significant change in the tax system. The recurrent costs include the regular compliance costs incurred by the taxpayers for an existing tax system. This study concentrates on estimating the recurrent compliance cost of GST incurred by the small business. Additionally, the compliance costs can be classified into gross and net compliance costs. The gross compliance costs include the overall tax compliance costs without offsetting for the tax compliance benefits. The net compliance costs are equivalent to the difference between the gross compliance costs and tax compliance benefits. Tax compliance benefits are aids realised by the taxpayers for being tax compliant. These benefits include cash flow benefits, managerial benefits, and tax deductibility benefits. Cash flow benefits arise when there is a time gap between the receipt of the tax funds and remitting of it to the tax authorities. Managerial benefits arise when taxpayers maintain detail records of the transactions for tax purposes, which in turn helps them in decision making and improved businesses, and tax deductibility benefits arises when government considers some tax compliance costs as a valid tax-deductible expenses. However, quantifying cash flow benefits and managerial benefits are highly difficult task and due to in adequate data measuring tax compliance benefits are beyond the scope of this study.

## **Sample Design**

In the current study the targeted population is the GST registered businesses in Tamil Nadu. As mentioned earlier, the aim is to estimate the compliance costs of GST incurred by small GST registered businesses with the annual turnover up to Rs. 50 million. However, firms with annual turnover above Rs. 50 million is also included to examine the effect of the business size on the GST compliance costs. The total number of GST registrants for the year 2019-20 were 12.3 million and 0.97 million in India and Tamil Nadu respectively as on 31<sup>st</sup> March 2020. For the administrative purposes the GST registered business taxpayers are divided between the state tax administration and the central tax administration. The state tax administration in Tamil Nadu is the CTD. The total number of registrants under the state tax administration for the year 2019-20 were 618,382. Of that 556,047 were the active taxpayers for the year. Here, the GST compliance costs are incurred only by the active taxpayers. Hence, it is vital that the sample is from the population of active GST registered businesses. Only the CTD has the knowledge of both active and inactive businesses. Therefore, it was decided to seek the assistance of the CTD to conduct the survey which was accepted by the Commissioner of CTD on request. The CTD has twelve territorial divisions including a Large Taxpayers Unit (LTU) in Tamil Nadu and the districts are grouped under these twelve territorial divisions. The data for GST registered businesses were available only in total, and turnover wise and sector wise classification of the GST registered business were not available. However, the current study is mainly focused on estimating compliance of small businesses of different sectors including businesses which have exports and refund claims in Tamil Nadu. So, the sample must have GST registered small businesses of different sectors, businesses which export and claim refund, and businesses with turnover above Rs. 50 million to examine the size effect on the GST compliance costs. This was explained to the Commissioner, CTD of Tamil Nadu, and after the discussion it was decided to conduct the survey in Erode territorial division which consists of Erode, Tirupur, and Karur district.

Sample size is one of the issues in the sample design that needs to be determined. Fowler (2014) stated that it is common misconception that a certain percent of the population must be taken as a sample, and the sample size must be large to increase the accuracy to generalise the estimates to the population. He argued that a sample of 150 would describe the population of 15000 or 15 million with virtually the same degree of accuracy. Fowler (2014) also demonstrated that precision increased steadily up to the sample size of 150 to 200, and after that there is only a modest gain to increase the sample. Therefore, a sample of at least a 200 responses were required to estimate the GST compliance costs. However, the response rate of the surveys conducted for the compliance cost studies ranges from as low as 2.68 percent to 80.2 percent (Makara and Pope, 2013). Hence, a sample 500 was determined anticipating a moderate response rate as the CTD agreed to assist in conducting the survey. Subsequently, a sample of 500 GST registered businesses majorly small businesses were drawn from the total population with the help of the tax officials, and the semi-structured questionnaires were distributed to the selected sample through the tax officials. This way the response rate was better, and the anonymity of the respondents and their responses were maintained. A total of 247 useable responses were received after the deduction of out of frame, unusable responses, which gives a good response rate of 49.4 percent<sup>4</sup>.

### **Statistical Analysis**

The quantitative data obtained from the survey were analysed using both descriptive and inferential statistical analysis. The descriptive statistics such as frequency, mean, minimum and maximum were used to describe the respondents' profile such as the sector, legal structure, annual turnover of the businesses etc and to estimate the mean and aggregate GST compliance costs. In addition, there are certain factors that may influence the magnitude of compliance costs as discussed in the existing

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<sup>4</sup> A 30 percent response rate is considered as the "norm" for tax compliance costs studies (Sandford 1995, as cited in Evans 2003).

literature. In this study the factors such as volume of business (measured based on number of invoices processed in a month), sector and legal structure of the business, method of accounting, way the returns are completed, size of the business, whether the business claimed refund, and categories of purchases and sales tax rate are included to examine if these factors influence the GST compliance costs incurred by the small businesses. Therefore, to examine if these factors determine the GST compliance costs a multiple regression (Ordinary Least Square) analysis was adopted. The above mentioned variables were selected based on the existing literature. The following regression equation was adopted

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

where,

Y = natural logarithm of GST compliance costs

$X_i$  = independent variable  $i$  ( $i = 1, 2 \dots n$ )

$n$  = number of independent variables

$\alpha$  = constant

$\beta_i$  = coefficients of the independent variables ( $i = 1, 2 \dots n$ )

$\varepsilon$  = random error term

## **SURVEY RESULTS**

This section presents the survey results and discussion. The respondents key profile is presented in first, followed by the estimates of time spent GST compliance work, internal compliance costs, external compliance costs, gross GST compliance costs, aggregate GST compliance costs, and the regression analysis examining the factors associated with the GST compliance costs.

### **Respondents Profile**

The table below shows the key profile of respondents by annual turnover, sector, legal structure, method of accounting, refund claims and the

manner with which the returns are completed. As mentioned previously the businesses are classified based on the size measured by the annual turnover. The businesses with annual turnover below Rs. 50 million are considered as small businesses. Here the small businesses are again classified into three categories based on the annual turnover up to Rs. 4 million, above Rs. 4 million below Rs. 15 million, and above Rs. 15 million below Rs. 50 million. Out of the total 247 respondents, 191 are small businesses which is about 77.3 percent, and large number of businesses are in manufacturing sector as sole proprietors. Further, 95.95 percent of the businesses have taken normal registrations, 92.31 percent of the respondents filed their returns every month, and 23.48 percent of the businesses had refund claims for the year 2019-20.

**Table 1: Key Profile of the Respondents**

<b>Annual Turnover range (Rs. in millions)</b>	<b>N</b>	<b>Percent</b>
up to 4	62	25.10
Above 4 to 15	66	26.72
Above 15 to 50	63	25.51
Above 50 to 250	37	14.98
Above 250 to 500	9	3.64
Above 500	10	4.05
Total	247	100
<b>Sector/Business Activity</b>	<b>N</b>	<b>Percent</b>
Manufacturing	103	41.70
Services	50	20.24
Trade - business to business (B2B)	46	18.62
Trade - Business to consumers (B2C)	20	8.10
Trade - both B2B and B2C	28	11.34
Total	247	100
<b>Legal Structure/Type of ownership</b>	<b>N</b>	<b>Percent</b>
Sole Proprietors	135	54.66
Partnership	93	37.65
Private Limited Companies	17	6.88
Public Limited companies	2	0.81
Total	247	100
<b>Registration</b>	<b>N</b>	<b>Percent</b>
Normal registration	237	95.95
Composition registration	10	4.04
Total	247	100
<b>Frequency of Filing Returns</b>	<b>N</b>	<b>Percent</b>
Monthly	228	92.31
Quarterly	19	7.69
Total	247	100
<b>Refunds</b>	<b>N</b>	<b>Percent</b>
Businesses with refund claim	58	23.48
Businesses without refund claim	189	76.51
Total	247	100

**Source:** Taxpayer survey and own computation

**Note:** Totals may not agree due to rounding.

## Compliance Time

The mean yearly hours spend on GST obligations by different personnel in the firms are presented in this section. The internal time costs are incurred only by businesses either whose GST tax returns are entirely completed within the firm or partly within the firm and partly outsourced to external assistance. The respondents were asked to provide the number of hours spent on GST compliance in a month, which were then converted to yearly hours. The mean yearly internal hours spent on GST compliance by different personnel for the financial year 2019-20 are presented in the Table 2. Out of 247 respondents, 161 incur time costs, and the overall average time spent on GST activity for the year were 384 hours. On an average the highest number of hours on GST compliance have been by accounting staffs at 301 hours, followed by the managers at 254 mean hours, and by the owners at 129 mean hours for the year.

**Table 2: Mean Yearly Internal Hours Spent on GST Compliance by Internal Staff Category (2019-20)**

Staffs	Mean hours	Minimum	Maximum	N
Owner	129	6	720	62
Manager	254	12	900	52
Accounting Staff	301	6	1920	135
Overall internal time spent	384	6	2580	161

**Source:** Taxpayer survey and own computation. N represents the number of respondents in each category.

The analyses of average personnel hours spend on GST compliance by annual turnover (business size) are presented in Table 3. The regressive nature of the compliance costs is visible here. The businesses with annual turnover less than Rs. 4 million spend 385 mean hours on GST activities, which is higher than mean hours spend by the firms with annual turnover between Rs. 4 million and 50 million. This is probably due to the business owners of the firms with annual turnover below Rs. 4 million spend more time on GST activities (Table 4). The mean yearly internal hours spent on GST activities by different personnel

analysed by the annual turnover are presented in the Table 4. The mean hours spend by the business owners shows a steep downward trend as the annual turnover increases. The mean hours spend by the managers does not show any trend, however the managers from businesses with annual turnover up to Rs. 4 million spend higher mean hours on GST compliance than the firms from the other categories. And the mean hours spend by the accounting staffs shows an upward trend as the annual turnover increases. This shows that relatively owners from micro firms tend to work on the GST activities than hiring an accounting staff. Further, Table 2 and Table 4 reveal that when the GST requirements are fulfilled by the owners the time costs tend to be higher than when the work is done only by the manager or the accounting staff.

**Table 3: Mean Yearly Internal Hours Spent on GST Compliance by Turnover (2019-20)**

<b>Annual Turnover (in millions)</b>	<b>Mean hours</b>	<b>Minimum</b>	<b>Maximum</b>	<b>N</b>
up to 4	385	12	2064	33
Above 4 to 15	318	12	1320	35
Above 15 to 50	338	6	2580	46
Above 50 to 250	442	6	1836	29
Above 250 to 500	321	24	984	8
Above 500	708	84	2100	10
Overall	384	6	2580	161

**Source:** Taxpayer survey and own computation. N represents the number of respondents in each category.

**Table 4: Mean Yearly Internal Hours Spent on GST Compliance by Turnover and Staff (2019-20)**

<b>Annual turnover(in millions)/ Staff</b>	<b>Owner</b>	<b>Manager</b>	<b>Accounting Staff</b>
up to 4	238 (20)	291 (7)	269 (22)
Above 4 to 15	100 (11)	201 (9)	274 (30)
Above 15 to 50	101 (16)	246 (14)	268 (39)
Above 50 to 250	34 (11)	285 (13)	336 (26)
Above 250 to 500	12 (1)	188 (3)	249 (8)
Above 500	44 (3)	274 (6)	530 (10)

**Source:** Taxpayer survey and own computation. The number of responses is presented in parentheses.

### Internal GST Compliance Costs

The estimated personnel average value of time spend on GST activities by staff category are presented in Table 5. The higher amount of the internal costs was incurred by the accounting staff followed by the managers and the owners.

**Table 5: Personnel Mean Yearly Internal Costs Spent on GST Compliance by Staff Category (2019-20)**

Staffs	Mean (in Rs.)	Minimum	Maximum	N
Owner	14545	625	72000	62
Manager	19713	500	105000	52
Accounting Staff	20126	200	120000	135
Overall	28843	375	215000	161

**Source:** Taxpayer survey and own computation. N represents the number of respondents in each category.

The estimated average personnel costs reveal the regressive nature of the compliance costs even in the absolute term (Table 6). The firms with annual turnover up to Rs. 4 million has incurred the average personnel costs of Rs. 26,483 for the year, but firms with annual turnover up to Rs. 15 million and Rs. 50 million has incurred the average personnel costs of Rs. 22,316 and Rs. 23,454 respectively. This is due to the internal costs incurred by the owners from the smallest firms are higher than the managers and accounting staffs of the firms from the same category (Table 7). The owners probably end up spending more time on the GST activities outside of business hours or on the weekends. So that the money paid to the external assistance or to hire an accounting staff can be reduced.

**Table 6: Personnel Mean Yearly Internal Costs Spent on GST Compliance by Turnover (2019-20)**

<b>Annual turnover (in millions)</b>	<b>Mean (in Rs.)</b>	<b>Minimum</b>	<b>Maximum</b>	<b>N</b>
up to 4	26483	500	97500	33
Above 4 to 15	22316	750	95000	35
Above 15 to 50	23454	375	168750	46
Above 50 to 250	32894	2250	98300	29
Above 250 to 500	36213	4450	108000	8
Above 500	66215	6000	215000	10
Overall	28843	375	215000	161

**Source:** Taxpayer survey and own computation. N represents the number of respondents in each category.

**Table 7: Personnel Mean Yearly Internal Costs Spent on GST Compliance by Turnover and Staff (2019-20)**

<b>Annual turnover (in millions)/ Staff</b>	<b>Owner</b>	<b>Manager</b>	<b>Accounting Staff</b>
up to 4	19688 (20)	18750 (7)	15861 (22)
Above 4 to 15	13364 (11)	13644 (9)	17041 (30)
Above 15 to 50	14164 (16)	20089 (14)	14748 (39)
Above 50 to 250	4538 (11)	19385 (13)	25077 (26)
Above 250 to 500	2000 (1)	13833 (3)	30775 (8)
Above 500	27500 (3)	32708 (6)	38340 (10)

**Source:** Taxpayer survey and own computation. The number of responses is presented in parentheses.

The mean yearly internal costs ( here after internal costs include both personnel and non – personnel costs) on GST activities for the year 2019 – 20 is presented in the Table 8 and Table 9. Out of 247 respondents 181 incurred the internal costs of which 109 incurred non – personnel costs that includes the money spent on computers, stationery, telephone, photocopy, and travel. The overall mean internal costs incurred by the businesses were Rs. 34,063 for the year. The overall average non – personnel and personnel costs are Rs. 13,960 and Rs. 28,843 respectively.

**Table 8: Mean Yearly Internal GST Compliance Costs (2019-20)**

<b>Description</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>	<b>N</b>
Personnel	28843	375	215000	161
Non - personnel	13960	1200	36000	109
Overall	34063	375	215000	181

**Source:** Taxpayer survey and own computation. N represents the number of respondents in each category.

The analyses of average yearly internal costs by annual turnover are presented in table 9. Usually, the compliance costs tend to increase in absolute terms as the turnover increases, and the regressive nature of the compliance costs is seen as a proportion to the turnover. However, here the internal compliance costs are regressive even in the absolute terms incurred by the firms below Rs. 4 million annual turnover at Rs. 30,188. Further, the mean internal compliance costs relative to the turnover shows an extreme regressive pattern. The smallest firms incur the mean internal compliance costs of around 1.51 percent of the annual turnover. This gets drastically reduced even for the businesses at the second smallest level that is firms with annual turnover up Rs. 15 million is 0.28 percent of the annual turnover. This is probably because, the firms with annual turnover less than Rs. 4 million are sort of forced to take GST registrations<sup>5</sup> to make transactions with the medium and large businesses. Further, these smallest firms mostly likely maintain accounting records only for the GST purposes. Hence, they end up incurring higher non – personnel costs such as computer costs, also the ever-evolving GST rules will make it difficult for them to cope with the frequent changes. Thus, they probably spend a greater number of hours on fulfilling GST compliance requirements.

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<sup>5</sup> The GST registration threshold for businesses dealing only with goods is the aggregate turnover of more than Rs. 4 million in a year, and for services it is Rs. 2 million.

**Table 9: Personnel and Non - Personnel Mean Yearly Internal Costs Spent on GST Compliance by Turnover (2019-20)**

<b>Annual turnover (Rs. in millions)</b>	<b>Mean (in Rs.)</b>	<b>Mean internal compliance costs percent of turnover<sup>a</sup></b>	<b>N</b>
up to 4	30188	1.51	39
Above 4 to 15	26231	0.28	47
Above 15 to 50	29439	0.09	48
Above 50 to 250	42015	0.03	29
Above 250 to 500	43463	0.01	8
Above 500	77615	0.02	10
Overall	34063		181

**Source:** Taxpayer survey and own computation. a. The proportion of mean internal compliance costs to turnover is calculated using the mid-turnover. N represents the number of respondents in each category.

### **External GST Compliance Costs**

This section outlines the external costs that is the fees paid to the external tax advisors or GST practitioners to do the GST compliance work on firms' behalf for the year and the reasons for hiring external assistance. The average external compliance costs by the firms analysed by annual turnover are presented in the Table 10. Out of 247 respondents, 221 hired the external assistance to fulfil the GST compliance requirements. The external costs also show a regressive pattern both in absolute and relative terms for the firms with annual turnover up to Rs. 4 million, and as the turnover increases the mean compliance costs as a percent of annual turnover decreases as much as to 0.01 percent.

**Table 10: Mean External Compliance Costs by Turnover (2019-20)**

Annual turnover (Rs. in millions)	Mean (in Rs.)	Mean external compliance costs percent of turnover <sup>a</sup>	N
up to 4	12397	0.62	50
Above 4 to 15	11601	0.12	61
Above 15 to 50	21874	0.07	61
Above 50 to 250	36011	0.02	35
Above 250 to 500	29688	0.01	8
Above 500	57783	0.01	6
Overall	20391		221

**Source:** Taxpayer survey and own computation. a. The proportion of mean internal compliance costs to turnover is calculated using the mid-turnover. N represents the number of respondents in each category.

Further, the respondents were asked to report the reasons for hiring external assistance for GST compliance work. The results show that 20.75 percent of the respondents hired external assistance hoping that would reduce the chance of being audited by the tax authorities, 18.55 percent hired to ensure all the GST requirements are met, and 13.68 percent of the respondents hired external assistance as they did not have time to do GST work. Further, 24.06 percent of the respondents chose multiple reasons for hiring external assistance.

**Table 11: Reasons for Hiring External Assistance**

Reasons	N	Percent
The GST return is too complicated	20	9.43
I do not have time for GST related activities	29	13.68
External assistance costs lesser than if I did the GST work myself	25	11.79
Hiring an external assistant will reduce the chance of being audited by the tax authorities.	44	20.75
To ensure all the tax requirements are met	41	18.55
Others (lack of GST knowledge)	11	5.19
Multiple reasons	51	24.06
Total	221	100

**Source:** Taxpayer survey and own computation.

**Note:** Totals may not agree due to rounding. N represents the number of respondents in each category

## Mean GST Compliance Costs

The mean GST compliance costs include both internal costs and external costs spend on GST. The mean compliance costs and the proportion of mean compliance cost to the annual turnover are presented in Table 12. The results reveal the extremely regressive nature of the compliance costs. Though the costs increase as the turnover increases in the absolute terms, the compliance costs as a percentage to annual turnover is highest for the businesses with turnover below Rs 4 million. The compliance costs of the smallest firms are around 1.45 percent of the annual turnover, and it shows a downward trend as the annual turnover increases. The largest firms incur only about 0.02 percent of the annual turnover. The compliance costs for the smallest firms are 72 times higher than the firms with annual turnover above Rs. 250 million.

**Table 12: Mean Compliance Costs (External and Internal)  
Relative To Turnover, 2019-20**

<b>Annual turnover (Rs. in millions)</b>	<b>Mean compliance costs (Rs.)</b>	<b>Mean compliance costs percent of turnover</b>	<b>N</b>
up to 4	28989	1.45	62
Above 4 to 15	29401	0.31	66
Above 15 to 50	43609	0.13	63
Above 50 to 250	66995	0.04	37
Above 250 to 500	65022	0.02	9
Above 500	112285	0.02	10
Overall	43452		247

**Source:** Taxpayer survey and own computation. a. Percentages are calculated using the average of each turnover category, and for "above Rs. 500 million" category the percentage is calculated relative to Rs. 500 million. b. N is the total number of respondents in each category.

The mean compliance costs of GST by primary activity of the firms are presented in Table 13. The results reveal that the manufacturing firms incur the highest amount of compliance costs at Rs. 55,221 followed by the trading firms that have both business to business and business to consumer transactions at Rs. 38,766. The lowest

compliance costs are incurred by trading firms that has only business to consumer transactions (i.e.) retail trade.

**Table 13: Mean Compliance Costs by Sector (2019-20)**

Sector	Mean compliance costs (in Rs.)	N
Manufacturing	55221	103
Services	35967	50
Trading - business to business (B2B)	33927	46
Trading - Business to consumers (B2C)	26985	20
Trading - both B2B and B2C	38766	28

**Source:** Taxpayer survey and own computation a. N is the total number of respondents in each category.

The analyses of the mean compliance costs by legal structure shows that the sole proprietor businesses incur the lowest compliance costs compared to the other firms.

**Table 14: Mean Compliance Costs by Legal Structure of the Firm (2019-20)**

Legal structure	Mean compliance costs (in Rs.)	N
Sole proprietor	34882	135
Partnership	50054	93
Private limited company	63356	17
Public limited company	115400	2

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

### **Mean GST Compliance Costs by other Business Traits**

This section analyses the mean GST compliance costs by other characteristics of the firms such as how the accounting records are maintained, classification of purchases and sales by the number of tax slabs, the manner with which the GST returns are completed, firms with refund claim and no refund claim, and the number of invoices processed in a month.

The analyses of mean compliance costs by the manner of record keeping are presented in the Table 15. The results show that on an average the firms which have adopted a fully computerised system to keep their records incurred the highest compliance costs at Rs. 53,764 compared to the other firms. The lowest compliance costs are incurred by the firms using manual book-keeping at Rs. 25,167. This is probably due to the costs spent on computers, software, and maintenance of the same.

**Table 15: Mean Compliance Costs by Record Keeping Manner of, 2019-20**

<b>Record keeping</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
Manual book-keeping	25167	23
Fully computerised system	53764	89
Partly computerised system	41650	79
Fully outsourced to external assistance	37444	34
Partly outsourced to external assistance	38514	22

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

In India, the GST has four main tax rates (i.e.) 5 percent, 12 percent, 18 percent, and 28 percent along with exemption of some goods and services and zero-rated of exports. The literature says that more categories of GST/VAT rate increase the expected compliance costs. Here in Table 16 and Table 17 compares the mean costs of respondents having various tax rates for purchases and sales. Accordingly, businesses with single tax rate on their purchases incur the lowest compliance costs at Rs. 39,345, and the compliance costs increases as the number of tax slabs for purchases goes up. Likewise, firms with single rate for their sales incur the lower compliance costs compared to the firms with more tax rates. The compliance costs gradually increase as the rate category on sales increases. However, firms with 5 tax rates on their sales seem to incur the lowest compliance costs, but the number of respondents for that category is low.

**Table 16: Mean Compliance Costs By Number of Tax Slabs on Purchases (2019-20)**

<b>Number of tax slabs</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
1	39345	113
2	40987	63
3	48116	50
4	60349	17
5	54688	4

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

**Table 17: Mean Compliance Costs By Number of Tax Slabs on Sales (2019-20)**

<b>Number of tax slabs</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
1	41925	182
2	44384	41
3	53259	14
4	56836	7
5	26083	3

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

The analyses of mean compliance costs by with which the GST returns are completed are presented in the Table 18. The results reveal that the firms whose GST returns are completed entirely by external assistance incur the lowest compliance costs at Rs. 18,489, and the firms whose GST returns are partly completed by the firm and partly completed by the external assistance incur the highest compliance costs at Rs. 57,804. The previous studies also have found that firms which do partial outsourcing incur the highest compliance costs (Makara, 2014).

**Table 18: Mean Compliance Costs by GST Returns Completed (2019-20)**

<b>Returns completed</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
Entirely within the firm	49161	26
Partly by firm and partly by external assistance	57805	135
Entirely by external assistance	18489	86

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

The mean compliance costs for businesses that claim refund, and for businesses with no refund claim are varies significantly. Table 19 shows that on an average businesses with refund claim incur twice the compliance costs than the businesses with no refund claim. This is because the firms must spend more time on refund procedure<sup>6</sup>, and they also have to pay more for the external assistance to do the refund claims.

**Table 19: Mean Compliance Costs by Refund Claim, 2019-20**

<b>Description</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
Businesses claimed for refund	74078	58
Businesses with no refund claim	33732	189

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

The analyses of mean compliance costs by number of invoices processed in a month are presented in Table 20. The results show as expected that the mean compliance costs increase as the number of invoices processed increases.

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<sup>6</sup> Please refer <https://www.cbic.gov.in/resources/htdocs-cbec/gst/circular-cgst-125.pdf> for detailed procedure to claim refunds under GST.

**Table 20: Mean Compliance Costs by Number of Invoices Processed In A Month (2019-20)**

<b>Number of invoices (Range)</b>	<b>Mean compliance costs (in Rs.)</b>	<b>N</b>
0 – 30	29771	72
31 – 50	36672	43
51 – 100	47839	38
101 – 200	43705	38
Above 200	62015	56

**Source:** Taxpayer survey and own computation. N is the total number of respondents in each category.

### **Aggregate Compliance Costs**

The method of computation of aggregate gross compliance costs follows the weighted mean approach that was used in various previous studies (Sanford, *et. al.*, 1981; Yesegat, 2009; Makara, 2014). The compliance costs of GST in Tamil Nadu are weighted by the number of active GST registrants in each annual turnover category. The aggregate compliance costs and the overall weighted mean are calculated using the below equation as used by Makara (2014).

*Equation one – Aggregate compliance costs = Mean compliance costs of the size stratum × Total number of active GST registrants in that size stratum.*

*Equation two – Overall weighted mean = Aggregate GST compliance costs ÷ Total number of active GST registered businesses.*

The aggregate GST compliance costs by the annual turnover classification are presented in the Table 6.22. The overall aggregate GST compliance costs in Tamil Nadu for the year 2019-20 is Rs. 17844 million. Of which, Rs. 11611 million or 65 percent of the total compliance costs

are incurred by businesses with turnover below Rs. 4 million, and Rs. 16126.8 million<sup>7</sup> or around 90 percent of the total compliance costs are incurred by the small businesses with annual turnover up to Rs. 50 million. Further, businesses with annual turnover more than Rs. 500 million incurred compliance costs of Rs. 297 million, which is around just 1.6 percent of the total compliance costs. In addition, the weighted average compliance costs are Rs. 32,091. As noted by Sandford, *et. al.*, (1981) an overall average is not very meaningful due to the wide variations in compliance costs between the businesses. Hence, the overall weighted average is a better estimate.

**Table 21: Aggregate GST Compliance Costs in Tamil Nadu (2019-20<sup>\*</sup>)**

Annual Turnover (Rs. in millions)	Mean compliance costs (in Rs.)	Total no. of Traders (2019-20) <sup>b</sup>	Aggregate Compliance Costs (Rs. in million)
up to 4	28989	400537	11611.1
Above 4 to 15	29401	85926	2526.3
Above 15 to 50	43609	45620	1989.4
Above 50 to 500	66609	21315	1419.7
Above 500	112285	2648	297.3
Overall	43452	556047 <sup>a</sup>	17844
Overall weighted mean = Rs. 17844 million ÷ 556047 = Rs. 32091			

**Source:** Taxpayer survey and own computation.

**Note:** (a) Taken from Management Information System, Commercial Taxes Department.  
 (b) Represents total number of traders administered by the Commercial Taxes Department, Tamil Nadu. Further, the number of traders for the year 2019 – 20 are extrapolated using data from Administrative Report 2018 – 20, published by CTD, as the Administrative Report for 2019 – 20 has not been published by CTD at the time of writing this paper.

\* Totals may not agree due to rounding.

The table 22 presents the total compliance costs as a percentage of Gross State Domestic Product (GSDP) and the GST revenue of Tamil

<sup>7</sup> Sum of total compliance costs incurred by first three annual turnover category in Table 21

Nadu. The total compliance costs as a percentage of GDP shows the weight of the compliance costs on the economy (Makara, 2014). Further, the total compliance costs as a percentage of tax revenue collected shows how efficient the tax is (i.e.) higher the percent, the more inefficient the tax is (Skatteverket, 2006). Almost all major tax compliance cost studies have followed this approach (Sandford, et al. 1981; Sandford et al. 1989; Skatteverket, 2006; Yesegat, 2009; Makara, 2014). The aggregate compliance costs as a percentage of GSDP and as a percentage of GST revenue is 0.10 percent and 4.65 percent respectively. The tax compliance costs of taxes such as income tax, corporation tax, and VAT generally range between 2 percent and 10 percent of the tax revenue and may range up to 2.5 percent of the GDP (Evans, 2008). However, comparing compliance costs of tax of various countries could be misleading because of the differences in the countries' tax systems, tax base, level of development and socio-economics factors (Makara and Pope, 2013). Further, comparing tax compliance cost findings of various countries would be more likely to mislead than enlighten (Sandford, 1995 as cited in Makara and Pope, 2013). In view of that, it would be better to undertake further research on compliance costs of GST in major states in India and compare the findings.

**Table 22: Aggregate Compliance Costs as A Proportion of GSDP and GST Revenue of Tamil Nadu**

<b>Description</b>	<b>Rs. in million</b>
Aggregate compliance costs	17844
GSDP of Tamil Nadu <sup>a</sup>	17972287
GST revenue of Tamil Nadu <sup>b</sup>	383762
	<b>Percentage</b>
Aggregate compliance costs as a percentage of GSDP	0.10
Aggregate compliance costs as a percentage of GST revenue	4.65

**Source:** a. National Accounts Data, Ministry of Statistics and Programme Implementation.

b. State Finances: A Study of Budgets, Reserve Bank of India.

### **Factors influencing GST Compliance Costs**

The review of existing literature shows that there are certain factors that are associated with compliance costs of tax. Therefore, this section explores the relationship between certain variables, and the GST compliance costs using the Ordinary Least Square (OLS) regression method. Based on the literature, the following model is specified for the GST compliance costs, and Table 23 presents the summary statistics and description for all the variables used in the model

$$\begin{aligned} \mathit{Ln}(\mathit{GST\ CC}) = & \alpha + \beta_1 \mathit{Ln}(\mathit{NoI}) + \beta_2 \mathit{Sector} + \beta_3 \mathit{Legal\ structure} \\ & + \beta_4 \mathit{Accounting} + \beta_5 \mathit{Returns\ completed} + \beta_6 \mathit{Size} \\ & + \beta_7 \mathit{Refund} + \beta_8 \mathit{Purchase\ categories} \\ & + \beta_9 \mathit{Sales\ categories} + \varepsilon \end{aligned}$$

**Table 23: Descriptive Statistics of All Variables**

<b>Variable</b>	<b>Description</b>	<b>Mean</b>	<b>SD</b>
Dependent Variable Ln(GST CC)	Natural log of Total GST Compliance Costs	10.29	0.88
Independent Variables Ln(NoI)	Natural log of number of invoices (NoI) processed in a month	4.38	1.42
Sector	Primary sector of the businesses 1 if Manufacturing 0 otherwise	0.41	0.49
Legal Structure	Legal structure of the businesses 1 if Sole Proprietor 0 otherwise	0.54	0.49
Accounting	Method of maintaining accounting records in a firm 1 if Fully Computerised 0 otherwise	0.36	0.48
Returns completed	Returns are completed 1 if partly by firm and partly by external assistance 0 otherwise	0.54	0.49
Size	Business size measured in terms of Annual turnover is divided into three categories as follows		
(i) Up to Rs. 4m	Annual turnover of the businesses 1 if up to Rs. 4m 0 otherwise	0.25	0.43
(ii) Rs. 4m to Rs. 15m	Annual turnover of the businesses 1 if up to Rs. 4m to Rs. 15m 0 otherwise	0.26	0.44
(iii) Rs. 15m to Rs. 50m	Annual turnover of the businesses 1 if up to Rs. 15m to Rs. 50m 0 otherwise	0.25	0.43
Refund	Businesses with refund claim 1 if with refund claim 0 otherwise	0.23	0.42
Purchase category	Number purchase tax rate applicable to businesses	0.45	0.49

	1 if One purchase category 0 otherwise		
Sales category	Number sales tax rate applicable to businesses 1 if One sales category 0 otherwise	0.73	0.44
N	No of observations	247	

**Source:** Taxpayer survey and own computation.

Table 24 presents the OLS estimates for the natural log of the GST compliance costs for the 247 sample firms. A full model with all the independent variables (model 1), and a parsimonious model (model 2) with the variables that are statistically significant in model 1 are presented. The models are statistically significant (F-value = 20.88,  $p = 0.0000$ ; F-value = 28.67,  $p = 0.0000$ ), and the adjusted  $R^2$  – values are 47.06 percent and 47.37 percent for model 1 and model 2 respectively.

**Table 24: Ordinary Least Square Estimates of GST Compliance Costs**

Variables	Model 1	Model 2
Ln(NOI)	0.122 (3.57) <sup>***</sup>	0.135 (4.18) <sup>***</sup>
Sector	0.203 (2.15) <sup>**</sup>	0.206 (2.22) <sup>**</sup>
Legal Structure	-0.026 (-0.29)	
Accounting	0.090 (1.00)	
Returns completed	0.685 (7.78) <sup>***</sup>	0.687 (7.83) <sup>***</sup>
Up to Rs. 4m	-0.414 (-2.76) <sup>***</sup>	-0.409 (-2.85) <sup>***</sup>
Rs. 4m to Rs. 15m	-0.477 (-3.44) <sup>***</sup>	-0.473 (-3.58) <sup>***</sup>
Rs. 15m to Rs. 50m	-0.328 (-2.54) <sup>**</sup>	-0.316 (-2.53) <sup>**</sup>
Refund	0.460 (4.14) <sup>***</sup>	0.468 (4.24) <sup>***</sup>
Purchase category	0.207 (2.08) <sup>**</sup>	0.179 (2.03) <sup>**</sup>
Sales category	-0.064 (-0.58)	
$R^2$ (in percent)	49.42	49.08
Adjusted $R^2$ (in percent)	47.06	47.37
F-value	20.88	28.67
p-value	0.0000	0.0000
N	247	247

**Note:** t statistics in parentheses. \*\* significant at 5 percent; \*\*\* significant at 1 percent

The OLS estimates reveal the following findings. The overall results tend to support the descriptive statistics in the previous sections and the existing literature. The volume of business measured by the natural log of average number of invoices processed in a month is positively associated with the GST compliance costs. The coefficient 0.122 shows that the one percent increase on the number of invoices processed in a month increases the GST compliance costs by 0.12 percent, and it is statistically significant at 1 percent. The sector of the business also significantly affects the GST compliance costs. The result reveals that the manufacturing businesses incur 20 percent higher GST compliance costs than the businesses in other sectors such as services and trading. The legal structure of the businesses that is dummy variable for sole proprietor was not a significant determinant of the GST compliance costs, but it shows a negative relationship in accordance with the results of the descriptive statistics analysis, where the sole proprietor firms incurred the lowest GST compliance costs (Table 14). Similarly, the method of maintaining accounting records dummy variable for fully computerised system was not statistically significant determinant of the GST compliance costs.

Another important factor influencing the GST compliance costs is how the GST returns are completed. The result shows that dummy variable for returns completed partly by the firm and partly by external assistance significantly influence the compliance costs. The businesses who completed their GST returns partly within and partly by external assistance incurred 68 percent higher GST compliance costs than otherwise, and it is statistically significant at 1 percent. The reason for this could be due to the size of the business that is, out of the total firms that filed the returns completely by the external assistance nearly 70 percent of the firms are with the annual turnover below Rs. 15 million. The two important points that need to be noted here is that first for the firms with annual turnover up to Rs. 15 million, the number of invoices processed every month may be comparatively lower than the businesses with annual turnover above Rs. 15 million, so they outsource all the GST

work and external assistance may also charge them lower due to lower volume of businesses. Second, the businesses with annual turnover above Rs. 20 million must mandatorily file annual return and businesses with annual turnover above Rs. 50 million must file annual return along with the reconciliation statement, and this considerably increases their compliance costs. Out of the total businesses that complete the returns partly with firm and partly by external assistance, nearly 65 percent of the businesses filed the annual return for the year 2019-20. Therefore, their volume of the business is also higher which explains why they had to do GST work partly within the firm as it would cost them more money to completely outsource to the external assistance, and they had to sought external help for annual returns, as the return must be signed by a certified auditor.

The next independent variable is the size of the firm measured by annual turnover. It is one of most important determinants of the tax compliance costs. Here, the firms have been categorised into three different sizes with first dummy variable for the firms with annual turnover up to Rs. 4 million, second dummy variable for the firms with annual turnover above Rs. 4 million below Rs. 15 million, and third dummy variable for annual turnover above Rs. 15 million below Rs. 50 million, and the reference category is firms with annual turnover more than Rs. 50 million. Hence, the coefficients of all the three variables are negative showing that in absolute terms the GST compliance costs increases with the size of the firm, and all the three variables are statistically significant and in line with the descriptive statistics analysis and prior studies. The firms with annual turnover below Rs. 4 million incurred 41 percent lesser GST compliance costs than the reference category. On the other hand, the firms with annual turnover above Rs. 4 million and below Rs. 15 million incurred 47 percent lesser GST compliance costs than the reference category. Here the compliance costs are regressive even in absolute terms. The probable reason could be that the internal time spent by the smallest firms (annual turnover below Rs. 4 million) were relatively higher compared to the other firms in the

sample (Table 3 and Table 4). This could be due to that they may still not be familiar with the GST laws, which are also still evolving. Further, they may outsource only the return filing to external assistance and do the tax computation within the firm as it may be expensive to outsource all the GST work to external assistance.

Another independent variable that is associated with higher GST compliance costs is whether the firms had a refund claim for the year. The firms with refund claim had incurred 46 percent higher compliance costs than otherwise. The businesses must follow a set of rules and fill out a separate form to claim refund and they must be careful to not to make any error to get the refund quickly. This increases the time spend on the refund procedures. Also, almost all firms claiming for refund seek for external assistance, and they have to pay a separate fee to do refund claim procedures. Hence, this increases the GST compliance costs significantly for the businesses with refund claims.

The other set of factors that determine the GST compliance costs are the number of purchases and sales tax rate categories a businesses has to deal with. The literature says that higher the number of categories of tax rates higher the GST compliance costs. However, surprisingly the results have revealed that firms with only one purchase tax rate incur 20 percent higher compliance costs than otherwise, and it is statistically significant. Yet, the underlining reason for the same could not be identified. Further, the firms with only one sales tax rate incur 6 percent lesser compliance costs than other, but it is not statistically significant. A parsimonious model (model 2) was estimated using only the statistically significant variable from the model 1. The signs of the coefficient remain the same, and all the variables are still statistically significant, which suggests that this model specification is robust.

## CONCLUSION

This paper has attempted to estimate the compliance costs of GST incurred by the small businesses in Tamil Nadu and examine the factors that are associated with higher GST compliance costs. The results reveal that the GST compliance costs are highly regressive in relative terms for the smallest businesses. The businesses with annual turnover up to Rs. 4 million incurred the mean compliance costs of Rs. 28,989 that is around 1.45 percent of the annual turnover. The firms with annual turnover between Rs. 4 million and Rs. 15 million incurred the mean compliance costs of Rs. 29,401 that is 0.31 percent of the annual turnover. And firms with annual turnover between Rs. 15 million and 50 million incurred compliance costs of Rs. 43,609 that is 0.13 percent of the annual turnover. Further, the GST compliance costs as a proportion of annual turnover for larger businesses with turnover above Rs. 50 million below Rs. 250 million, above Rs. 250 million and Rs. 500 million are just 0.04 percent, 0.02 percent, and 0.02 percent respectively. The reason could be the smallest firms (turnover below Rs. 4 million) incur higher internal compliance costs even in absolute terms compared to firms with higher annual turnover (above Rs. 4 million below Rs. 50 million). This may be because the smallest firms are kind of forced to take GST registrations to trade with medium and large businesses. Hence, the end up incurring high non-personnel costs such as computer costs, and they spend higher number of hours in fulfilling GST requirements due to the frequent changes in the rules.

The results reveal that the aggregate compliance costs of GST in Tamil Nadu are Rs. 17848 million, and aggregate compliance costs as proportion of GSDP and GST revenue of Tamil Nadu is 0.10 percent and 4.65 percent respectively. Further, the overall weighted mean of the GST compliance costs is Rs. 32,091. Further, the descriptive statistics and regression analysis reveal that there are certain factors that are associated with higher GST compliance costs such as sector, volume of business, method of maintaining accounts, manner with which the GST

returns are completed, and the refund claims. The businesses in manufacturing sector incurred higher GST compliance costs than others, and GST compliance costs increases along with the number of invoices processed in a month. In terms of maintaining of accounts, businesses that maintained a fully computerised accounting system incurred highest GST compliance costs. Further, businesses that completed their GST work partly within the firm and partly by external assistance incurred the highest GST compliance costs, while those who completely outsourced their GST work to external assistance incurred the lowest GST compliance costs. Similarly, firms with refund claims incurred around 46 percent higher compliance costs than firms without the refund claims.

These results provide an indicative understanding of the GST compliance costs incurred by the small businesses in Tamil Nadu. GST is a major reform in the right direction, which has rationalised the compliance process such as registration, filing of returns, flow of input tax credits, tax rates and refund claims. However, the GST system is complex combined with frequent changing of tax rules. The filing of returns under GST is complex, and the auto-population of input tax credits were not in place as expected till August 2020, which had made the reconciliation of invoices very difficult. Further, restriction of input tax credits in case of mismatch has made the tax complex. All these demand more time and money costs from the taxpayers especially the small businesses. In addition, the GST has 4 major tax slabs, exemption, zero rated for exports and couple of rates specifically for certain commodities. This would increase the compliance burden and chances of human error for the taxpayers.

Hence, the future development of GST should be making the regulations simpler and reducing the tax rates to one or two to ease the tax compliance for the small businesses.

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