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# E-tax System Adoption and Tax Compliance in Ethiopia: Large and Medium Taxpayers' Experience

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## **Summary**

In the last decade, tax administrations in developing countries have been introducing technological innovations such as e-filing and e-payment platforms. The main aim of introducing these technologies is to improve tax compliance and boost revenue collection by increasing convenience and flexibility for taxpayers and reducing their compliance costs. E-filing and e-payment could save taxpayers time preparing and returning taxes and reduce errors and opportunities for corruption. However, the adoption of these technologies and their effectiveness in improving tax compliance could be undermined by several factors. Using tax administrative records, we examined the adoption rate trend of the e-filing system and the correlation between e-filing adoption and tax compliance of large and medium taxpayers in Ethiopia. The timeliness of value-added tax (VAT) and corporate income tax (CIT) return filing and the amount of tax declared are the two main compliance indicators used in this study. Furthermore, we explored the existing challenges and the way forward to improve the adoption of the e-tax system using focus group discussions (FGDs).

We employed descriptive approaches to analyse the data from tax administrative records and FGDs. The overall findings indicate four clear messages on the e-tax system in Ethiopia. First, the e-filing adoption rate remained low and sluggish for a long period. This was because of weak administrative infrastructures, internet connectivity problems, and frequent power outages. A low level of taxpayers' awareness coupled with a non-mandated and incomplete e-filing platform also played a part in the low adoption rate of the technology. Second, late filers and nil filers are found to be less likely to adopt e-filing relative to on-time filers. Larger firms are also more likely to adopt e-filing than smaller ones. These are true for both VAT and CIT filings. Third, the amount of VAT and CIT declarations is also, on average, significantly higher among e-filers than those declarations made via the manual system. Fourth, the e-payment platform has not yet been implemented properly for similar administrative capacity constraints.

**Keywords:** e-tax system, e-filing, e-payment, tax compliance, VAT, CIT, Ethiopia.

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# Contents

	Summary	3
	Acknowledgements	6
	Acronyms	6
	<b>Introduction</b>	<b>7</b>
<b>1</b>	<b>The E-Tax system in Ethiopia: background and context</b>	<b>10</b>
<b>2</b>	<b>Method and materials</b>	<b>11</b>
	2.1 Data types and sources	11
	2.1.1 Administrative data	12
	2.1.2 Focus group discussions (FGD)	12
	2.2 Data analysis method	12
<b>3</b>	<b>Descriptive analysis</b>	<b>13</b>
	3.1 E-filing adoption over the years	13
	3.2 Why was the e-filing adoption rate low and sluggish? Insights from the focus group discussions	14
	3.3 The majority of firms do not adopt e-filing consistently	15
	3.4 E-filing adoption by firm size	16
	3.5 E-filing and timely return of taxes	17
	3.6 Taxpayer characteristics and e-filing	18
<b>4</b>	<b>Correlates of e-filing adoption</b>	<b>21</b>
<b>5</b>	<b>The e-payment system is not yet being implemented appropriately</b>	<b>22</b>
<b>6</b>	<b>Conclusions and recommendations</b>	<b>23</b>
	<b>References</b>	<b>25</b>
	<b>Appendices</b>	<b>28</b>
	Appendix A	28
	Appendix B	34
	Appendix C	35
	C.1 Guiding questions for taxpayers	35
	C.2 Guiding questions for officials and experts	35
	<b>Figures</b>	
	Figure 3.1.1 E-filing adoption over the years	14
	Figure 3.4.1 E-filing use by firm size	17
	Figure 3.5.1 E-filing and timely return of taxes	18
	Figure 3.6.1 Characteristics of VAT filers and e-filing	19
	Figure 3.6.2 Characteristics of CIT filers and e-filing	20
	Figure 4.1 Correlates of e-filing share	22
	Figure A.1 E-filing registration trend over the years	31
	Figure A.2 VAT e-filing adoption by year and firm size	32
	Figure A.3 CIT e-filing adoption by year and firm size	33

**Tables**

Table 3.6.1 Summary statistics of VAT and CIT declarations (log transformed)	21
Table A.1 Summary statistics of main variables by year	28
Table A.2 Trends in annual average of VAT and CIT tax records (log)	29
Table A.3 Switching between e-filing and manual filing	30
Table B.1 Number of FGD participants and represented institutions	34

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# Acronyms

CBE	Commercial Bank of Ethiopia
CIT	Corporate Income Tax
ERCA	Ethiopian Revenues and Customs Authority
ESRM	Electronic Sales Registration Machine
ETRN	Ethiopian Tax Research Network
FGD	Focus Group Discussion
ICT	Information Communication Technology
ICTD	International Centre for Tax and Development
INSA	Ethiopian Information Network Security Agency
LTO	Large Taxpayers Office
MoR	Ministry of Revenue
MTO	Medium Taxpayers Office
NBE	National Bank of Ethiopia
SIGTAS	Standard Integrated Government Tax Administration System
SSA	Sub-Saharan Africa
STO	Small Taxpayers Office
TIN	Taxpayer Identification Number
TTO	Tax Transformation Office
UNU-WIDER	United Nations University World Institute for Development Economics Research

# Introduction

Technological innovations in tax administrations have a paramount role to play in efficiently mobilising domestic resources to finance development plans (Ali *et al.* 2015; Olatunji and Ayodele 2017; Okunogbe and Pouliquen 2022; McCluskey and Huang 2019; Kochanova, Hasnain and Larson 2020; Mascagni, Mengistu and Woldeyes 2021). Contrary to the traditional paper-based tax filing and payment system, an efficient and widely accepted electronic system for filing and paying taxes benefits both taxpayers and tax authorities (Okunogbe and Santoro 2022). For taxpayers, electronic filing saves time by reducing calculation errors on tax returns and making it easier to prepare and file declarations. Similarly, e-payment makes paying taxes convenient and easier. Taxpayers can easily avoid travelling to tax centres and meeting corrupt officials and long queues, and they can file taxes and make payments at their convenience. For tax authorities, these innovations could reduce the workload and operational costs, such as the costs of processing and handling tax returns, and make monitoring and enforcement more efficient. These benefits, ultimately, are supposed to improve timely and correct tax filing and increase compliance.

According to the World Bank (2019), Ethiopia's ease of paying taxes ranks 132 out of 190 economies in the world. On average, it takes 300 hours per year to prepare and file tax returns and to pay tax liabilities for a local medium-sized business company in Ethiopia. This time is longer than the sub-Saharan Africa (SSA) average (280.6 hours) and other East African countries such as Rwanda (91 hours), Kenya (180), Uganda (195), and Tanzania (207). It suggests that relative to these countries, the Ethiopian Tax Administration operates more manually to process tax return filing, tax payments, and refunds. In response, the Ethiopian tax authority has recently introduced an e-tax system that enables taxpayers to electronically submit tax returns and process tax payments, which can be considered a big step towards digitising the tax administration.

However, the adoption rate of such technologies and the users' satisfaction level determine to what extent government authorities optimise the potential benefits of the technologies. Previous studies show that taxpayers' adoption rate of e-tax systems is sluggish in some countries. For instance, only 52 per cent of US taxpayers used e-filing in 2007 after it was introduced in 1986 (Schaupp, Carter and McBride 2010). Taiwan also introduced the electronic tax-filing system in 1998, and less than 8 per cent of taxpayers were using the filing system in 2002 (Wang 2003). Coolidge and Yilmaz (2014) advised countries not to push e-filing on all taxpayers until the revenue authorities, infrastructures, and taxpayers are ready to avoid unintended consequences such as lower compliance levels.

Other studies also documented evidence that the success of e-government services depends on the importance citizens place on factors such as convenience and usefulness of the services (Chaouali *et al.* 2016). Integrating trust into the technology adoption model, Belanche, Casaló and Flavián (2012) found that the level of trust has significant and strong direct effects on both attitude and intention to use new e-governance technologies. Better performance and effort expectancy are also found to significantly influence willingness to use e-filing in northwestern Nigeria. At the same time, low awareness negatively correlates with willingness to adopt e-filing technology (Mas'ud 2019). Taxpayers' education level and awareness are also found to impact the e-service adoption level in Rwanda's tax administration (Santoro *et al.* 2023). Generally, under-utilisation of innovative technologies in e-governance, such as internet banking and e-filing of tax returns, remained a problem across the developing world (Martins, Oliveira and Popovič 2014). We have little to no evidence about the e-tax adoption rate, its correlation with tax compliance, and the



challenges and opportunities for harnessing the power of technologies for better tax administration in Ethiopia since the introduction of the e-tax system in late 2011.

This study aims to assess taxpayers' e-filing adoption rate trend, the e-payment practices, and their role in improving tax compliance in Ethiopia. As they increase convenience and flexibility for taxpayers and reduce their compliance costs, e-filing and e-payment technologies were introduced in the tax administration to improve tax compliance and boost revenue collection. Specifically, it is widely believed that the innovations could save taxpayers time preparing and returning taxes and paying liabilities. They also could reduce errors and opportunities for corruption. However, there is no evidence of how effectively taxpayers used the technologies in line with these expectations. On the one hand, our study fills this gap by examining the adoption rate trend of the e-filing system and the correlation between e-filing adoption and tax compliance of large and medium taxpayers. On the other hand, we partially examine and characterise the current state of e-payment practices in Ethiopia. Tax compliance<sup>1</sup> being a wide concept, we only use the timeliness of value-added tax (VAT) and corporate income tax (CIT) return filings and the amount of tax declared as this study's two main compliance indicators.

The specific questions this study aims to answer include:

- What is the adoption rate of the e-filing system among Ethiopian taxpayers?
- Which type of firms better take up the e-filing application among large and medium-sized taxpayers?
- Does adopting e-filing improve tax compliance, especially on-time filing and the amount of tax returns?
- What are the main challenges taxpayers face to consistently e-file and e-pay their tax returns?

We employed descriptive analysis techniques to answer these questions using tax administrative records of large and medium-sized businesses in Ethiopia and qualitative data we collected from focus group discussions (FGDs).

The overall findings from our analysis provide four clear messages on the e-tax system in Ethiopia. First, the e-filing adoption rate among taxpayers has been low for both VAT and CIT filers. However, the results show that e-filing adoption increased over the years, though with a sluggish trend. As focus group discussants from tax administration and taxpayers indicated, the e-filing system was largely incomplete — several tax modules were missing at the start, and the tax authority went through a trial-and-error approach to gradually improve the system. Weak administrative infrastructures, internet connectivity problems, frequent power outages, and taxpayers' low awareness were also among the challenges that contributed to the low adoption of the technology. Besides, the system was not mandated, and there was no rule to force taxpayers to adopt the technology consistently, resulting in frequent switching between manual and e-filing systems. Second, we found a strong correlation between e-filing adoption and on-time filing. Late filers and nil filers were also found to be less likely to adopt e-filing relative to on-time filers. In terms of firm size, larger firms were more likely to adopt e-filing compared to medium ones. These are true for both VAT and CIT filers. Third, the amount of VAT due and CIT profit declarations were, on average, significantly higher among e-filers than those declarations made via the manual system. Fourth, the e-payment platform has not yet been implemented properly for similar administrative capacity constraints. E-payment also seems completely misunderstood, as taxpayers still need to visit bank branches in person and fill out a special paper named 'e-payment

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<sup>1</sup> Tax compliance is the degree to which taxpayers adhere to the tax laws by filing and paying their taxes timely and accurately. What our study addresses is the extent to which taxes are reported in a timely manner and the tax amount due. Ascertaining accurate tax payment further requires auditing and we did not obtain audit data for this study.

form' and battle with all the bureaucracy and face-to-face interactions. Moreover, with no training for bank professionals about how to access taxpayers' declarations, taxpayers barely get served well.

This study makes two contributions. First, this study contributes to the growing literature on the role of information communication technologies (ICT) in tax administrations (Santoro, Amine and Magongo 2022; Okunogbe and Santoro 2022; Bellon *et al.* 2022; Jousté, Nalukwago and Waiswa 2021; Kochanova, Hasnain and Larson 2020) and in various e-governance service provisions (Lewis-Faupel *et al.* 2016; Aker and Ksoll 2019; Callen *et al.* 2016; Banerjee *et al.* 2020) from the Global South – especially Ethiopia. Specifically, it contributes to the literature by adding nuance and evidence on taxpayers' experience of using the e-filing and e-payment systems, the effectiveness of the technologies and the challenges faced in the Ethiopian context. In this regard, we augment the findings of previous research from Ethiopia (Ali *et al.* 2015; Mascagni *et al.* 2021). These studies assessed the effectiveness of Electronic Sales Registration Machines (ESRMs) to increase tax compliance. The study by Ali *et al.* (2015) found that adopting the ESRMs resulted in a large and significant increase in VAT payments - about 20 log points. The same technology was found to increase business income taxes and VAT by at least 12 per cent and 48 per cent, respectively (Mascagni *et al.* 2021). This study further looks at the current practices and challenges of the e-payment technology in Ethiopia that are widely overlooked in previous studies.

Second, our empirical findings inform policymakers and the tax administration on how to improve the e-filing and e-payment systems for better service provision and revenue collection. The results in this regard emanated from nuanced insights on both tax administrative data and FGDs with all key stakeholders (more details in Section 2.1.2). Any policy reform to address the challenges identified in these results needs to be based on facts on the ground and would amplify the interests of relevant actors — policymakers, customers, and intermediary institutions- and, thus, it would be highly likely to succeed. Furthermore, the results remind the tax authority to establish effective communication channels, like call centres and reminders of tax module updates, accessible in real time for taxpayers. The evidence on e-payment practices helps both the tax authority and the banks to strengthen the infrastructure and institutional collaboration for a better e-payment service.

The rest of the paper is organised as follows. Section 1 characterises the e-tax system in Ethiopia and how the Ethiopian tax administration introduced the e-tax system to taxpayers. Section 2 discusses the data and methods. Discussion on descriptive results and correlates of e-filing adoption follows in Sections 3 and 4. Section 5 presents a brief assessment of the e-payment system, and Section 6 concludes the study's main findings and forwards policy implications.

# 1 The E-Tax system in Ethiopia: background and context

The Ethiopian e-tax system is connected to the main Standard Integrated Government Tax Administration System (SIGTAS). It consists of two main components — e-filing tax returns and e-payment of taxes. E-filing is an electronic system that enables taxpayers to declare their tax returns online at any time from anywhere. The Ministry of Revenues (MoR), previously named Ethiopian Revenues and Customs Authority (ERCA), introduced the e-filing platform in late 2011. It was started as a pilot project with 51 taxpayers registered at Large Taxpayers Office (LTO).<sup>2</sup>

Initially, only large businesses with an annual turnover of 27 million and above were using the e-filing system. Up to 2015/16, all taxpayers at the LTOs were registered for and trained on the e-filing platform. The e-filing services became widely available to Medium Taxpayers Offices (MTO) and Small Taxpayers Offices (STOs) in 2016/17. Description of the different functionalities and information provided by the e-filing system are summarised below.<sup>3</sup>

**Home:** This dashboard provides taxpayers with a summary of all information about the taxpayer and its records. The taxpayer can choose a calendar type – either Gregorian or Ethiopian Calendar – and a local language – English is the default language.

**Taxpayer services:** Several services can be found under this functionality, and arguably, this is the central functionality that taxpayers use most, as described below.

**Tax declaration:** Taxpayers file all types of tax liabilities that they owe to the government and can view current liabilities to declare, as well as previous declaration records. For example, declaration forms for VAT, CIT, Withholding, and pension contributions are all here. Taxpayers can also recall previously submitted forms and amend them to resubmit for active liabilities. Taxpayers can view, download, and print these files with all the necessary taxpayer details.

**Tax accounts:** The e-filing system provides taxpayers with a platform to view transactions that have taken place in each of their tax accounts. This feature allows the taxpayers to track their various tax accounts, see the assessments being done, reassessments (if any), charges, penalty type, the payments made and the overall position of their tax accounts, transaction dates, and any pertinent comments can be viewed here. This makes the entire process transparent to the taxpayer.

**Potential refunds:** This is a place that provides taxpayers with the ability to make online requests for refunds to the tax administration.

**Refund:** Taxpayers can electronically follow up on the status of a refund without going to the tax centre and can find all the previously requested refunds. If a request is rejected, the taxpayer will receive a message explaining the reasons for rejection.

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<sup>2</sup> There is fiscal federalism in Ethiopia. Thus, regions and city administrations have their own tax offices. For instance, Addis Ababa City Administration has Large, Medium, and Small and Micro tax offices. This study, however, focuses only on federal taxpayers and federal tax offices.

<sup>3</sup> The MoR has a dedicated webpage for e-tax services (<https://etax.mor.gov.et/>) where taxpayers use their log-in credentials to access all the functionalities and information they need.

Request clearance: Here, taxpayers can request tax clearance certificates for various purposes. The purpose may be for business license renewal, business closing, bank loan, share transfer clearance, cost sharing, bid participation, or selling property. All previous requests and statuses can also be found in the expanded view under the 'Clearance Requests List' functionality.

Message centre: This feature of the e-tax platform facilitates communication between taxpayers and their tax centre. The taxpayer Customer Service at the tax centre level is responsible for handling this service, and in principle, messages from taxpayers need to be responded to within five days. The number of unread messages is also visible on the 'Home' page dashboard as 'You have X new messages', and the taxpayer can see them easily and access them with just a click. These messages, however, do not leave the e-tax application through other messaging systems, such as Outlook, for security reasons.

Validity checks: This functionality allows taxpayers to check the validity of a Taxpayer Identification Number (TIN) and various institutions' tax clearances against the data in the central SIGTAS database. If the TIN or the certificate number is valid, the taxpayer's name is displayed, and validity is confirmed. Otherwise, a message is displayed informing the user that the TIN or clearance certificate number is not valid.

There are also other functionalities that taxpayers can use from the e-filing platform. They can, for example, access their full registry and update information, such as their contact information, physical location, and mailing addresses. The platform also allows taxpayers to change their login password. But if they forget the existing password, they need to go to their tax centre, and only the tax administration officers can reset and generate a new password. There are also some pre-loaded details annexed and videos explaining specific rules and requirements in the 'Help' functionality of the platform.

The other component of the e-tax system is the e-payment platform that aims to allow taxpayers to pay their taxes through bank systems without a need to physically go to the tax administration centre after e-filing returns online. The e-payment system was tested for about a year as a pilot by 11 companies in 2018/19 and is currently being expanded to all taxpayers. Before this expansion, tax payments could only be accepted at revenue authority offices, even if taxpayers file returns online. Access to the e-payment system was limited to the Commercial Bank of Ethiopia (CBE).<sup>4</sup> Currently, other commercial banks have begun to process tax payments.

The e-tax system is also supported by an electronic billing platform called *DERASH*. It is an internet interface developed and managed by the Ethiopian Information Network Security Agency (INSA) with a prior objective of providing financial institutions with a secured interface for their financial transactions. Thus, taxpayers' online declarations must pass through the *DERASH* interface before being visible and accessible in the MoR system and at banks for payments.

## 2 Method and materials

### 2.1 Data types and sources

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<sup>4</sup> The CBE is a state-owned bank and arguably the most widely available bank in Ethiopia. However, businesses may not always prefer this bank, as it is also the most overcrowded in terms of customers, which results in a delay to access services.

To answer the research questions in this study, we combine two main data sets: administrative data on taxpayers' tax returns and qualitative data from FGDs with stakeholders.

### **2.1.1 Administrative data**

We used large and medium taxpayers' administrative records on VAT and CIT declarations from the MoR. Detailed taxpayer information in the tax administration registry also helped us characterise taxpayers and generate almost all our quantitative results. VAT is recorded on a monthly basis, and firms are required to return their CIT yearly. Thus, panel data on VAT and CIT declarations from before and after the introduction of the e-filing system is generated from the authority's data system. In the case of VAT, the panel ranges from 2008 to 2020. In this period, 668 large taxpayers and 3437 medium taxpayers submitted complete declarations. The CIT record available to us during data acquisition spans from 2008 to 2019 for 646 large taxpayers and 3613 medium taxpayers.<sup>5</sup>

The administrative data consists of detailed information on tax filing type, timing, and amounts declared for VAT and CIT. Among others, our variable of interest includes filing status (late or on-time filing), filing type (manual filing or e-filing), the tax amount declared (VAT due, credit or nil, and profit, loss, or nil for the CIT records), and firm size (large or medium taxpayer). Tables A.1 and A.2 in Appendix A provide summary statistics of the main variables over the years.

### **2.1.2 Focus group discussions (FGDs)**

We collected qualitative data using FGDs with taxpayers and different stakeholders to complement our analysis of the administrative data. We ran four FGDs in April 2022 using semi-structured guiding questions and probing strategies.<sup>6</sup> The total number of FGD participants was 27, of which there were 14 taxpayers with e-filing experience randomly chosen from the administrative data and 13 from different stakeholder institutions (Table B.1 in Appendix A provides a list of participants). Stakeholder institutions such as the MoR, the National Bank of Ethiopia (NBE), commercial banks, and the INSA were represented by officials and experts who are knowledgeable about the e-tax system.

The FGD guiding questions are primarily designed to find insights and clarifications on our results from the administrative data. Particularly, the questions are about exploring the e-filing adoption trends, reasons for inconsistencies in e-filing applications, e-tax system developments, the challenges encountered since the early stage up to now, and the way forward to improve the effectiveness of the e-tax system that consists of e-filing and e-payment. Since the administrative data does not consist of tax payment modalities, our discussion on the e-payment system completely relies on the qualitative data from FGDs.

## **2.2 Data analysis method**

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<sup>5</sup> Newly registered large taxpayers may exist in the VAT declaration records, while not appearing in the CIT data. Due to the continuous amendment of laws, some medium taxpayers may not appear in the monthly VAT declaration records although they should file CIT returns. For example, before Proclamation 1157/2019, all VAT-registered entities had to file on a monthly basis. According to this proclamation, companies with annual turnover less than ETB 70 million must file their VAT return every three months.

<sup>6</sup> The FGDs were conducted in the Mado Hotel in Addis Ababa on 11 and 12 April 2022. The first two sessions were for taxpayers and then two sessions followed on the second day with stakeholder institutions. Each FGD session was moderated by an ICTD employee with experience in designing and undertaking qualitative and quantitative research. Each session took an average of two hours, and the guiding questions can be found in Appendix C.

We employed both descriptive and econometric analysis to answer our research questions. The descriptive analysis (in Section 3) mainly shows the e-filing adoption over the years and across firm size, e-filing, and timely return of taxes, and the amount of taxes due by filing type. Information contents and contexts from the FGDs were thematically integrated into our analysis to explain and triangulate the results from administrative data. We also use notes and audio recordings from the FGDs to assess the challenges that taxpayers and administration are facing, as well as the opportunities for systemic improvements.

Moreover, we run linear regressions to estimate correlates of e-filing adoption to characterise which firms are more likely to adopt the e-filing platform. For VAT and CIT returns, e-filing is the dependent dummy variable, taking a value of 1 if a firm returns its taxes electronically and 0 otherwise. Firm characteristic indicators such as firm size (1= LTO and 0= MTO), nil filer (1= yes, 0= otherwise), credit filer (1= yes, 0= otherwise), and loss filer (1= yes) were controlled in the regression. We also included the total number of returns by a taxpayer as an indicator variable for a firm's experience or indicator of age in the business. Section 4 discusses the regression results.

## 3 Descriptive analysis

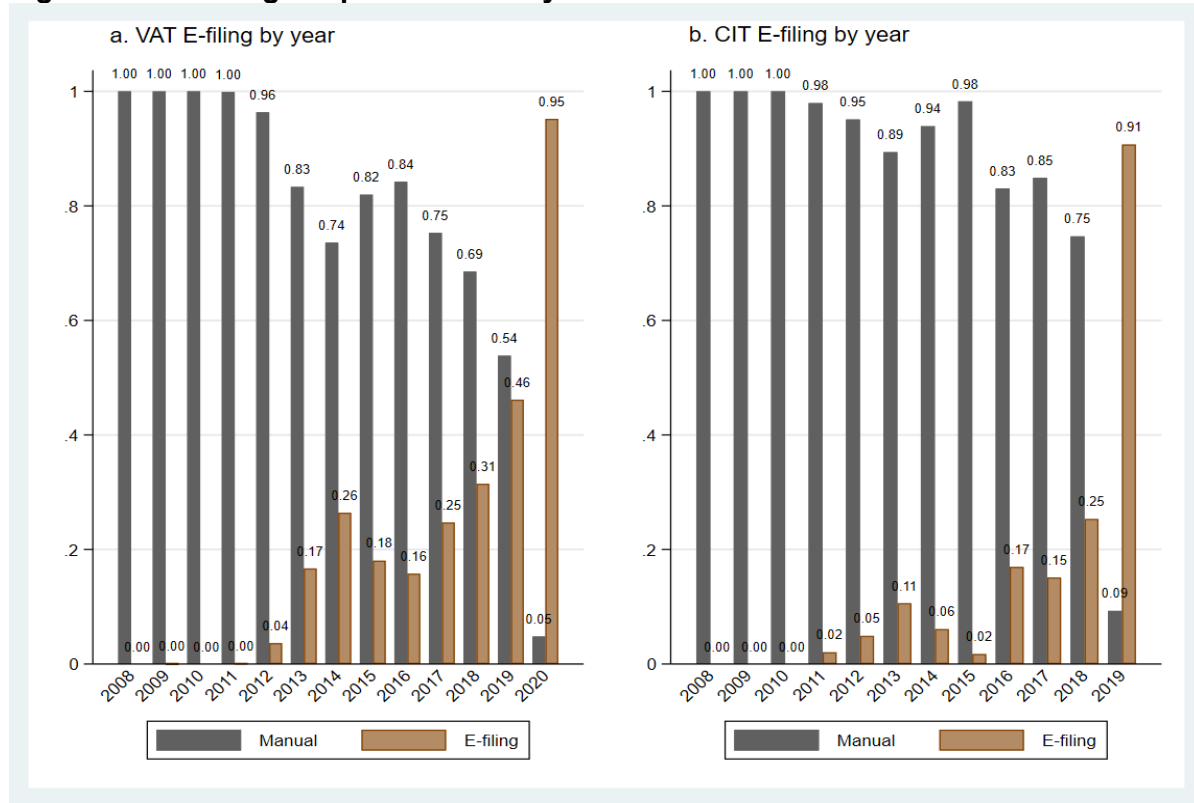
The MoR piloted a new e-filing system in late 2011. We asked taxpayers and tax administration officials about the benefits of using the e-filing system during the FGDs. Taxpayers acknowledged that e-filing helps them reduce their compliance costs by saving time in preparing their tax returns and travelling to tax centres and by avoiding the long queues to declare their tax returns. Similarly, tax administration officials stated that the e-filing system significantly reduced their administrative costs. Furthermore, other stakeholders, such as banks, are willing and have expressed their commitment to play constructive roles in harnessing the power of technology, especially for effective domestic tax collection in Ethiopia. This could easily start by training their employees on how to access taxpayers' tax liabilities and swiftly releasing transfers into the tax administration accounts. The current tax payment practice shows the immediate need for effective collaboration between the tax administration and banks so that electronic payments eventually become possible and convenient.

From tax administrative records, we learned that the taxpayers' adoption rate of the new online tax filing platform has been very low for a long period, and uptake of the technology varies across years, firm size, and types of taxpayers. The sections that follow discuss these variations in more detail.

### 3.1 E-filing adoption over the years

Since its introduction, the adoption rate of the new e-filing system among taxpayers has been low, and the trend remained sluggish for a long period (Figure 3.1.1). All VAT (Figure 3.1.1a) and CIT (Figure 3.1.1b) returns were filed manually until 2011. The share of returns filed electronically shows a slightly increasing trajectory for three consecutive years since the introduction of the e-filing system, accounting for 26 per cent of VAT in 2014 and 11 per cent of CIT returns for 2013. However, the share of electronically filed returns of both tax categories declined in the following years before rising again. E-filing adoption seems to gain significant momentum in 2019 and 2020, as 46 per cent and 95 per cent of VAT returns were filed online, respectively. The share of CIT returns electronically filed also showed a spike in 2019, growing from 25 per cent in 2018 to 91 per cent in 2019.

**Figure 3.1.1 E-filing adoption over the years**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

### 3.2 Why was the e-filing adoption rate low and sluggish? Insights from the focus group discussions

The e-filing application in Ethiopia was not mandated, and there was no rule that could force taxpayers to strictly adopt the technology, besides other technical challenges. This could partly contribute to its low adoption rate in Ethiopia. As in Eswatini, where e-filing technology was actually mandated, less sophisticated and less IT-savvy businesses were much less likely to register for e-tax systems. A study from Rwanda also indicates that a significantly large number of taxpayers were using both the e-services and manual systems simultaneously despite e-services being mandated (Santoro *et al.* 2023). Focus group participants from the MoR and taxpayers shared their perspectives on why taxpayers were reluctant to use the e-filing system, as Figure 3.1.1 presents. Three main reasons were mentioned by FGD participants.

First, both MoR officials and taxpayers stated that the online filing system was not complete and lacked clarity. In the beginning, not all tax forms were available online, and the system could not automatically calculate values, such as totals and a flat 15 per cent VAT rate. The 'Help' menu and drop-down information boxes were also missing in the e-filing system. Discussing the characteristics of the e-filing system, one official also stated, '[...] the system was not implemented after going through all the necessary tests. Rather, we followed a trial-and-error approach to test the system while being used by taxpayers. In line with Okunogbe and Santoro (2023), inefficient infrastructure and low cyber capacity to handle high transaction traffic, especially when there are many users at the end of tax filing periods, is reported to cause low e-filing adoption. Participants from the MoR stated that the authority was unable to continue with the previous IT system

consulting company and eventually contracted another IT system developer in 2016/17 to improve the e-tax system. That also resulted in a temporary interruption of efforts to update the existing e-filing system and online tax forms (registration of new businesses for e-filing in these years was also suspended, as Figure A.1 in Appendix A shows).

Second, the training sessions on the e-filing system provided for taxpayers were inadequate. The sessions are regarded as short and lacking depth in terms of content, with limited practical exercises. This was especially the case, as there is no way for more than one person from a firm to attend such training. Similarly, professionals hardly got any training on relevant system updates even after requesting it.

Third, taxpayers faced cultural shock<sup>7</sup> and lack of trust in the early stage of the e-filing system, and inexperience using computers and the internet were mentioned as challenges to better utilising the e-filing system, especially in the early periods. Internet connectivity, lack of technical knowledge and inadequate training were also major constraints for e-filing uptake in Ethiopia, like in other developing countries, for example in Zimbabwe (Sifile *et al.* 2018) and Rwanda (Santoro *et al.* 2023).

FGD participants also mentioned two important cases that improved taxpayers' e-filing adoption in 2019 and 2020 (see Figure 3.1.1). One reason was that the MoR undertook serious discussions with its experts and taxpayers to identify issues that needed immediate intervention and improvement on the e-filing system in 2018 and the following year. This resulted in system improvements, especially by incorporating more necessary tax forms and becoming more complete, coupled with taxpayers' learning experiences of using and trusting the system. The second case mentioned by participants was a campaign by the MoR to register more than 10,000 e-filers in 2019 and 2020. This campaign was believed to have the potential to either force or convince taxpayers to adopt the e-filing system in a short time and resulted in a spike in e-filing adoption since 2019, as Figure 3.1.1 shows.

### **3.3 The majority of firms do not adopt e-filing consistently**

Besides the low incidence of e-filing applications discussed in Section 3.2, the majority of firms were not consistently using the e-filing system to return their VAT and CIT declarations after their first e-filing experience. As Table A.3 in Appendix A shows, nearly 55 per cent of firms switched from e-filing to the manual system to declare their monthly VAT returns at least once after their first e-filing experience. Similarly, on average, 54 per cent of firms switched from manual to e-filing applications. The majority of firms were also found to have switched between e-filing and manual filing for their CIT declaration in the period considered. For both VAT and CIT declarations, taxpayers who use e-filing consistently are found to be relatively late adopters, consistent with the challenges related to e-filing system development and lack of knowledge at the earlier stages.<sup>8</sup>

Taxpayers and tax administration officials who participated in the FGDs stated four critical reasons why taxpayers frequently switch between e-filing and manual filing systems. These reasons are as follows:

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<sup>7</sup> Interacting with the tax administration using the online platform was a new exposure for taxpayers and their records are more easily accessible, trackable, and visible to the agency than the old manual system. Taxpayers referred to being virtually known and followed by the government agency as 'scary'. Mistakes were also punishable, as they were not difficult to mend during that period.

<sup>8</sup> After their first e-filing exposure, on average, large and medium taxpayer businesses were able to electronically file 76 per cent of VAT and 78 per cent of CIT returns, with very little variation across firm size.



First, taxpayers could easily go back to the manual e-filing system if there were internet and electricity outages, which were very common incidences, especially in the earlier periods.

Second, between experienced employees quitting their posts and another employee receiving training, the business returns to the manual filing system.

Third, the e-filing system has been through a continuous improvement process. In this process, both taxpayers and tax administration officials underlined that communication on system updates was not swift at all. Thus, participants stated that delays in communicating updates and changes on tax forms often force taxpayers to switch to the manual filing system. This inefficient change management and the struggle to re-engineer the business processes by the tax administration are similar to the experience of other developing countries, such as Uganda and Sierra Leone, that have little prior experience in providing e-government services (Occhiali, Akol and Kargbo 2022).

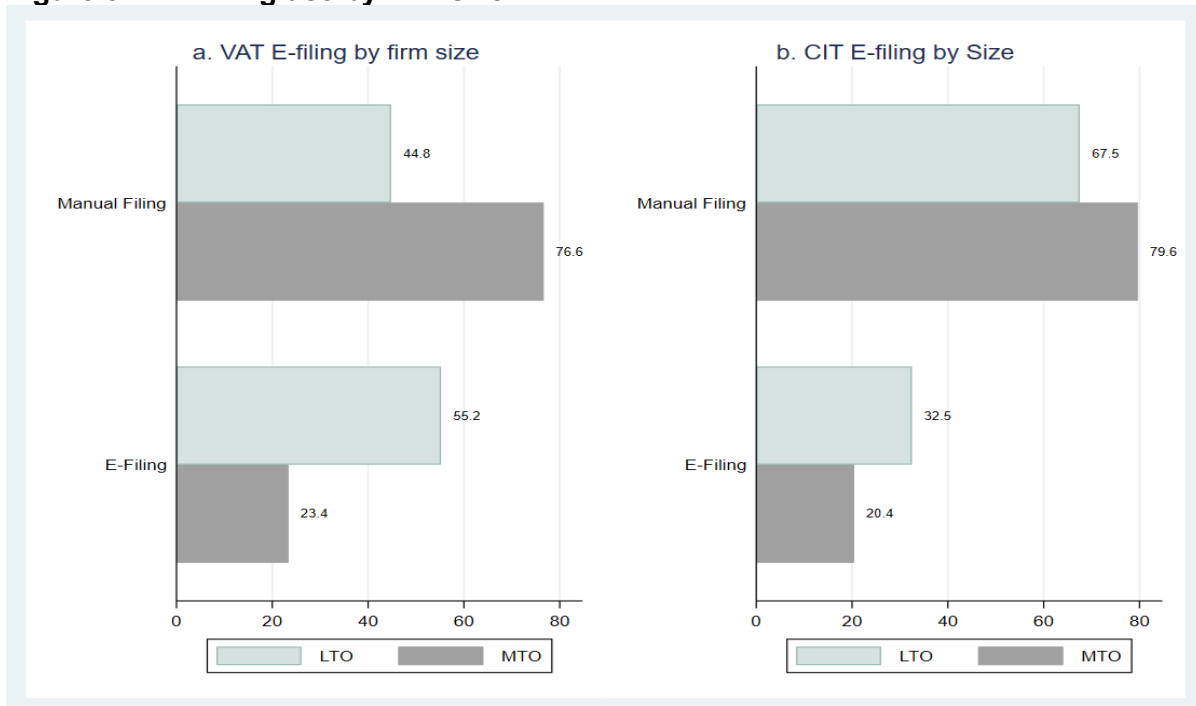
Attempts to file declarations near deadlines were also frequently mentioned as one key reason why taxpayers switch from e-filing to the manual filing system. Crowding the system on the last few days of tax declarations forces some large taxpayers to use tax centre computers since they can easily pass internet security assessments.

Both from the administrative data (Table A.3 in Appendix A) and the FGD participants, we understood that switching incidents from e-filing to manual filing system were not permanent for most firms. This is true for both VAT and CIT declarations.

### **3.4 E-filing adoption by firm size**

The proportion of manual and e-filing incidences of VAT and CIT returns is found to vary across firm sizes. Figures 3.4.1a and 3.4.1b show that large taxpayers declared 55 per cent of their VAT returns electronically since 2012, while the electronic filing incidence was only 23 per cent for medium taxpayers for the same tax type and period. The share of electronically-filed CIT returns by the two groups of taxpayers is even lower, accounting for nearly 33 per cent for LTO and 20 per cent for MTO taxpayers. As the e-filing programme was initially introduced with larger, purposefully chosen businesses, filing of VAT and CIT returns using the online platform is expected to be higher among large taxpayers in the early years, and that leads overall adoption of the e-filing system to vary across firm size over the period. This is also evident as the e-filing adoption gap between LTO and MTO eventually declines and disappears in 2020 for VAT and 2019 for CIT filing, respectively (Figures A.2 and A.3 Appendix A).

**Figure 3.4.1 E-filing use by firm size**

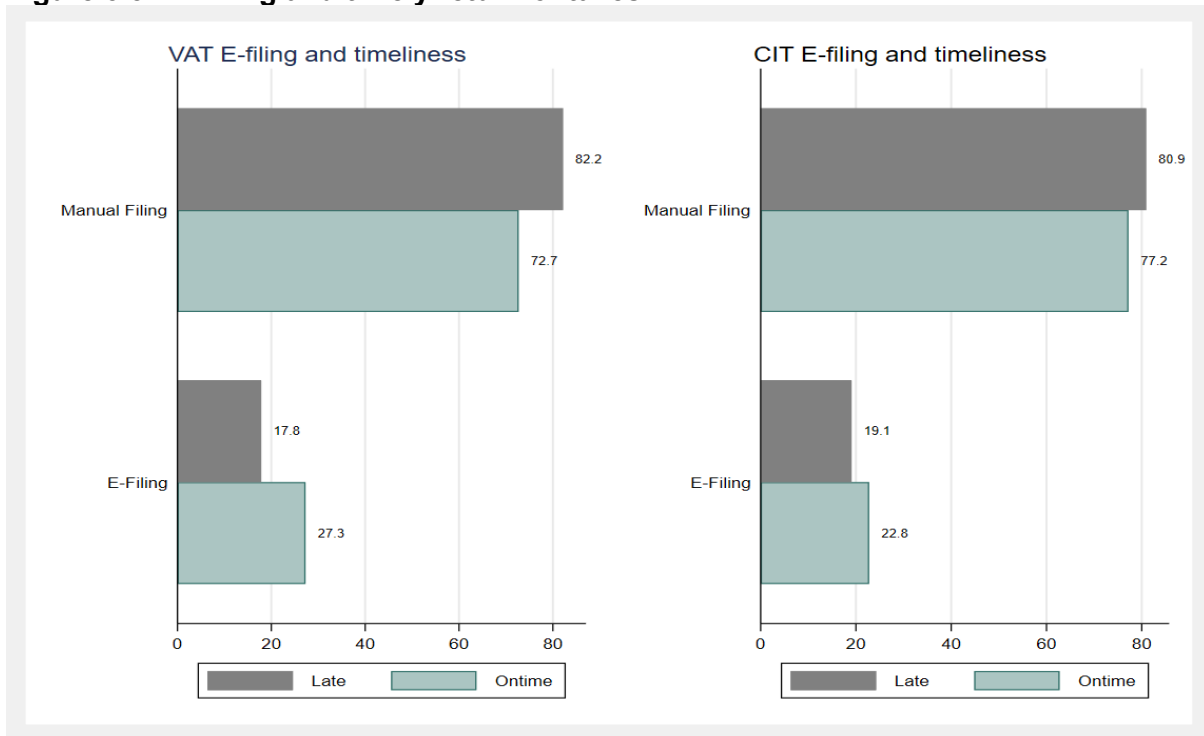


Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

### 3.5 E-filing and timely return of taxes

The incidence of late filing was around 4 per cent of VAT returns and 13 per cent of CIT returns since 2008. After 2012, late filing incidence was found to be significantly higher when taxpayers returned their taxes manually than when using the e-filing platform. Figure 3.5.1 shows that nearly 18 per cent of late VAT returns were filed electronically, while this proportion increases to 27 per cent among VAT returns filed on time. Even if the gap looks narrow, Figure 3.5.1b indicates a similar story: the proportion of e-filing is higher among businesses that return their CIT on time than the late CIT filers. Taxpayers also particularly emphasised the flexibility of filing, time, and cost-saving benefits of using the e-filing system during the FGDs. The e-filing platform, however, does not send reminders of tax return deadlines, which could have made the deadlines more salient and improved the timeliness of returns. It is only the taxpayer's responsibility to note the important time brackets for declaring and paying taxes.

**Figure 3.5.1 E-filing and timely return of taxes**

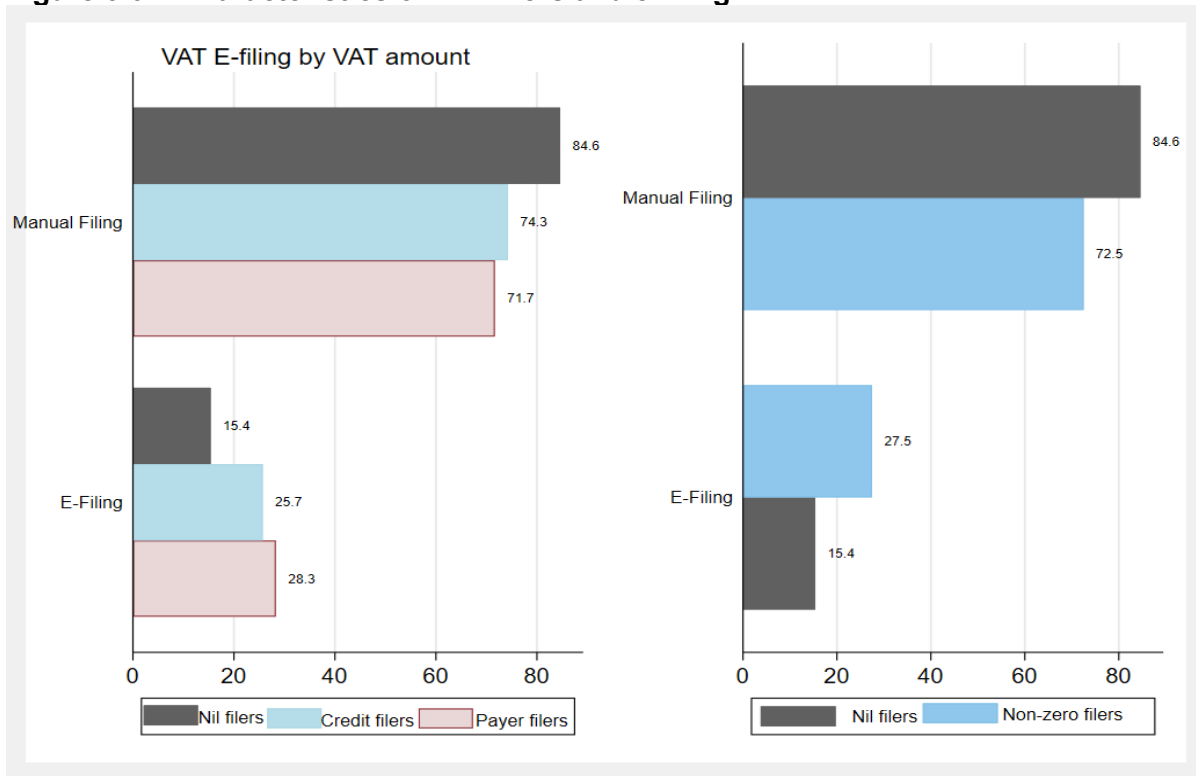


Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

### 3.6 Taxpayer characteristics and e-filing

Figure 3.6.1 presents how the share of tax returns using e-filing varies across various characteristics of VAT filers since 2012. In particular, it shows who uses the e-filing system more frequently among VAT payers, VAT credit filers, and nil filers. More than three-quarters of the VAT filing has been made through the manual filing process since the beginning of 2012. Though the overall performance of e-filing adoption was low, one can observe that VAT payers (about 28 per cent) and credit filers (26 per cent) have been using the e-filing platform, on average, more frequently than the nil VAT filers (only 15 per cent). A general comparison of zero and non-zero filing provides further insight. Non-zero (aggregating payers and credit) filers were twice as likely to use the e-filing system as zero filers. Why do taxpayers tend to opt for manual filing rather than e-filing when their VAT returns become nil or credit? This might indicate tax evasion if taxpayers think the electronic filing is more visible to the tax authority and likely to be assessed.

**Figure 3.6.1 Characteristics of VAT filers and e-filing**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

The mean difference in both the VAT due and credit amount between manual and filing systems appears to be statistically significant without considering other covariates. Likewise, Figure 3.6.2 shows CIT filers and their characteristics in relation to the filing type they used. It shows that 87 per cent of nil CIT declarations were made using the manual reporting approach, while the remaining 13 per cent of nil CIT declarations were filed electronically. On the other hand, nearly 23 per cent of loss and profit filers reported their CIT using the e-filing system. In general, non-zero profit filers better adopt the e-filing system compared to nil CIT filers (about 13 per cent).

**Figure 3.6.2 Characteristics of CIT filers and e-filing**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

Furthermore, Table 3.6.1 presents the differences in average VAT and CIT tax revenue before and after firms' first e-filing adoption, as well as between manual and electronic filing systems. Results indicate that VAT due, VAT credit, and CIT declarations vary significantly between manual and online filers for both LTO and MTO businesses. The amount of these taxes due is significantly higher for taxpayers who use e-filing than manual declarations. Firms are also more likely to declare higher amounts of such taxes after their first e-filing experiences than before. Similar to the findings of Ali *et al.* (2015) and Mascagni, Mengistu and Woldeyes (2021) on ESRMs, these results imply that technological innovations in tax administrations, such as e-filing, can improve tax compliance. However, as Table A.2 in Appendix A presents, there was also an increasing VAT and CIT declaration trend over time. Thus, the before/after and the manual/e-file statistics presented in Table 3.6.1 are only suggestive pieces of evidence and might not be enough to conclude that e-filing results in a positive impact on tax payments.

**Table 3.6.1 Summary statistics of VAT and CIT declarations (log transformed)**

VAT and CIT declaration by filing type since 2012						
Size	Tax type	Manual (N)	E-file (N)	Mean (Manual)	Mean (E-file)	diff***
	VAT due	17704	24131	13.029	13.435	0.406
<b>LTO</b>	VAT credit	8039	8533	11.646	12.187	0.541
	CIT	2506	1289	15.509	15.764	0.255
	VAT due	139198	37852	11.293	11.989	0.698
<b>MTO</b>	VAT credit	69272	18244	10.115	10.912	0.796
	CIT	15079	3822	13.235	13.62	0.385
	VAT due	156902	61983	11.488	12.553	1.065
<b>Total</b>	VAT credit	77311	26777	10.274	11.318	1.044
	CIT	17585	5111	13.559	14.161	0.602
VAT and CIT declaration before and after the first e-filing experience						
	Tax type	Before (N)	After (N)	Mean (Before)	Mean (After)	diff***
	VAT due	24081	30376	12.545	13.409	0.865
<b>LTO</b>	VAT credit	11875	10641	11.181	12.187	1.006
	CIT	3297	1945	15.055	15.775	0.721
	VAT due	174680	51059	11.04	11.957	0.916
<b>MTO</b>	VAT credit	87629	24172	9.864	10.863	0.998
	CIT	19851	4744	12.979	13.69	0.711
	VAT due	198761	81435	11.223	12.498	1.276
<b>Total</b>	VAT credit	99504	34813	10.021	11.268	1.246
	CIT	23148	6689	13.274	14.296	1.022

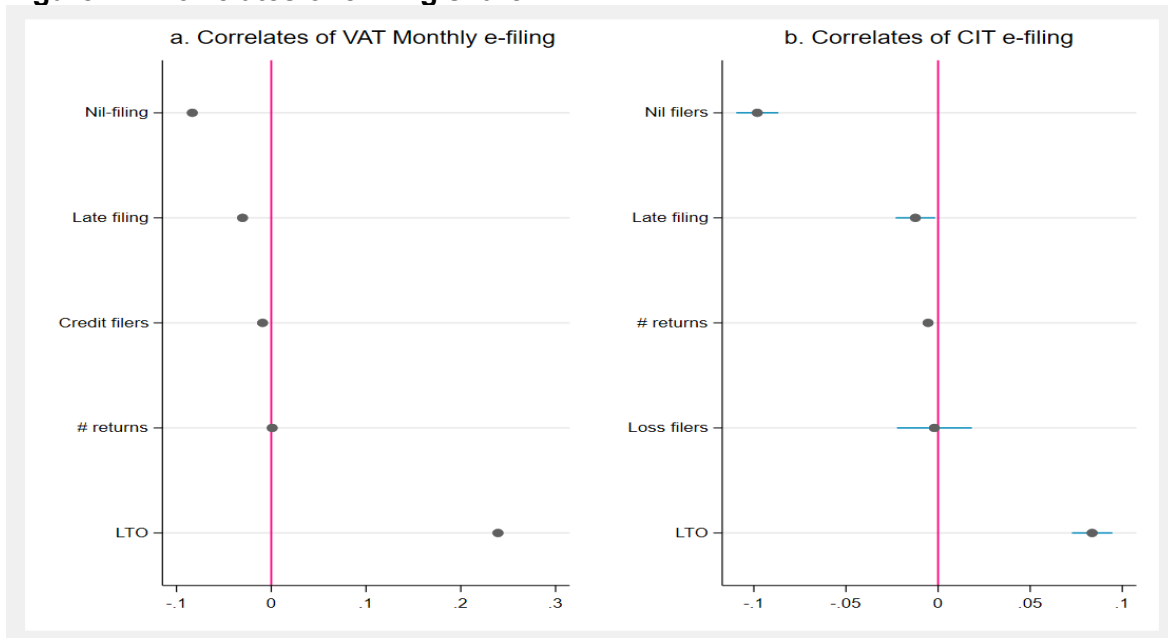
Note: All the mean differences are statistically significant at 1% level, \*\*\* p<0.01

Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

## 4 Correlates of e-filing adoption

Figure 4.1 presents the coefficients of a regression model in which the outcome variable indicates whether a particular business adopts the online e-filing system to return its taxes within a given tax period. The results show that adopting the e-filing system is significantly correlated with the timing of tax returns, value of returns and firm size of the business. The regression results in Figure 4.1 indicate that firms are less likely to adopt e-filing when they return their VAT and CIT declarations late.

**Figure 4.1 Correlates of e-filing share**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

The results also indicate that large taxpayers are more likely to adopt e-filing than medium taxpayers. Taxpayers who declare VAT due were found to be more likely to adopt the e-filing system relative to businesses that return nil or credit VAT. Likewise, taxpayers declaring positive profit tax were more likely to file their taxes electronically than nil or loss filers. These findings are similar to those of Santoro, Amine and Magongo (2022), that show that e-filers in Eswatini were less likely to file nil profit and more likely to declare significantly higher taxable income than manual filers.

Other correlates, such as the age or experience of firms as measured by the number of tax returns in the tax periods statistically significantly correlate with a higher likelihood of e-filing system adoption for VAT returns (Figure 4.1a) even if the correlation coefficient is very small. However, experience seems to have no significant correlation with adopting the e-filing system for CIT returns (Figure 4.1b).

## 5 The e-payment system is not yet being implemented appropriately

In principle, the e-tax system includes both e-filing and e-payment platforms. We learned from FGD participants that Ethiopia's e-payment platform is not fully operational. What taxpayers and tax administration officials refer to as e-payment is not the electronic payment of taxes. Rather, taxpayers have just started to pay their taxes directly to tax administration accounts using banks after e-filing their returns. However, they still need to physically go to the banks and fill out a special form.

Yet, as taxpayers cannot pay all taxes through banks, such as pension and PAYE, they are required to go to tax centres, as well as banks, to complete all payments. FGD participants

emphasised that such incomplete e-payment services discourage taxpayers from consistently using the e-tax system. This is in line with the suggestion by Kochanova, Hasnain and Larson (2020) that policy implementation of complementary online tools such as e-payments plays a crucial role, as solely introducing the e-filing system may not significantly affect compliance costs.

Furthermore, access to the e-payment system is currently limited to a few banks, resulting in inconvenience and difficulties for taxpayers. Though the Commercial Bank of Ethiopia pioneered e-payment services, the bank is also the most crowded bank in terms of customers. The growing mobile payment system and internet banking are not yet functional for tax payment purposes.

The other issue related to tax payment is that professionals at banks have limited awareness of the e-payment system. All FGD participants from banks clearly indicated that their employees were not given any training on the e-payment system. Because of this, taxpayers are unable to pay their taxes at banks easily, meaning they either have to try other bank branches or go back to tax centres to make the payments. Taxpayers also revealed that often bank professionals struggle to access taxpayers' declarations from the system due to either their lack of knowledge on how to access the system or missing taxpayers' information, such as emails, bank accounts and telephone numbers, as the *DERASH* interface, needs these records to make the files accessible for banks.

## 6 Conclusions and recommendations

This study assesses the adoption rate of the Ethiopian e-tax system in general and the e-filing and e-payment platforms in particular. It also aims to identify challenges and potential opportunities to improve the acceptance and application of the system. Our study found the following insightful results and policy implications.

The adoption of the e-filing system has been improving in recent years, though it was very low for a long period. The main reasons for such a low adoption rate were mainly associated with factors related to the weakness of the tax administration and the e-filing system itself. Thus, the tax administration authority needs to improve taxpayers' awareness through adequate and timely training, make the e-tax system more complete and more convenient by incorporating all tax forms and help desks, and develop a platform to swiftly communicate with taxpayers about new forms and updates on the system.

The results also indicate that late filers and nil tax filers are less likely to adopt the e-filing system relative to on-time filers. Irrespective of taxpayers' size, the results also show that the number of tax returns filed using the e-filing application is higher than those made via the manual system. However, there is not enough evidence to conclude that e-filing positively impacts compliance, e.g. on-time filing of returns and the amount of tax payments.

The e-payment platform is not fully operational in Ethiopia. What taxpayers and tax administration officials refer to as e-payment is not even the electronic payment of taxes. Rather, taxpayers have just started to pay their taxes directly to tax administration accounts using banks. However, they still need to physically go to the banks and fill out a special form. Taxpayers complained that after e-filing tax returns, it is difficult to access their records at the banks. Moreover, most bank employees do not know how to access taxpayers' returns from the online platform. Stakeholders from banks also revealed that there is no training for their employees on e-payment, and taxpayers have to try different branches to make tax payments.



To improve the implementation of the e-tax system, the MoR needs to create better awareness of its advantages and provide extensive practical training for taxpayers. Developing a common platform on which authorities and taxpayers could easily exchange information on new tax forms and e-tax system updates would also be essential. Moreover, beyond expanding the e-payment services to more banks and providing adequate training for bank employees on the e-tax system, there is also a need to introduce a fully electronic e-payment platform so that taxpayers can avoid travelling to banks and filling out a paper form to make their tax payments.

Our study sheds light on e-filing and e-payment technology adoptions, the existing practices, and the challenges in adopting the e-tax system in Ethiopia. However, the analysis is limited to describing factual trends, implementation processes, and practices using descriptive methods. Further research employing rigorous impact evaluation techniques is recommended to make causal inferences. Moreover, understanding why taxpayers accept or reject the e-tax system is important to improving the system's functionalities for better customer service provision by the tax authority. This needs further study on taxpayers' satisfaction levels.

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# Appendices

## Appendix A

**Table A.1 Summary statistics of main variables by year**

Year	State	E-filing (yes=1)	Late filing (yes=1)	VAT Due (ln)	VAT Credit (ln)	E-filing (yes=1)	Late filing (yes=1)	Profit (ln)	Profit Tax (ln)
2008	mean	0	0.0326	6.3385	2.9303	0	0.1084	12.3214	8.2004
	SD	0	0.1776	5.3827	4.5634	0	0.3109	5.4494	6.1238
	Obs	20653	20653	20653	20653	2150	2150	2150	2150
2009	mean	0	0.0337	6.6738	2.8561	0	0.1067	12.4889	8.7881
	SD	0	0.1805	5.4244	4.5577	0	0.3088	5.5158	6.1041
	Obs	22965	22965	22965	22965	2427	2427	2427	2427
2010	mean	0	0.0286	6.8665	2.9116	0	0.1054	13.0927	9.3193
	SD	0	0.1668	5.4821	4.6349	0	0.3072	5.1659	6.0540
	Obs	26053	26053	26053	26053	2656	2656	2656	2656
2011	mean	0.0011	0.0376	7.0595	3.1068	0.0205	0.1058	13.2642	9.6906
	SD	0.0332	0.1902	5.5726	4.7894	0.1417	0.3077	5.2253	6.0461
	Obs	29007	29007	29007	29007	2929	2929	2929	2929
2012	mean	0.0365	0.0316	7.2670	3.1361	0.0491	0.1161	13.5151	9.9334
	SD	0.1875	0.1748	5.6437	4.8386	0.2161	0.3204	5.1600	6.0375
	Obs	31974	31974	31974	31974	3179	3179	3179	3179
2013	mean	0.1669	0.0373	7.3393	3.1658	0.1062	0.1118	13.6114	9.8614
	SD	0.3729	0.1896	5.6642	4.8840	0.3082	0.3152	5.1500	6.1225
	Obs	35047	35047	35047	35047	3408	3408	3408	3408
2014	mean	0.2641	0.0439	7.3824	3.2434	0.0609	0.1149	13.9375	10.1862
	SD	0.4409	0.2048	5.7159	4.9538	0.2392	0.3190	4.9583	6.0082
	Obs	38003	38003	38003	38003	3646	3646	3646	3646
2015	mean	0.1805	0.0475	7.5689	3.1782	0.0174	0.1245	14.3239	10.4978
	SD	0.3846	0.2127	5.7537	4.9618	0.1307	0.3302	4.6728	5.9568
	Obs	40757	40757	40757	40757	3856	3856	3856	3856
2016	mean	0.1579	0.0488	7.5955	3.2152	0.1697	0.1194	14.7195	10.9185
	SD	0.3647	0.2155	5.8067	5.0195	0.3754	0.3243	4.2980	5.7771
	Obs	43549	43549	43549	43549	3961	3961	3961	3961
2017	mean	0.2474	0.0431	7.7047	3.2292	0.1510	0.1300	14.9778	10.9151
	SD	0.4315	0.2032	5.8338	5.0438	0.3581	0.3364	4.0735	5.8268
	Obs	45150	45150	45150	45150	4007	4007	4007	4007
2018	mean	0.3150	0.0466	7.7961	3.1691	0.2532	0.2005	14.8709	10.4712
	SD	0.4645	0.2108	5.8425	5.0061	0.4349	0.4005	4.3053	6.1773
	Obs	45657	45657	45657	45656	4064	4064	4064	4064
2019	mean	0.4618	0.0521	7.7178	3.2240	0.9072	0.1499	14.5634	9.7221
	SD	0.4985	0.2223	5.9062	5.0210	0.2901	0.3570	4.7514	6.5126
	Obs	46157	46157	46157	46157	3956	3956	3956	3956
2020	mean	0.9500	0.0565	7.9561	3.8687				
	SD	0.2180	0.2309	6.4023	5.5857				
	Obs	13969	13969	13969	13969				

Note: Monthly averages for each year are presented in the VAT column.

Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

**Table A.2 Trends in annual average of VAT and CIT tax records (log)**

Year	VAT due (ln)		VAT credit (ln)		Profit tax (ln)	
	Firms (N)	Mean	Firms(N)	Mean	Firms (N)	Mean
2008	1573	83.222	1411	42.891	1416	12.451
2009	1775	86.346	1569	41.804	1675	12.734
2010	2040	87.692	1824	41.588	1904	13
2011	2276	89.972	2045	44.068	2146	13.226
2012	2491	93.277	2280	43.98	2360	13.381
2013	2766	92.994	2490	44.559	2503	13.427
2014	3027	92.683	2702	45.618	2744	13.535
2015	3242	95.152	2919	44.376	2959	13.68
2016	3483	94.969	3077	45.504	3141	13.769
2017	3623	96.017	3157	46.182	3162	13.832
2018	3670	96.989	3196	45.271	3057	13.92
2019	3679	96.828	3213	46.314	2770	13.885
2020	1460	76.122	1197	45.148		

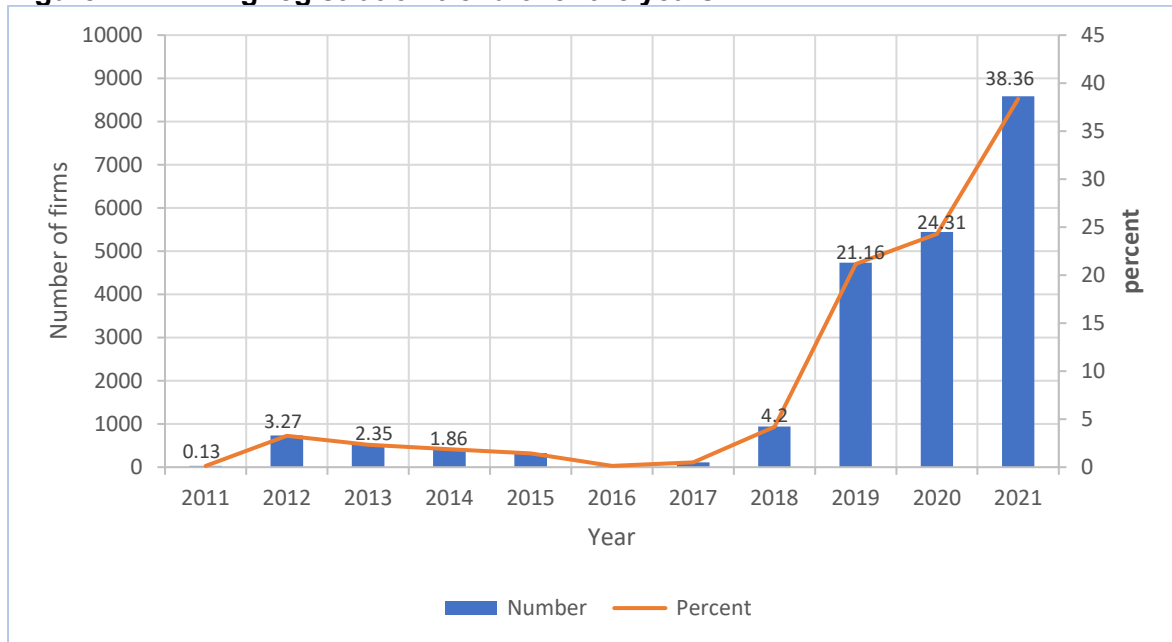
Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

**Table A.3 Switching between e-filing and manual filing**

Tax type	Incidence of change (number)	E-file to Manual		Manual to E-file	
		Freq.	Per cent	Freq.	Per cent
	0	2555	45.25	2593	45.92
	1	203	3.59	238	4.21
	2	248	4.39	237	4.2
	3	240	4.25	245	4.34
	4	301	5.33	316	5.6
	5	326	5.77	300	5.31
	6	269	4.76	273	4.83
	7	316	5.6	315	5.58
	8	355	6.29	327	5.79
<b>VAT</b>	9	188	3.33	196	3.47
	10	217	3.84	198	3.51
	11	169	2.99	165	2.92
	12	91	1.61	89	1.58
	13	62	1.1	50	0.89
	14	45	0.8	45	0.8
	15	41	0.73	39	0.69
	16	6	0.11	6	0.11
	17	15	0.27	15	0.27
	0	1242	12.49	1410	14.73
	1	6724	67.64	6318	66
<b>CIT</b>	2	1915	19.26	1785	18.65
	3	60	0.6	60	0.63

Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

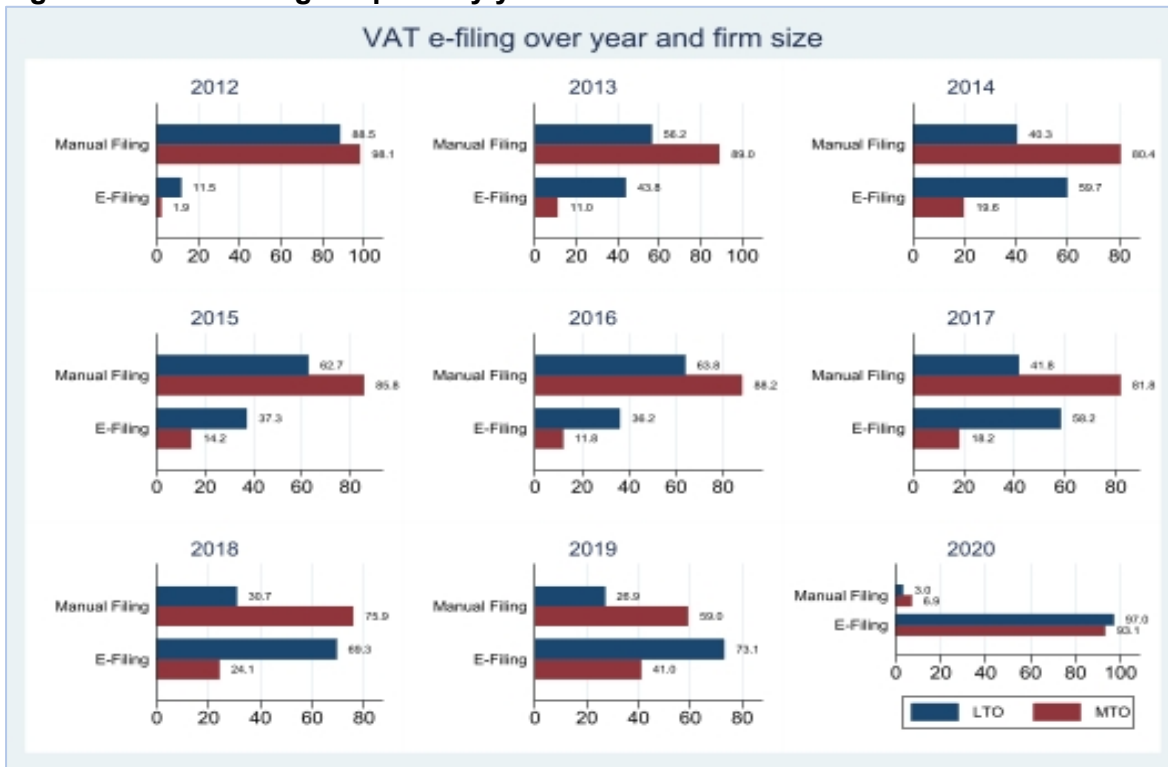
**Figure A.1 E-filing registration trend over the years**



Source: Authors' computation based on tax administrative data from the MoR (2011-2021)

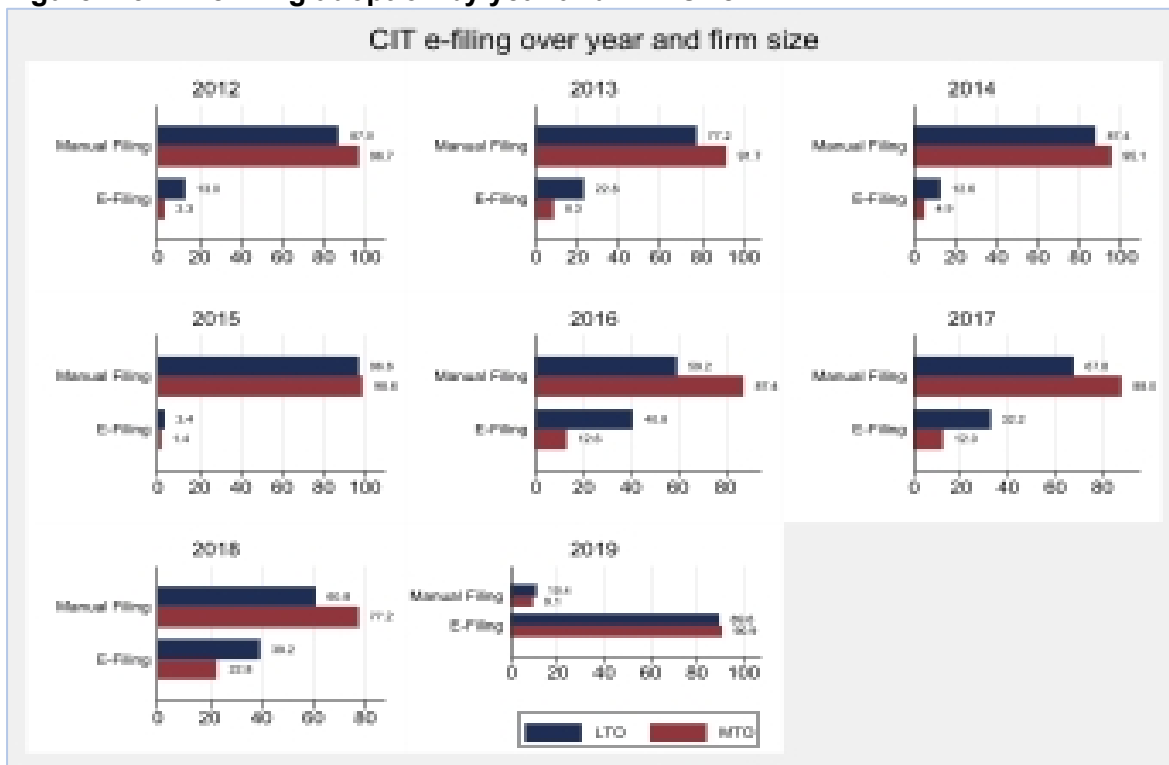


**Figure A.2 VAT e-filing adoption by year and firm size**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

**Figure A.3 CIT e-filing adoption by year and firm size**



Source: Authors' computation based on tax administrative data from the MoR (2008-2020)

# Appendix B

**Table B.1 Number of FGD participants and represented institutions**

S.No.	Number of Participants	Institutions
1	2	National Bank of Ethiopia (NBE)
2	1	Abyssinia Bank
3	1	Awash Bank
4	1	Commercial Bank of Ethiopia
5	1	Berhan Bank
6	1	Information Network Security Agency (INSA)
7	1	Tax Transformation Office (TTO)
8	2	Large Taxpayers Office (LTO)
9	1	Medium Taxpayers Office (MTO)
10	2	MoR Headquarters
11	7	MTO Taxpayers
12	7	LTO Taxpayers

Source: Authors' own data

# Appendix C

## C.1 Guiding questions for taxpayers

(Before each session, we explained the purpose of our discussions and data confidentiality and obtained consent to record the discussions.)

1. Since the 2004 Ethiopian calendar (2011/12 GC), the e-filing system was available for taxpayers. How does the e-tax system help your business (when used) relative to filing your returns manually? [In terms of time and cost saving, avoiding face-to-face interaction, corruption, reducing late filing and penalties [ . . . prob].
2. How do you characterise the e-filing system at the beginning and its developments over time? [user friendly? Completeness in terms of forms and tax types? Drop-down help boxes? [ . . . prob]
3. Overall usage of the e-tax system has been very low and most of the tax returns were filed manually. What do you think are the main reasons for such low acceptance of the system? [Knowledge, trust in the online system, internet access, electricity, laws, . . . what else . . . prob].
4. Almost all businesses are registered for e-filing/online filing services, since the first e-filing encounter, taxpayers have switched on and off between manual and e-filing systems. What are the main reasons for this? (what are other reasons?)
5. What do you think is mainly missing in the online e-filing system?
6. What are the reasons for low E-payment usage? Can you tell us about your e-payment experiences and challenges? What do you recommend to make the e-tax system a more user-friendly platform?

## C.2 Guiding questions for officials and experts

1. When and how e-tax was introduced, its objectives, characteristics at the beginning, and developments over time? How do you evaluate the achievements by now?
2. What kinds of advantages it brings to both the taxpayer and the tax administration in general?
3. What were the major challenges at the time of its introduction into the tax system and now?
4. What kind of improvements has the E-tax system made over time since its beginning?
5. The administrative records show that the manual filing system was above e-filing during the period 2012 to 2019. What kinds of reasons can be mentioned for this?
6. Nearly all the MTO and LTO taxpayers are registered for e-filing. Why do they keep filing mostly manually? Or alternate between e-filing and manual filing?
7. Why Banks, more generally, are not introducing a tax e-payment system? What are the challenges? (what is the role of INSA here?)
8. What kind of recommendations can you provide to improve the e-tax system (e-filing and e-payment)?



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