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Taxes on Individuals, Households, and Nonfarm Enterprises

FINDINGS OF THE 2018/19 AND 2021/22 ETHIOPIA SOCIOECONOMIC PANEL SURVEY

ETHIOPIAN STATISTICAL SERVICE

LSMS
Living Standards Measurement Study

Taxes on Individuals, Households, and Nonfarm Enterprises

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Chapter 1
Introduction

Detailed micro-level data and analyses on how the various tax policies impact individuals, households and businesses are crucial. Like in many low-income countries, there is a dearth of comprehensive data on administrative tax in Ethiopia. Moreover, a thorough understanding of the burden on different groups of taxpayers is complicated by the fact that formal and informal tax systems often operate in parallel. To address these data gaps, the nationally-representative, multi-topic Ethiopia Socioeconomic Panel Survey (ESPS) 2018/19 and 2021/22 included questions to address the taxation of individuals, households, and household nonfarm enterprises (NFEs) in relation to different types of formal and informal taxes.

A previous report by the Central Statistics Agency and World Bank (2021) provided detailed, disaggregated information on taxation of individuals, households, and household businesses using only the 2018/19 wave. Building upon that, the current report provides further analysis on taxation dynamics from a longitudinal context at both the individual and household levels. Accordingly, the objectives of this report are to provide descriptive analyses of tax-related data; and highlight issues that will be further explored in future analyses.

The remainder of the report is organized as follows. Section 2 presents findings on household business taxes. Section 3 discusses the main results on employment income tax. Findings on rural and urban land use taxes are presented in Section 4, while those on informal taxation are available in Section 5. Summary and concluding remarks are in Section 6. In addition, the appendices provide an overview of the current tax system in Ethiopia (Appendix A), information on survey design (Appendix B), tax and transfer related questions included in the survey (Appendix C), and imputation to calculate employment income tax (Appendix D).

Chapter 2
Personal Business Taxes

Key Findings

- About 14% (up from 11% in 2019) of unincorporated enterprises paid business income tax in 2022. In urban areas, this share increased from 16% in 2019 to about 25% in 2022.
- Personal business income tax represented a very small proportion (2%) of total business operational costs during both survey years. These taxes accounted for 8% of annual sales in 2022.
- In 2022, about 15% of enterprises paid business license fees (again, higher for those in urban areas), and only 7% paid other business-related fees/taxes, such as for municipality services.
- Business license fees and other business-related fees/taxes represented 2% and 3.4%, respectively, of annual business sales in 2022.

2.1 PROFILE OF HOUSEHOLD NFEs

The 2018/19 and 2021/22 ESPS included detailed information on household nonfarm enterprises (NFEs) during the 12 months preceding the survey[1]. Table 1 summarizes the ownership structure of NFEs by type of enterprise. Nationally, 27% of households in 2022 owned at least one NFE. Over 15% of rural households reported having one or more NFEs in 2022, with a higher proportion among urban households (48%). In urban areas, the share of households owning any NFE in 2022 increased by ten percentage points compared with 2019. The most common household nonfarm enterprises are nonagricultural businesses operated from home/shop.[2]

TABLE 1
Households reporting one or more NFEs, by NFE activity and location, percent, over time

	2019			2022		
	National	Rural	Urban	National	Rural	Urban
Share of households with any NFE	22.7	15.4	37.9	26.8*	19.4*	47.7***
Across all NFEs, primary activities:						
Nonagricultural business/services from home/shop	9.9	5.7	18.7	10.5	6.7	21.4
Processed agricultural products	3.3	2.8	4.2	5.7**	5.1*	7.4*
Selling on a street or in a market	3.5	1.9	6.9	3.7	2.2	7.9
Offered services and sold goods	1.8	2.0	1.3	1.9	2.2	1.1
Professional	0.5	0.2	1.1	0.7	0.4	1.6
Taxi/pickup truck	1.1	0.6	2.1	1.6	1.0	3.5*
Bar/restaurant	0.6	0.2	1.4	0.6	0.3	1.6
Other small business	3.8	2.9	5.7	4.3	3.1	7.9
Number of households	6,094	2,722	3,372	4,959	2,285	2,674

Source: ESPS 2018/19 and 2021/22.

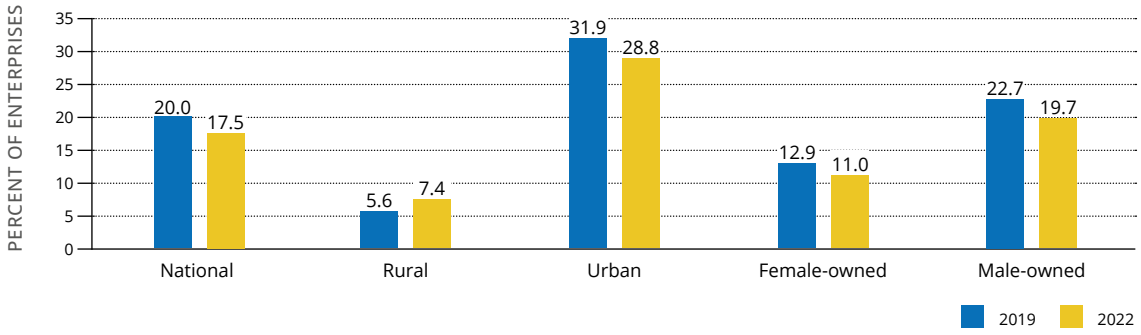
Notes: Estimates are weighted; the number of households is unweighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

Only about a fifth of household NFEs nationally were formally registered and in possession of a license in 2022 (Figure 1). Significantly larger portions of urban and male-owned businesses were formally registered compared with rural and female-owned businesses.

[1] ESPS considers participation in NFEs of any household member, over the past 12 months, owned, processed, or provided non-agricultural business, product, or service from home, shop, street, etc. For a detailed list, refer to Box 1 in Appendix C.

[2] Household businesses in Ethiopia are predominantly microenterprises. In separate estimates, ESPS 2021/22 found that 96% of NFEs employed no more than five employees, and about 88% of this group were own-account businesses with no employees. Only 16% of urban and 9% of rural household NFEs hired one or more employees in 2022. In 2022, NFEs operated for 176 days in urban areas and for 95 days in rural areas.

FIGURE 1
NFEs that are registered and have a license, percent, by location and owner's gender, over time



Note: Estimates are weighted. Rural-urban and male-female mean differences are statistically significant at 0.01 and 0.05 levels, respectively, for both years.

Source: ESPS 2018/19 and 2021/22.

For formal NFEs that reported paying business income taxes, most of the operating costs (59%) in 2022 went towards buying goods for sale (Table 2). Income taxes constituted a small share of these costs, averaging 2%, compared to 5% for rent, 8% for wages, and 19% for raw materials. Since nearly all NFEs that pay taxes are in urban areas, the breakdown of costs for the total sample primarily reflects the urban group.

TABLE 2
Average annual operating costs, non-tax items (all firms), firms paying taxes, over time

	2019		2022	
	Average operating costs (Birr)	Share of costs (percent)	Average operating costs (Birr)	Share of costs (percent)
Business income taxes	3,193	2	3,916	2
Wages	9,489	6	14,306	8
Purchase of goods for sale	99,397	64	106,037	59
Raw materials	22,556	14	34,324	19
Transportation	6,384	4	9,337	5
Rent	11,259	7	9,066	5
All other non-tax operating costs	3,759	2	3,544	2
Observations	252		322	

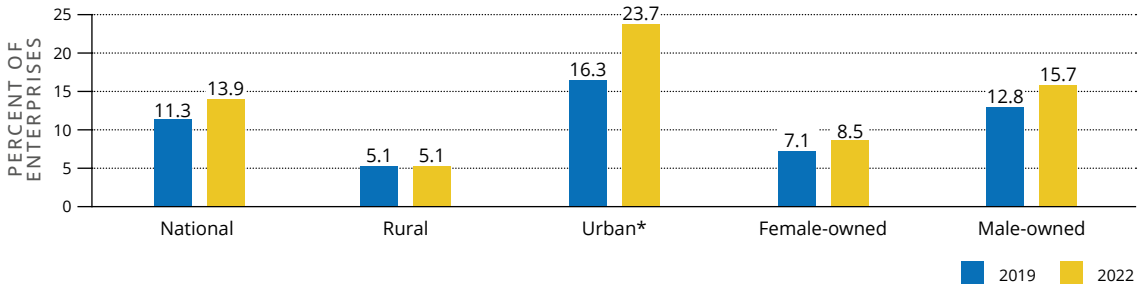
Source: ESPS 2018/19 and 2021/22.

Notes: Estimates for income tax and costs are weighted; the number of observations is unweighted.

2.2 PERSONAL BUSINESS INCOME TAX

About 14% of NFEs approached in 2022 paid personal business income tax, compared to 11% in 2019 (Figure 2). The share was not only higher in urban areas (24%) compared to only 5% in rural areas, but also increased by seven percentage points from 2019. In both years, the proportion of male-owned NFEs that reported paying personal business taxes was about twice of that of female-owned NFEs.

FIGURE 2
NFEs that reported paying business income tax, percent, by location and gender, over time



Note: Estimates are weighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Rural-urban and male-female mean differences are statistically significant at 0.01 and 0.1 levels, respectively, for both years.

Source: ESPS 2018/19 and 2021/22.

The average household NFE paid 3,916 Birr per year in personal business income tax in 2022, amounting to 8% of annual sales (Table 3). Female-owned enterprises paid 3,155 Birr (12% of their annual sales) and male-owned enterprises paid 4,056 Birr (7% of their annual sales).

TABLE 3
Average personal business income tax, by location and owner's gender, over time

	2019		2022	
	Mean	Obs.	Mean	Obs.
Personal business income tax, annual (Birr):				
National	3,193	252	3,916	322
Rural	514	22	650	31
Urban	3,887	230	2,240	291
Female-owned	2,901	53	3,155	77
Male-owned	3,252	199	4,056	245
Tax-to-annual sales ratio (percent):				
National	9.0	252	8.0	322
Rural	9.5	22	7.2	31
Urban	8.9	230	8.2	291
Female-owned	5.9	53	11.6	77
Male-owned	9.6	199	7.3	245

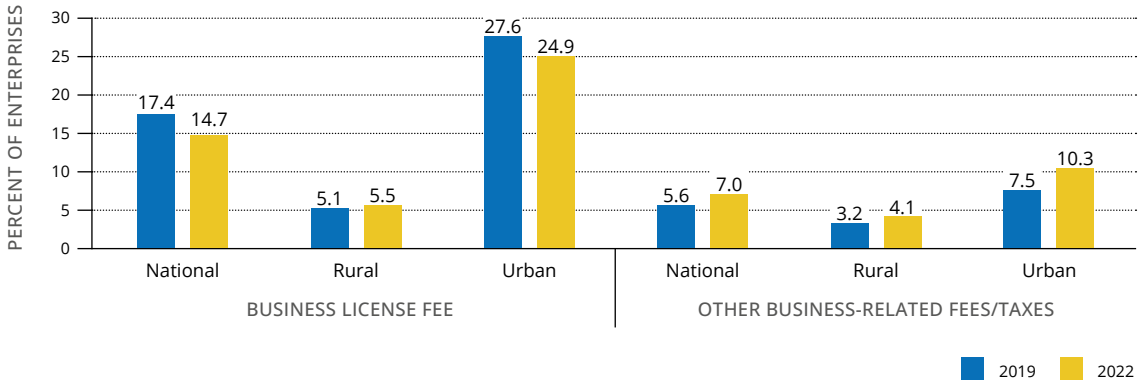
Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. All 2019-2022, rural-urban, and male-female mean differences are not statistically significant. Estimates for rural NFEs are based on a small number of observations.

2.3 BUSINESS LICENSE FEES AND OTHER BUSINESS-RELATED FEES

About 15% of NFEs that paid personal business income taxes also paid business license fees, either for the renewal or issuance of a new one, within the 12 months of the survey in 2022, with no significant changes from 2019 (Figure 3). On the other hand, 7% of NFEs paid other business-related direct fees/taxes, other than income tax, such as municipal service fees, market taxes, etc. As can be expected, most enterprises paying business license fees and other fees operate in urban areas. The proportion of urban firms paying license fees in both 2019 and 2022 was five times that of rural firms.

FIGURE 3
NFEs paying business license fees and other business-related fees/taxes, percent, over time



Note: Estimates are weighted. All 2019-2022 and rural-urban mean differences are not statistically significant.

Source: ESPS 2018/19 and 2021/22.

Annual business license fees averaged 1,545 Birr in 2022, representing about 2% of total business annual sales (Table 4). In 2022, the share of business license fees out of total annual sales in urban areas was 1.6%, and this fell by more than half from 3.4% in 2019. In contrast, other business-related fees/taxes paid in 2022 averaged 1,209 Birr and accounted for 3.4% of annual sales.

TABLE 4
Annual business license fees and other fees/taxes, national and by location, over time

	2019			2022		
	National	Rural	Urban	National	Rural	Urban
Business license fees, annual (Birr)	915	690	947	1,545	483	1,854
Share of business license fees in total annual sales (%)	3.5	4.1	3.4	1.9	3.2	1.6*
Number of observations	422	33	389	464	52	412
Other business-related fees/taxes, annual (Birr)	3,942	NA	2,800	1,209	773	1,405
Share of other fees/taxes in total annual sales (%)	18.1	NA	6.9	3.4	4.7	2.8*
Number of observations	101	NA	93	104	19	85

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates for income tax are weighted; the number of observations is unweighted. The sample is those enterprises that paid taxes.
*, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.
All rural-urban mean differences are not statistically significant. NA=Estimates are not available since they come from very few observations.

Chapter 3
Employment Income Tax

Key Findings

- 81% of income earning individuals were liable to pay employment income tax in 2022. The share was higher for men, the formally employed, the richest 60%, and those in urban areas.
- Men paid more in income tax, above the national average, than women.
- The tax/income ratio in 2022 was 11% at the national level and higher in urban areas than in rural areas. This average tax rate increased with consumption expenditure per adult equivalent in 2022, showing better progressivity compared to 2019.
- Individuals in the top 20% of the distribution paid 14% of their annual wage income in 2022, half of the average tax rate of those in the bottom 20%.

3.1 WAGE EMPLOYMENT PARTICIPATION AND DISTRIBUTION

About one in ten individuals aged 18 years or older were employed for payment[3] in the 12 months prior to the survey in 2022, with no change from 2019 (Table 5)[4]. Expectedly, men and individuals in urban areas had higher wage employment participation rates than women and those in rural areas. Slightly more than half of the employees had a formal employment with a written contract, with no significant difference over the survey years and among comparable subpopulations. Wage employments are dominated by the service sector, accounting for 62% in 2022, followed by manufacturing (including mining and construction) at 23%, and agriculture (including fishing) at 11%.

TABLE 5
Annual wage employment participation, by location, gender and sector, individuals 18 or older, percent, over time

	2019					2022				
	National	Rural	Urban	Men	Women	National	Rural	Urban	Men	Women
Wage employment participation rate	10.7	3.8	25.9	14.8	6.8	10.0	4.9	24.8	13.6	6.3
Formal employment	51.2	41.6	54.3	50.1	53.4	56.1	49.7	59.8	54.3	60.0
Sector of employment:										
Agriculture	13.4	33.8	6.9	13.4	13.4	11.2	24.6	3.4	10.5	12.9
Manufacturing	19.2	16.4	20.2	24.0	9.8	23.1	25.1	22	25.3	18.5**
Services	57.3	39.0	63.2	54.9	61.9	61.7	46.1	70.8*	60.8	63.7
Others	10.0	10.7	9.8	7.6	14.9	3.9***	4.2	3.7**	3.5*	4.9***
Number of observations	13,426	5,931	7,495	6,302	7,124	12,315	5,769	6,546	5,780	6,535

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted using household sampling weights. Number of observations is unweighted. Only self-reporting individuals aged 18 and older are included. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Rural-urban differences are statistically significant for wage employment, agriculture, and service for both years. Male-female differences are statistically significant for wage employment for both years, manufacturing, and others (only 2019).

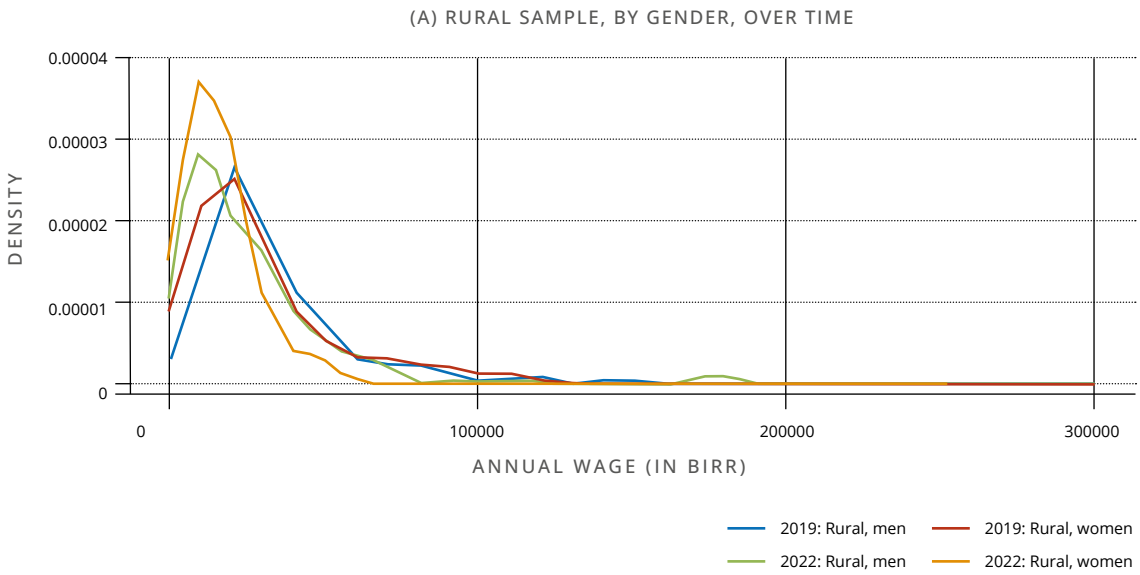
The distribution of reported wage employment income is presented in Figure 4. It shows that the employment income is skewed over the two periods and is similar in both rural and urban areas, as well as for men and women.[5] This would reflect a major discrepancy between the mean and median estimates of employment income tax (EIT), thus the forthcoming results will report both estimates.

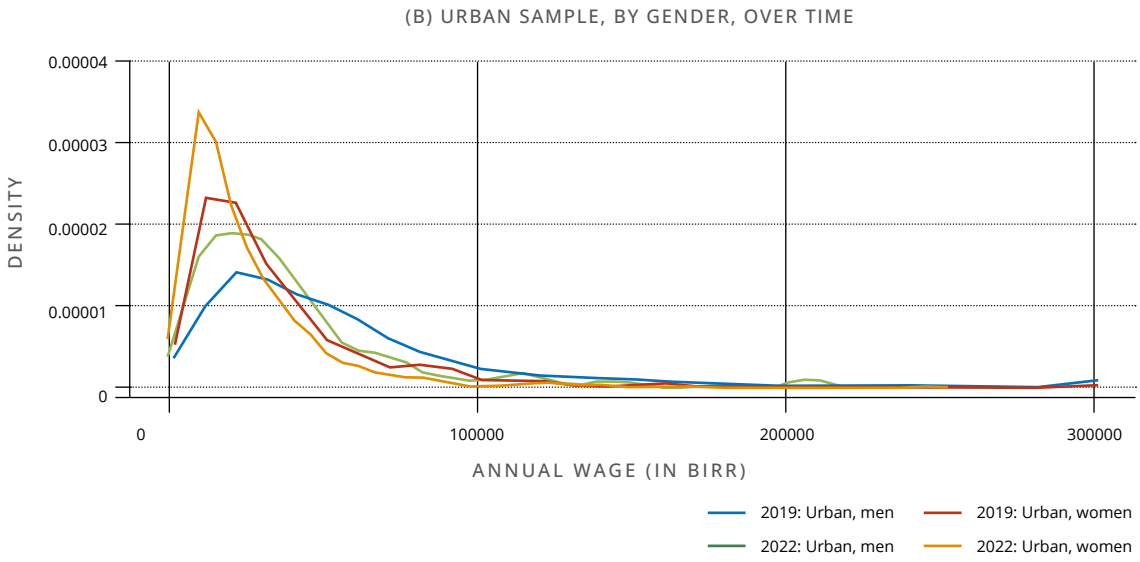
[3] These include part-time labor, for wage, salary, commission, gratitude, or any in-kind payment.

[4] If the working age is lowered to 7 years or older, the participation decreases to about 7% in 2022, of whom about 55% had a written contract. 99% were aged 15 or older, and no children aged below 10. 32% were females, similar for those with a written contract with 34% women. The distribution is also the same in 2019. For more labor market participation and earnings estimates, please refer to Table B1 in Appendix B.

[5] The skewness of taxable income remains unchanged for the broad employing sectors (agriculture, manufacturing, service, etc.) and for formal and informal employment types.

FIGURE 4
Distribution of taxable income, by place of residence and gender, over time





Note: Taxable income is any income greater than 600 Birr/month of salary income.
Annual employment incomes in 2022 are converted to real values using consumer price indices of 2019 and 2022.

Source: ESPS 2018/19 and 2021/22.

3.2 IMPUTED EMPLOYMENT INCOME TAX

For the full sample in 2022, 81% of individuals employed earned beyond the 600 Birr per month threshold.[6] About 86% of employees in urban areas and 74% in rural areas were liable for employment income tax (Table 6).[7] The amount of annual employment income tax paid by an employee in 2022 averaged 10,432 Birr.

TABLE 6
Annual employment income and tax (imputed), national and by location, over time

		2019			2022		
		Mean	Median	Obs.	Mean	Median	Obs.
Annual imputed employment income tax (EIT) (Birr)	National	6,635	2,616	2,018	10,432	3,870	1,830
	Rural	3,654	1,896	180	5,085	1,371	283
	Urban	7,272	3,096	1,838	13,239	5,890	1,547
Annual chargeable employment income (Birr)	National	43,455	28,800	2,018	57,326	37,158	1,830
	Rural	30,999	24,000	180	36,036	20,500	283
	Urban	46,117	32,000	1,838	68,504	47,600	1,547
Share of individuals paying tax to all income earners (after imputation) (%)	National	71			81		
	Rural	45			74*		
	Urban	82			86		

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. EIT estimate includes individuals earning above the 600 Birr per month income threshold. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

Employees with written (formal) contracts earned and paid income taxes that were higher than the national average in both 2019 and 2022, compared to those with no contracts (Table 7). Moreover, the imputations show that in 2022, a significantly larger share of employees with contracts paid a higher income tax (92%) than those without contracts (69%) – a much lower gap relative to 2019.[8]

[6] Out of the 19% employed individuals who earned below the minimum monthly threshold of 600 Birr in 2022, 45% were women. In 2019, among the 29% getting below the threshold, 38% were women.

[7] Since it is difficult to obtain information on employment income tax directly from employees, the report estimates it using the reported wage income and official tax rates. For the details of this imputation, refer to Appendix D.

[8] The imputed tax figures for informal employees can only indicate future potential as they cannot be observed by the tax authority.

TABLE 7
Annual employment income and tax (imputed), by formality of employment, over time

	2019				2022			
	Formal		Informal		Formal		Informal	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Annual imputed employment income tax (EIT) (Birr)	7,820	3,696	4,729	1,446	11,197	5,970	9,207	2,046
Percentage to the national average	118		71		107		88	
Annual chargeable employment income (Birr)	49,462	36,000	33,801	21,000	62,368	48,000	49,244	25,000
Percentage to the national average	114		78		109		86	
Share of individuals paying tax to all income earners (after imputation) (%)	91		53		92		69	
Observations	1,295		723		1,219		611	

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. EIT estimate includes individuals earning above the 600 Birr per month income threshold. Formal vs. informal mean differences are statistically significant at 0.01 level for both years.

The share of men (85%) liable for paying taxes in 2022 was higher than the share of women (74%) and increased from 2019 (Table 8). Employment income in 2022 for men was ten percentage points above the national average, while it was below the national average for women. The men-women gap in taxable employment income and imputed income tax were statistically significant in 2019, but disappeared in 2022.

TABLE 8
Annual employment income and tax (imputed), by gender, over time

	2019				2022			
	Men		Women		Men		Women	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Annual imputed employment income tax (EIT) (Birr)	7,436	2,796	4,893	1,896	11,475	4,770	7,968	3,216
Percentage to the national average	112		74		110		76	
Annual chargeable employment income (Birr)	47,003	30,000	35,745	24,000	61,204	42,000	48,160	32,800
Percentage to the national average	108		82		107		84	
Share of individuals paying tax to all income earners (after imputation) (%)	73		67		85*		74	
Observations	1,306		712		1,160		670	

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. EIT estimate includes individuals earning above the 600 Birr per month income threshold. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Men-women mean differences in chargeable employment income and EIT are statistically significant only in 2019, and this difference for 'the share of individuals paying tax to all income earners' is significant only for 2022.

Table 9 categorizes employment taxpayers according to their household's position in the distribution of consumption expenditure[9] (bottom 40%: the 1st and 2nd quintiles; and top 60%: the 3rd, 4th, and 5th quintiles). In 2022, the share of employees with taxable income was higher for those in the top 60% of the expenditure distribution (86%) compared to those in the bottom 40% of the distribution (66%). However, the gap between the two groups reduced from 30 percentage points in 2019 to 20 percentage points in 2022. Over the survey years, the share of income taxpayers to all income earners increased only among the wealthy. Those in the bottom 40% earned a little more than half the wage income of those in the top 60%, but were responsible for paying a third of the income tax. For both groups, chargeable employment income saw a significant decrease in real terms over time. In 2022, the bottom 40% were eligible to pay two-thirds of the national taxable average, while the top 60% were liable to pay 80 percentage points more than the national average.

TABLE 9
Annual employment income and tax (imputed), by quintiles of expenditure, over time

	2019				2022			
	Bottom 40%		Top 60%		Bottom 40%		Top 60%	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Annual imputed employment income tax (EIT) (Birr)	3,575	1,080	7,254	3,242	4,515	1,896	11,912	4,770
Percentage to the national average	54		109		68		180	
Annual chargeable employment income (Birr)	28,345	18,000	46,513	32,976	34,067	24,000	63,144	42,000
Percentage to the national average	65		107		59		110	
Share of individuals paying tax to all income earners (after imputation) (%)		49		79		66		86*
Observations	238		1,780		274		1,556	

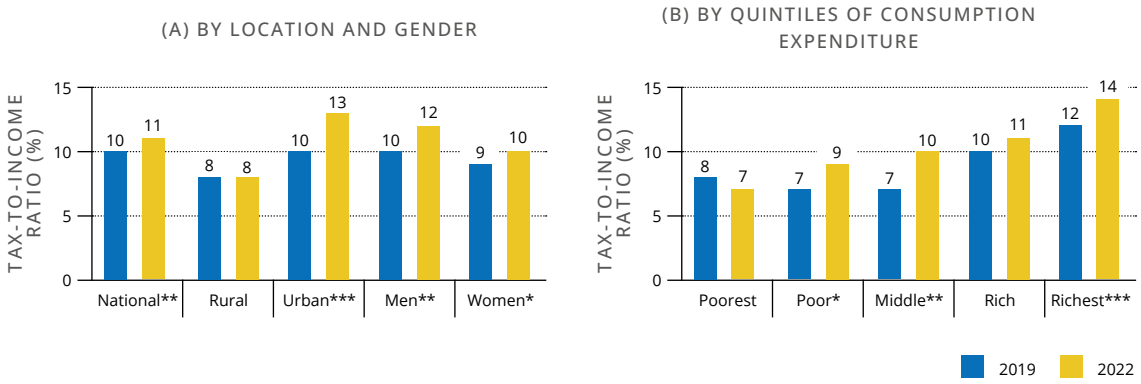
Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. EIT estimate includes individuals earning above the 600 Birr per month income threshold. Grouping (bottom 40% and top 60%) is based on spatially adjusted per adult equivalent consumption expenditure. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

The average tax-to-income ratio in 2022 was 11% at the national level, with 8% in rural areas versus 13% in urban areas, and 12% for men versus 10% for women (Figure 5a). These average employment tax rates increased from 2019, except in rural areas. Moreover, in both years, men and employees in urban areas had higher tax-to-income ratios than women and those in rural areas. The average tax rate also increased with per adult equivalent expenditure in 2022, showing better progressivity compared to 2019 (Figure 5b). Employees from the wealthiest households paid 14% of their annual wage/salary income in 2022, which was double that paid by the poorest households.

[9] Consumption expenditure is in per adult equivalent terms and is spatially adjusted to account for regional as well as rural-urban differences.

FIGURE 5
Tax-to-income ratio, percent, by location, gender, and expenditure quintile, over time

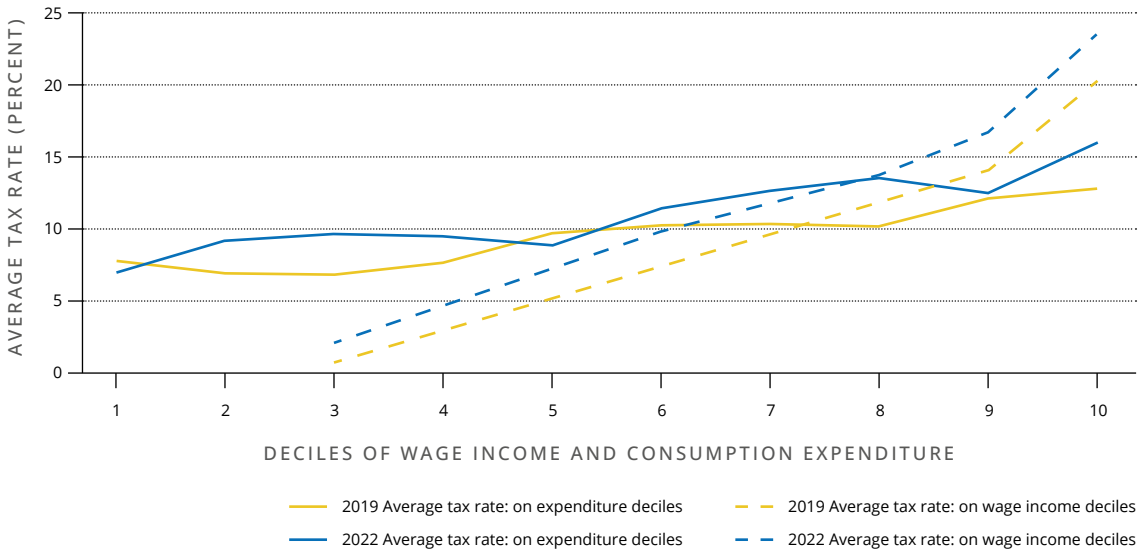


Note: Estimates are weighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

Source: ESPS 2018/19 and 2021/22.

Comparing the distribution of average tax rates by expenditure and wage income deciles, Figure 6 confirms a slightly weaker correlation of tax rates with expenditure than with income.

FIGURE 6
Distribution of tax-to-income ratio, by expenditure and wage income deciles, over time



Note: Estimates are weighted.

Source: ESPS 2018/19 and 2021/22.

Chapter 4

Rural and Urban Land Use Taxes

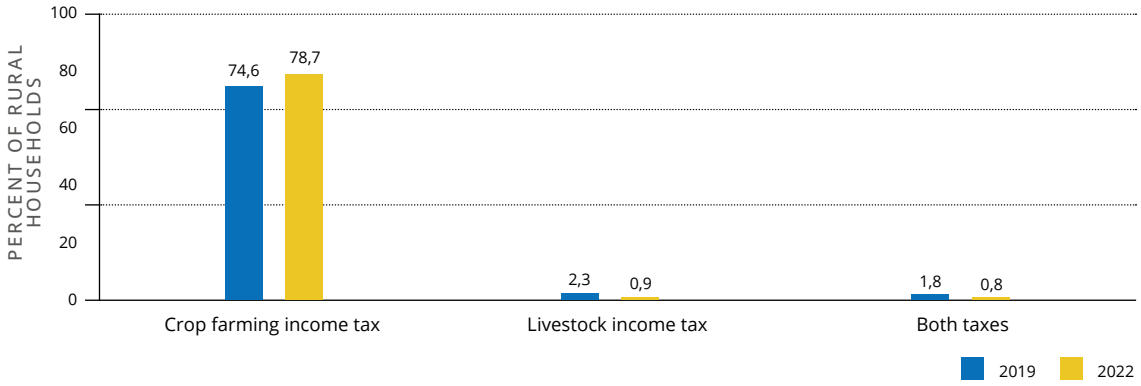
Key Findings

- In 2022, about 80% of rural households paid some type of agricultural tax, with the largest majority (79%) paying land use and crop income tax.
- Land use and crop income taxes accounted for 1.6% of annual per adult budget, and regional differences exist.
- In 2019 and 2022, rural households in the bottom 40% of expenditure paid a higher share of their annual expenditure in crop income taxes than those in the top 60%.
- Half of urban households living in self-owned dwellings paid an urban land use fee and housing tax in 2022. This proportion decreased to 48% from 58% in 2019 among male-headed households.
- Urban land use fee and housing taxes accounted for 2.9% of the annual per adult budget with differences across regions.
- In both years, urban households in the bottom 40% paid a higher share of their annual budget in property taxes than those in the top 60%.

4.1 RURAL LAND USE FEES AND AGRICULTURAL INCOME TAX

In 2022, about 79% of rural households paid a tax on agricultural activities[10], known as the "crop farming income tax," which is the sum of the rural land use fee and agricultural income tax (Figure 7). Only one in ten households paid a livestock income tax, with almost the same proportion paying both livestock and crop farming taxes.

FIGURE 7
Households paying rural land use fee and agriculture income tax, percent, over time



Note: Estimates are weighted. All 2019 vs 2022 mean differences are not statistically significant.

Source: ESPS 2018/19 and 2021/22.

Nationally, the average farm household paid 340 Birr per year in land use and crop farming income tax in 2022, representing 1.6% of consumption expenditure per adult equivalent (Table 10). Crop income taxes were comparable for both male- and female-headed households, with no significant difference from 2019.

TABLE 10
Annual agricultural income taxes, national and by gender of household head, over time

	2019			2022		
	National	Female-headed	Male-headed	National	Female-headed	Male-headed
Land use and crop farming income tax (Birr)	235	229	236	340	273	360
Crop tax-to-expenditure ratio (%)	2.6	2.3	2.7	1.6	1.2	1.7
Number of observations	1,435	313	1,122	1,049	236	813
Livestock income tax (Birr)	272	358	261	NA	NA	NA
Livestock tax-to-expenditure ratio (%)	2.8	2.9	2.8	NA	NA	NA
Number of observations	145	23	122	NA	NA	NA

Source: ESPS 2018/19 and 2021/22.

Note: Estimates are weighted. All 2019 vs. 2022 and female-headed vs. male-headed mean differences are not statistically significant.
NA=Estimates are not available since the 2022 livestock tax amount data come from very few observations.

[10] Farmers in rural Ethiopia are required to pay a rural land use fee and an agricultural income tax. This tax type falls under the tax jurisdiction of regional states, and the rates and schedules vary. For more details, see Appendix A.

Consumption-poor households tend to pay a higher share of their annual budget on crop income taxes compared with wealthier households. While crop income taxes cost the poor 2% of their annual expenditure in 2022, they cost the wealthy just 1%, indicating that crop taxes are regressive (Table 11).

TABLE 11
Annual agricultural income taxes, by quintiles of consumption expenditure, over time

	2019			2022		
	National	Bottom 40%	Top 60%	National	Bottom 40%	Top 60%
Land use and crop farming income tax (Birr)	235	210	262	340	315	364
Crop tax-to-expenditure ratio (%)	2.6	3.6	1.5	1.6	2.3	1.0
Number of observations	1,435	754	681	1,049	487	562
Livestock income tax (Birr)	272	327	237	NA	NA	NA
Livestock tax-to-expenditure ratio (%)	2.8	5.0	1.3	NA	NA	NA
Number of observations	145	67	78	NA	NA	NA

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. All 2019 vs 2022 and bottom 40% vs top 60% mean differences are not statistically significant. NA=Estimates are not available since the 2022 livestock tax amount data come from very few observations.

There appeared to be regional disparities in the payment of land use and crop farming income tax, though these are expected given that the collection of agricultural taxes falls under the jurisdiction of regional states.11 Compared with the national average of 235 Birr per year or 1.6% of consumption expenditure, farming households in Benishangul-Gumuz paid the lowest in crop income taxes in 2022 (109 Birr or 0.4% of expenditure) while those in Gambela paid the highest (590 Birr or 2.2% of expenditure) (Table 12).

TABLE 12
Land use and crop farming income tax, by region, over time

	2019			2022		
	Crop farming income tax (Birr)	Crop tax-to-expenditure ratio (%)	Number of observations	Crop farming income tax (Birr)	Crop tax-to-expenditure ratio (%)	Number of observations
Afar	NA	NA	NA	NA	NA	NA
Amhara	213	2.6	384	301	1.6	198
Benishangul-Gumuz	193	1.8	105	109	0.4	86
Dire Dawa	NA	NA	NA	NA	NA	NA
Gambela	183	2.0	108	590	2.2	94
Hareri	197	1.4	63	276	0.6	32
Oromia	287	2.7	330	406	1.7	310
SNNP	166	2.3	322	219	1.3	307
Somali	348	4.8	113	NA	NA	NA
National	235	2.6	1,435	340	1.6	1,049

Source: ESPS 2018/19 and 2021/22.

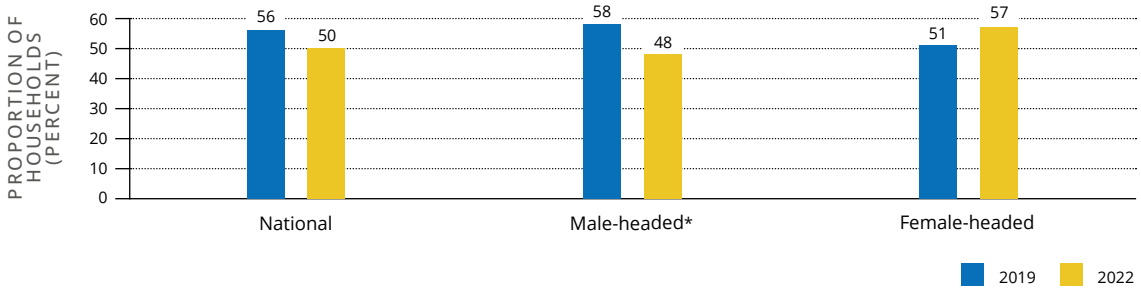
Notes: Estimates are weighted; the number of observations is unweighted. NA=Estimates are not available since there are no or very few observations.

[11] Estimates for Afar, Hareri regions and Dire Dawa are based on very few observations and are dropped. ESPS was not implemented in Tigray in 2021/22 and the 2018/19 data observations were dropped for consistency. Disaggregation by region for livestock tax was impossible due to the small number of observations.

4.2 URBAN LAND USE FEES AND HOUSING TAX

The ESPS asks each urban household whether they paid an urban land use fee and housing tax for the house they own. Accordingly, half of urban households that own private houses paid the land use fee and housing tax in 2022 (48% among male-headed and 57% among female-headed households) (Figure 8).[12]

FIGURE 8
Households with own dwellings paying urban land use fee and housing tax, percent, by gender of the household head, over time



Note: Estimates are weighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Female-headed vs. male-headed mean differences are not statistically significant.

Source: ESPS 2018/19 and 2021/22.

Among households that paid the urban land use fee and housing tax in 2022, average annual taxes were about 738 Birr or 2.9% of expenditure, with no significant disparities between male-headed and female-headed households (Table 13). Male-headed householders paid a lesser proportion of their expenditure in 2022 relative to 2019. Poor households (40%) paid more of their annual budget (3.4%) in urban land use fee and housing tax than the rich households (60%) (1.9%) in 2019.

[12] In 2022, 54% of urban households (51% female-headed and 55% male-headed) lived in dwellings they owned, which increased from 42% in 2019 (39% female-headed and 44% male-headed).

TABLE 13
Annual urban land use and housing tax, national, and by gender of the household head and quintiles of consumption expenditure, over time

	2019					2022				
	National	Female-headed	Male-headed	Bottom 40%	Top 60%	National	Female-headed	Male-headed	Bottom 40%	Top 60%
Urban land use and housing tax (Birr)	400	391	403	247	437	738	957	640	900	706
Tax-to-expenditure ratio (%)	2.2	2.1	2.3	3.4	1.9	2.9	5.7	1.6*	9.7	1.5
Number of observations	667	201	466	113	554	662	233	429	83	579

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Female-headed vs. male-headed mean differences are not statistically significant. Tax-to-expenditure ratio for bottom 40% vs top 60% mean difference is statistically significant for 2019.

In 2022, urban land use and housing tax payments differed by region, ranging from 425 Birr in Amhara to 1,019 Birr in Hareri, with the national average being 738 Birr (Table 14). These taxes cost households in Gambela and Amhara only 1.1% of their annual consumption expenditure, although this was as high as 5.9% in Oromia, which is double the national average (2.9%).

TABLE 14
Annual urban land use and housing tax, by region, over time

	2019			2022		
	Urban land use and housing tax (Birr)	Urban tax-to-expenditure ratio (%)	Number of observations	Urban land use and housing tax (Birr)	Urban tax-to-expenditure ratio (%)	Number of observations
Addis Ababa	358	1.6	135	916	1.7	161
Afar	205	1.0	25	678	1.3	23
Amhara	187	1.2	42	425	1.1	41
Benishangul-Gumuz	570	2.8	38	622	1.5	49
Dire Dawa	209	0.9	87	829	2.7	54
Gambela	960	5.8	71	811	1.1	58
Hareri	1,730	4.7	36	1,019	1.5	55
Oromia	457	2.4	84	944	5.9	67
SNNP	462	3.0	79	622	1.8	104
Somali	326	2.7	70	654	2.0	50
National	400	2.2	667	738	2.9	662

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations is unweighted.

Chapter 5
Informal Taxation

Key Findings

- In 2022, over half of households contributed to both informal social security institutions and religious institutions.
- About one-third of households paid taxes towards community development activities and social and political activities.
- The share of households making these informal contributions increased in all categories in 2022 compared to 2019, with those in rural areas having larger shares.

A large proportion of households contribute to the group-based, informal[13] social security institutions that are common in Ethiopia. As can be expected, most households contributed to informal social security institutions, such as IDDIR, in both survey years (47% in 2019 and 54% in 2022) (Table 15). About half of households made contributions to religious institutions; a third, to community development activities such as roads, schools, health, and water development (in-kind and/or cash); and another third to social and political activities, such as the Red Cross and political parties. The proportion of households making informal local contributions in all categories increased between 2019 and 2022. Across the board, more rural than urban households made informal payments in both years, although the rural-urban gap reduced in 2022. This may have important implications for understanding how local resources and services are financed. Nationally in 2022, about 15% of individuals contributed free labor to social and local development activities including the provision of public goods/services such as roads and engaging in other works organized by the local government or institutions.[14] Free labor was also more prevalent in rural areas (16%) than in urban (11%).

TABLE 15
Households and individuals making informal contributions, percent, over time

Purpose of contribution(1)	2019			2022		
	National	Rural	Urban	National	Rural	Urban
Social and political activities(2)	14.9	18.7	6.8	31.2***	33.5***	24.6***
Community development activities	21.7	24.2	16.4	32.4***	33.8*	28.5**
Religious institutions	40.5	43.2	34.7	50.8***	52.6*	45.5*
Informal social security institutions	46.9	51.7	36.9	54.3*	54.7	53.2***
Number of observations (households)	6,094	2,722	3,372	4,959	2,285	2,674
Free labor contribution (individuals)(3)	12.2	13.8	7.9	14.5	15.6	11.0
Number of observations (individuals)	21,045	10,327	10,718	19,020	9,714	9,306

Source: ESPS 2018/19 and 2021/22.

Notes: (1) Informal contributions include both cash and in-kind contributions, unless otherwise stated. (2) Social and political activities to informal state tax that are mandatory and required by local government structures (state actors). (3) Household members aged 7 and up are included in this sample. Estimates are weighted; the number of observations (households or individuals) is unweighted. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

The amount and pattern of informal contributions changed between 2019 and 2022, especially in terms of contributions to informal social security institutions, religious institutions, and social and political activities among male-headed urban households (Table 16). In 2022, male-headed households contributed more than female-headed households to almost all informal institutions and activities considered at the national, rural and urban levels.

[13] Defining informal taxation is difficult. Following Olken and Singhal (2011), the ESPS identified the various informal cash and in-kind labor contributions or 'taxes' that individuals and households make to state and nonstate actors in Ethiopia. For details on this and questions in ESPS, see Appendix A and Box 1 in Appendix A.

[14] Among those who provided free labor in the last 12 months, 98.1% were aged 15 and older in 2022 (96.7% in 2019); but about 0.3% were children aged 7 to 9 (0.6% in 2019). Of these, the majority (78% in 2022 and 75% in 2019) were males.

TABLE 16
Annual informal contributions among payers, by location and gender of head, Birr, over time

	National			Rural			Urban		
	Total	Male-headed	Female-headed	Total	Male-headed	Female-headed	Total	Male-headed	Female-headed
2019									
Social and political activities	70	73	58	63	65	51	113	118	92
Community development activities	238	247	203	211	220	175	322	337	277
Religious institutions	337	361	256	265	281	201	526	591	360
Informal social security institutions	286	282	300	228	234	200	454	449	465
2022									
Social and political activities	518	563	364	350	374	270	1,169	1,307	721
Community development activities	367	375	331	288	291	272	633	671	496
Religious institutions	551	598	383	401	419	335	1,047	1,207	527
Informal social security institutions	583	616	464	468	497	355	918	1,002	697

Source: ESPS 2018/19 and 2021/22.
Notes: Estimates are weighted.

Table 17 provides the amounts of informal contributions and their ratio to household consumption expenditure among those making payments, by their status of consumption expenditure.[15] During both years, the top 60% contributed higher amounts over the 12 months before the survey than the bottom 40%, except for social and political activities, and community development activities in 2019. However, in terms of contribution as a proportion of expenditure, the bottom poor paid a higher share of their annual consumption across the different types of contributions than the rich during the survey years.

[15] Given the relatively small numbers of households contributing to these activities, the analysis here focuses strictly on the amounts paid in order to better understand the extent of payments.

TABLE 17
Annual informal contributions among payers, by consumption expenditure quintile, over time

Type of informal contribution (IC)	Quintile group of consumption expenditure	2019			2022		
		Mean of the IC (Birr)	IC-to-expenditure ratio (%)	Obs.	Mean of the IC (Birr)	IC-to-expenditure ratio (%)	Obs.
Social and political activities	Bottom 40%	65	1.0	176	293	2.1***	253
	Top 60%	74	0.3	336	614	1.4***	804
Community development activities	Bottom 40%	170	2.4	260	239	2.0	306
	Top 60%	277	1.3	642	434	1.0	932
Religious institutions	Bottom 40%	210	3.1	522	335	2.4*	545
	Top 60%	412	1.9	1,430	670	1.6*	1,667
Informal social security institutions	Bottom 40%	196	2.8	564	372	2.5	556
	Top 60%	344	1.7	1,383	710	1.9	1,574

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted; the number of observations (obs.) is unweighted. Distribution is based on spatially adjusted per adult equivalent consumption expenditure. Consumption expenditure averaged 7,078 Birr for the bottom 40% and 25,034 Birr for the top 60% in 2019 which increased to 15,221 Birr and 46,221 Birr in 2022. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively. Except for social and political activities, and community development activities in 2019, the top 60% contributed significantly higher amounts than the bottom 40%; IC-to-expenditure ratios also differ for these groups except for social and political activities in 2022; these test results are not reported for brevity.

Chapter 6
Summary and Concluding Remarks

In many low-income countries like Ethiopia, administrative data and regularly gathered nationally representative household survey data can be combined to analyze the tax burdens experienced by various subpopulations. However, these data are still not readily available. Realizing this challenge, ESPS 2018/19 and 2021/22 collected detailed, disaggregated, longitudinal survey data on the taxation of individuals, households, and their businesses, in addition to the various data LSMS-ISA program surveys collect. Using these data, this report provides descriptive information and analyses on domestic direct taxes and informal tax burdens in Ethiopia.

Depending on the tax type, analyses were made for individuals, households, and their nonfarm enterprises by various classifications (rural-urban, men-women, as well as different income groups). The taxes investigated include personal business income taxes, employment income taxes, rural land use fees and agricultural income taxes, urban land use and housing/property taxes, and informal contributions.

The report and the microeconomic longitudinal survey data that ESPS collected can complement administrative data to better understand the implications of changes in tax policy and administration, both formal and informal. This may include an understanding of how recent tax policy shifts in Ethiopia affect investments by smaller firms and employment in the informal sector, as well as the effects on earnings and community investments. The trend in these effects over time can also be observed.

Appendix A
Overview of the Current Ethiopian Tax System

A discussion on Ethiopia's tax system begins with the 1995 Constitution of the Federal Democratic Republic of Ethiopia (FDRE), which clearly declares that the federal government and the regional states share revenue by considering the federal arrangement. The FDRE Constitution (1995) then classifies taxation powers into three: those assigned exclusively to the federal government, those assigned to the regional states, and those assigned concurrently to both regional governments and the federal government. Table A1 provides a summary of these powers that are extracted from Articles 96–98 of the Constitution. Where powers of taxation are not specifically provided, the Constitution's Article 99 states that a joint session of the two Houses (the House of the Federation and the House of Peoples' Representatives) shall decide by a two-thirds majority vote.

TABLE A1
Taxation powers of the federal government and regional governments in Ethiopia

Federal government levies and collects:	State governments levy and collect:	Both concurrently levy and collect:
• Custom duties, taxes and other charges on imports and exports • Income tax on employees of the federal government and international organizations • Income, profit, sales and excise taxes on enterprises owned by the federal government • Taxes on incomes and winnings from national lottery and games of chance • Taxes on income of air, rail and sea transport services • Taxes on income of houses and properties owned by the federal government • Fees and charges related to licenses issued and services rendered by organs of the federal government • Taxes on monopolies • Federal stamp duties	• Income taxes on employees of the state and of private enterprises • Fees for land usufructuary rights • Incomes of private farmers and farmers incorporated in cooperative associations • Profit and sales taxes on individual traders carrying out a business within their territory; • Income from transport services rendered on waters within their territory • Taxes on income derived from private houses and other properties within the state; and rent on houses and properties they own • Profit, sales, excise and personal income taxes on income of enterprises owned by regional states • Taxes on income derived from mining operations, and royalties and land rentals on such operations • Fees and charges relating to licenses issued and services rendered by state organs • Royalty for use of forest resources.	• Profit, sales, excise and personal income taxes on enterprises they jointly establish • Taxes on the profits and sales of companies and on dividends due to shareholders • Taxes on incomes derived from large-scale mining and all petroleum and gas operations, and royalties on such operation

Source: FDRE Constitution (1995).

Ethiopia's taxation system can generally be classified as domestic direct tax, domestic indirect tax, and trade tax. Given that the focus of the report lies on analyzing tax data from individuals, households and their businesses, an overview of only domestic direct tax policies is presented here.16 The domestic direct income taxation is currently governed by the Federal Income Tax Proclamation No. 979/2016 (FDRE FITP, 2016) and the Federal Income Tax Regulation No. 410/2017 (FDRE FITR, 2017). They classify income into five schedules: Schedule A: income from employment; Schedule B: income from the rental of buildings; Schedule C: income from business activities; Schedule D: other income; and Schedule E: exempt income. Moreover, in line with these federal laws, regional states enforce their own taxation laws including municipal fees as well as rural land use fees and agricultural income tax. The various directives at the federal Ministry of Revenues (MoR) and regional revenue bureaus play roles in the administration of taxes in the country.

EMPLOYMENT INCOME TAX (SCHEDULE A)

According to the Federal Income Tax Proclamation 979/2016, employment income tax (EIT) in Ethiopia is levied each calendar month on the income that the employee receives in that month.[17] For tax purposes, employment income includes an employee's salary, wage, allowance, bonus, commission, gratuity, and any other remuneration in respect of past, current, and future employment; fringe benefits are treated as employment income (FDRE FITP, 2016).

An employee's income tax liability is calculated according to the progressive tax schedule shown in Table A2. Income exceeding 600 Birr per month is subject to tax. The maximum tax rate is 35%, applied on income exceeding 10,900 Birr per month. Pay-As-You-Earn is the most common mechanism for paying EIT. Using the tax rates, employers withhold the income taxes from employee salaries and remit them to the MoR or revenue bureaus on their behalf each month.

TABLE A2
Employment income tax rates in Ethiopia

Employment income per month (Birr)	Applicable income tax rate (%)
0–600	0
601–1,650	10
1,651–3,200	15
3,201–5,250	20
5,251–7,800	25
7,801–10,900	30
Over 10,900	35

Source: Federal Income Tax Proclamation No. 979/2016 (FDRE FITP, 2016).

16 For a detailed review of all tax type policies, recent trends and reforms, see Harris and Seid (2021).

17 An "employee" means an individual engaged, whether on a permanent or temporary basis, to perform services under the direction and control of another person, other than as an independent contractor, and includes a director or other holder and an officer in the management of a body, and government appointees and elected person holding public offices (FDRE FITP, 2016).

RENTAL INCOME TAX (SCHEDULE B)

Urban landlords in Ethiopia are subject to an urban land use fee and rental income tax. Rental income tax is levied annually on a person (or a body/entity) renting out a building and who receives taxable rental income during the year. The taxable rental income is the gross amount of rental income minus a range of allowable expenses. The gross amount of rental income includes: all income derived during the fiscal year under the lease agreement. This includes any lease premium or similar amounts; all payments made by the lessee in accordance with the lease agreement; the amount of any bond, security, or similar amount that the taxpayer is entitled to retain during the fiscal year in the event of any damages; and the cost of renovations or improvements to the building borne by the lessee in addition to the rent payable to the taxpayer. The deductions include: fees and charges paid in respect of the land/building lease and half of the gross rental income as an allowance for repair, maintenance, depreciation, furniture and equipment. For taxpayers with books of records, the deductions also include interest and insurance premiums (FDRE FITP, 2016).

For incorporated bodies/entities, rental income is subject to a flat tax rate of 30%. In contrast, for individuals and unincorporated businesses, the rental tax rates are similar to the ones used for the EIT, except that they are now applied on annual amounts (see Table A3). Rental tax also falls under the taxation power of regional states, so that there may be regional differences.

TABLE A3
Rental income tax rates in Ethiopia

Taxable rental income per year (Birr)	Rental income tax rate (%)
0–7,200	0
7,201–19,800	10
19,801–38,400	15
38,401–63,000	20
63,001–93,600	25
93,601–130,800	30
Over 130,800	35

Source: Federal Income Tax Proclamation No. 979/2016 (FDRE FITP, 2016).

BUSINESS INCOME TAX (SCHEDULE C)

The Ethiopian business income tax system classifies businesses into three categories—A, B, or C—based on annual turnover and whether the business is incorporated.[18] In contrast to Category A and Category B taxpayers, Category C businesses are not required to keep books of accounts because they pay their taxes based on an assessment made by regional revenue bureaus.[19] The annual tax liability for a Category C business is based on its estimated turnover (which is placed into 19 bands) and an assumed profit margin, which varies across sectors (see Harris and Seid (2021) for sector details).

For Category A and B taxpayers, the gross business income for the year is determined in accordance with the taxpayer's profit and loss or income statement. Business income includes the following: the gross amount derived by the taxpayer during the fiscal year from the conduct of a business including gross proceeds from the disposal of trading stocks and gross fees from the provision of services (other than employment income); any gain on the disposal of business assets (other than the disposal of trading stock) made by the taxpayer during the tax year. Deductions from taxable business income include input costs used in deriving, securing and maintaining business income such as labor, materials, rentals; cost of trading stock disposed; depreciation of assets; any losses on business assets (other than trading stock) disposed of during the year; interest payments and charitable donations under certain conditions (FDRE FITP, 2016). Incorporated taxpayers face the same tax rate of 30% of their annual taxable income. Individual businesses or unincorporated enterprises pay income tax using the same rate as in the rental income tax (see Table A4).

TABLE A4
Business income tax rates for individual or unincorporated businesses in Ethiopia

Taxable business income per year (Birr)	Business income tax rate (%)
0–7,200	0
7,201–19,800	10
19,801–38,400	15
38,401–63,000	20
63,001–93,600	25
93,601–130,800	30
Over 130,800	35

Source: Federal Income Tax Proclamation No. 979/2016 (FDRE FITP, 2016).

[18] All corporations belong to Category A regardless of their turnover. If an unincorporated business has an annual turnover exceeding 1 million Birr, it is also classified as Category A. Those with annual turnover between 500,000 Birr and 1 million Birr fall into Category B, while businesses with turnover below 500,000 Birr are classified as Category C (FDRE FITP, 2016; Harris and Seid, 2021). The ESPS does not explicitly ask households whether their businesses are incorporated, but the statistics show most are likely to be in Category C.

[19] Category C taxpayers may pay according to information from their own books of accounts if the respective regional revenue bureau grants them permission to do so.

OTHER DIRECT TAXES (SCHEDULE D)

Other incomes include (with applicable tax rates): royalties (5%), dividends (10%), interest from saving deposits (5%), other interests (10%), income from games of chance (15%), income from casual rentals (15%), and undistributed or repatriated profit (10%) (FDRE FITP, 2016).

EXEMPT INCOMES (SCHEDULE E)

The payments exempted for businesses (employers) and individual employment include: cost of medical expenses of employees covered by the employer; transportation allowances granted under the contract of employment; hardship allowances; allowance for transport costs granted under a contract of employment; travel expenses and a per diem payment (e.g. to cover accommodation and food) for employees traveling as part of their work; and contribution of an employer to pension, provident or other retirement fund for the benefit of an employee (provided that the monthly contribution does not exceed 15% of the monthly employment income of the employee) (FDRE FITP, 2016).

RURAL LAND USE FEES AND AGRICULTURAL INCOME TAX

Farmers in rural Ethiopia are required to pay a rural land use fee and an agricultural income tax. This tax type falls under the tax jurisdiction of each regional state, and the regional rates and schedules vary.[20] The rates are typically determined according to the amount of agricultural land, and in some regions, they also vary between farmers whose land is rain-dependent and those whose land is irrigated. Pastoralists are subject to a livestock income tax according to the number of livestock they own. For a detailed analysis on rural land use fees and agricultural income tax and tax schedules in the various regional states, see Komatsu et al. (2021).

[20] In Oromia region, for example, the annual land use fee and agricultural income tax depend on the area of the land. Rain-dependent farmers with one to two hectares pay a total of 65 Birr; 30 Birr for the rural land use fee and 35 Birr for income tax (Proclamation No. 131/2007 of the Oromia Regional State). A pastoralist in Oromia region with 75 to 100 livestock would pay an annual income tax of 60 Birr.

Appendix B
Survey Design

The Ethiopia Socioeconomic Panel Survey (ESPS) is a multi-topic household survey with several modules that collect socioeconomic and demographic information from individuals, households, and communities. ESPS 2021/22 is a follow-up survey of a new panel of a nationally representative sample of households that started in 2018/19. ESPS 2018/19 was sampled from the 2018 pre-census cartographic database of enumeration areas (EAs). The sample is also representative of regions, as well as of rural and urban areas. A two-stage probability sampling procedure was used to select households. The first stage selected the primary sampling units, the EAs. Based on probability proportional to the total number of EAs in each region, 535 EAs were selected – 316 rural and 219 urban. The second stage of sampling was to select households from each EA. For rural EAs, 10 to 12 households were sampled from each EA. Of these, 10 were randomly selected from a fresh list of agricultural households (those engaged in agriculture or livestock activity). Two more households in the same EA were randomly selected from all households not engaged in agriculture or livestock activities, if there were any such households. If there were none, or if there was only one, the total sample might be 10 or 11. In urban areas, 15 households were selected from the list for each EA. The total sample in 2018/19 was 6,770 households (28,719 individuals). In the 2021/22 follow-up survey, a total of 4,959 households and 22,688 individuals were interviewed.[21]

Table B1 presents statistics on the shares of men and women, aged 18 and older, working in different sectors and who are self-employed or wage-earners. In the seven days prior to the survey, a large share of workers reported to be self-employed. This is particularly the case within the agricultural sector in rural areas (70% for men and 42% for women in 2022, though the participation decreased from what it was in 2019). In urban areas, the majority of jobs come from wage employment (28% for men and 14% for women) and non-farm enterprise self-employment (18% for men and 17% for women). These proportions slightly increase when the annual labor market participation is considered. Among wage earners, cash receipts remain the dominant means of getting remuneration and this decreased between 2019 and 2022 nationally and for urban men in real terms.[22] Yet, in-kind payments also account for about a third to half of cash payments, with higher proportions in rural areas.

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[21] In 2021/22, the survey was not implemented in the Tigray region. To ensure comparability over time, the analysis in this report excludes the 2018/19 subsample from Tigray, thereby reducing the national sample to 6,094 households and 26,026 individuals.

[22] The 2022 earning values are converted to real values using mid-year (June) national consumer price indices of 2019 and 2022 from ESS.

TABLE B1
Labor market participation and earnings, individuals 18 years and older, over time

	2019						2022					
	National		Rural		Urban		National		Rural		Urban	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Participation in the last 7 days in:												
Any agricultural activity (self-employed) (%)	61	38	82	53	14	8	56*	34	70***	42**	14	10
Non-farm enterprise (self-employed) (%)	9	9	5	5	19	16	8	8	5	5	18	17
Wage employment (%)	10	5	3	1	26	13	10	4	4	1	28	14
Participation in the last 12 months:												
Non-farm enterprise (self-employed) (%)	13	6	4	1	33	16	12	6	6	2	32	16
Wage employment (%)	15	7	6	2	36	17	14	6	7	3	33	17
Among wage earners:												
Annual hours	1,361	1,490	762	807	1,589	1,638	1,383	1,208*	904	576	1,685	1,516
Average annual cash earnings (Birr)	35,723	25,234	17,175	15,256	42,778	27,398	24,353***	18,081*	13,730	9,991	31,048***	22,038
Average annual in-kind earnings (Birr)	11,181	8,644	5,189	11,915	13,107	7,797	12,077	6,436	12,569	5,293	11,882	6,770
Observations	6,302	7,124	2,870	3,061	3,432	4,063	5,780	6,535	2,821	2,948	2,959	3,587

Source: ESPS 2018/19 and 2021/22.

Notes: Estimates are weighted using household sampling weights; the number of observations is unweighted. Data come from the individual labor module of the ESPS. Only self-reporting individuals aged 18 and older are included. Earnings are reported from respondents' main wage employment; earnings of 2022 are in 2019 prices. For rural women, there were many missing observations in wage earnings, so average earnings are likely driven by outliers. *, ** and *** denote statistical significance for mean separation test for 2022 values from 2019 values at 0.1, 0.05 and 0.01 levels respectively.

Appendix C
Tax-related questions in the ESPS

ESPS 2018/19 and 2021/22 contain several questions on tax payments as well as cash and in-kind contributions. These include questions about formal and informal taxes levied on individuals and households, and questions about taxes levied directly on nonfarm and agricultural enterprises. This is besides the detailed self-reported individual data on basic demographics: education; health; labor and time use; household consumption; and asset ownership. Both ESPS rounds gather thorough information on wages, salaries, and casual incomes of individuals. They also collect information on additional household incomes, barriers to starting and expanding NFEs, and geospatial information on the locations of homes and community facilities. These enable an in-depth comprehension of the distribution of tax payments by sex, industry, wealth category, and area.

Box 1 presents tax-related questions in the ESPS 2018/19 and 2021/22. Many individuals and households in Ethiopia interact with both formal (local or federal) and informal taxation systems. The definition of informal taxation is more complex, however, and has been the subject of considerable debate (see, for example, Prud'Homme 1992; Olken and Singhal 2011; Khan et al. 2016; Van den Boogaard 2018; Walker 2018). Drawing on the work of Olken and Singhal (2011), the ESPS team also refined some previous questions to enable researchers and policymakers to better understand and distinguish between the various informal cash and in-kind labor contributions that individuals and households make to state and nonstate actors.

The series of questions on self-reported payments included in the ESPS can be categorized as follows:

- Local formal taxes: Questions about the taxation of small NFEs, livestock, agricultural land, and urban residential property that are collected by regional states, municipalities and districts.
- Informal taxes: Questions about individual and community cash and labor contributions to community development activities which are organized by local public officials.
- Other informal contributions within the community: Questions about cash contributions to religious institutions and social insurance mechanisms, which can be distinguished from informal taxes.

The ESPS collects detailed information on income earned by wage-earners and salaried workers; tax paid on this income can be estimated using the rate schedule in the income tax laws. In an effort to better understand when such employment is formal and likely to be subject to taxation, the survey includes a question about whether the arrangement between employer and employee is governed by a written contract. For completeness, the ESPS also has several questions to elicit information on taxes paid on other sources of individual income, such as pensions and

investments, rental income, and revenues from the sale of assets, although the proportion of respondents paying these forms of taxation is likely to be negligible.[23]

The responses to these questions will give researchers and policymakers a more detailed understanding of the prevalence and magnitude of local and informal taxes, as well as a more comprehensive picture of the overall tax burden faced by individuals and households.

BOX 1. **QUESTIONS RELATED TO TAXATION, THE ESPS 2018/19 AND 2021/22**

1. Individual labor and time use

- **a.** At any time over the last 12 months, was [NAME] employed in any kind of job, including part-time labor, for wage, salary, commission, or any payment in kind, for anyone who is not a member of the household?
- **b.** Who is the employer in [NAME]'s main wage job?
- **c.** Does [NAME] have a written contract with [NAME]'s employer?
- **d.** How much was [NAME] 's last payment for wages/salary? (gross salary)
- **e.** How much does [NAME] usually receive in allowances or gratuities, including in-kind payments such as uniform, housing, food, and transport, that were not included in the salary just reported?

2. Nonfarm enterprises (NFEs)

- **a.** Over the past 12 months has anyone in this household… (i) owned/provided a non-agricultural business/service from home or shop, including carwash owner, metal worker, mechanic, carpenter, tailor, barber, etc.; (ii) processed and sold any agricultural by-products, including flour, local beer ('tella'), 'areke', 'injera', seed, etc., but excluding livestock by-products, fresh/processed fish; (iii) owned a trading business on a street or in a market; (iv) offered any service or sold anything on a street or in a market, including firewood, home-made charcoal, construction timber, wood poles, traditional medicine, mats, bricks, cane furniture, weave baskets, thatch grass etc.; (v) owned a professional office or offered professional services from home as a doctor, accountant, lawyer, translator, private tutor, midwife, mason, etc.; (vi) driven a household-owned taxi or pick-up truck to provide transportation or moving services; (vii) owned a bar or restaurant; (viii) owned any other non-agricultural business, even if it is a small business run from home or on a street.
- **b.** Is your business registered and does it have a license (work permit)?
- **c.** Over the last 12 months, how much was paid in total for licenses associated with this enterprise? (Includes renewal or to get a new license).
- **d.** Over the last 12 months, was any tax paid on the enterprise's profits through the income tax? If so, how much tax was paid?
- **e.** Over the last 12 months, was any other type of enterprise tax paid, including municipality fees/taxes? If so, how much tax was paid

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[23] For example, in 2018/19, less than 20 respondents paid taxes on most income sources, fewer than 100 on rental income, and fewer than 50 on income from sales of agricultural assets.

3. Other income
   During the last 12 months, was any tax paid on the following sources of income? If so, how much tax was paid?
   a. **Pension and Investment Income:** Interest or other Investment Income; Pension Income
   b. **Rental Income:** Income from shop/store/ house/ rental/ car, truck, other vehicle rental (not NFE); Income from land rental; Income from renting agricultural tools; Income from renting transport animals
   c. **Revenue from Sales of Assets:** Income from real estate sales; Income from household nonagricultural asset sales; Income from household agricultural/fishing asset sales; Income from the sale of other assets (business sales, investment share sales)
   d. **Other Income:** (for example, inheritance/lottery)

4. Rural land use and agricultural taxes
   a. During the last 12 months, did you or any member of your household pay any rural land use fee or agricultural income tax? If so, how much did your household pay in total?
   b. During the last 12 months, did you or any member of your household pay any tax on your livestock? If so, how much did your household pay in total?

5. Urban land use and housing/property taxes
   a. During the last 12 months, did you or any member of your household pay any land use fee and housing tax?

6. Informal taxation and other informal contributions at the community level
   Over the past 12 months, did your household purchase or pay for any of the following:
   a. Household contributions to informal social security institutions (such as IDDIR)
   b. Donations to religious institutions
   c. Contributions to community development activities (road, school, health, water, etc. developments)
   d. Contributions to social and political activities (Red Cross, sport, political parties…)
   e. At any time over the last 12 months, did [NAME] participate in free labor contribution to social and local development activities (such as building public services, roads, and other local works organized by local government or institutions) for nothing in return?
   f. Community-level data: What was or will be the total amount of money contributed by community members for different community/public works projects?

Appendix D
The Imputation Method of Computing Employment Income Tax

Data from household surveys or administrative sources can facilitate the direct identification of tax burdens of individuals, households, and businesses. When such micro-level data are not available, indirect methods, such as simulation or imputation approaches, can be used to draw information from tax bases, socioeconomic characteristics, and relevant tax laws to shed light on the amounts paid and the distributional effects of the various tax policies (Lustig 2019; Grown and Valodia 2010; Lustig, Pessino, and Scott 2014; Harris et al. 2018; Bachas et al. 2020). Given the difficulty of directly collecting individual-level employment income tax (EIT), the report uses an 'imputation method' to estimate EIT, applying official tax rates on taxable employment income. For other tax types than employment income tax, the information that is directly reported is used.

Unlike other tax types, information on employment income tax is difficult to collect directly. Hence, it is estimated based on individuals directly reporting on their main wage or salaried job in the ESPS over the 12 months prior to the survey. The survey collected data on individuals' last gross payment for wage, salary, allowances, and gratuities before any deductions.[24] Respondents reported their income at various frequencies (weekly, biweekly, monthly, and annually), depending on their work arrangements.

Official tax rates are used to estimate an individual's employment income tax payments. This "imputation method" pursues the following steps. First, the earnings data were aggregated to total annual employment income and then converted to a monthly amount.[25] Next, the employment income tax is computed from the estimated monthly chargeable income using official tax rates for those earning more than the 600 Birr per month threshold for paying taxes.[26] Finally, the monthly tax value is aggregated to obtain the annual employment income tax. This imputation procedure assumes, however, that all eligible taxpayers are in fact paying taxes, which may not necessarily be the case.

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[24] During pre-survey questionnaire testing, nearly all respondents knew whether they were receiving gross or net income. However, to minimize the risk of respondents not knowing whether deductions have been taken, the questionnaire has been designed to carefully elicit gross income, and survey administrators also received training to ensure that they collect gross wage information from respondents.

[25] The annual income computation process controlled for outliers of 3% of the right tail and 2% of the left by region.

[26] The tax estimate accounts for both progressivity and taxing different components of employees' income at different rates.

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