eJournal of Tax Research

Volume 15, Number 1 September 2017

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UNSW Australia
ISSN 1448-2398

eJournal of Tax Research (2017) vol. 15, no. 1, pp. 77-104

Tax compliance costs in developing countries: Evidence from Ethiopia

Wollela Abehodie Yesegat, Jacqueline Coolidge and Laurent Olivier Corthay[1]

Abstract

This paper estimates tax compliance costs for business taxpayers in Ethiopia; it also assesses factors affecting the magnitude of tax compliance costs. The paper uses survey data from a scientific sample of 1,003 Ethiopian businesses.

Total tax compliance costs in the year 2012/13 were estimated to be about 4.5 percent of tax revenue collection. Tax compliance costs were found to be regressive and there was a higher burden for smaller businesses in Ethiopia than those in Kenya or Nepal. Business profit tax, value added tax (VAT) and turnover tax (ToT) constituted the largest share of tax compliance costs.

Simplifying the tax regime for smaller businesses, reducing the frequency of VAT filing for relatively small businesses, raising the VAT threshold and revisiting mandatory VAT sector specific registration requirements were suggested areas of reform.

Key words: tax compliance costs, cost structure, cost burden, cost drivers

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1. INTRODUCTION

In Ethiopia, tax revenue collection in absolute terms is increasing. Currently, tax revenue covers about 70 percent of government expenditures. However, in terms of the tax to GDP ratio, revenue performance is still at a very low level.[2] This low revenue performance measured in terms of tax to GDP ratio is likely to create pressure[3] on the government to meet its revenue collections, and may lead to unfair procedural practices and also increase the burden on compliant taxpayers (relative to informal businesses). Such pressures on honest taxpayers are likely to lead to increased taxpayer resentment, which may have an adverse impact on taxpayers' willingness to comply voluntarily which in turn is instrumental in enhancing the efficiency and equity of the tax system as a whole (IFC, 2009).

To mitigate tax compliance 'quasi-voluntary compliance' problems (IFC, 2009, p. 24), reducing the burden of compliance requirements (as measured by tax compliance costs) is crucial. This paper offers an estimate of tax compliance costs in Ethiopia and identifies areas in the design and administration of taxes that are associated with excessive tax compliance costs in the country.

The paper is organised into six parts. Part two provides a theoretical framework along with international empirical evidence on tax compliance costs. This is followed by research objectives, questions and hypothesis in part three. Data sources and methods used are presented in part four, while part five presents the results and discussion. Finally, the conclusion and recommendations are provided in part six.

2. THEORETICAL FRAMEWORK AND EMPIRICAL EVIDENCE: TAX COMPLIANCE COSTS

'The term "compliance costs" itself is ambiguous' (Sandford et al., 1989, p. 10). Evans et al. (1996) also noted the apparent debate on the nature of tax compliance costs, the lack of a well-established consensus as to the precise meaning of compliance costs and how such costs could, or should, be measured. With this caveat Johnston (1963, p. 5) defined compliance costs (specifically for federal income tax) as:

> …the reduction in the corporation's operating costs, exclusive of the tax itself, which would result if the federal income tax were eliminated. Ideally, it is the amount evolving from the comparison of total administrative costs presently experienced by the firm with the total administrative costs which would be experienced by the firm if the federal income tax were eliminated.

Sandford (1995, p. 1) adopted a similar definition of compliance costs:

> They are costs over and above the actual payment of tax and over and above any distortion costs inherent in the nature of tax; costs which would disappear if the tax was abolished.

[2] Tax to GDP ratio of Ethiopia (about 13 percent) is lower than the average for low income and sub-Saharan African countries (Yesegat, 2016). Further, it remains low in the context of the government's plan of increasing it to 15.3 percent by the end of its Growth and Transformation Plan (GTP), 2014/15.

[3] As Gill (2003) notes, tax to GDP percentage is a readily available indicator that gives a sense of the fiscal pressure; and comparing the tax to GDP ratio of countries with similar economic and tax structures gives a sense of the relative effectiveness of the revenue administration.

Sandford (1995, p. 1) went on to stating compliance costs as:

> …the costs incurred by taxpayers in meeting the requirements laid on them by the tax law and the revenue authorities.

If the description of compliance costs is understood to refer to all costs (other than the tax payments themselves and associated efficiency costs) incurred by taxpayers that would disappear if the tax was abolished, the scope of tax compliance costs would be broader than just those incurred in the process of complying with tax laws. Further, such a definition would go beyond the scope of Johnston's (1963) definition, which focuses on companies' operating costs. Arguably, compliance costs could include the expected discounted future costs of non-compliance and the lobbying of tax policy makers for lower effective tax rates. However, if the same description is understood in the context of the definition of compliance costs as costs of complying with the requirements of tax laws, the expected costs of non-compliance and of lobbying politicians would be excluded from the notion of compliance costs. Compliance costs would then be confined to costs incurred in complying with the requirements of a tax system.

In light of the above discussion and taking the narrower view, compliance costs can at least conceptually be considered as costs encompassing the following: explicit costs incurred; and payments made by taxpayers trying to fulfil their taxation obligations. These potentially include:

1. gross salaries and wages to internal employees;[4]
2. fees paid to external professional tax advisors;
3. costs of communication, stationery items, required computer hardware and software, postage, and accommodation;
4. costs of acquiring sufficient knowledge (these costs may take the form of conference and seminar costs, training costs and material costs);
5. imputed costs of time spent by taxpayers/business owners (including unpaid helpers) in complying with taxation obligations;
6. psychological costs—the costs of anxiety and stress that taxpayers experience when dealing with a tax legislation; and
7. some elements of compliance costs that may exacerbate efficiency costs (Tran-Nam, 2003).

There are also offsetting benefits to the above definition. These benefits include any legally available allowances or commissions for collecting taxes on behalf of tax authorities and one-time cash subsidies for tax compliance from the government, cash flow benefits, managerial benefits and tax deductibility of certain compliance costs.[5] For example, managerial benefits could be obtained from improvements to the accounting information system, improvements to controls and savings on other costs (Lignier, 2009). Similarly, less frequent value added tax (VAT) payments provide

[4] Employees working on tax matters.

[5] Please see Lignier (2009), Lignier and Evans (2012), Tran-Nam (2003) and Tran-Nam and Glover (2002) for more discussion on offsetting benefits.

more of a cash flow advantage to businesses that are registered to collect VAT, as they can make use of the funds for a period of time, interest-free, before remitting them to the government.

There are measurement problems for some elements of compliance costs.[6] The first problematic area is the category of psychological costs. By their very nature psychological costs that taxpayers experience in complying with the requirements of a tax system are nearly impossible to be objectively assigned monetary value to. In fact, there has been an attempt by Woellner et al. (2005, 2007) to compare the relative psychological costs incurred by Australian taxpayers when reading and applying the *Income Tax Assessment Act 1936* and *Income Tax Assessment Act 1997*, although monetary values were not assigned. Managerial and cash flow benefits are also difficult to measure with certainty. For instance, the main difficulty with managerial benefits is that even though the concept itself is rather straightforward, the reality of managerial benefits can be elusive because it is dependent on how the accounting information generated by tax compliance activities is valued by business owner–managers and used in business decisions (Lignier, 2009).

The other problem in the measurement of compliance costs is the difficulty of separating the accounting costs of tax compliance from the costs of general business accounting—referred to as core accounting costs by Sandford (1995). For small businesses, which often tend to carry out bookkeeping primarily for the purpose of complying with the tax system, it may seem plausible to treat all their accounting costs as tax compliance costs. However, using their bookkeeping information, these businesses would get such benefits as enhanced and better informed financial decision making and better access to credit markets. Consequently, although the initial and primary purpose for these businesses of keeping accounting records is for tax compliance, they should and often do use the records for other purposes of benefit to their businesses. This reveals the likely overestimation of tax compliance costs as a result of treating the whole of accounting costs as tax compliance costs. The allocation of the joint tax and accounting costs is also problematic in large businesses. In these businesses (that may have separate tax departments) the issue arises because, even though taxation matters are handled by separate departments, the determination of the accounting costs of one tax separately from the others and of the marginal costs of introducing a new tax or changing the existing ones remains a hurdle (Sandford et al., 1989).

There is also another challenge in the measurement of compliance costs, i.e., the valuation[7] of time spent in complying with the requirements of tax legislation. Pope (1995) identified at least six methods of valuing taxpayers' time. These methods include:

1. each individual's own valuation of time (reported value);
2. each individual's own valuation, subject to a maximum hourly rate;
3. the median (or mean) value of time as reported by individual taxpayers;

[6] Sandford et al.(1989) note different problems in measuring tax compliance costs; Lopes and Martins (2013) also report that psychological costs are difficult to put a price on.

[7] The valuation of taxpayers' time is sometimes cited as the most difficult measurement problem (Plamondon, 1993).

4. what taxpayers would pay to be rid of all compliance costs—fair compensation claim (Evans et al. (1997);

5. before-tax hourly wage rate (e.g., from national labour statistics, also with or without overheads); and

6. after-tax hourly wage rate.

The availability of these alternate methods reveals that there is no single way of valuing the time used in the process of compliance with the requirements of a tax law. Variations in the choice of the appropriate method of valuing time may lead to substantially different estimates. In connection with this and the other issues discussed, it is worth stressing that the nature and measurement of compliance costs are ambiguous and considerable caution should be exercised in deriving estimates that can be thought of as indicative.

2.1 Factors affecting tax compliance costs and impact of tax compliance costs

Theoretically there are a number of factors affecting the magnitude of compliance costs. These factors include the complexity of the tax system (including features of the tax law and associated regulations and enforcement practices), business size, the nature of the business, the length of time the business has been operating, general education and bookkeeping training of business owners and staff preparing returns, the accounting system employed and socio demographic factors.[8]

The impact of tax compliance costs was recognised as early as the eighteenth century by Adam Smith in his discussion of the four canons of tax policy—'equity', 'certainty', 'convenience' and 'economy'[9] of a good tax system (Smith, 1776 (1952 ed)). Three of Smith's canons (namely economy, certainty and convenience) for a good tax policy were concerned with tax operating costs. Smith (1776 (1952 ed), p. 362) in discussing the economy canon of a good tax system noted that:

> …every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state.

In order to help keep the compliance costs as low as possible, the tax that each taxpayer is obliged to pay should be certain and not arbitrary, according to Smith's (1776 (1952 ed)) certainty canon. Certainty pertains to the clarity to taxpayers and every other person as to the time of payment, the manner of payment and the amount to be paid. Further, according to Smith's (1766 (1952 ed)) convenience canon, each tax ought to be imposed at the time or in the manner in which it is most likely to be convenient for the taxpayer to pay it. In the context of these principles, the lack of certainty in tax legislation, and the arbitrariness and inconvenience in the administrative procedures, could increase operating costs by using up the resources of both taxpayers and the government in working through various tax issues. Moreover, the lack of certainty and the arbitrariness and inconvenience prevalent in a tax system

[8] Please see Hansford et al. (2003), Yesegat (2009), Evans (2003), Smulders et al. (2016), and Evans and Tran-Nam (2014) for more discussion on factors driving tax compliance costs.

[9] Certainty and convenience are concerned wholly with compliance costs, while economy includes both compliance and administrative costs (Sandford et al., 1989). Although it is not the emphasis of this paper, it is worth noting that the economy canon deals with efficiency loss as well.

would expose taxpayers to unnecessary trouble, vexation[10] and oppression, thereby increasing their overall compliance costs.

The existence of high compliance costs, due partly to the complexity and arbitrariness in the system, would violate the economy canon, which requires operating costs (both compliance costs of the taxpayers and administrative costs of the government) to be as little as possible.

In addition to the above, the relatively heavier burdens of compliance costs on smaller taxpayers erode the built-in progressivity in the tax system and undermine the equitable distribution of the overall burden of taxation. Further, high compliance costs have their own impact on the efficiency of a tax system. For example, because of high (actual or perceived) VAT compliance costs, business taxpayers may restrain business growth or reduce the range of goods supplied giving rise to an efficiency loss. In this regard, Tran-Nam (1999) indicated that business taxpayers may cut back the volume and range of their activities because of high VAT compliance costs.

Discussions thus far reveal problems in the nature and measurement of tax compliance costs, factors affecting them and the impact of tax compliance costs in terms of Smith's (1776 (1952 ed)) canons of a good tax policy. With these theoretical underpinnings, the subsequent discussion presents the increase in the number of empirical studies and the evidence in the estimation and analysis of tax compliance costs.

2.2 Increase in the number of empirical studies and evidence in the estimation of tax compliance costs

In contrast to the long theoretical recognition of tax compliance costs, there have been relatively few empirical studies conducted until recently and most of the earlier literature generally focused on equity and efficiency considerations.[11] As a result, little had been done on the measurement and analysis of compliance costs. Sandford et al. (1989, pp. 25-26) noted that, with the exception of McCulloch (1845), the discussions of the two principles—equity and efficiency—(ignoring Smith's (1776 (1952 ed)) certainty, convenience and economy canons[12]) had dominated the main stream of economic literature until recently. The lack of research into tax compliance costs is perhaps explained by factors[13] including the lack of agreement on the subject[14] and the previously high costs of conducting studies.[15]

It was not until the twentieth century[16] that research in tax compliance costs attracted academic researchers, with a relatively systematic measurement of tax compliance costs being attempted by Haig (1935) in the United States of America (USA). Until

[10] Although vexation is not, strictly speaking, expense, it is certainly equivalent to the expense at which every man would be willing to redeem himself from it (Smith, 1776 (1952 ed)).

[11] In fact, as Wicks and Killworth (1967) and Sandford et al. (1989) noted, compared to compliance costs, administrative costs have been subjected to some degree of measurement.

[12] As noted previously these are concerned with the operating costs of a tax system.

[13] See Sandford et al. (1989) and Oster and Lynn (1955).

[14] The lack of agreement pertains to such issues as what constitutes compliance costs, what to include (exclude) and how to measure compliance costs.

[15] See, for example, Pope (1989).

[16] It was in the 1930s that Professor R. M. Haig first endeavoured to measure tax compliance costs (see, for example, Haig (1935), Oster and Lynn (1955) and Sandford et al. (1989)).

the 1960s, other published studies of tax compliance costs took place only in North America. Then, from the mid-1960s to the 1970s the interest appeared to expand from North America to Europe (mainly Germany and the United Kingdom (UK)) (Sandford et al., 1989).

Since the beginning of the 1980s there has been a growing interest in tax compliance costs by academics (e.g., Slemrod & Venkatesh, 2002), governments and others, especially in developed countries. The growth of concern by governments[17] and the proliferation of research in tax compliance costs internationally are evident from the fact that governments (mainly of OECD member countries) have commissioned[18] tax compliance costs studies (before the introduction of a new tax or a change in the existing ones, often estimated ex-ante but not necessarily verified empirically ex-post) by funding research projects and/or becoming directly involved in the research. In addition, some governments[19] require the preparation of regulatory impact assessments for various regulations including taxation before introducing a new law or amending existing ones. For example, Evans and Walpole (1999) wrote that the use of regulatory impact statements to assess the likely consequences of proposed legislative changes has become more and more prevalent internationally and is often a crucial tool in assisting policy formulation and decision making in the area of taxation in many OECD countries. Similarly, since the mid-2000s, many governments in developing countries, including those in Africa, have commissioned tax compliance costs studies with the support of the International Finance Corporation (IFC)/World Bank (Coolidge, 2012).

In particular, the Trade and Competitiveness Global Practice of the World Bank Group[20] (WBG) has undertaken numerous tax compliance cost surveys (TCCS) in developing and transition countries over the past several years, and has amassed a wealth of empirical data documenting the severity of the compliance burden for micro,

[17] Focusing on voluntary compliance with the laws has contributed to governments' concern about compliance costs (Sandford, 1995).

[18] To mention some government initiatives, in the USA, the Internal Revenue Services (IRS) commissioned Arthur D. Little & Co. to develop a methodology for estimating taxpayer paper work burden (Arthur D. Little & Co., 1988). In Canada, a study on the administrative and compliance costs of the federal sales tax system with brief comparison to the retail sales tax system of Ontario was conducted by Arthur Andersen & Co. for the Department of Finance (Arthur Andersen & Co., 1985). In Australia, the Revenue Analysis Branch of the Australian Taxation Office (ATO) commissioned a team of consultants from the University of New South Wales (UNSW) to advise the ATO on aspects of the methodology which needed to be used to estimate the costs of taxpayer compliance with proposed amendments to taxation legislation, and to carry out research to establish the values of components to be used in these estimates (Evans et al., 1996).

[19] In reviewing governments' concern about tax compliance costs, Sandford (1995) noted that since 1985 the UK has required its officials to produce compliance cost assessments (CCAs) for all regulations affecting business, including tax regulations. In 1994, the New Zealand Inland Revenue Department (NZIRD) set out a compliance cost reduction strategic plan and put in place a compliance cost reduction unit to implement it. In August 1994, the Australian government announced its intention to accompany all future tax legislation with Tax Impact Statements (TIS) addressing the compliance cost issues of taxpayers. In the Netherlands, since 1985 CCAs (often qualitative rather than quantitative) have been required for changes in tax legislation. The USA introduced a Taxpayers' Bill of Rights in 1988 and concern at the level of compliance costs is evident by the request to taxpayers to indicate on their tax return how long it took to complete.

[20] Formerly known as the Investment Climate Department and earlier as the Foreign Investment Advisory Service of the WBG (FIAS).

small and medium enterprises, and perceptions about tax compliance from both formal and informal businesses. [21]

The WBG TCCS database, as of 2016, includes 20 developing and transition countries.[22] The methodology used in most WBG TCCS has been stratified random sampling based on the database of active business taxpayers of the respective revenue authority in each country (IFC, 2011). The sample sizes have ranged from about 750–1,000 in each country.

The findings of the WBG surveys cannot necessarily be taken as typical for developing countries, as the majority of governments only requested a TCCS if there was a reason to believe that it was a problem for small business taxpayers (with the exception of South Africa, where the WBG TCCS was first piloted in 2006).

The WBG's TCCS noted a pattern that in some regions, businesses either have one or more certified accountants on staff, or outsource their tax compliance work to external certified accountants. This pattern is usually seen where tax compliance tends to be relatively complicated and onerous (e.g., in former Soviet countries such as Ukraine) or where there is a legal requirement to have returns prepared by a certified accountant (e.g., in some Latin American countries such as Peru). In other countries (e.g., Burundi or Nepal) most small business owners or managers undertake the work themselves (Coolidge, 2012). The latter case makes the valuation of time particularly difficult, as they usually do not pay themselves a salary. The opportunity cost of a business owner's time is problematic to assess: the late evening or weekend hours often devoted to such tasks may not, strictly speaking, take away from time devoted to alternative business activities and might therefore be considered quite low in value (especially for relatively low-profit businesses). On the other hand, time taken by a highly-skilled professional might carry quite a heavy opportunity cost.

The number of tax compliance costs studies continues to grow. The following paragraphs provide very broadly the international evidence on tax compliance costs with a particular focus on those that have been conducted since the 1980s. [23]

The literature reveals that there has been a high concentration of tax operating costs studies in developed countries particularly in Australia, Canada, New Zealand, the UK and the USA. However, recently the number of tax compliance cost studies in developing countries has been increasing. For example, in addition to those carried out by the WBG, studies have been carried out in such countries as Croatia, India, Indonesia, Hong Kong Malaysia, South Africa, Tanzania and Ethiopia.[24] A review of these studies reveals that most of them relied on mail surveys as their principal way of

[21] In addition to Coolidge (2012), please see Coolidge and Ilic (2009) and Coolidge and Yilmaz (2015).

[22] South Africa, Vietnam, Ukraine, Yemen, Peru, Uzbekistan, Armenia, Georgia, Laos, Kenya, Burundi, Bihar and Rajasthan (India), Nepal, Uganda, Bangladesh, Albania, Colombia, Jamaica, Bosnia and Herzegovina. Repeat surveys (after at least some reforms have been enacted) have been undertaken for South Africa, Georgia and Bihar, and Peru. Related TCCS were carried out in South Africa with cooperation from USAID in 2007 (USAID, 2008a, 2008b).

[23] Such a focus is because of the fact that the number of studies into tax operating costs has tended to grow since the 1980s. Please see Evans (2003), Yesegat (2009), Coolidge (2012) and Susila and Pope (2012) for some detailed reviews of the empirical evidence on tax compliance costs.

[24] For more details please see Blazic (2004), Chan et al. (1999), Chattopadhyay and Das-Gupta (2002), Susila and Pope (2012), Klun (2004), Pope and Abdul-Jabbar (2008), Shekidele (1999), Smulders et al. (2016), and Yesegat (2009).

gathering information, which led to a relatively low response rate and likely non-response bias. Most of these studies drew their samples from sources other than tax authorities' databases[25]—a situation that has contributed to some scepticism about the reliability of the findings. Most of the studies focused on the estimation of the magnitude of compliance costs. Most studies also did not look into specific areas in the tax system that resulted in the estimated level of compliance costs in the respective investigations. However, in making policy relevant proposals (i.e., formulating tax policy), as James and Edwards (2008) noted, it is important to adopt a wider context. Most studies also relied on descriptive statistics in analysing factors affecting compliance costs without attempting to see the strength of the relationship between compliance costs and determining factors and to control for the effects of the interdependence that might exist among the factors.

Although tax compliance cost studies were conducted in different countries, to the knowledge of the authors, in Ethiopia, there has been only one attempt (Yesegat, 2009) to estimate the compliance costs of taxes, VAT in particular.[26] This study estimated both tax compliance and administrative costs of VAT in Ethiopia, while the compliance costs of all other tax types were beyond the scope the study and thus remain unquantified. It is, hence, important to study the nature of compliance costs of all taxes in Ethiopia.

3. RESEARCH OBJECTIVE, QUESTIONS AND HYPOTHESIS

The main objective of this study was to estimate tax compliance costs in Ethiopia and assess factors affecting them. Specifically, the research attempted to address the following research questions (RQ) and hypothesis (HP):

RQ1. What is the magnitude of tax compliance costs in Ethiopia?

RQ2. Which types of taxes contribute to the largest share of the estimated tax compliance costs in Ethiopia?

As shown in section two, the literature, among others, Hansford et al. (2003), Yesegat (2009), Evans (2003), Smulders et al. (2016) and Evans and Tran-Nam (2014) discuss the relationship between tax compliance costs and different factors that are expected to affect the magnitude of tax compliance costs. Considering this and the research objective the following hypothesis was developed:

HP1. The magnitude of tax compliance costs in Ethiopia is associated with:

- *business size;*
- *nature of business (business sector);*
- *business age (start date);*

[25] This is in fact often because of the lack of cooperation from the side of tax authorities.

[26] Such a limited work in the estimation and analysis of tax compliance costs in developing countries, as Ott and Bajo (2001) pointed out in connection with transitional countries, may be because of the difficulty in data collection and estimation, lack of expertise, non-existence or weakness of taxpayer associations and other institutional obstacles.

- *the habit of outsourcing tax compliance activities;*
- *the practice of using computers for bookkeeping purpose;*
- *the practice of maintaining full accounting records;*
- *cash register machine usage status;*
- *business ownership type; and*
- *gender of respondent/ owner.*

4. DATA SOURCES AND METHODS

The study employed the IFC's/WBG's tax compliance costs and perception survey data from Ethiopian business taxpayers.[27] The total number of eligible business taxpayers in the sampling frame was 987,923.[28] The eligible sampling frame was stratified by region, business sector, category ('A', 'B' and 'C')[29] and ownership status, and the sample was randomly selected from businesses located in Addis Ababa and four major cities (Adama, Bahir Dar, Hawassa and Mekelle) of the four largest regional states. The reference year in the survey was 2012/13. The survey was conducted between May 2014 and August 2014 using face-to-face interviews. The number of valid responses was 1,003.

In terms of data analysis, we present below the estimation of tax compliance costs together with the descriptive statistics and the regression analysis undertaken. The tax compliance cost estimation employed the following cost components:

1. In-house cost of time spent by individuals = Time spent by various individuals on tax accounting tasks X salaries (salaries of relevant personnel was asked in the survey)[30]

2. Outsourcing costs = Outsourcing cost paid to outside professionals for tax accounting tasks

3. Cost of software/hardware/dataware/information [31] = Money spent by businesses on acquisition and maintenance of software, hardware, dataware and information in the five-year period before the survey divided by five

[27] This paper used the raw survey data along with WBG (2016); the survey covered all business sector and size groups..

[28] The list of taxpayers in the population was obtained from the Ethiopian Revenue and Customs Authority's database; in determining the sampling frame, businesses that were not in operation during the entire reference year (2012/13 fiscal year) were excluded.

[29] Category A businesses include all incorporated entities and unincorporated entities with annual turnover of more than ETB 500,000 (equivalent to about USD 23,000; USD 1 = ETB 21.73 as of October 26, 2016); category B businesses are those which are not included in A and whose annual turnover is between ETB 100,000 (equivalent to USD 460) and ETB 500,000; category C businesses are those which are not already included in categories A or B and whose annual turnover is up to ETB 100,000 (FDRE, 2002).

[30] For salaries the following indirect question was used: 'How much average gross remuneration (including salaries, bonuses, insurance and all other benefits) per month per person do you think a similar business would pay to personnel (bookkeepers/accountants, managers/owners and other workers) working on general bookkeeping and tax accounting related tasks?'

In this study general bookkeeping is defined to include all bookkeeping activities that should be undertaken even if the business did not comply with tax requirements. All other activities are considered under tax accounting, i.e., tax compliance costs.

In the survey respondents were asked about the costs of outsourcing general bookkeeping and tax accounting activities and carrying them out in-house. Respondents were also asked to divide the overall costs into general bookkeeping costs and tax accounting costs. In addition, respondents were asked about the costs of specialised tax software, hardware, and information. The estimation of tax compliance costs is based on taxpayers' own estimation of costs incurred in the process of complying with the tax system. To deal with the problem of allocating costs between tax accounting costs and general bookkeeping costs, this paper estimates tax compliance costs in two scenarios:

1. Tax accounting cost = Cost of in-house time spent on tax accounting + cost of outsourcing the tax accounting activities

   or

2. Cost of in-house time spent on tax accounting + cost of outsourcing the tax accounting activities + acquisition and maintenance cost of software/hardware/dataware/information

Average total compliance costs of all taxes were estimated using sampling weights, which considered the stratification criteria (region, size, sector and legal form of ownership). The overall compliance costs of taxes in Ethiopia were, then, estimated by multiplying the average compliance costs by the total number of business taxpayers in the country obtained from the Ethiopian Revenue and Customs Authority.

4.1 Definition of variables and model specification

To assess the association between estimated tax compliance costs and their determinants a multivariate regression analysis was run. The analysis considered such factors as size and sector of business, business ownership type, bookkeeping practice, business age, gender of owners/respondents, cash register machine usage status, and the habit of outsourcing tax compliance activities. Below are the definitions of these variables:

Dependent variable: natural logarithm of the magnitude of tax compliance costs as estimated using the general formula provided previously (both including and excluding costs of amortisable assets required for tax compliance).

Independent variables:

Business size natural logarithm of the reported annual turnover

Business sector (manufacturing and others[32] as a reference group)

Dummy variable that equals 1 if the sector is trade and 0 otherwise

[31] These costs cover both tax accounting and general bookkeeping related software, hardware and information costs; these costs are amortised over a five-year period.

[32] This refers to other non-services sectors.

Dummy variable that equals 1 if the sector is other services[33] and 0 otherwise

Bookkeeping practice

Dummy variable that equals 1 if the business keeps full records of revenue and expenses and 0 otherwise (do not keep full records as a reference)

Dummy variable that equals 1 if the business uses computers for tax accounting and 0 otherwise (do not use computer for tax accounting as a reference group)

Practice of outsourcing tax compliance activities variable that takes 1 if tax-related activities are carried out completely in-house, 2 if partially in-house and 3 if completely outsourced

Cash register machine usage status (not use cash register machine as a reference)

Dummy variable that equals 1 if the business uses cash register machine and 0 otherwise

Business ownership type (all other ownership types as a reference group)

Dummy variable that equals 1 if the ownership type is in the form of sole proprietorship and 0 otherwise

Business start time (businesses started on or before the year 2000 as a reference group)

Dummy variable that equals 1 if the business started operations in the year 2000 or after and 0 otherwise

Gender of business owners (male and multiple owners as a reference)

Dummy variable that equals 1 if the gender is female and 0 otherwise (including those with multiple owners)

Gender of respondents (male as a reference)

Dummy variable that equals 1 if the gender is female and 0 otherwise

To examine the conditional association between the magnitude of tax compliance costs and the above listed factors, the following general multivariate regression equation similar to Vaillancourt (1989) and Yesegat (2009) was adopted:

[33] Include services other than trade (wholesale and retail trade).

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 \ldots + \beta nXn + u$$

where:

Y = natural logarithm of the magnitude of the compliance costs estimate;

Xi = independent variables where i takes the value from 1 to n;

n = number of independent variables;

α = intercept;

βi = coefficients to be estimated associated with the independent variables Xi (i = 1, 2, 3…n); and

u = classical random error term.

5. RESULTS AND DISCUSSION

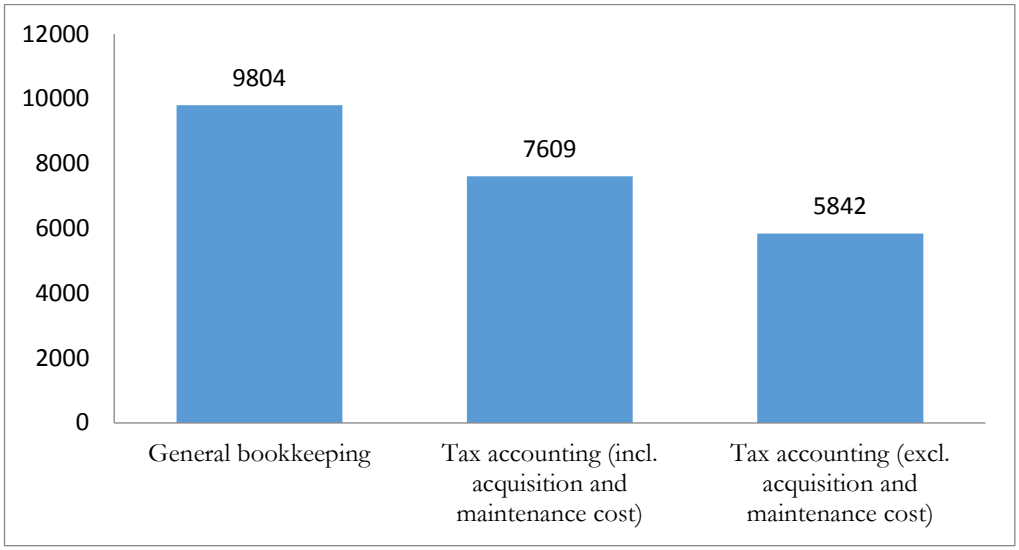
This section presents the results and discussion. The estimated compliance costs are presented first; this is followed by descriptive statistics and regression analysis.

5.1 Estimation of tax compliance costs

Using the method presented in section four the average cost of a business for general bookkeeping was estimated to be ETB 9,804 (USD 523.2)[34] in the tax year 2012/13. In the same year, the average total tax compliance cost of a business including costs of acquisition and maintenance of software and hardware was ETB 7,609 (USD 406) while the average total tax compliance cost without acquisition and maintenance costs was ETB 5,842 (USD 311.7) (Figure 1).

[34] Average exchange rate for the year 2012/13 was USD 1 = ETB 18.59 (NBE, 2012/13).

Figure 1: Average Total Compliance Costs (in ETB)



Source: Tax Compliance Costs and Perception Survey in Ethiopia (WBG 2016)

The average tax compliance cost for a business (including amortised acquisition and maintenance costs of software and hardware) as a share of turnover was estimated to be about 5.4 percent while the share of tax compliance costs on total turnover without acquisition and maintenance costs was 4.7 percent (Table 1). In absolute terms, tax compliance costs for category A businesses were well over five times the costs for category C businesses (both when tax compliance costs include and exclude acquisition and maintenance costs). However, relative tax compliance costs as a share of turnover were larger for category C compared with category A.

Table 1: Average Tax Compliance Costs (in ETB and as a Share of Turnover) by Taxpayers' Category

	Category		
	A	B	C
N	323	199	201
Tax compliance costs in ETB (excl. acquisition and maintenance costs)	17185	10068	2637
Tax compliance costs in ETB (incl. acquisition and maintenance costs)	21639	13162	3203
Tax compliance costs as share of turnover (%) (excl. acquisition and maintenance costs)	3.85%	3.84%	5.03%
Tax compliance costs as share of turnover (%) (incl. acquisition and maintenance costs)	4.70%	5.39%	5.51%

Source: Tax Compliance Costs and Perception Survey in Ethiopia (WBG 2016)

In addition, tax compliance costs as a share of turnover tend to decrease as business turnover increases, suggesting that tax compliance costs are regressive (Figure 2). This is true whether costs of acquisition and maintenance of software and hardware are included or excluded. Those with turnover under ETB 100,000 faced compliance costs of almost 7 percent (for those who had tax hardware/software related costs); it

was 6 percent if hardware and software costs were excluded (Figure 2). In general, the paper indicates that small businesses bore a disproportionately higher compliance cost burden (in the range of 6–7 percent) compared to the largest businesses (under 1 percent).

As can be seen from the analysis of the tax compliance cost burden and the WBG's (2016) study about the perception of taxpayers and review of the micro and small business taxation legal framework in Ethiopia, the tax regime is relatively complex, time-consuming and costly. For the smallest (category C) taxpayers, there are over 90 categories of sectors and nearly 20 turnover bands in the official matrix to determine the tax due. In the implementation of the legal framework, the tax administration relies on daily sales estimates of each and every taxpayer under the regime. The estimation uses mostly such criteria[35] as location and nature of the business, the estimated volume of transactions, as well as estimated expenditures for business and non-business purposes. This may open up opportunities for negotiations between taxpayers and tax officials about the daily sales estimates and which category the taxpayer belongs in, which can be time-consuming, and therefore may partly explain the existence of the relatively high tax compliance costs burden on the category C taxpayers in Ethiopia.

In addition, the use of sector specific VAT registration requirements[36] together with a registration threshold of ETB 500,000 (annual turnover), which has never been inflation-adjusted, has led to the inclusion of an increasing number of small businesses in the VAT net.[37] This, in turn, may have contributed to the disproportionately higher tax compliance burden on smaller businesses. The frequency of filing and paying VAT could be the other factor for the reported high compliance costs burden on relatively small businesses. This is because in Ethiopia, all VAT-registered businesses, regardless of their annual turnover, are required to file and pay VAT on a monthly basis.

It is critical to take steps to reduce the compliance burden on small businesses as much as possible. When tax compliance costs are, say, 5 percent of turnover, it is the equivalent to an additional 5 percent turnover tax (ToT) (which, even assuming a generous profit margin of 20 percent, would be equivalent to a 25 percent profit tax on top of all other taxes being paid by a small business). Such a burden reduces the competitiveness of businesses, especially small domestic businesses. This high burden of tax compliance costs on relatively small businesses is likely to deter them

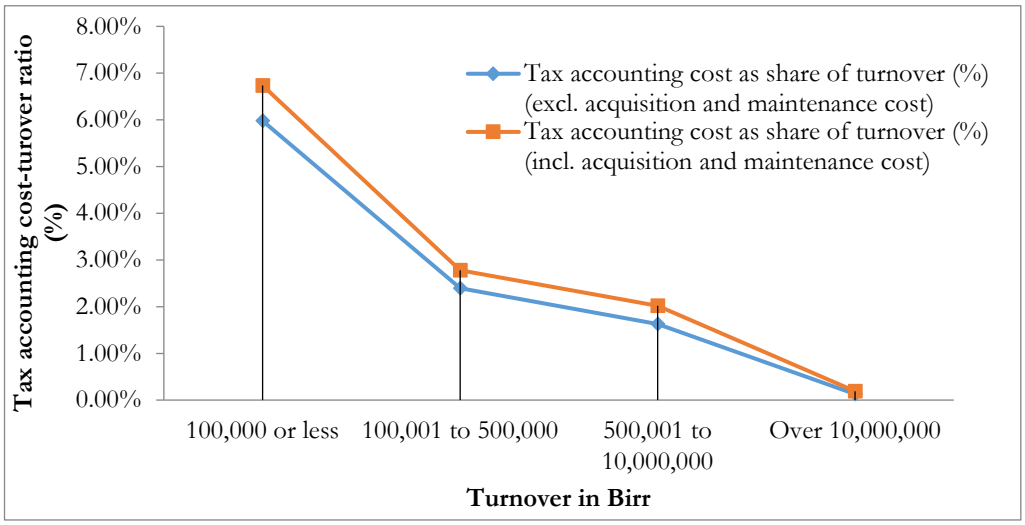
[35]These criteria are subjective in the sense that they all depend on the opinion of estimation committee members for there is no legally standardised approach to them in Ethiopia.

[36] In Ethiopia, businesses engaged in such selected sectors as goldsmiths, plastic products manufacturers and computer and accessories suppliers are required to register for VAT regardless of their annual turnover. This may have brought a large number of smaller businesses into the VAT, which, in turn, is contributing to the relatively high compliance costs of small business in Ethiopia compared to those in the countries considered in this paper. The use of a sector specific registration requirement may be particularly a problem in regional states for the volume of operations in the regions is likely to be much less than that in Addis Ababa. As a result, businesses engaged in those selected sectors may have annual turnover of less than the registration threshold of ETB 500,000.

[37] As Yesegat (2008) showed, the total number of VAT-registered businesses in the year 2008 was 32,840. However, according to information obtained from the Research and Development Directorate of the Ethiopian Revenue and Customs Authority, by February 2017, the total number of VAT-registered businesses had reached 204,131. The majority of these VAT-registered businesses is likely to be relatively small businesses for the Ethiopian business environment is dominated by small and medium businesses.

from fulfilling the tax requirements imposed on them. The burden of tax compliance costs increases the cost of doing business and tends to depress business investment and formalisation.

Figure 2: Tax Compliance Costs as a Share of Turnover by Turnover Band



Source: Tax Compliance Costs and Perception Survey in Ethiopia (WBG 2016)

To gain a better insight into the magnitude of estimated tax compliance costs in Ethiopia, comparison with similar estimates in other countries is worthwhile. However, important differences[38] limit the use of comparative analysis in assessing the extent of tax compliance costs. This does not mean that a comparative scrutiny of such costs is completely meaningless. Instead, it is to emphasise that caution needs to be exercised and the caveats ought to be borne in mind in interpreting the results of the comparative analysis. Further, as Evans (2003) argued, the comparative analysis should be used as suggestive though not conclusive.

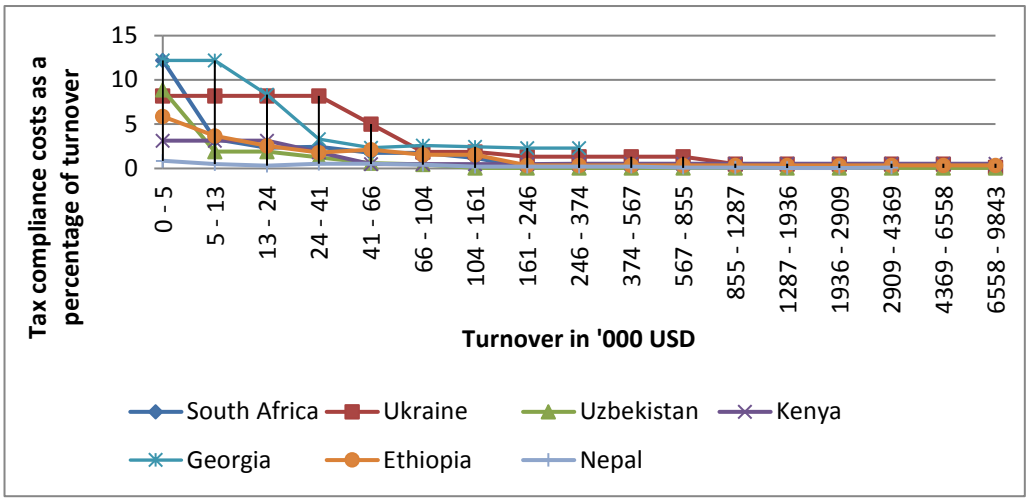
Figure 3 shows tax compliance costs as a percentage of turnover for different countries including Ethiopia. For this purpose we use the tax compliance costs measure for Ethiopia that excludes costs of acquisition and maintenance of software and hardware so that the results are more comparable across countries. Tax compliance costs as a percentage of turnover for Ethiopia are relatively high compared to those of Kenya and Nepal (Figure 3). Tax compliance costs in Ethiopia might be considered high even in comparison to some of the other countries included (also noting that most of the countries that have conducted such a survey were the ones already known to have a problem with tax compliance costs, such as the ex-Soviet countries).

Specifically, the ratio of tax compliance costs to turnover for the smallest businesses in Georgia was over 12 percent while for Nepal it was only about 1 percent. Absolute

[38]There are differences among countries with respect to such factors as level of development, taxpayers' awareness, tax rates, definition of tax base and the reliability of data obtained from tax offices. This is due to the fact that apart from the inherent differences among the countries being considered, the scope of tax compliance costs estimates, costs included, sectors covered, estimation methods employed, reliability of data used and other details are likely to be different.

tax compliance costs also appear relatively lower in Ethiopia than the other countries due to the very low wage rates in Ethiopia.

Figure 3: International Comparison of Tax Compliance Costs



Source: Coolidge (2012) and WBG (2016)

Based on the results of the survey, with about 1 million businesses in Ethiopia[39], total national tax compliance costs were estimated to be about ETB 5.8 billion (about USD 309.5 million[40]) or ETB 7.5 billion (USD 400.5 million) (depending on whether tax compliance costs include acquisition and maintenance costs of software and hardware). These costs represent between 4.5 and 5.8 percent of Ethiopia's total tax revenues collected in 2012/13. The ratio of tax compliance costs to overall tax revenues for Indonesia was about 3.2 percent in 2010 (Susila & Pope, 2012). A similar study in Nepal indicates overall average compliance costs of about 2.7 percent of tax revenue in 2012 (IFC, 2012). In Slovenia, total compliance costs (for personal income tax) accounted for around 2.8 percent of personal income tax revenue (Klun, 2004), while the figure for Croatia was 0.81 percent of personal income tax (Blazic, 2004). Further, tax compliance costs as a share of tax revenue was about 11.5 percent in Armenia (Jrbashyan & Harutyunyan, 2006), while the figure for Canada was 2.7 percent of revenue (Charron et al., 2008). Overall, there is considerable variation in terms of the magnitude of tax compliance costs across countries depending on their economic size, tax code complexity and tax revenue collection performance. [41]

Survey respondents were asked to split the costs of tax compliance between the different taxes. In general, business profit tax constitutes the largest share of tax compliance costs (40 percent of total tax compliance costs) followed by VAT (24 percent of the total) [42] and then ToT (15 percent) (Figure 4). The burden of

[39] The total number of businesses was obtained from Management Information Systems Directorate of the Ethiopian Revenues and Customs Authority.

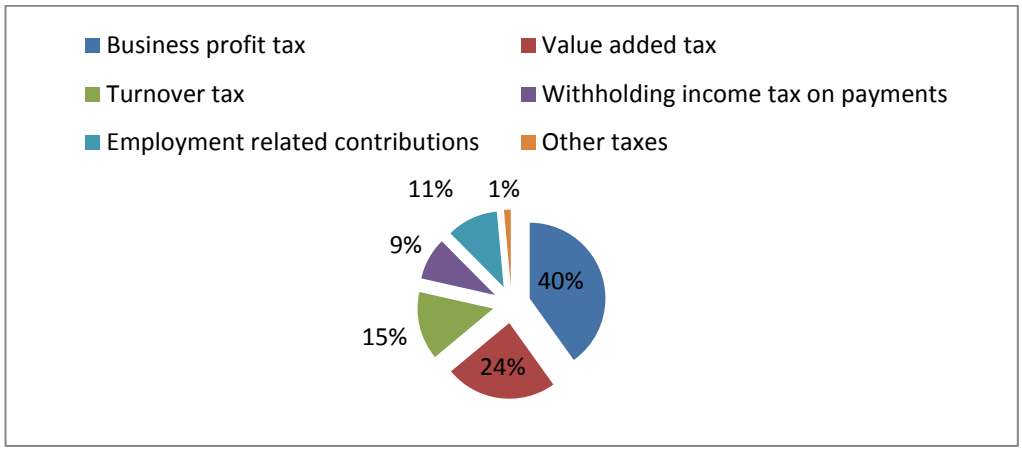
[40] Assuming average exchange rate for the fiscal year 2012/13, USD 1 = ETB 18.59.

[41] See Yesegat (2009), Coolidge (2012) and Susila and Pope (2012) for detailed review of literature on the magnitude of tax compliance costs.

[42] In relation to the compliance burden of VAT, WBG (2016) noted that about half of the businesses that are registered for VAT are outsourcing at least some of the tax compliance burden suggesting that the complexity is more than many Ethiopian businesses can currently handle on their own.

compliance costs associated with business profit tax and VAT indicates that these two taxes have complexities that result in taxpayers incurring high costs of compliance in terms of staff time and professional fees paid for external assistance.

Figure 4: Distribution of Total Tax Compliance Costs by Tax Type (in Percent)

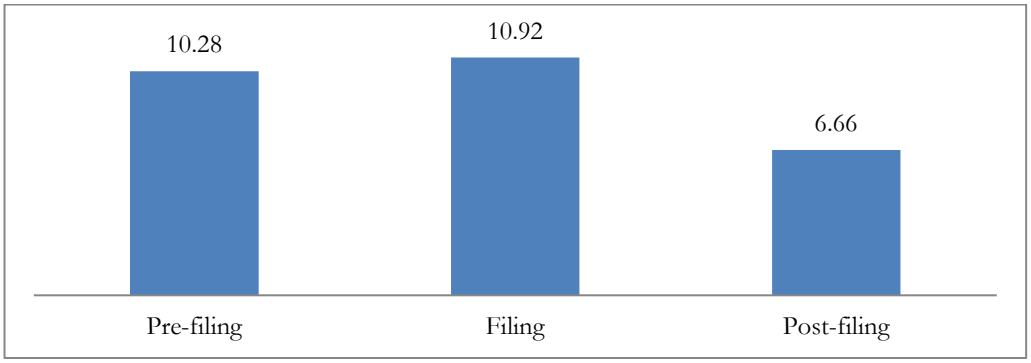


Source: Tax Compliance Costs and Perception Survey in Ethiopia (WBG 2016)

Respondents were also asked to split their total tax compliance work between 'pre-filing' activities, 'filing' activities (including effecting payment) and 'post-filing' activities (such as undergoing inspections, requesting refunds, or appealing assessments). Looking at in-house tax compliance costs by tax activity indicates that, on average, businesses spent about 11 person-days[43] on filing activities during the tax year considered; this is the highest time spent by tax activity. Pre-filing took the second highest average time of the three activities (10 person-days), with post-filing taking the smallest average amount of time (about 7 person-days) (Figure 5). This result may be because business taxpayers have to spend a lot of time as the existing system is based on manual taxation where taxpayers have to visit tax offices and queue for a long time.

[43] Filing activities estimated to take 11 days if only one person was engaged.

Figure 5: Person-Days Spent on Tax Compliance by Tax Activity (N=627)



Source: **WBG (2016)**

5.2 Descriptive statistics and regression analysis

As defined in section four earlier, the study considers factors such as size and nature of business, business ownership type, bookkeeping practice, business start time, gender of owners/respondents, sales register machine usage, and the habit of outsourcing tax compliance activities. Table 2 shows that about 36 percent of respondents were using computers for tax accounting purposes (mostly large businesses) and about 77 percent of respondents reported they maintained full records of revenue and expenses. About 75 percent of the respondents were sole proprietorship form of businesses and 46 percent were engaged in trade (including both wholesale and retail trade). About 63 percent of respondents reported they were also using a sales register machine.

Table 2: Descriptive Statistics only for Variables included in the Regression (N=724)

Variable	Mean	Std. Dev.	Min	Max
Log Compliance costs	8.293	1.722	2.813	14.424
Log turnover	12.714	1.949	7.783	19.519
Dummy for keeping records with computer	0.359	0.480	0	1
Dummy for keeping full records	0.769	0.422	0	1
Dummy for gender owner	0.207	0.406	0	1
Dummy for gender respondent	0.225	0.418	0	1
Dummy for respondent position –owner	0.739	0.440	0	1
Dummy for respondent position manager	0.171	0.377	0	1
Dummy for ownership type	0.747	0.435	0	1
Dummy for trade	0.461	0.499	0	1
Dummy for other services	0.388	0.488	0	1
Dummy for business start time	0.579	0.494	0	1
Dummy for sales register machine	0.630	0.483	0	1
Outsourcing practice	1.704	0.841	1	3

Source: WBG's (2016) Data on Tax Compliance Costs and Perception Survey in Ethiopia and own computation

The overall regression results were found to be statistically significant (P-Value = 0.000) (Table 3). As can be seen in Table 3, the regression results show the existence of a statistically significant relationship between the magnitude of tax compliance costs and such factors as the practice of outsourcing tax compliance tasks, the maintenance of full records of revenue and expenses, the use of computers in keeping records, ownership type, business sector, business size, and use of a cash register machine. Specifically, the results show that sales register machine usage was found to have a statistically significant positive relationship with the magnitude of tax compliance costs. That is, sales register machine usage was found to be associated with increased tax compliance costs. This may be caused by such difficulties associated with using the machine as the need to correct errors, which is both frequent and cumbersome. As noted by WBG (2016, p. 26), the 'difficulty of correcting errors' was perceived by business taxpayers as the biggest disadvantage of using cash register machines in Ethiopia.

The practice of outsourcing tax compliance activities to external tax advisers (professionals) was found to have a positive and statistically significant impact on the magnitude of tax compliance costs. This means businesses outsourcing tax compliance activities were found to have higher compliance costs than those who carry out their tax compliance activities in-house. In terms of business size, the results show that business size and magnitude of tax compliance costs were positively associated in absolute terms (i.e., larger businesses usually have higher tax compliance costs). This is consistent with the findings of nearly all prior studies into tax compliance costs in general. For example, Hasseldine and Hansford (2002) and Hansford et al. (2003) showed with regression analyses that business size had been the strongest determinant of total compliance costs of VAT in the UK. Sandford et al. (1981), Sandford et al. (1989), Malmer (1995), Hasseldine (1998) and Smulders et al. (2016) also noted that compliance costs had increased with the increase in business size.

In terms of the sector of business activity, the results indicate that, all else being equal, 'services (trade)' and 'other services' tend to have lower tax compliance costs than manufacturing. The evidence in the literature, in this regard, appears to be mixed. For example in the case of VAT, Sandford et al. (1981) found that in the UK relatively low average VAT compliance costs were incurred by primary business sectors (including agriculture) while relatively high average compliance costs were incurred by the financial and business services. The agriculture, forestry and fishing industries exhibited the lowest VAT compliance costs while the highest costs were borne by the manufacturing and trade sectors in New Zealand (Hasseldine, 1998). Hasseldine and Hansford (2002) also showed that in the UK, industries such as manufacturing, dealing and services faced lower compliance costs relative to those faced by other sectors.

With respect to the ownership type of businesses, those operating as a sole proprietorship were found to have lower tax compliance costs than other forms of ownership including private limited companies, cooperative societies and others. Maintenance of full records of revenue and expenses, and using a computer for tax compliance tasks were also found to have a statistically significant and positive impact on the magnitude of compliance costs (Table 3). That is, taxpayers using computers in their tax accounting system incurred higher costs of tax compliance than the others. This result is in concordance with the findings of such prior studies as Smulders et al.

(2016) (South Africa), Coolidge and Yilmaz (2014) (Armenia and Nepal), Yesegat (2009) (Ethiopia), Hasseldine and Hansford (2002) (UK) and Hansford et al. (2003) (UK). In contrast, Plamondon (1993) (Canada) noted that no matter what the level of revenues was, taxpayers enjoyed lower compliance costs when computers were used to operate their accounting systems. Sandford et al. (1981) (UK) emphasised that there was no consistent pattern relating the type of accounting system with compliance costs. Generally speaking, larger businesses are more likely to use computers and also more likely to have a lot of complex transactions that could drive up tax compliance costs. The findings of Coolidge and Yilmaz (2014) in Armenia suggest that less well-educated business managers might tend to waste time with computer programs searching for opportunities to minimise tax liabilities, whereas the most well-educated and experienced accountants appeared to make more efficient use of computer programs in tax preparation.

Table 3: Ordinary Least Square Estimates of Tax Compliance Costs (Log Compliance Costs)

Variables	Coefficient	Robust Std. Err.
Log Turnover	0.295***	0.035
Dummy for keeping records with computer	0.255**	0.128
Dummy for keeping full records	0.249*	0.136
Dummy for gender owner	0.122	0.212
Dummy for gender respondent	0.035	0.204
Dummy for respondent position –owner	0.025	0.188
Dummy for respondent position manager	-0.189	0.213
Dummy for ownership type (sole proprietorship)	-0.363**	0.154
Dummy for trade	-0.197	0.156
Dummy for other services	-0.279*	0.157
Dummy for business start date	-0.158	0.102
Dummy for sales register machine	0.789***	0.132
Outsourcing practice	0.388***	0.062
_cons	3.649***	0.552
Number of obs	723	
F(13, 709)	37.35	
Prob > F	0.0000	
R-squared	0.432	

significant at 10%, ** significant at 5%; * significant at 1%*

Source: WBG's (2016) Data on Tax Compliance Costs and Perception Survey in Ethiopia and own computation

In addition, the regression was run excluding some of the explanatory variables that were shown to have statistically weak effects on the magnitude of tax compliance costs. The variables excluded were gender of owner/respondent, sector, and business start date. As shown in Table 4, the results under this scenario were found to be consistent with the results depicted above.

Table 4: Ordinary Least Square Estimates of Tax Compliance Costs (only Significant Variables Included)

Variables	Coefficient	Robust Std. Err
Log Turnover	0.303***	0.035
Dummy for keeping records with computer	0.232*	0.124
Dummy for keeping full records	0.257*	0.135
Dummy for ownership type (sole proprietorship)	-0.253*	0.134
Dummy for sales register machine	0.803***	0.131
Outsourcing practice	0.374***	0.061
_cons	3.206***	0.486
Number of obs	723	
F(6, 716)	76.95	
Prob > F	0.0000	
R-squared	0.425	

significant at 10%, ** significant at 5%; * significant at 1%*

Source: WBG's Tax Compliance Costs and Perception Survey in Ethiopia and own computation

6. CONCLUSION AND RECOMMENDATIONS

Using the IFC's/WBG's (2016) tax compliance costs and perception survey data, this study estimated and analysed tax compliance costs for businesses in Ethiopia for the year 2012/13.

6.1 Conclusions

First, the average tax compliance cost per business was estimated to be ETB 6,753 (USD 360) (including amortised acquisition and maintenance costs for tax-related hardware and software) and ETB 5,520 (USD 297) (excluding the acquisition and maintenance costs). Total tax compliance costs for all businesses in Ethiopia in the year 2012/13 were estimated to be ETB 6.7 billion (about USD 360 million). This is between 4.5 and 6 percent of Ethiopia's total tax revenue collected in 2012/13 (depending on whether tax compliance costs include acquisition and maintenance costs of software and hardware).

Second, the paper showed that tax compliance cost estimates as a share of turnover were on average 5.4 percent in the year under consideration. Tax compliance costs as a percentage of turnover for smaller businesses were high compared to those of larger businesses, providing evidence on the regressiveness of tax compliance costs in Ethiopia (as in most countries). Further, in Ethiopia, compliance costs as a percentage of turnover were found to be higher than those in Kenya and Nepal.

Third, the examination of tax compliance costs by tax type revealed that VAT constituted the second largest category of compliance costs next to business profit tax, highlighting the existence of complexities in the VAT system. In terms of the in-house costs of compliance by type of compliance activity, the results showed that

activities associated with filing and paying taxes absorbed the highest share of taxpayers' time in compliance (compared to pre-filing and post-filing activities).

Fourth, as the regression analysis revealed the use of a cash register machine (mandatory in Ethiopia for most large businesses) was found to be associated with higher compliance costs. Consistent with the findings of nearly all prior studies into tax compliance costs, this paper reported not only the existence of a positive and statistically significant relationship between tax compliance costs and the size of businesses, but also regressivity in that the ratio of tax compliance costs to turnover was significantly higher for smaller businesses than larger ones.

Finally, taxpayers using computers in their tax accounting systems were found to incur higher costs of tax compliance than the others. Businesses engaged in the service (trade) and other services sectors were also found to have lower tax compliance costs than those engaged in the manufacturing and other sectors.

6.2 Recommendations

In order to reduce the tax compliance burden on smaller businesses in Ethiopia and also encourage formalisation, further simplification of the tax regime for micro (category C) enterprises is worth considering. As presented in section five, the tax regime for micro (category C) businesses is complex, time-consuming and costly.

The practice of taxing micro businesses in Ethiopia coupled with the tax compliance burden as revealed by the relatively high tax compliance costs of smaller businesses necessitated the review of the business tax system (for category C businesses) in light of international experience and the reality in the country and replacement of the regime by a more simplified and more objective system.

The fact that about half of the businesses that are registered for VAT are outsourcing at least some of the tax compliance burden suggests that the complexity is more than many Ethiopian businesses can currently handle on their own. The relatively high compliance costs associated with VAT also suggest that the burden is onerous for smaller businesses. It is recommended that the frequency of VAT filing be reduced (e.g., make it quarterly) for relatively smaller businesses. The VAT threshold also needs to be adjusted periodically for inflation, and is usually set at the lower turnover level for a 'medium' sized business (taking into account also the capacity for the necessary bookkeeping for VAT compliance). The current threshold, ETB 500,000 (at about the equivalent of USD 25,000), is quite low by international standards.

In addition, it might be helpful to eliminate legally-mandated registration requirements for certain sectors for VAT. In particular, reviewing these requirements may be important in reducing the burden of tax compliance on affected taxpayers operating in regional states, as the volume of business in regions outside Addis Ababa is likely to be relatively lower and is therefore likely in most cases to stay below an annual turnover of ETB 500,000.

Businesses in Ethiopia typically visit tax offices regularly, and this is more so for category A and B taxpayers. Furthermore, the in-house cost of compliance for filing taxes is higher than that of pre-filing and post-filing activities. It is, therefore, recommended that voluntary electronic filing (e-filing) of tax reports and payments, and mobile phone payments should make it possible to considerably reduce the time costs and the overall tax compliance costs for many businesses. It is known that the

tax authority has launched e-filing for larger businesses (and medium business to some extent) in Addis Ababa. Extending the e-filing system on a voluntary basis to those taxpayers who are able to use the system is worth considering. Furthermore, for the e-filing system to be effective in reducing the compliance costs of taxpayers, it should be supplemented by electronic payment (e-payment) or payment through the banking system. Payment using mobile phone is also recommended to be considered as one option in reducing the compliance costs burden, especially on smaller businesses.

Tax compliance costs in Ethiopia are the highest for business profit tax. ToT and VAT also contribute a lot to compliance costs, depending on the size category considered. We also find that the total compliance costs as a share of turnover are relatively high for Ethiopia, and especially so for the smallest businesses. Thus, total compliance costs could probably be reduced through continuing taxpayer education and awareness creation programs.

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