



## African Tax Administration Paper 11

# **Perceptions of Value Added Tax Filing and Invoicing Compliance in Ethiopia: The Case of Three Federal Branch Offices in Addis Ababa**

Worku Tamrie Atnafu, Gebregziabhere Gebretsadik Kalayou and  
Assefa Gezae Huluf with Colin Anderson

June 2019

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*The ICTD's African Tax Administration Papers (ATAPs) are research papers that will be of specific interest to people working in tax administration in Africa. The purpose is to encourage and support useful, policy-oriented research by African professionals directly involved in tax administration.*

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ICTD African Tax Administration Paper 11

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## **Summary**

African governments are increasingly seeking to improve tax compliance in the pursuit of domestic revenue sources. Despite this trend, there is limited understanding of value added tax (VAT) compliance in Africa. In Ethiopia, increased VAT compliance is essential for the government to meet its ambitious domestic revenue goals. Therefore, we surveyed 652 Ethiopian VAT-registered businesses to better understand VAT compliance attitudes. Our study found that compliance is negatively affected by the time and effort required to file VAT. Additionally, registrants do not perceive a strong link between tax collection and adequate government service provision. As a result, we recommend a streamlined VAT filing and invoicing process that is digitized and available in the local language. We also recommend improved tax administrative support, training, and explanatory materials. Finally, our findings indicate that a demonstrated relationship between VAT collection and improved government service provision will positively influence compliance.

**Keywords:** perceptions; value added tax; tax compliance; ERCA (Ethiopian Revenues and Customs Authority); factors; Ethiopia.

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# Introduction

Mobilising domestic revenue to support government spending is a clear priority for the Ethiopian government, as it is for many other countries. The current Growth and Transformation Plan (GTP-II) states an ambition that 86 per cent of government expenditure is to be financed through domestic revenue (National Planning Commission 2016: 115). This is far higher than the current level of 41 per cent (MOFEC 2009: 57). According to the World Bank, the ratio of taxation revenue-to-GDP in Ethiopia was 12.4 percent in 2015/16, which is lower than the average ratio 16.3 percent found in other sub-Saharan African countries (World Bank Group 2016). Clearly additional action is needed to generate the increases anticipated and additional revenue.

Many factors influence the volume of revenue generated by taxation. One of these is the level of compliance with tax requirements by the population. The greater the level of tax compliance, the greater the country's ability to raise funds from taxes (Mukhlis et al. 2014). Whilst the types, rates and collection mechanisms of taxes are important, it has also been argued that the amount of tax revenue a government can raise depends to a great extent on the willingness of taxpayers to comply with tax laws and regulations (Mlay 2015). As a result, understanding tax compliance is of significant interest for those charged with tax administration, and has been a consistent concern amongst countries regardless of their level of development (Loo et al. 2010). This has generated a number of theories on what drives more compliant behaviour, and a range of empirical studies on what generates more tax-compliant attitudes amongst a population (Allingham and Sandmo 1972; Alm et al. 1992; Hamza and Berhane 2017; Yesegat and Fjeldstad 2016).

In this paper we explore attitudes to VAT compliance amongst VAT registrants in Addis Ababa. VAT is one of the types of taxes with the greatest possibility of non-compliance for various reasons (Bird and Gendron 2007). Returns are completed frequently, in Ethiopia monthly, and much of the administration work is undertaken by taxpayers or agents – for example, registered wholesalers or retailers. Numerous calculations need to be completed and evidenced, and there are complicated systems of refunds and exemptions. There is also an opportunity for fraud, as the VAT system relies on proper processing and compliance of multiple vendors in a supply or purchasing chain, supported by paperwork from each stage. VAT is also different from other taxes in ways that might matter for tax compliance attitudes. One of these is that the taxpayer is not necessarily an individual, but acting within and for a business. Another is the high visibility of other businesses' behaviour through the need for them to produce VAT invoices or receipts. In this sense companies can be tax compliant in two ways – in producing or issuing the required invoices, and in then filing their tax return and paying tax owed. Data collected from the Ethiopian Revenues and Customs Authority (ERCA) for the year 2016/17 indicates that 67 per cent of those registered for VAT and expected to file returns monthly did not actually pay any VAT – 30 per cent declared a nil return and 37 per cent declared a VAT credit. This study is motivated by a desire to understand attitudes that might lie behind what seems to us a low rate of tax compliance.

Whilst there is a growing body of literature on tax compliance attitudes in sub-Saharan Africa, and on taxation in Ethiopia, there are very few specific studies on VAT compliance attitudes, and none that substantially explore attitudes to VAT invoicing and filing separately. To fill this gap in our knowledge, researchers from ERCA conducted an in-depth investigation during 2018 that considered views of both ERCA officials and taxpayers. The study adopted a mixed method research approach. A quantitative component surveyed 1,060 randomly selected VAT payers residing in Addis Ababa, with a 62 per cent response rate. Subsequent to this qualitative in-depth investigation, one-to-one interviews and focus group discussions took place with selected tax officials.

We found:

- A common perception that business owners are willing to follow VAT processes and pay taxes, but that they are not able to do so for various reasons.
- Significant numbers of people hold a clearly non-compliant attitude, and think that willingness to pay VAT is low or relies on the threat of sanction by ERCA.
- Perceptions of high numbers of false invoices, low issuance of invoices, and low demand for VAT invoices from customers.
- Evidence that perceptions of the costs of compliance are high, and that the link between VAT revenue and government services is not clear for the people who pay taxes.

Based on these findings we make a number of recommendations that identify interventions that ERCA could make to improve tax compliance and potentially increase tax revenue from VAT in Ethiopia.

This paper is organised in four sections. The following section discusses key theories of tax compliance, their relevance to VAT, and evidence gathered so far in Ethiopia. Section 2 describes the research approach. Section 3 presents the findings of the study against some key drivers of tax compliance identified in the existing literature. The final section summarises these findings and explores implications for the work of ERCA.

# 1 Tax compliance: theories and existing evidence from Ethiopia

Tax compliance refers to complex attitudinal issues towards all types of tax (Yesegat and Fjeldstad 2016). There are many different models and theories used to explain the factors that shape the perception and attitude of taxpayers towards paying taxes in general. Reviewing the theoretical and empirical literature on this topic, we conclude that much of the existing work done could also be applicable to VAT compliance. In this section we summarise our understanding of this literature, the evidence from sub-Saharan Africa, and Ethiopia in particular, and note particular features of VAT that might be relevant. This understanding informed the choice of questions in our research, described in more detail in the following section.

Whilst tax compliance is in principle easy to measure – by registration, filing, computation and payment compliance (King’oina 2016), and observing the declaration of income and payment of taxes on time (Palil and Mustapha 2011) – understanding the attitudinal drivers of greater tax compliance is far more complex. The study of tax compliance behaviour has often been based on understandings from literature on the economics of crime – for example, the important contributions of Becker (1968). From this perspective, the factor that motivates higher tax compliance is the perception of how likely and severe the punishment will be for not paying – and how this contrasts with the profit gained by a decision not to pay (Allingham and Sandmo 1972). According to this model, tax compliance will be higher where the perceived probability of tax avoidance being detected by authorities, and the penalties that result, combine to outweigh the advantage of not paying. Yesegat and Fjeldstad (2016) critically assess business people’s views of paying taxes in Ethiopia. They found a statistically significant relationship between tax compliance attitudes and the perception of probability of audit, corruption and satisfaction with the tax administration. More advanced theories of this vein also recognise there are costs of compliance – that the calculation of the costs of paying or not paying taxes owed also includes how much time or money is required for taxpayers to make a tax return. In relation to VAT specifically, we know that the

administrative burden on taxpayers, and the technical complexity of completing an accurate and regular tax return, is one of the factors suggested to lower compliance (Bird and Gendron 2007). Several studies in Ethiopia, including Yesegat (2008), Hamza and Berhane (2017) and Ayenew (2016), identify key problems in the administration of VAT in different sub-national areas. Together, these theories about taxpayers balancing the relative costs of paying or not paying taxes owed can be characterised as *economic deterrence* theories.

A number of scholars, however, suggest approaching the issue of what drives tax compliance from more social, cultural and psychological perspectives. Hamza and Berhane (2017) and Yesegat and Fjeldstad (2016) note that tax-paying decisions arise from different root factors that include these wider determinants. For the purposes of this study we explore the work of Allingham and Sandmo (1972) and Alm et al. (1992), who look at mechanisms that support active decisions to pay taxes, rather than decisions to evade payments required. There are a number of different theories here. Some scholars suggest that willingness to pay taxes is related to how legitimate taxpayers perceive government to be (Yesegat and Fjeldstad 2016). Taxpayers might be encouraged to comply with taxation when the government shows legitimacy. Others suggest that the level of satisfaction of taxpayers towards the provision of public goods and services could be another influential factor in taxpayers' decisions whether to pay or evade taxes. What is known as the *fiscal exchange* theory suggests that the extent of government expenditure may motivate compliance (Alm et al. 1992). This theory states that if the taxpayer believes and trusts that the government is providing sufficient goods and services for the 'price' of their taxes, compliance will be higher. Fjeldstad et al. (2012) survey the evidence on people's views of taxation in Africa, assessing various studies that had taken place. These studies identify that people's view of the tax system, trust in public institutions, and the degree of service delivery they perceive from government, are important factors in determining levels of compliance, although the review also finds them to use diverse measures of what constitutes a tax-compliant attitude.

Other theories emphasise the psychological aspects of tax compliance behaviour. The *comparative treatment* theory suggests that taxpayers are more likely to be tax compliant if they perceive that government treats other taxpayers like themselves in the same way (Yesegat and Fjeldstad 2016). This is based on an understanding that citizens judge how the state treats them relative to their fellow citizens, and that this may affect their view of the state and willingness to provide it with resources (D'Arcy 2011). It has also been suggested that social interactions and conventions impact tax compliance. For example, attitudes towards tax compliance could be influenced by perceptions of what peers do, or the attitude of families, friends and neighbours. Yesegat and Fjeldstad (2016) argue that willingness to comply might increase if there are severe social sanctions against non-compliant taxpayers. This means that taxpayers may comply since they value their relationship with others. In our study we look at these as factors related to *social influence*. As noted above, VAT is a highly visible tax. As a result we might expect social influence to play a significant role if this theory is correct. The only specific study we found specifically addressing VAT tax compliance attitudes in Ethiopia finds social influence to be important (Markos 2010).

Finally, Yesegat and Fjeldstad (2016) argue that attitudes to tax compliance may also be influenced by the *social characteristics* of the taxpayer. These include factors such as age group, gender, level of education, religion and ethnic group. Yesegat and Fjeldstad (2016) find that in Ethiopia women in the business community have a more tax-compliant attitude, and that those with higher levels of education are less compliant as they are able to judge the tax system more critically.

## 2 Research approach

The objective of our research is to assess perceptions of value added tax compliance in Ethiopia, with a specific focus on the different activities of VAT invoicing and filing of VAT returns. We set out to gather evidence on perceptions of compliance with these requirements, and to explore factors that influence compliance. By learning about these perceptions and what influences them, we hope to be able to identify strategies that can increase tax compliance. The study uses a mixed research approach, with quantitative and qualitative elements used for research participants.

### 2.1 Survey of VAT registrants

The quantitative aspect of the study consisted of a survey of VAT-registered taxpayers at three branch offices of ERCA in Addis Ababa – the Large Taxpayers Office, and the East and West Medium Taxpayers Offices. We chose to focus on these three offices because they contribute the majority of revenue for the federal government. In the fiscal period 2012/13-2016/2017, the three branches contributed on average 55 per cent of the total federal tax revenue (ERCA 2012/13-2016/17 revenue collection report).

We randomly selected a sample of registrants at each branch office using the sample size determination method of Yamane (1967). This resulted in identification of 1,060 of the 23,114 people registered for VAT at the point of research design (January 2018).

We used a structured survey instrument that asked questions about respondents' characteristics, their perceptions of VAT filing and invoicing compliance, their perceptions on a number of issues identified in other studies to be linked to more tax-compliant attitudes, and the challenges people saw in successfully complying with VAT requirements. The questionnaire largely used five point Likert scales to identify attitudes and opinions of varying strength.

Data collectors were hired to distribute hard copies of surveys to those in the sample between February and August 2018. Data collectors explained the survey, and asked identified participants to complete it. Data collectors returned to the businesses later to collect completed questionnaires, but the questionnaire itself was anonymous. As indicated in Appendix Table A1, we achieved a 62 per cent response rate, with 652 questionnaires returned for analysis.

Our survey asked for information to allow us to understand the characteristics of those responding. Our analysis showed that these characteristics were representative of the original sample to the best of our knowledge – 55 per cent of respondents were male, whilst 45 per cent were female; most were aged 21-40, with only 11 per cent outside of this group; 89 per cent were educated to degree level. Importers and exporters were the largest single group in terms of business activity (23%), followed by those working in the construction industry (18%) and the service sector (16%). A full breakdown of respondent characteristics is in Appendix Table A2.

Survey response data was analysed using descriptive statistics software. We analysed the range of responses to each question, and undertook two multiple regression analyses to explore the relationships between particular perceptions or views. The Appendix gives a technical summary of our responses, explains our approach to regression, and tabulates the results of this.

## **2.2 Discussions with tax officials**

The qualitative component of the study used one-on-one interviews and focus group discussions. These were supplemented with documentary review of various ERCA reports and relevant laws. We interviewed six senior officials within ERCA, and ran a focus group with each branch office involved in the study. Five people from each branch office participated in these focus groups, which took place after the quantitative study was completed.

Interview and focus group discussions addressed the following issues:

- Reasons for taxpayer non-compliance on VAT filing and invoicing
- Factors that affect taxpayer behaviour on filling and invoicing compliance
- Challenges related to VAT filing and invoicing facing taxpayers and ERCA
- Perceptions of the probability of detection and severity of penalty for non-compliance with VAT rules
- Perceptions of taxpayer willingness to file returns properly
- The ease of filing returns and undertaking tax administration
- The predictability and transparency of VAT laws
- The education and awareness-raising efforts of ERCA for VAT payers
- The effectiveness of mechanisms to detect VAT filing and invoicing non-compliance within ERCA.

In the following sections we integrate findings from the quantitative survey and the qualitative research with tax officials.

## **2.3 Limitations**

Our questionnaire explicitly stated that responses would be anonymous and that individual's views would be kept confidential. However, it is important to note that, because this study was undertaken by the tax authority, we might expect some over-reporting of positive attitudes towards taxation. One criticism of research on tax compliance attitudes is that how people describe their behaviour and beliefs may not be consistent with how they actually act. Based on this, we took the view that asking indirect questions about the general population would be more likely to solicit truthful findings on attitudes than asking about individual behaviour.

# **3 Findings and discussion**

This section presents results from the research activities, highlighting how these fit with existing evidence and theories on tax compliance attitudes.

## **3.1 Attitudes to tax compliance**

We asked a number of questions in our survey to identify the attitude of taxpayers to VAT invoicing and filing compliance. We asked both about the attitudes of the individuals completing the questionnaire, and their view of the attitudes and behaviour of others. We asked about others, and views on general perceptions and levels of compliance, partly to understand the social norms around VAT compliance. It is common in the study of tax compliance to ask more indirect questions, on the basis that individuals are less likely to be truthful about their own level of compliance. As noted, we imagined this would particularly be the case given our study was carried out by the revenue authority.

One of the questions we used was based on a formulation common in other studies on tax compliance attitudes, asking how wrong it is to avoid taxes. We asked this separately in terms of attitude to not issuing VAT invoices, and not filing VAT returns. The results are displayed in the figures below. Over three-quarters of respondents felt that not issuing VAT invoices was wrong and punishable, with just over half considering it 'extremely wrong and punishable'. However a significant minority – 17 per cent – considered not issuing invoices not wrong, and not deserving of punishment. An even greater number considered not filing VAT returns as wrong and punishable to some degree, but again a significant minority – in this case 13 per cent of respondents – considered non-compliance as not wrong and not punishable. Given the concern that people might over-report the extent of their support for tax compliance, it is notable that a section of our survey population of people registered to pay VAT chose to report that they do not think that failing to follow VAT rules should be punishable.

Figure 1 What is your stance on VAT invoicing non-compliance?

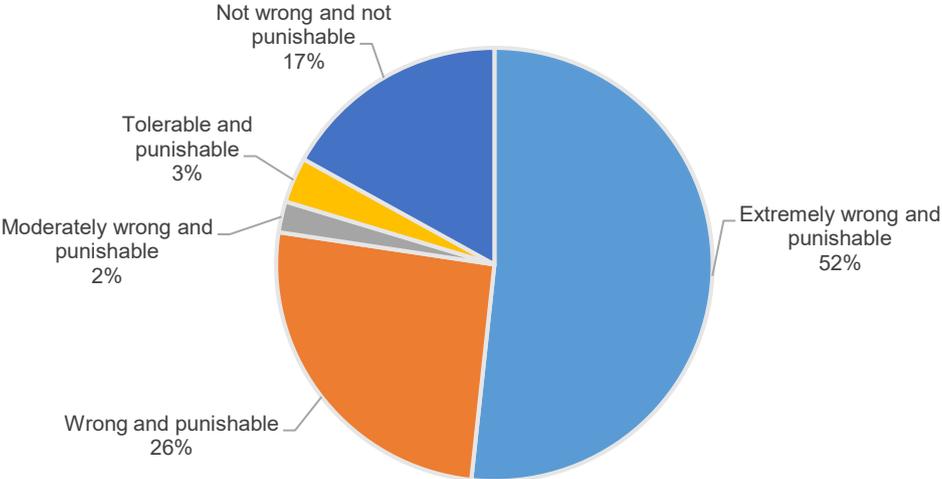
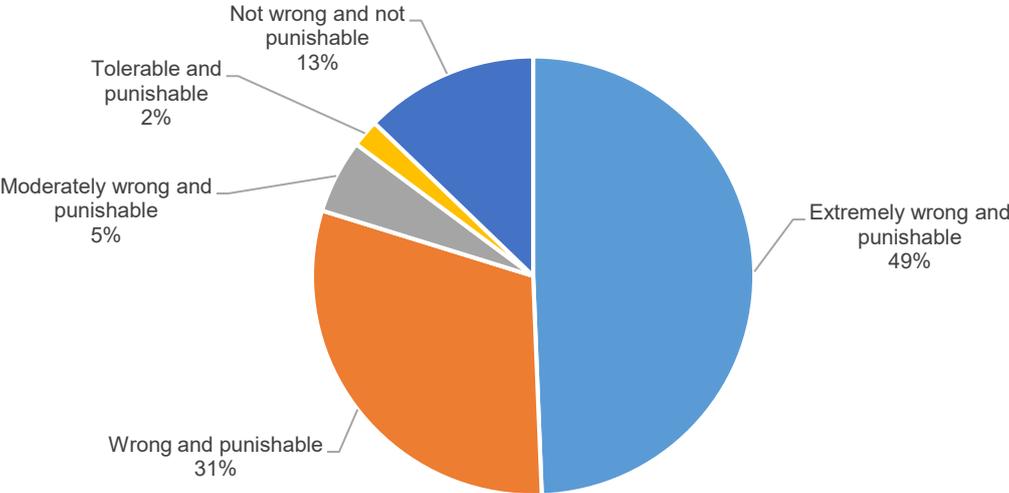
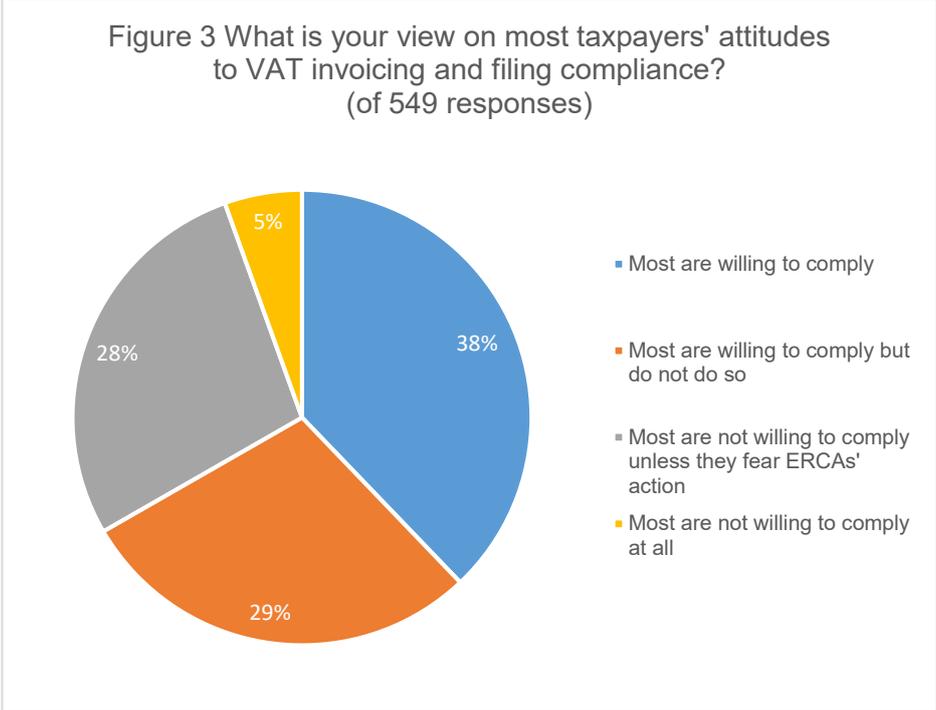


Figure 2 What is your stance on VAT filing non-compliance?



We asked respondents how willing they thought people in general were to comply with VAT requirements and to be VAT-compliant. Two-thirds of the respondents to this question considered most people willing to comply with VAT rules. Importantly, however, just under half of these responses consider people willing to comply *in theory* but not actually complying *in practice* – 84 per cent of our respondents answered this question. Only a small number of responses considered people generally ‘not willing to comply at all’, but nearly 30 per cent of respondents felt that most people were only willing to comply in the face of sanctions or punishment for not following the rules. We consider this to indicate low levels of voluntary compliance with the VAT system.



### 3.2 Factors affecting tax compliance: social influence

It has been suggested that social interactions and conventions impact tax compliance in important ways – for example, that attitudes towards tax compliance could be influenced by perceptions of what peers do, or the attitude of families, friends and neighbours. Yesegat and Fjeldstad (2016) and Chan and Mo (2000) find that peers play a significant role in compliance. Willingness to comply might increase if there is high severity of social sanctions against non-compliant taxpayers, and taxpayers may comply since they value their relationship with others. Conversely, if taxpayers do not perceive others to comply, and do not see them being sanctioned for this, it may lower their own desire to comply or fear of detection and sanction.

The only specific study we have found to date on VAT tax compliance attitudes in Ethiopia highlights this as an important factor. Markos (2010) explores VAT administration and compliance in Mekelle, a city in the north of Ethiopia, finding that that many business people did not believe that others were VAT-registered or compliant in paying the taxes they owed, and that this influenced their own attitude towards complying with VAT requirements.

To explore these issues in our questionnaire, we asked for respondents' views on the frequency of VAT-compliant practices in their experience. These questions did not ask about

their own practice specifically, but what they perceived to happen in general, or the behaviour of their competitors or neighbours. The findings from these questions contrast with the views reported in relation to the two questions above that found largely pro-compliance views. For example:

- 215 respondents (41% of those answering this question) considered the prevalence of false invoices to be high or very high (Q.2.17).
- Nearly 400 respondents (62% of those answering this question) agreed or strongly agreed that their neighbours do not issue VAT invoices (Q.4.9).
- A third of all respondents overall disagreed or strongly disagreed that their competitors and taxpayers at large comply with VAT invoicing and filing requirements (Q.2.11).
- 47 per cent of respondents disagreed or strongly disagreed that their customers request VAT invoices during transactions (Q2.19).
- Only 40 per cent of respondents felt that VAT registrants generally completed VAT returns honestly (Q.4.3).

Overall this suggests parallel perceptions of willingness to comply, but frequent and widespread non-compliance with VAT regulations. Perception of active avoidance of paying tax, amongst others, was common.

Tax officials who participated during interviews and focus groups agreed that public support for VAT compliance was not strong, and not improving. They noted the social effects of widespread perceptions of non-compliance, and that this could have impact on the attitude of VAT registrants to comply.

### **3.3 Factors affecting tax compliance: cost of compliance**

The findings reported above suggest willingness to comply with VAT systems is perceived to be higher than actual compliance. We asked a number of questions specifically aimed at identifying barriers to compliance with VAT regulations and tax payment. One assumption might be that reducing these barriers would potentially increase compliance if taxpayers are willing to pay, but find doing so to have high costs. In terms of theories on tax compliance, this connects with the idea that the decision to pay taxes is in part a rational economic calculation based on the costs of compliance and the perceived likely costs of non-compliance.

Yesegat (2008) identifies key problems in the administration of VAT in Ethiopia that may play a role here. They include a lack of sufficiently skilled personnel in areas of tax administration to undertake the tasks of refunding, invoicing and communicating filing requirements. This has a knock-on effect to how well tax officials can explain the system to taxpayers, and may increase the cost of complying with the tax system. Similar reviews of the difficulties of implementing VAT systems in particular localities of Ethiopia were carried out by Hamza and Berhane(2017) and Ayenew (2016), and highlighted similar inefficiencies. The complexity of these systems may reduce compliance.

One of the factors that we assumed might increase the cost of compliance was the ease of understanding VAT requirements. We asked respondents how far they agreed with a set of statements on VAT filing processes and VAT law. Our respondents largely felt that awareness of the VAT filing process was widespread – 59 per cent agreed or strongly agreed that VAT registrants know when and how to file their returns (Q.4.1); 50 per cent disagreed or strongly disagreed that VAT laws are complex and difficult to understand, and only 7 per cent strongly agreed with this statement (Q.4.6).

Despite this majority view that people know what is expected of them in terms of VAT compliance, responses also indicated a view that the processes involved are difficult to complete. Few respondents felt that taxpayers can easily access VAT laws (Q.4.5), with just under a quarter agreeing with this statement; 53 per cent of respondents disagreed or strongly disagreed with the statement that VAT filing processes are simple. Asked to select from a number of factors that negatively affect filing compliance, 58 per cent of people reported that bureaucratic filing processes were an issue (Q.2.9). Interview and focus group participants from within ERCA identified that filing processes were not easy, and that people experience long queues to process their paperwork at tax offices, especially during peak times. There was a common view that filing processes were not cost- and time-effective, discouraging taxpayers from filing properly. Officials told us that the filing process was not easy due to the absence of an electronic filing and payment system, slow and frequent downtime of the network leading to lengthy manual work, and poor data recording. They also highlighted that the number of assessors and cashiers was not sufficient to serve the current number of VAT filers, particularly as most taxpayers came to file on the last day of the filing period.

These findings are consistent with the study conducted by Markos (2010), which indicates lengthy VAT filing processes reduce taxpayers' commitment to comply. Regression analysis on our survey responses suggested that believing filing processes to be easier was associated with a view that taxpayers generally file honestly. It also suggested that believing VAT laws to be complex and difficult to understand was associated with perceptions of dishonest filing and low issuance of VAT receipts in the wider population.

As noted above, VAT tax compliance is particularly complicated as it often relies on others providing information in the form of VAT receipts or invoices, which the taxpayer needs to calculate from or provide as evidence. Nearly 300 of our respondents (45%) stated that they found it hard to get a VAT invoice from their suppliers when asked about barriers to VAT-compliant invoicing (Q2.10). This corresponds with responses to a specific statement on this same issue, where 57 per cent of respondents agreed that acquiring input invoices was difficult (Q.4.8). Again, ERCA staff members raised this as a significant problem. They noted that VAT registrants often complain that they were not able to get input VAT invoices during purchase from importers and manufacturers. Interviewed officials and focus group participants agreed that there was not a public culture of requesting invoices during transactions. They also noted that the language used in the invoices was not usually the local language, which makes it difficult for the public or taxpayers to understand the detailed information.

Our regression analysis indicated that views on how often VAT invoices were issued were associated with a view that ERCA provides support to taxpayers on these issues, that customers request these invoices, and that it was easy to get invoices from suppliers.

We asked for views on actions that might make it easier to comply with VAT requirements. Whilst just under half of our respondents agreed that ERCA tax officials support them on VAT filing and invoicing, a significant minority disagreed (Q2.3, Q2.4). ERCA support was perceived to be more available on filing tax returns than VAT invoicing. Only 42 per cent of respondents agreed that ERCA provides VAT training for taxpayers, although ERCA does run a training programme that covers how to file VAT returns and use cash registers to support VAT compliance. We found that three-quarters of our respondents used cash registers (Q.2.13), 90 per cent of those answering that question, and that a high proportion – 80 per cent – felt this made complying with VAT requirements easier (Q.2.14).

### **3.4 Factors affecting tax compliance: comparative treatment**

We asked questions intended to explore perceptions of receiving support and being fairly treated by the tax administration. These were based on the evidence that tax compliance is affected by comparative treatment. Comparative treatment theory is based on an understanding that citizens judge how the state treats them relative to their fellow citizens, and that this may affect their view of the state and willingness to provide it with resources (D'Arcy 2011). The implication is that if people perceive themselves to be treated fairly compared to other taxpayers like them they might be more willing to comply with requirements. Yesegat and Fjeldstad (2016) find a statistically significant positive relationship between taxpayers' satisfaction with the tax authority in Ethiopia and their reported willingness to pay business taxes.

To identify connections between VAT invoicing and filing compliance attitudes and perceptions of fair treatment by the tax administration, we asked how far people agreed with the statement: 'The tax authority (Ethiopian Revenue and Customs Authority) provides services without discriminating amongst tax payers' (Q.2.12) – 62 per cent of our respondents agreed or strongly agreed with this statement. However one-fifth of respondents disagreed or strongly disagreed.

Regression analysis showed this question to be linked to wider positive perceptions on tax compliance. We found a statistically significant positive relation between perceptions that ERCA provide services without discriminating and the view that in general VAT registrants file honestly. Holding this view also increased the probability of believing VAT registrants comply with invoicing requirements during transactions.

### **3.5 Factors affecting tax compliance: fiscal exchange**

The level of satisfaction of taxpayers towards the provision of public goods and services has also been suggested as an influential factor in taxpayers' decisions whether to pay or evade taxes. Fiscal exchange theory suggests that the extent of government expenditure may motivate compliance (Alm et al. 1992). This theory supposes that if the taxpayer believes and trusts that the government is providing sufficient goods and services for the 'price' of their taxes, compliance will be higher. It is a factor commonly explored in other studies of tax compliance in Africa (Fjeldstad et al. 2012).

To explore this in our survey, respondents were asked how satisfied they were that VAT revenue was used to provide public goods and services. Almost half of our sample reported being dissatisfied or very dissatisfied. One-third were satisfied or very satisfied, and only 10 per cent were very dissatisfied (Q.2.5). Interestingly, tax officials themselves had some sympathy with this view. Our interviewees and focus group respondents agreed that in general public goods and services, such as electricity, roads and schools, were not provided sufficiently from taxation.

In our regression analysis, the perception that government uses VAT revenue for providing public goods and services was found to have a statistically significant positive relationship with perceptions on how honest people are in their VAT returns.

### **3.6 Regression analysis**

To support our analysis we chose two questions to use as dependent variables in a multiple regression, which were designed to indicate the probability that holding certain opinions or having certain characteristics led to greater perceptions of VAT compliance amongst our sample. We undertook this analysis against the strength of opinion on how honest VAT registrants are in filing their VAT returns (Q4.3), and the perception of how often people issue

VAT receipts (Q4.4). These were both measured on five point Likert scales where five indicated the most positive view. Further details on the statistical approach and results can be found in the Appendix. Based on the SPSS ordinal regression, the overall regression was statistically significant ( $p = 0.000$ ).

#### ***Factors associated with the view that ‘VAT registrants honestly file’***

Respondents were more likely to agree with the statement that VAT registrants file their VAT returns honestly if they also perceived (in order of the strength of association):

- The VAT filing process to be easy
- That taxpayers know when and how to file tax returns
- ERCA to provide services without discriminating between taxpayers
- That VAT laws are not complex or difficult to understand
- Government uses VAT revenue to provide public goods and services.

Our analysis also suggested that the respondents’ level of education played a role here – those with higher levels of education were seemingly more likely to perceive dishonest behaviour in the general population.

#### ***Factors associated with the view that ‘VAT registrants issue invoices during transactions’***

Respondents were more likely to perceive common compliance with VAT invoicing requirements if they also perceived that (in order of the strength of association):

- ERCA provided training for VAT taxpayers
- VAT laws were not complex or difficult to understand
- Customers request invoices more frequently during transactions
- ERCA provides services without discriminating between taxpayers
- Tax officials provide support to VAT registrants on invoicing
- VAT invoices to be commonly issued by their neighbours.

We found that female respondents were more likely to hold a positive view of the level of invoicing compliance. The age of respondents also appeared to influence this view – with older respondents appearing to hold more negative views about compliance levels.

## 4 Conclusions and implications

This study attempted to assess the perception of taxpayers on VAT filing and invoicing compliance in Addis Ababa, offering new insights on different aspects of compliance. We have found evidence to support a number of existing theories and studies on which factors are associated with more tax compliant attitudes in other countries and with other types of taxation. We have also gained new insights into factors that are particularly important in VAT compliance. In this section we summarise these findings, and explore their implications for ERCA in terms of establishing a higher level of VAT compliance.

The results of data obtained from different sources and analysis of factors identified from literature review revealed a number of key findings. Overall, we consider that we have found *evidence of low tax compliance attitudes* in relation to VAT. Whilst a majority of our survey respondents felt that avoiding VAT payment was wrong and punishable to some degree, a significant proportion disagreed. Moreover, we found a view that dishonest filing was relatively common, and that there was a high prevalence of false VAT invoices. A significant

number of our respondents felt that VAT registrants would only comply with VAT requirements if they feared enforcement actions by ERCA.

This suggests to us that ERCA needs to develop and implement a better compliance management policy and strategy that allows tracking and investigation of taxpayers' compliance history. This will help to recognise taxpayers who are compliant, and to take corrective action against those who are not. If ERCA properly designs and applies such a strategy, it could help to encourage taxpayers and the public in general to have a more tax-compliant attitude. This in turn could improve the revenue collection performance of the authority.

We also discovered a perception that a sizeable proportion of the business population is willing to comply with VAT requirements, but do not do so for various reasons. This suggests to us that actions by ERCA may be able to increase tax compliance. We found that many of our respondents and colleagues working in the tax authority agreed that processes for filing tax returns and complying with VAT laws in this respect were over-complicated and not easy to comply with. These '*costs of compliance*' factors may be reducing compliance if those that should pay VAT are weighing these against the possibility of being sanctioned for non-payment, and also potentially negatively affecting perceptions of ERCA's performance.

We suggest that there is potential for ERCA to modernise core VAT processes, including filing and invoicing, so that they are more cost-effective. Digitalisation through an e-filing system should be fully applied across branches. This could drastically reduce compliance costs, simplifying the filing process and reducing the cost of filing compliance for both taxpayers and ERCA. In addition we found that a reasonable number of people felt that information on the VAT system was inaccessible, which adds to the costs of compliance. We see potential for ERCA to improve communication systems with existing taxpayers and the public, in order to enhance awareness of tax requirements. We suggest that more regular training should be given to VAT registrants, and that all relevant laws be available in both local and foreign languages, made more accessible, and promoted via media platforms and outlets.

Our study looked in a number of ways at the importance of *social influence* and the effects of peer behaviour on VAT payment and compliance attitudes. Existing studies have shown that social norms and peer group effects play an important role in tax compliance in Ethiopia (Yesegat 2008). VAT is a highly visible tax, and VAT avoidance is therefore also visible to others. We found a widespread perception that it is difficult to get VAT invoices from suppliers, and that customers do not request VAT invoices. This does not encourage taxpayers to issue VAT invoices, making filing more complex and influencing their perception of compliance levels and social demand for compliance. As VAT is collected at each stage of value addition, the proper issuance of invoices is required across all stages. Our findings identified that manufacturers and importers are not properly issuing VAT invoices for their wholesale or retail customers. This may cause wholesalers or retailers not to issue VAT invoices, and to perceive tax compliance as low. We suggest one solution to this is to take action to encourage requesting VAT invoices or receipts, improving public awareness of the need to ask for invoices at the time of transaction. A lottery could offer prizes linked to evidence of compliance, motivating people to ask for VAT invoices or receipts at the time of transaction. Another important change we recommend is acting to ensure that receipts and invoices produced electronically – for example, by cash registers – are printed in both local languages and English, so that they are useful for the recipient and for administrators more generally. To alleviate the key problem of retailers being unable to get input VAT receipts, we recommend that ERCA focus taxpayer awareness and enforcement actions on key manufacturers, importers and distributors in order to ensure issuance of VAT receipts to buyers.

Finally, we explored two areas of perceptions linked to tax compliance in other work – *comparative treatment* and *fiscal exchange*. In relation to the latter, we found that a significant number of our VAT registrants did not believe that VAT income was used by the government to provide public goods. Given evidence that taxpayers are more likely to comply with tax regulations if they perceive such a link, ERCA may want to factor this into any public awareness-raising around VAT compliance. In relation to comparative treatment, we found that holding the view that ERCA treats taxpayers without discrimination was associated with perceptions of higher compliance. ERCA may want to consider how its fair treatment of different groups of taxpayers might be emphasised in its communications and public profile.

## Appendix: Survey results and analysis

### A1 Sampling strategy and response rate

As of 11 January 2018 there were 23,114 VAT registrants in the three branches of ERCA in Addis Ababa chosen for this study. The sample size was determined by using Yamane's (1967) sample size determination method, which we adopted as it is suitable for a finite and small population. Accordingly, a total of 1,060 registrants were randomly selected from the branch offices in proportion to the population distribution.

**Table A1 Survey and sampling and response rates**

Branch Office	Questionnaires distributed	Questionnaires returned	Response rate
LTO	52	47	90%
East	612	393	64%
West	396	212	53%
<b>Total</b>	<b>1,060</b>	<b>652</b>	<b>62%</b>

### A2 Characteristics of survey respondents

Table A2 describes the individual characteristics of survey respondents, noting the percentage of the response sample that each category made up.

**Table A2 Characteristics of survey respondents**

Characteristic	Categories	Frequency	Valid Per cent
Gender	Male	353	55%
	Female	289	45%
	Missing	9	
Age	<=20	32	5%
	21-30	338	53%
	31-40	235	37%
	>41	37	6%
	Missing	9	
Education level achieved	High School	14	2%
	Diploma	55	8%
	1st degree	396	61%
	2nd degree	157	24%
	>2nd degree	27	4%
	Missing	2	

### A3 Nature of business

Table A3 describes the nature of the businesses that responded to the survey. Note that the turnover category starts at £1m Ethiopian Birr per year, as businesses below this turnover level do not need to register for VAT.

**Table A3 Business profile of survey respondents**

Business profile characteristic	Response categories	Frequency	Percentage
Age of business/enterprise	>2 year	133	20.4
	2-5 years	216	33.2
	5-10 years	164	25.2
	>15 years	89	13.7
	Total	602	92.5
	Not completed	49	7.5
Business main activity (Sector)	Importer and exporter	150	23
	Service sector	110	16.9
	Construction	117	18
	Property rental	12	1.8
	Wholesaler and trade retailer	33	5.1
	Manufacturer	88	13.5
	Other	67	10.3
	Not completed	74	11.4
Enterprise sales amount in 2017/2018 financial year (Ethiopian Birr)	1-5 million	269	41.3
	5-10 million	164	25.2
	10-15 million	50	7.7
	>15 million	81	12.4
	Not completed	87	13.4

## A4 Responses to survey questions

Table A4 gives response rates, mean responses, and the standard deviation for the survey questions used in the analysis for this paper.

**Table A4 Responses to survey questions referred to in this paper**

Question No.	Question	Response options	Responses	Response rate	Mean	Std Dev.
2.11	Do you agree that your friends, competitors, relatives and the taxpayer at large comply with VAT invoicing and filing?	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5, Strongly Disagree	536	82%	2.47	1.158
2.12	How far do you agree that the tax authority (Ethiopian Revenue and Customs Authority) provides services without discriminating between taxpayers	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	587	90%	2.55	1.345
2.14	How far do you agree that using a cash register machine improves invoicing and filing compliance?	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	591	91%	1.61	0.885
2.17	Invoice compliance attitude (based on prevalence of forged invoice) (Very high (1) to very low (5))	1: Very High, 2: High, 3: Medium, 4: Low, 5: Very Low	525	81%	2.73	1.322
2.19	How far do you agree that: Customers request invoices during transactions	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	580	89%	2.3	1.164
2.3	How far do you agree that: Tax officials support taxpayers on VAT filing	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	612	94%	2.6	1.245
2.4	How far do you agree that: Tax officials support taxpayers on VAT invoicing	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	607	93%	2.62	1.167
2.5	How satisfied are you that government uses VAT revenue to provide public goods and services	1: Very Satisfied, 2: Satisfied, 3: Neither Satisfied or Dissatisfied, 4: Dissatisfied, 5: Very Dissatisfied	599	92%	3.07	1.287
4.1	How far do you agree that: VAT registrants are aware of when and how to file returns	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	578	89%	3.8	1.352
4.2	How far do you agree that: The VAT filing process is simple	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	556	85%	2.89	1.38
4.3	How far do you agree that: VAT honestly file their VAT returns	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	551	85%	3.22	1.109
4.4	How far do you agree that: VAT registrant taxpayers issue VAT invoices during transactions	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	541	83%	3	1.13
4.5	How far do you agree that: Taxpayers can easily access VAT laws	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	567	87%	2.69	1.135
4.6	How far do you agree that: VAT laws are complex and difficult to understand easily	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	552	85%	2.99	1.19
4.7	How far do you agree that: ERCA provides VAT training for taxpayers	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	554	85%	3.18	1.096
4.8	How far do you agree that: It is difficult to get input VAT invoices during purchase	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	551	85%	2.98	1.242
4.9	How far do you agree that: VAT invoices are not issued by your neighbours	1: Strongly Agree, 2: Agree, 3: Neutral, 4: Disagree, 5: Strongly Disagree	568	87%	3.37	1.137

## A5 Regression analysis

The researchers used two questions to understand the attitude of VAT registrants towards filing and invoicing compliance. The first question is about VAT filing compliance behaviour 'VAT registrants honestly file', and the response ranges from strongly agree = 1 to strongly disagree = 5. The second question is on VAT invoicing compliance attitude, 'VAT registrants issue invoice during transaction', with the response ranges from strongly agree = 1 to strongly disagree = 5. The researchers chose to use ordinal regression analysis since the dependent variable is ordinal.

In both cases the variable estimation equation was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + e$$

Where:

Y = dependent variable;

$\beta_0$  = constant;

$X_i$  = independent variable where i runs from 1 to n;

$\beta_i$  = coefficient of the independent variable i; and

e = error

The tables below show the results of the regressions.

<b>Dependent variable: 'How far do you agree that VAT registrants honestly file'. The response ranges from strongly disagree = 1 to strongly agree = 5</b>							
Based on the SPSS ordinal regression the overall regression was statistically significant (p = 0.000).							
Independent variables	Value	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Strength of agreement: VAT filing processes are simple (Q.4.2)	.482	.090	28.445	1	.000	.305	.659
Strength of agreement: VAT registrants are aware when and how to file (Q.4.1)	.477	.093	26.620	1	.000	.296	.659
Strength of agreement: VAT laws are complex and difficult to understand easily (Q.4.6)	-.062	.045	1.938	1	.000	-.025	.150
Strength of agreement: ERCA provides services without discriminating between taxpayers (Q.2.12)	.097	.096	1.020	1	.000	-.091	.286
Strength of agreement: Other VAT registrant are compliant in their VAT filing (Q.2.11)	.427	.096	19.721	1	.000	-.615	-.238
Strength of agreement: Government uses VAT revenue to provide public goods and services (Q.2.5)	.005	.099	.003	1	.0006	-.199	.188
Strength of agreement: Tax officials support taxpayers on VAT filling (Q.2.3)	.026	.103	.062	1	.803	-.177	.229
Education level	-.840	.172	23.770	1	.000	-1.177	-.502
Respondent's age	-.399	.180	4.920	1	.027	-.751	-.046
Sex	.591	.229	6.657	1	.010	.142	1.039
Link function: Logit							

**Dependent variable: 'VAT registrants issue invoice during transaction'. The response ranges from strongly disagree = 1 to strongly agree = 5**

Based on the SPSS ordinal regression the overall regression was statistically significant ( $p = 0.000$ ).

Independent variables	Value	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Strength of agreement: VAT invoices are not issued by your neighbours (Q.4.9)	-.083	.085	.951	1	.000	-.251	.084
Strength of agreement: Tax officials support taxpayers on VAT invoicing (Q.2.4)	.210	.077	7.399	1	.007	-.362	-.059
Strength of agreement: Government uses VAT revenue to provide public goods and services (Q.2.5)	.189	.081	5.393	1	.020	-.349	-.030
Strength of agreement: ERCA provides services without discriminating between taxpayers (Q.2.12)	.240	.076	10.008	1	.002	-.389	-.091
Strength of agreement: Cash register machines improve invoicing and filing compliance (Q.2.14)	.150	.110	1.883	1	.170	-.365	.064
Strength of agreement: Customers request invoice during transactions (Q.2.19)	.265	.085	9.733	1	.002	-.431	-.098
Strength of agreement: VAT laws are complex and difficult to understand easily (Q.4.6)	-.332	.082	16.582	1	.000	.172	.492
Strength of agreement: ERCA provides VAT training for tax payers (Q.4.7)	.373	.094	15.761	1	.000	.189	.557
Strength of agreement: It is difficult to get input VAT invoices during purchase (Q4.8)	.021	.080	.068	1	.000	-.177	.136
Sex	.731	.195	14.035	1	.000	.349	1.114
Age	-.469	.147	10.258	1	.001	-.757	-.182
Education level	-.212	.126	2.832	1	.092	-.459	.035

Link function: Logit

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