

A large, abstract graphic on the left side of the cover consists of several overlapping, semi-transparent shapes in shades of yellow, orange, and teal, all pointing towards the center. The shapes are outlined in a light teal color, creating a layered, fan-like effect.

**African Tax
Administration Paper 32**

Presumptive Taxation and Equity: Evidence from the Ethiopian Informal Sector

Fissha Asmare,
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Fissha Asmare, Seid Yimam and Etsehiwot Semreab

Summary

Presumptive tax has become a popular way of taxing businesses operating in the informal sector across middle- and low-income countries. However, evidence on the unintended effects of presumptive tax systems is scant and the effects themselves are not yet clearly known. Presumptive taxation in general has been much criticised, and public outcry and complaints have emerged due to its alleged unfairness and a lack of clarity in its implementation. The case of Ethiopia is no different. It is expected that a simple imposition of the presumptive tax system to tax the informal sector without considering stylised facts in the sector would have various negative consequences, especially in terms of the repercussions on equity. This study examines the issue empirically in the case of Ethiopia and is probably the first study of its kind in the country. We explore the equity implications of the presumptive tax system to tax the informal sector in Addis Ababa, Ethiopia. We also critically evaluate income distribution among informal sector operators considering various social stratifiers such as gender.

The main dataset we use to address our research questions is the informal micro enterprise (IME) survey data collected by BAN-Development Research Centre for Excellence (BAN-DRCE) in collaboration with *Stichting Nederlandse Vrijwilligers* (SNV) Ethiopia from Addis Ababa in 2021. Employing descriptive analysis and a representative taxpayer approach, we find that informal sector taxation using the turnover-based presumptive tax system would be both horizontally and vertically inequitable. Our analysis shows that about 44 per cent of informal sector businesses which participated in the survey earn below the minimum formal sector business income tax threshold. Most of these 44 per cent of businesses are owned by women. The plausible reasons for the inequitable taxation of the informal sector are the complexity of how the presumptive tax burden is determined, and lack of clarity on this process. Therefore, the presumptive tax system in Ethiopia requires a serious discussion that extends up to revision.

Keywords: presumptive taxation, informal sector, equity, Ethiopia.

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Acronyms

BAN-DRCE	Development Research Centre for Excellence
BIT	Business income tax
CIT	Company income tax
CSA	Central Statistical Agency of Ethiopia
ETB	Ethiopian Birr
IME	Informal micro enterprise
MoR	Ministry of Revenue
PIT	Personal income tax
SNV	<i>Stichting Nederlandse Vrijwilligers</i>

Introduction

A growing informal sector has been considered to be one of the areas where a significant amount of tax revenue is lost in sub-Saharan Africa (Ohnsorge and Yu 2022; Monye and Abang 2020). However, recent evidence contends this argument and shows that the informal sector would in any case be generally unlikely to yield the much-needed revenue (Lediga, Riedel and Strohmaier 2020; Gallien, Moore and van den Boogaard 2021; Moore 2022; Mascagni *et al.* 2022). In particular, the type of informality with a high potential for tax revenue generation is not yet clearly understood by policymakers. While in the mind of tax officials the aspect of the informal sector that serves as the source of controversy is the subsistence type of informality, the large potential of revenue from this sector is however attributed to those 'evaders, avoiders, and those above the law' (Gwaindepi 2022: 4; Moore 2022; Joshi, Prichard and Heady 2014). This type of informality strongly inhibits domestic resource mobilisation. Even if the debate about the sector's potential for tax revenue and the type of informality that matters most in this regard is not yet settled, tax officials and policymakers in the region have put greater efforts into generating tax revenue from the informal sector by introducing various initiatives.

The introduction of a presumptive tax system is one of these efforts made in many low- and middle-income countries to force firms operating in the informal sector to pay their fair share of taxes. The purpose of presumptive taxation varies from country to country, depending on different country policy objectives (Bird and Wallace 2014). However, the overall goal of this system is to reduce fiscal evasion resulting from complex tax systems, low awareness of tax obligations, and high compliance costs. It has been shown that small business enterprises operating in an environment with low tax administration capacity are subject to a regressive tax compliance cost. Findings from the World Bank's compliance cost survey reveal that in the developing world, small businesses incur tax compliance costs of up to 15 per cent or more of their turnover (Engelschalk and Loeprick 2016; Coolidge 2012; Klun and Blasic 2005). In this regard, presumptive taxation could simplify tax revenue collection and reduce administrative and tax compliance costs (Taube and Tadesse 1996; Engelschalk 2007). Moreover, countries might adopt presumptive tax regimes to foster voluntary tax compliance. This type of system provides incentives for individuals or companies operating in the informal sector to join the formal sector and pay taxes, which allows them to enjoy the benefits of formalisation such as access to the market, credit, and a skilled labour force (Semboja 2015).

Previous studies conducted to measure the effect of the presumptive tax system on various outcomes such as tax revenue collection, tax gap, and taxpayers' registration in sub-Saharan Africa (SSA) document its ineffectiveness in achieving its primary goals. The relative contribution of the presumptive tax system to total tax revenues is found meagre and insignificant, though it leads to an absolute increase in presumptive taxes. Moreover, it appears that this system is unable to encourage voluntary tax compliance, especially through the registration of informal firms (Danquah and Osei-Assibey 2018; Mabwe and Chimanga 2018; Semboja 2015).¹

Yet, the key question that remains unclear is the unintended consequence of the presumptive tax system, especially from an equity perspective. Even if the presumptive tax system has been widely implemented in developing countries, the implications of the system for equity are not carefully considered. Particularly when it comes to its application to taxing

¹ See Bucci (2020) for a detailed review.

the informal sector,² we argue that it considerably compromises both horizontal and vertical equities. Since on the one hand policymakers do not give due attention to the sector, and on the other hand there is a lack of clarity about which type of informality is critical in terms of tax revenue, a simple imposing of the presumptive tax system to taxing the informal sector without considering stylised facts in the sector has various negative consequences. But there is a dearth of studies that bring this issue into empirical scrutiny, except for Semboja (2015) for Tanzania and Dube and Casale (2019) for Zimbabwe; both studies report that presumptive taxation in the informal sector violates the principles of vertical and horizontal equities.

To our knowledge, the equity implications of the presumptive tax system in Ethiopia, where a growing informal sector is predominant, are not yet well understood and no evidence exists. Despite the informal sector drastically challenging the Ethiopian economy, it receives very limited attention from policymakers and researchers alike.

Against this backdrop, the main objective of this study is to assess the equity implications of presumptive taxation by considering its application to the informal sector in Addis Ababa. Exploring this issue in the Ethiopian context is very critical for various reasons. First, since its introduction, the presumptive tax system has been a source of criticism and complaints due to its alleged unfairness and a lack of clarity in its implementation. For instance, in 2016, 8,312 complaints were received by the Revenue Office of Addis Ababa City Administration alone, and the initial revenue assessment was reduced for about 58 per cent of the complaints (Mekonnen Workneh, Mulugeta Baileyegn and Stewart-Wilson 2019). Second, one of the primary reasons for the introduction of the presumptive tax system in Ethiopia in 2002 was to increase the tax base by expanding the formalisation of informal sector operators through the help of presumptive taxation (FDRE 2002). However, it is not known to what extent this tax system considers the key features of the informal sector, like the tax-paying potential and characteristics of operators in the sector. Finally, it is an area where there is no proper documentation of the features and stylised facts of the informal sector and one which receives the least attention from a policy perspective. An understanding of the stylised facts and peculiar features of the sector is critical to show what needs to be improved and/or changed to successfully bring informal sector operators into the tax net and the formal business environment. It is believed that a thorough investigation of the sector considering gender and income heterogeneities among informal sector operators would provide substantial information and evidence for policymakers. This would increase their awareness and broaden their understanding of the complex aspects of the economy which facilitate efficient public policy decision-making.

To achieve our objectives, we use informal micro enterprise (IME) survey data collected in Addis Ababa. Using this data, we explore income distribution considering gender differences. By mapping the earning distribution of informal sector operators to the formal business income tax (BIT) schedule, we shed some light on the tax-paying capacity of informal microenterprises in Addis Ababa.³ Finally, we explore the equity implications of informal sector taxation through the presumptive tax system in Addis Ababa.

The remainder of the paper is organised as follows. In section 1 we present the data and methods. In section 2 we discuss the results, and section 3 concludes.

² In this study, the informal sector is defined as 'Establishments/activities, which are mainly engaged in marketed production (of goods and services), and which are not registered companies or cooperatives, and which have no full written book of accounts, and which have less than ten persons engaged in the activity, and which have no license.'

³ Identifying and measuring the tax-paying potential of enterprises in the informal sector is challenging as high-net-worth earners in the informal sector are less represented in surveys and reported incomes are mostly downward biased. Using administrative tax data could minimise the challenge although it cannot fully avoid the problems. As our study relies on survey data, such limitations are inevitable. Hence, the results should be interpreted with caution. As a remedy, we consider the estimated income as the minimum threshold that we can expect from the informal sector actors as downward bias is a common problem in reporting incomes.

1 Data and methods

1.1 Data source, sampling, and data collection

We use IME survey data collected in Addis Ababa to answer our research questions. The data was collected between 3 and 17 February 2021 by *Stichting Nederlandse Vrijwilligers* (SNV) Ethiopia in collaboration with BAN-Development Research Centre for Excellence (BAN-DRCE), a consulting firm based in Addis Ababa. Following a mixed-method approach, the data was collected from 1,063 IMEs operating in Addis Ababa City Administration. Addis Ababa is subdivided into ten sub-cities and 126 woredas.⁴ Since an exhaustive list and information about the size of informal microenterprises are not available anywhere, including at the government offices, a purposive sampling method was used to select three sample woredas from each sub-city of Addis Ababa. The judgement was made based on the criteria of where the concentration of informal microenterprises is expected to be relatively higher. After these areas were identified, a listing of IMEs was made to have a sampling frame from which the final informal sector enterprises included in the survey were selected. Finally, using a systematic random sampling method, a total sample of 1,063 informal microenterprises in the city was identified.

The data collection was conducted in the form of computer assisted personal interview (CAPI) using a structured questionnaire that allowed the collection of information about the demographic characteristics of the owner of the IME; the IME's activities; employment and training; capital and expenditure; customers and competitors; problems and prospects; and any intentions to formalise the activity/business. This dataset enables us to examine income distribution in the informal sector across owners' gender and sector of economic activities. Moreover, we exploit information in the data to measure and analyse the equity implications of taxing informal sector enterprises using the presumptive tax system in Addis Ababa.

How informality was defined in the survey and in this study also needs to be clear. We know that the term 'informality' or 'informal sector' is a very heterogeneous concept in literature. The concept in Ethiopia is quite clear. The Central Statistical Agency of Ethiopia (CSA) defines 'informality' or 'informal sector' in a consistent way. Accordingly, informal businesses are defined as 'household type establishments/activities, that are mainly engaged in marketed production (of goods and services), not registered companies or cooperatives, have no full written book of accounts, have less than ten persons engaged in the activity, and have no license.' The same definition was used during the survey and in our studies.⁵

1.2 Data analysis

By using distributional plots disaggregated by gender, we show how income is distributed among the informal sector operators. We also employ quantile bar charts to measure the distribution of informal sector operating firms across different income groups. Furthermore, by using Ethiopia's seven formal business income tax brackets, we also map the proportion of informal sector enterprises under each category of the business income tax bracket using the actual profit data from these enterprises. Using various frequency tables, histograms, and bar charts, we conduct our analysis disaggregating by gender to characterise the tax-paying potential of informal sector firms in Addis Ababa.

⁴ Woreda is the lowest administrative unit in Addis Ababa.

⁵ See also Yimam, Asmare and Moore (2023) for more on the concept of informality in Ethiopia.

1.3 The representative taxpayer approach

There are three main approaches to measure the equity implications of taxation: the economic incidence analysis, a general equilibrium model, and the representative taxpayer approach (Atrostic and Nunns 1991; Mazerov 2002). While measuring equity is not an easy exercise, it is more challenging in the informal sector where there no registered tax return, no income data and no expenditure data. In particular, the economic incidence analysis and the general equilibrium model approaches require intensive data, including information about individual tax returns, income and expenditure data, and input-output matrices. However, the representative taxpayer approach is the most applicable and widely used method to evaluate equity with limited data.

In the representative taxpayer approach, the tax burden under the presumptive tax regime is compared at varying levels of income with the taxes payable by (1) salaried employees under the standard personal income tax (PIT) system, and (2) registered businesses liable for company income tax (CIT). The two main measures of equity are horizontal and vertical equity. In the former case, comparisons are made between those with similar incomes to determine whether their tax burdens are equal. In the latter case, equity is measured by checking whether tax burdens are different at varying income levels. Since the presumptive tax rate is different based on the sector of economic activity, we conduct the equity analysis considering various business activities in the informal sector.

The representative taxpayer approach is less data-intensive, as the tax burden for each group of interest is estimated by applying the tax rates to hypothetical or actual levels of income (Shoup 1972). This method of evaluating the equity implications of the tax regime has been employed by Grown and Valodia (2010) and Memon (2013). More recently, Dube and Casale (2019) employed the method to evaluate the equity implications of informal sector taxation in Zimbabwe. In this study, we employ the same method of equity measurement. Unlike Dube and Casale (2019), however, who used a hypothetical level of income to determine the tax burden, we use the actual income reported in the survey by the informal sector operators.

2 Results and discussion

2.1 Characteristics of the informal sector in Addis Ababa

Table 2.1 presents the characteristics of the informal sector in Addis Ababa using the IME survey (2021) collected by BAN-DRCE and SNV-Ethiopia. According to the survey, nearly 60 per cent of informal sector operators in Addis Ababa are women and 55 per cent are married. Most have no vocational training (83 per cent) but have more than five years of experience in the business. Most of the informal businesses (61 per cent) in this survey are private/family-owned with women being business heads. In a broad category of activities, most of the firms engage in retail trade types of business activities (68 per cent) for the purpose of fulfilling the basic needs of their family (70 per cent). The choice to engage in informal sector activities is mainly due to a lack of alternative income sources (58 per cent) and because it does not require large start-up capital (22 per cent). Not paying tax (48 per cent), being a boss of one's own business (19 per cent) and easy entry to and exit from the business (14 per cent) are the three most stated benefits of operating in the informal sector.

The characteristics of informal business operators in Addis Ababa are, on average, quite similar to the findings from the CSA's nationally representative time series data.⁶ For instance, in both surveys, it appears that informal sector operators lack vocational training about how to run a business and are predominantly engaged in retail types of businesses. It is also evident that women, similar to our findings from Addis Ababa, constitute a large share of informal sector employment in the nationally representative datasets.

Table 2.1 Characteristics of informal sector participants in Addis Ababa

Variable	Average/per cent (N=1,063)	Variable	Average/per cent (N=1,063)
Age (year)	30.66	The sector of economic activity	
Gender (male)	40.45	Manufacturing	12.89
Marital status (married)	54.75	Other services	2.63
Read and write (yes)	82.50	Restaurants, bars, and canteens	16.27
Vocational training (yes)	16.93	Retail trade	68.20
Experience (years)	5.36	Form of ownership	
Average working hours/week	9.68	Private/family with a woman business head	60.96
Average working days/week	6.16	Private/family with a male business head	38.38
Initial capital	3,691.32	Share with other non-family members	0.66
Average sales/month during peak season	5,680.87	Why are you engaged in this business currently?	
Average sales/month during slack season	2,756.22	To fulfil the basic needs of my family	69.80
Average monthly profit	1,279.58	To smoothen my consumption demand	9.41
Why did you choose this activity/business from others?		To employ myself since there is no other job	14.30
Family tradition	4.99	Not to stay at home	1.13
I like the activity	6.11	To reduce my vulnerability to income fluctuations	1.79
The activity brings high income	4.14	To make a profit and broaden the business	1.98
A small initial investment needed	21.92	To formalise and do big business	1.60
I have no alternative source of income	58.42		
Other	4.42		
What is/are the benefits of operating in the informal sector?			
You do not pay tax	47.74	Market-oriented	2.64
No cost is involved in registration	5.47	Flexibility to do business	4.06
Free entry and exit	13.77	Other	7.08
You are the one who manages the business	19.25		

Source: Own computation using survey data in Addis Ababa.

⁶ A summary of selected indicators from CSA's datasets are presented in the appendix (table A1). We do not use these datasets for our analysis because data on business earnings/income was not collected, and we are unable to examine the equity implications of presumptive tax regimes using the datasets. However, it is important to show the characteristics and dynamics of the informal sector in the country.

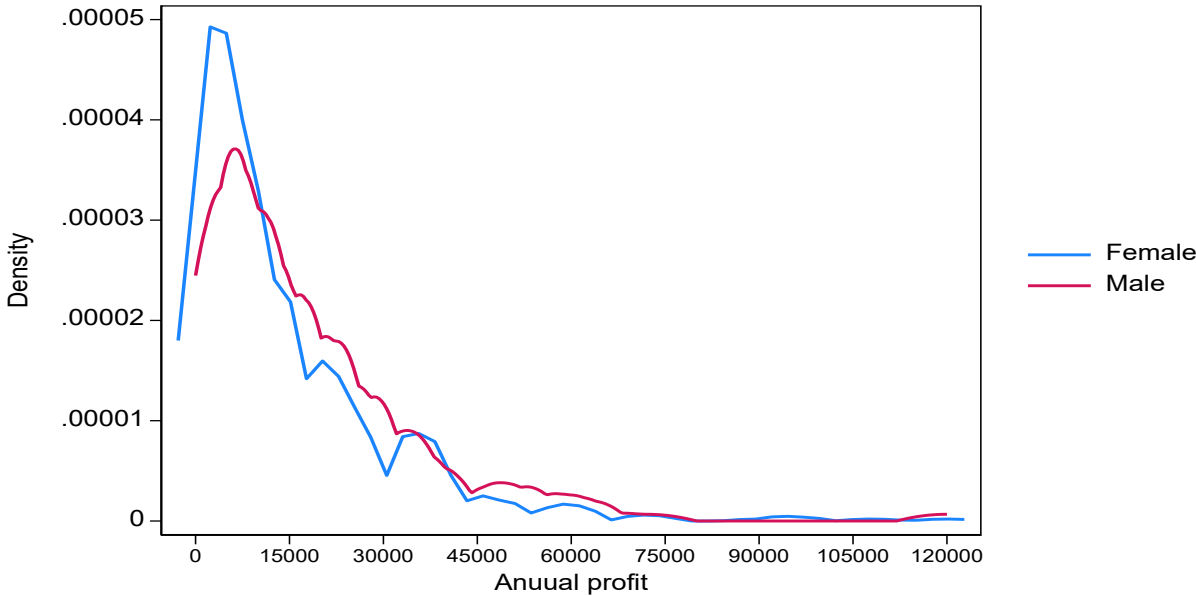
2.2 Income distribution in the informal sector in Addis Ababa

It is usually argued that most informal sector operators are working for subsistence with earnings below the business income tax threshold of formal sector operating firms. Beyond this, the claim extends to the case that within the informal sector itself there exists a great variation in income distribution based on the characteristics of the sector operators, such as gender.

To this end, we assess the informal sector’s income distribution using the informal sector survey data collected in Addis Ababa. Relying on various distribution plots of annual profit, we first check the overall level of income inequality in the informal sector, and across the owners’ gender. This is followed by assessing the tax-paying potential of firms in the sector.

Figure 2.1 presents the distribution of average annual profit disaggregated by gender. The figure clearly shows that female-owned businesses earn a low amount of income relative to male-owned ones. For instance, a large share of female-owned enterprises fell under the annual profit category of up to 15,000 Ethiopian Birr (ETB).⁷ Even if it is evident that the proportion of informal sector enterprises with an annual profit above ETB15,000 declines continuously, the share of male-owned enterprises who earn above this level of annual profit is on average higher than their female counterparts. This indicates that even though most of the firms in the informal sector make a lower profit that might not be enough for subsistence in some cases, females are probably most hit hard by the earning inequality in the sector.

Figure 2.1 Distribution of average annual profit by gender



Source: Own computation using survey data in Addis Ababa.

Another important question that we seek to partially answer is identifying informal sector operating firms that could pay tax had they been formalised. Answering this question allows one to target business activities that could potentially serve as a source of tax revenue and to provide evidence for the claim that informal sector operating firms earn below the formal tax rate threshold, hence targeting them for tax purposes alone is not very rewarding.

⁷ In 2020 the official exchange rate was 1 USD to 34.93 ETB (World Bank 2020).

For this purpose, we first present the distribution of informal sector operating firms using the formal business income tax rate threshold. As we present in the appendix (see Table A2), the formal business income tax rate has seven bands, with the first ETB7,200 annual profits tax exempted. Therefore, we mapped informal sector enterprises in our data using the formal business tax rate bands. Figure 2.2 presents the results. From the figure, it is evident that a large share of informal sector enterprises in Addis Ababa (about 44 per cent) are below the minimum tax threshold of the formal sector business income tax rate. This indicates that had they been formalised and governed by the formal business income tax rate, 44 per cent of the informal sector firms would be tax-free. On the other hand, about 20 to 26 per cent of the enterprises fall under the 10 and 15 per cent income tax rate bands. Moreover, the proportion of enterprises drastically decreases as the income tax rate increases beyond 15 per cent. All this implies that formalising informal businesses would have a marginal contribution to tax revenue, and the tax revenue generating potential of the informal sector is not as high as is often exaggerated in the literature (Monye and Abang 2020).

Looking at the gender composition, the highest share of female-owned businesses (29 per cent) is below the minimum formal tax threshold compared with the male counterpart (15 per cent). However, the gender gap decreases as the business income tax rate increases. For instance, at the 10 per cent business income tax rate level, 13 per cent are male-owned businesses, and 16 per cent are female-owned. But at the 15 per cent tax schedule, the gap declines to about 1 per cent.

Figure 2.2 Tax-paying potential in the informal sector



Source: Own computation using survey data in Addis Ababa.

In general, we can conclude that income distribution in the informal sector is highly unequal based on the gender of the business owner. Female-owned businesses mostly fall under the lowest segment of income distribution in the informal sector compared with male-owned ones. This could be because female workers in the informal sector have multiple responsibilities, mainly childcare. Since females engage in such types of business activities to support their day-to-day family life and most of them have children to care for, they will not have enough time and capacity to concentrate on their business to make the maximum attainable profit. Females working in the sector are also vulnerable to different levels of abuse and violence (Meester and Ezzeddine 2021). The informal sector in Addis Ababa is exclusionary, and the poor mainly consider the sector a last resort. For instance, about 70 per cent of our respondents mentioned that they engage in their current business activity to finance their family’s basic needs (see Table 2.1).

We also did not find enough evidence for the claim that the informal sector is the main sector where the government loses its tax revenue. Even if it requires extra investigation across the entire country, we can at least say that in Addis Ababa, most informal sector operating firms are below the minimum formal tax threshold. Furthermore, even focusing on these enterprises that are above the minimum business income tax bracket, only 7 per cent of our total sample businesses are capable of paying the formal tax of 20 per cent or more. Therefore, our results in this regard are in line with the view that informal sector businesses are operating at a subsistence level.

2.3 Informal sector taxation and equity implications: the representative taxpayer approach

According to Proclamation 979/2016 (FDRE 2016) and Regulation 410/2017, Article 60 (FDRE 2017), presumptive tax in Ethiopia is determined following two approaches. These are the turnover-based presumptive system and the indicator-based approach. In this section, we first present the equity analysis results for the turnover-based system followed by results for the indicator-based approach using the representative taxpayer method.

In the representative taxpayer approach, the equity implications of different tax systems are measured by comparing the tax burden from each system. In our case, we compare the tax burden from the presumptive tax rate and the business income tax rate by considering a varying level of income. To do this, we first choose the top five types of business activities in which informal sector operators are highly concentrated and their tax rate in the presumptive tax system is appropriately defined. These are retail sales of cloth; restaurants; retail sales of fruits and vegetables; coffee and tea; and hairdressing and other beauty treatments. Then, we define three annual income levels using our data collected in Addis Ababa. The three income levels are the first percentile, the mean, and the 99th percentile of the annual profit. For these three different income groups, we calculate the tax burden under the presumptive tax rate and the business income tax rate (see Table A2).

Table 2.2 presents the results of this exercise. From the table, it is evident that the assignment of the tax burden is not fair. Compared to the presumptive tax system, a business owner would pay a lower tax in the business income tax schedule, indicating that taxing the informal sector through the presumptive tax rate is not horizontally equitable. Indeed, if we consider different benefits and incentives provided by the government for formal firms and different informal taxes paid by firms in the informal sector, the tax burden gap between the two groups would be substantial. For instance, the government provides tax holidays and tax-free imports for selected business activities in the formal sector.⁸

On the other hand, within the presumptive tax system itself, businesses with an equal amount of income will not incur an equal amount of tax burden, implying a lack of vertical equity. For instance, at the minimum income level, restaurant type businesses pay a higher amount of tax (6.3 per cent) relative to other businesses (3–3.3 per cent). There is also a similar disparity when we consider the average and maximum income groups.

⁸ Our analysis does not take into account either the incentives and subsidies the government provides for formal firms nor the different types of informal taxes paid by informal firms due to the absence of an organised record for such types of incentives and tax payments.

Table 2.2 Informal sector taxation and its equity implications: turnover-based presumptive tax system

Annual profit in ETB	Business activity	Presumptive tax		BIT
		Amount of tax	Effective rate	
8,400	Retail sales of cloth	280	3.33%	1.43% (120)
	Restaurants	530	6.30%	1.43% (120)
	Retail sales of fruits and vegetables	255	3.03%	1.43% (120)
	Coffee and tea	280	3.33%	1.43% (120)
	Hairdressing and other beauty treatments	280	3.33%	1.43% (120)
24,912	Retail sales of cloth	2,040	8.18%	8.13% (2,026.8)
	Restaurants	2,040	8.18%	8.13% (2,026.8)
	Retail sales of fruits and vegetables	2,190	8.79%	8.13% (2,026.8)
	Coffee and tea	2,040	8.18%	8.13% (2,026.8)
	Hairdressing and other beauty treatments	2,040	8.18%	8.13% (2,026.8)
48,000	Retail sales of cloth	6,370	13.27 %	12.43% (5,970)
	Restaurants	6,370	13.27 %	12.43% (5,970)
	Retail sales of fruits and vegetables	6,120	12.75 %	12.43% (5,970)
	Coffee and tea	6,370	13.27 %	12.43% (5,970)
	Hairdressing and other beauty treatments	6,370	13.27 %	12.43% (5,970)

Source: Own computation using survey data in Addis Ababa.

We argue that one source of this inequality is the procedure that the Ministry of Revenue (MoR) followed to determine the presumptive tax rates. The presumptive tax rates of different business activities are determined based on the perceived profitability rate of each business type. For example, the annual profit rate of retail sales of cloth is 10 per cent, while the annual profit rate of retail sales of fruits and vegetable businesses is 13 per cent. On the other hand, the yearly profit rate for restaurants is 25 per cent. Considering the varying amount of profit earned by each business type, the presumptive tax rate is determined across different annual turnover bands. There are 19 turnover band rates in the presumptive tax regime, of which the first group is an annual turnover of up to ETB50,000.⁹ This annual turnover is free of presumptive tax for business activities with an annual profit rate of less than 15 per cent. However, compared with the BIT, the problem with the presumptive tax rate is that any business with an annual turnover up to ETB50,000 and an annual profit rate of 15 per cent will have to pay a tax that ranges from ETB30 to ETB780 and is predetermined by the authority. But this would not necessarily be the case in the formal tax rate. If we consider a business with an annual turnover of ETB40,000 and a profit rate of 15 per cent, it will be tax-free in the business income tax system while it pays a positive tax in the presumptive tax rate.

Beyond this, the determination of the annual turnover conducted by the MoR has faced many criticisms and was a main source of grievances from taxpayers when it was first implemented in 2016. Even if the MoR used predetermined criteria to estimate the turnover of each business, most taxpayers in Addis Ababa indicated that they were neither aware of these turnover estimation criteria nor received enough explanation for questions that they asked during the awareness creation campaign about the estimation process. They also do not perceive the tax burden determined as fair. In fact, considering the Addis Ababa City Administration alone, 8,312 complaints were received by the revenue office in 2016, and the

⁹ Please see table A3 in the appendix for a snapshot of the turnover based presumptive tax rate in Ethiopia.

initial revenue assessment was reduced for about 58 per cent of the complaints (Mekonnen Workneh *et al.* 2019).

The other plausible reason could be the complicated procedure that the MoR used to estimate the tax burden for different types of business activities and turnover categories. Even if using a varying level of tax rates depending on the business's annual sales allows for avoiding tax burden differences, this creates a complex and unclear process that is difficult for tax officials to understand. For instance, looking at the recent Ethiopian Income Tax Regulation 410/2017 (FDRE 2017), there are 99 business activities with 19 turnover bands.¹⁰ That means that a given tax officer must set and adjust 1,881 tax percentages, which is not only complicated but also not understandable by taxpayers or by the lower-level officials responsible for tax collection in Ethiopia.

In general, our analysis indicates that informal sector taxation through the turnover-based presumptive tax system is not only inequitable vis-à-vis the BIT, but it is also subject to various problems that need careful consideration and perhaps revisions.

The indicator-based system is particularly designed for the transport sector and flour mills' business activities. The annual profit and the resultant amount of tax from each business are determined by considering the age and type of service a vehicle provides. If it is a public transport service provider, the variation in the number of seats is considered while disaggregation is made based on the amount of weight that vehicle would carry for dry freight transport service providers (in litres for tanker trucks). On the other hand, the type of energy used is considered as a criterion for flour mills (hydropower and electricity, diesel and electricity, diesel only). Finally, agricultural vehicle businesses are categorised as combiner/harvester renting and tractor renting. A snapshot of the indicator-based presumptive tax rate in Ethiopia can be found in Appendix Table A4.

Table 2.3 Informal sector taxation and its equity implications: indicator-based presumptive system

Annual profit in ETB	Business activity	Presumptive tax		BIT
		Amount of tax	Effective rate	
Public transport, 24–29 seats				
35,300	up to 15 years old	3,585	10.15%	3,585 (10.15%)
	> 15 years old	3,585	10.15%	3,585 (10.15%)
Dry freight transport				
42,864	51–70 Quintal up to 15 years old	4,943	11.5%	4,943 (11.5%)
	71–70 Quintal > 15 years old	4,943	11.5%	4,943 (11.5%)
Flour mills with a single hopper				
12,607	Use diesel and electricity engine	541	4.29%	541 (4.29%)
	Use diesel engine only	541	4.29%	541 (4.29%)

Source: Own computation using survey data in Addis Ababa.

Table 2.3 presents the analysis results of the equity implications of informal sector taxation following the indicator-based presumptive tax system. Applying a similar procedure as used in the turnover-based approach, we compare the tax burden of each business activity in the indicator-based presumptive tax rate and the BIT rate. Unlike the turnover-based system, in the indicator-based approach, the MoR determines a single annual sale and level of profit for each particular business considering the criteria mentioned above rather than having different ranges of sales categories. For example, the annual sales for public transport vehicles up to five seats and less than 15 years of age is ETB94,553, and the annual net profit is ETB18,911. On the other hand, the annual sales for a public transport vehicle with 24–29 seats and less than 15 years old is 220,623 ETB, of which ETB35,300 is net profit.

¹⁰ This system has been criticised due to its complications and lack of clarity since its inception in 2002. For instance, the 2002 presumptive tax system contained 69 business groups and 19 turnover brands, leading to 1,331 tax adjustments. Despite this, it was expected to be reformed in the latest version in 2016; however, the reform carried out in 2016 further complicated it by increasing the business groups to 99 and tax adjustments to 1,881.

Hence, to conduct our analysis, we choose three specific profit levels from the ones predetermined by the MoR: ETB35,300, ETB42,864, and ETB12,607.¹¹

The results indicate that taxing the informal sector using the indicator-based presumptive tax system is horizontally and vertically equitable vis-à-vis the BIT. Businesses with an equal amount of income would pay a similar level of tax in both systems. For instance, a public transport service provider with an annual profit of ETB35,300 will pay an equal amount of tax (ETB3,585) both under the indicator-based presumptive tax rate and the BIT rate. Looking at vertical equity, businesses with a similar amount of income taxed in the presumptive tax system itself pay an equal amount of tax, and the system, in general, is progressive. However, since the annual profit under this system is not determined for different income intervals, it does not lend itself to detailed vertical equity analysis. For instance, we cannot compare the tax burden of a business with an annual profit of ETB50,000 engaged in public transport and flour mills with a single hopper service provision. Even if the indicator-based presumptive tax rate is less complex and easily understandable, which could facilitate effective tax administration, it is applied to very limited types of businesses.

3 Conclusion and policy implications

Presumptive taxation has been criticised a lot, and public outcry and complaints have emerged due to its alleged unfairness and a lack of clarity in its implementation. We argue that it compromises equity, especially when used to tax the informal sector. Yet, these unintended effects of presumptive taxation are not well scrutinised. To this end, in this study, we answer two questions. First, what is the status of income distribution in the informal sector based on gender? Second, could taxing informal sector operating firms using the presumptive tax system be equitable?

Using survey data collected from about 1,063 informal sector operating firms in Addis Ababa, we employ descriptive statistics and a representative taxpayer approach of equity measurement to answer our research questions. We find that income distribution in the informal sector is quite heterogeneous: female-owned enterprises are found to earn lower income compared to male-owned ones. Apart from this, a significant share of informal sector operators earn income below the minimum formal tax threshold, providing initial evidence for the argument that the tax revenue potential of informal sector operating firms is minimal.

Looking at the equity implications of informal sector taxation, our findings indicate that informal sector taxation using the turnover-based presumptive tax system is both horizontally and vertically inequitable vis-à-vis the BIT. Enterprises that earn an equal amount of profit in the informal sector would pay a higher amount of tax under the presumptive tax rate than under the BIT rate. On the other hand, within the presumptive tax itself, different types of business activities with an equal amount of earnings have an unequal amount of tax burden. In the indicator-based system, the tax burden is both horizontally and vertically equitable. However, this method is only applicable to a few business activities focusing on the transportation sector.

Our findings have three key policy implications.

First, policies that aim at regulating and formalising the informal sector should consider existing stylised facts in the sector. Unlike the longstanding argument that the informal sector

¹¹ Since we do not have business activities in either the transport sector or flour mills service provision in our data, these income levels are hypothetical values taken from the indicator-based rate used by the ministry to determine the tax burden of each business type taxed under this system.

is where the government loses a huge amount of tax revenue, the informal sector in Addis Ababa has very limited tax-generating potential. Hence, the tax revenue narrative of the formalisation motive might be misleading. While formalisation of the informal sector is relevant for many other reasons, for instance, to increase the number of potential future taxpayers, and strengthen the perceived fairness of the revenue authority, it should not focus on exploiting microenterprises for revenue generation purposes. That would end up regressively taxing informal sector firms. Since female-owned businesses are the most hard hit by the earning gap, gender-based policy interventions would help to make informal sector operating firms sustainable and able to serve as potential future taxpayers.

Second, informal sector taxation using the presumptive tax system compromises welfare by exacerbating vertical and horizontal inequity. One of the plausible reasons for this is the complex and unclear nature of determining the tax burden through the presumptive tax rate. As the determination of the presumptive tax rate is not easily understandable by lower-level tax officials, who are responsible for tax collection, the tax burden is not equitably levied among different informal sector operating firms. Thus, careful consideration of the presumptive tax rate that extends up to revision, by considering other countries' experience and the current status of the sector, would be helpful in introducing a working policy in the sector.

Finally, we note that the informal sector in Ethiopia gets the least attention, and the sector is not well understood by policymakers, researchers, and other relevant stakeholders. Hence, further studies and public dialogues about the sector considering its various features would increase stakeholders' awareness of the informal sector and facilitate effective public policy decision-making pertinent to the sector.

Appendix

Table A1 The overall characteristics of the informal sector over time

	2011(a)	2020(b)	Difference (b-a)
Socio-economic characteristics			
Gender (% of males)	46	39.91	-6.09
Age of business owner (years)	33.29	33.49	0.2
Literate formal	61.4	62.67	1.27
Illiterate	37.05	30.36	-6.69
Literate informal	1.54	2.12	0.58
Marital status	48.64	55.19	6.55
Training	7.36	9.08	1.72
Type of business activity			
Clerk and related activity	0.76	-	
Personal service workers	2.9	20.52	17.62
Housekeeping and restaurant	5.13	7.76	2.63
Shop sales	6.47	0.08	-6.39
Gulit and open markets	13.05	-	-
Liquor retailers and related workers	7.74	41.17	
Market-oriented animal producers and related works	8.5	-	-
Building finishing and related works	6.59	3.56	-3.03
Potters metal and electronic related work	3.61	0.27	-3.34
Food processing	11.6	2.59	-9.01
Textile garment wood and related works	7.1	4.15	-2.95
Street vendors' shoeshine and related works	5.98	-	-
Messengers' porters, and related labourers	17.50	0.16	-17.35
Other	3.07	19.74	16.67
Working premises			
Business house	10.41	17	6.59
Office	1.1	0.9	-0.2
Home	28.65	28.83	0.18
Street	9.16	15.16	6
Open market	16.12	22.29	6.17
Farm area/field	6.66	2.04	-4.62
Factory	0.2	0.31	0.11
Quarrying or mining	0.24	0.27	0.03
Anywhere as found	13.43	8.34	-5.09
Construction site	3.84	1.45	-2.39
Where a customer is available	3.89	2.78	-1.11
Lakes or river	1.84	0.24	-1.6
Other	4.46	0.39	-4.07
Number of observations	9,098	2,553	

Source: Authors' computation using data from CSA 2011 and CSA 2020.

Table A2 Business income tax rate

Annual income in ETB	Tax rate	Deductions
0–7,200	0	0
7,201–19,800	10%	720
19,801–38,400	15%	1,710
38,401–63,000	20%	3,630
63,001–93,600	25%	6,780
93,601–130,800	30%	11,460
>130,800	35%	18,000

Source: Council of Ministers' Regulation No. 410/2017 (FDRE 2017).

Table A3 A snapshot of turnover-based presumptive tax rates in Ethiopia

	Sector/Type	Profit rates	Annual turnover in ETB																		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			50,000	50,001–75,000	75,001–100,000	100,001–125,000	125,001–150,000	150,001–175,000	175,001–200,000	200,001–225,000	225,001–250,000	250,001–275,000	275,001–300,000	300,001–325,000	325,001–350,000	350,001–375,000	375,001–400,000	400,001–425,000	425,001–450,000	450,001–475,000	475,001–500,000
1	Cereals & pulses trade	5%	-	-	-	-	30	155	280	405	530	655	780	905	1,030	1,155	1,290	1,478	1,665	1,853	2,040
2	Edible oil & its by-product trade	10%	-	30	280	530	780	1,030	1,290	1,665	2,040	2,415	2,790	3,165	3,540	3,915	4,370	4,870	5,370	5,870	6,370
3	Hides & skin trade	10%	-	30	280	530	780	1,030	1,290	1,665	2,040	2,415	2,790	3,165	3,540	3,915	4,370	4,870	5,370	5,870	6,370
4	Textile product (yarn)	10%	-	30	280	530	780	1,030	1,290	1,665	2,040	2,415	2,790	3,165	3,540	3,915	4,370	4,870	5,370	5,870	6,370
99	Transit service	30%	780	1,665	2,790	3,915	5,370	6,870	8,370	10,095	11,970	13,845	15,720	17,790	20,040	22,290	24,540	26,790	29,250	31,875	34,500

Source: Council of Ministers Regulation No. 410/2017.

Table A4 A snapshot of indicator-based presumptive tax rates in Ethiopia

SERVICES TYPE	Presumptive Tax payable					
	From 1-15 Years			Above 15 Years		
	Annual Sales	Net Profit	Tax	Annual Sales	Net Profit	Tax
Public Transport						
Up to 5 Seats	94,553	18,911	1,171	78,794	15,759	856
From 6 - 12 Seats	110,312	20,959	1,434	94,553	17,965	1,077
From 13 - 19 Seats	141,829	25,529	2,119	126,070	22,693	1,694
From 20 - 23 Seats	173,347	29,469	2,710	157,588	26,790	2,308
From 24 - 29 Seats	220,623	35,300	3,585	189,105	30,257	2,829
From 30 - 34 Seats	252,141	37,821	3,963	220,623	33,093	3,254
From 35 - 39 Seats	283,658	39,712	4,312	252,141	35,300	3,585
From 40 - 44 Seats	315,176	40,973	4,565	283,658	36,876	3,821
From 45 - 50 Seats				425,544	51,065	6,583
From 51 Seats and Above				443,865	48,825	6,135
Dry Freight Transport						
Up to 10 Quintal	110,312	22,062	1,599	94,553	18,911	1,171
From 11 - 20 Quintal	141,829	26,948	2,332	126,070	23,953	1,883
From 21 - 50 Quintal	173,347	31,202	2,970	157,588	28,366	2,545
From 51 - 70 Quintal	252,141	42,864	4,943	220,623	37,506	3,916

Source: Council of Ministers' Regulation No. 410/2017 (FDRE 2017).

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