



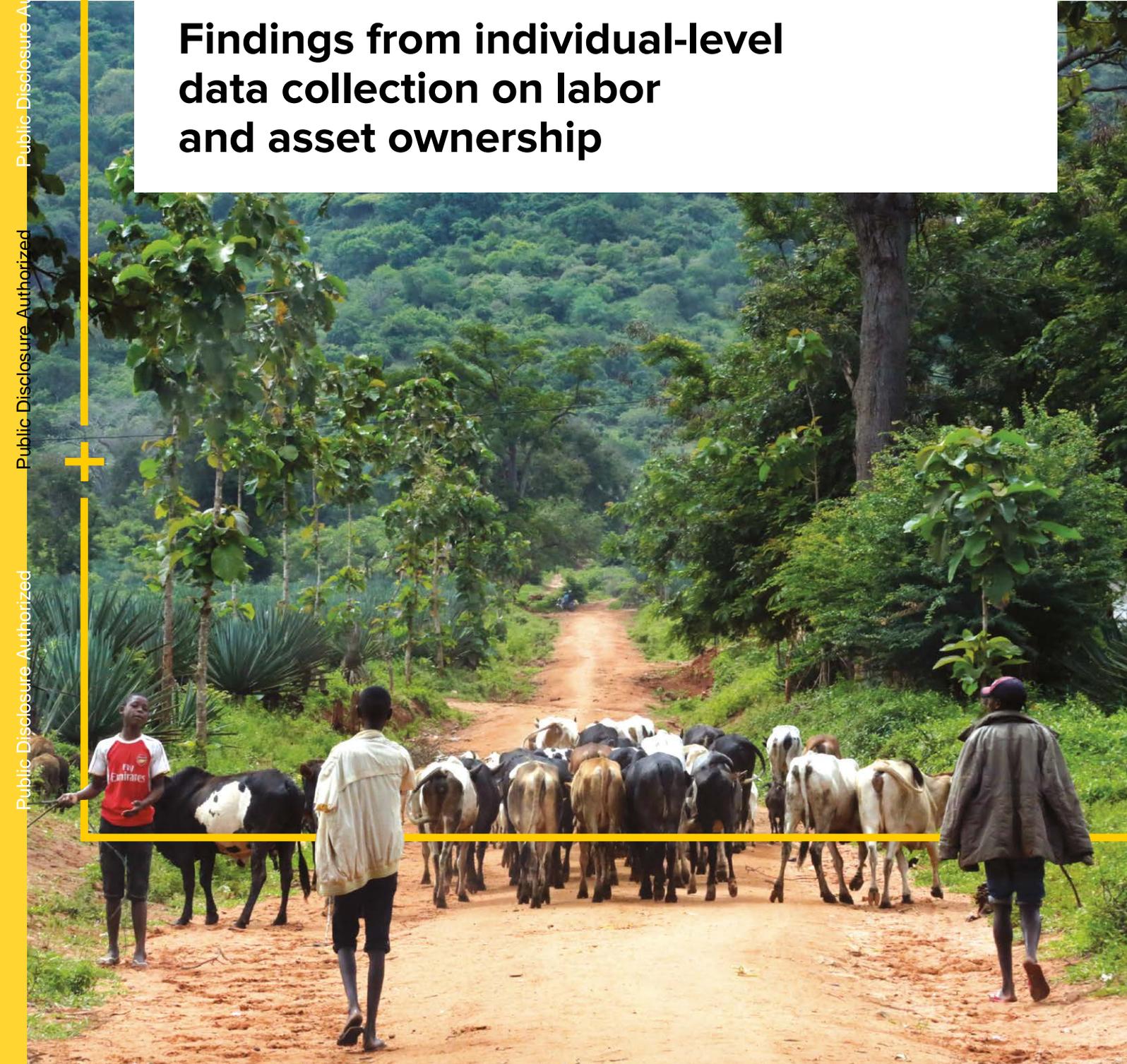
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Development Economics • Data

LSMS+ Program in Sub-Saharan Africa

Findings from individual-level
data collection on labor
and asset ownership





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LSMS+ Program in Sub-Saharan Africa

Findings from individual-level data collection on labor and asset ownership

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Executive Summary

Monitoring progress towards several targets of the Sustainable Development Goals (SDGs), across poverty reduction, agriculture, gender, employment, and inequality, require sex-disaggregated data on asset ownership, labor, time use, and roles in family enterprises. Expanding survey data collection on these topics is a priority for the World Bank, as expressed through the World Bank's Household Survey Strategy, Gender Strategy, and the 18th replenishment of the International Development Association (IDA18), which committed to launch pilot data collection in at least six IDA countries to **“gather direct respondent, intra-household level information on employment and assets.”**¹

¹ International Development Association (IDA), 2016. *IDA18 Special Theme: Gender and Development*. World Bank.



Against this background, the **World Bank Living Standards Measurement Study-Plus (LSMS+)** program was established in 2016 to support survey data production and methodological research activities – to improve the availability and quality of individual-disaggregated survey data in low- and middle-income countries on key dimensions of men’s and women’s economic opportunities and welfare. The LSMS+ is part of the **Living Standards Measurement Study (LSMS)**, which over the last four decades, has provided technical assistance to national statistical offices globally on designing and implementing high-quality, multi-topic household surveys. These surveys have been used extensively in policy making and research on a wide range of topics, including poverty, consumption and income inequality, employment, non-farm enterprises, agriculture, education, and health, among others.

In its current phase, the LSMS+ has built on the multi-topic survey questionnaire design that was pioneered by the LSMS and has been supporting national statistical offices in select IDA countries in operationalizing the latest international recommendations for individual-disaggregated survey data collection on asset ownership and labor. The latter involves administration of individual-level survey modules that are administered in private to household members age 18 and older and that focus on work and employment, non-farm enterprises, and ownership of and rights to selected physical and financial assets, including, at a minimum, dwelling and non-dwelling land, financial assets and mobile phones. **The approach of surveying multiple individuals per household captures intra-household dynamics in labor and economic decision-making – the understanding of which is critical for designing policy around improving economic opportunities, particularly for women.** Besides data production, the LSMS+ also supports methodological survey research activities to improve the foundations of individual-disaggregated data collection in household surveys.



In Sub-Saharan Africa, between 2016-2020, the LSMS+ program supported individual-level data collection in line with the aforementioned principles as part of Malawi Integrated Household Panel Survey (IHPS) 2016, Tanzania National Panel Survey (NPS5) 2019-20 and Ethiopia Socioeconomic Survey (ESS4) 2018-19 - all of which have been supported by the LSMS-Integrated Surveys on Agriculture Initiative (LSMS-ISA) since 2008.

This report presents the results from the analysis of the data from these surveys, with a focus on differences across men and women in labor market outcomes and asset ownership and rights. The report also highlights important areas of analysis that can be further explored with these surveys.

This report is targeted towards several audiences interested in the relevance of individual-level, self-reported data collection on highlighting economic constraints and opportunities for men and women. This includes national statistical offices (NSOs) interested in adopting LSMS+ recommendations on individual-disaggregated survey data collection on asset ownership and labor market outcomes, as well as data users across researchers and policymakers who are interested in the findings on gender inequalities that emerge from more granular data collection. Relevant for country NSOs and survey practitioners as well, a companion report, *LSMS+ Program Overview and recommendations for improving individual-disaggregated data on asset ownership and labor outcomes*, provides a more detailed overview of the LSMS+ program, including guidance and details on implementation for LSMS+ supported modules.

Key findings

regarding labor and asset ownership and rights to assets include:

Labor

+

Gender gaps in labor market outcomes can be better understood with multiple individuals reporting within households, as opposed to the standard survey practice that allow for proxy respondents reporting on behalf of other household members. The data from Ethiopia, Malawi and Tanzania reveal significant gender gaps across different areas of employment. Comparisons by Kilic et al. (2020a)² of the Malawi IHPS/LSMS+ and the concurrently-conducted Fourth Integrated Household Survey (IHS4), show that the IHS4 leads to significantly lower reporting of employment across a range of wage and self-employment activities, with stronger effects for women and for a longer (12-month) recall period.

+

Regarding non-market work, the LSMS+ supported surveys reveal greater time spent in particular by women, but also by men, for water and fuel collection in comparison to other national surveys conducted in these countries under the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) program.

² Kilic, Talip, Goedele Van den Broeck, Gayatri Koolwal, and Heather Moylan. 2020. "Are You Being Asked? Impacts of Respondent Selection on Measuring Employment." World Bank Policy Research Working Paper 9152.

Asset ownership and rights

+

The findings from Malawi, Tanzania, and Ethiopia highlight the importance of separately eliciting information on these constructs and identifying exclusive versus joint ownership.

- For example, even when respondents report exclusive ownership of land, **economic ownership and decision-making over the proceeds from hypothetical land sales is more likely to be joint or distributed across multiple household members.**
- There are significant gender differences in land ownership and rights. **In Tanzania, women are significantly less likely than men to exclusively own dwelling land.** And while a greater share of women are likely to exclusively own dwelling and non-dwelling land in Malawi, as well as dwelling land in Ethiopia, **women are significantly less likely than men among landowners to have rights to sell and bequeath.**
- Across countries, **the individual interview approach also reveals substantial intra-household agreement over ownership and rights constructs.**

+

In Ethiopia, an additional module on large livestock ownership also revealed significant gender differences, particularly in rural areas (**about 58 percent of rural women reported owning large livestock, compared to 64 percent of rural men**). Livestock ownership in rural areas was also more likely to be joint.

+

On mobile phones and financial accounts, ownership tends to be mainly exclusive as opposed to joint. Greater shares of respondents across countries do own a mobile phone, although they are mostly concentrated in urban areas, and men are also significantly more likely than women to own one. Gender disparities in mobile phone ownership also widen in rural areas.

+

When comparing with other national surveys conducted in the countries, **the individual-level interview approach in LSMS+ supported surveys is associated with a higher share of households reporting financial account ownership across all countries, and mobile phone ownership in rural areas for Tanzania and Malawi.**



Section 1

Introduction and LSMS+ overview

- 1. How can we better capture men's and women's economic opportunities in surveys?**
- 2. The LSMS+ Program: addressing key data gaps, and prioritizing individual interviews**
- 3. LSMS+ implementation in SSA (2016-2020)**
 - 3.1 Share of eligible respondents interviewed for modules on asset ownership
 - 3.2 Extent of self-reporting in modules on education, health, and labor
 - 3.3 Additional time spent in the field
- 4. Respondent characteristics across surveys supported by LSMS+ versus LSMS-ISA**

Section 1 / Summary

1.

How can we better capture men's and women's economic opportunities in surveys?

An improved understanding of men's and women's economic opportunities, through within-household, self-reported, individual-level data, is instrumental for the accurate targeting and design of economic policies — including the expansion of financial services, land reforms, as well as social protection policies aimed at reducing longstanding economic inequalities between men and women. Understanding the within-household distribution of labor, as well as the ownership and rights of different assets such as land, financial accounts and mobile phones, is key for understanding how households make collective decisions in responding to policy interventions.

Nationally representative, multi-topic household surveys, while well positioned to examine socioeconomic and demographic factors associated with economic outcomes, tend to use standard survey approaches that often mask true outcomes for men and women, as well as intra-household differences. This includes the use of proxy reporting, as well as interviewing respondents in non-private settings as opposed to one-on-one, which — especially in lower-income and more traditional contexts, as well as areas where work is more seasonal — can lead to the under- or misreporting of key economic roles among household members, including women. Land ownership may also not necessarily equate to rights over land, and these distinctions can be obscured when individuals do not report for themselves.

International momentum has built around improving individual-level survey data collection to better highlight economic opportunities and constraints for men and women. Several targets of the Sustainable Development Goals (SDGs), across poverty reduction, agriculture, gender, employment, and inequality, also hinge on improved sex-disaggregated data across asset ownership, labor, and time use, as well as roles in family enterprises (**Annex 1**). Following this momentum, the World Bank **Living Standards Measurement Study-Plus (LSMS+)** program was established in 2016 to enhance the availability and quality of individual-disaggregated survey data collected in low- and middle-income countries on key dimensions of men's and women's economic opportunities and welfare.³

³ For more information on LSMS+, please visit: <https://www.worldbank.org/lsmplus>. LSMS+ has been established with grants from the Umbrella Facility for Gender Equality Trust Fund, the World Bank Trust Fund for Statistical Capacity Building, and the International Fund for Agricultural Development, and is implemented by the World Bank Living Standards Measurement Study (LSMS) Team, in collaboration with the World Bank Gender Group and partner national statistical offices. The program leveraged existing World Bank partnerships with (1) United Nations Evidence and Data for Gender Equality (EDGE) Project on methodological experimentation and international guidelines on measuring asset ownership and control from a gender perspective, and (2) the ILO, FAO, the Data2X Project and the Hewlett Foundation on methodological experimentation for operationalizing the 19th ICLS definitions of work and employment, with a focus on subsistence agriculture.



2.

The LSMS+ Program: addressing key data gaps, and prioritizing individual interviews

Over the last decade, national statistical offices (NSOs) in Ethiopia, Malawi and Tanzania have been receiving financial and technical assistance through the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) initiative for the design and implementation of multi-topic, nationally-representative, longitudinal household surveys and for testing and adopting methodological innovations in survey data collection.

Individual disaggregated data help reveal economic inequalities among men and women

The LSMS+ program is the latest in this series of collaborations with the Central Statistical Agency of Ethiopia, Malawi National Statistical Office and Tanzania National Bureau of Statistics on improving the quality of data collection in multi-topic surveys. Within these countries, LSMS+ supported individual-level data collection as part of Malawi Integrated Household Panel Survey (IHPS) 2016, Tanzania National Panel Survey (NPS5) 2019-20 and Ethiopia Socioeconomic Survey (ESS4) 2018-19 - all of which have been supported by the LSMS-Integrated Surveys on Agriculture Initiative (LSMS-ISA) since 2008.

Box 1.1 presents the overview of LSMS+ supported data collection in these three countries. Additional nationally representative surveys that have been or are being supported by the LSMS+ include the Cambodia Socio-Economic Survey 2019-20 and Sudan Labor Market Panel Survey 2021. The findings from Cambodia are also available in a companion report, *LSMS+ Program in Cambodia: Findings from individual-level data collection on labor and asset ownership*. In its current phase, LSMS+ has been supporting the implementation of individual-level survey modules (i.e. the individual questionnaire) that is administered to adult household members in private to elicit information on work and employment, non-farm enterprises, and ownership of and rights to selected physical and financial assets, including, at a minimum, land, dwelling, financial assets and mobile phones. Any pre-existing individual-level survey modules on other topics, such as education and health, are also integrated into the individual questionnaire that is administered in each country. Respondents are considered eligible for the LSMS+ individual

interviews if they were 18 years and above.⁴ Along with a focus on self-reporting, LSMS+ supported surveys have worked towards **(i) conducting individual interviews in private**, and if possible **simultaneously across different household members**, and **(ii) ensuring as much as possible a gender match between the interviewers and the respondents** (see Kilic and Moylan, 2016, for more details about the approach).⁵ In each country, the LSMS+ has financed the survey implementation costs for collecting additional information from individuals that receive the new modules. The program has also provided direct technical assistance to the NSOs to ensure proper integration and successful implementation of the improved survey methods.

⁴ In case the head of household or his/her spouse is less than 18 years of age, these individuals are still considered interview targets.

⁵ Talip Kilic and Heather Moylan. 2016. *Methodological experiment on measuring asset ownership from a gender perspective (MEXA): technical report*. World Bank.

Box 1.1 LSMS+ supported national surveys in Sub-Saharan Africa

| | Malawi | Tanzania | Ethiopia |
|---|---|--|--|
| Survey | 2016 Integrated Household Panel Survey | 2019-20 Tanzania National Panel Survey | 2018-19 Ethiopia Socioeconomic Survey (ESS 4) |
| Implementing agency¹ | Malawi National Statistical Office | Tanzania National Bureau of Statistics | Ethiopia Central Statistical Agency |
| Sample size for individual interviews supported by LSMS+ | 2,508 households that had been previously interviewed in 2013 and 2010 | 1,184 households that had been previously interviewed by the NPS in 2008-09, 2010-11, 2012-13, and 2014-15 | 6,770 households |
| Fieldwork period | April 2016-Jan 2017 | Jan 2019-Jan 2020 | Sep 2018-Aug 2019 ² |
| Asset classes covered in LSMS+ individual questionnaire | Dwelling and non-dwelling land (ownership and rights); mobile phones and financial accounts (ownership) | Dwelling and non-dwelling land (ownership and rights); mobile phones and financial accounts (ownership) | Dwelling and non-dwelling land (ownership and rights); livestock; mobile phones and financial accounts (ownership) |
| Additional modules in LSMS+ individual questionnaire | Labor, education, health, food insecurity | Labor, education, health | Labor, education, health |

¹ Surveys also received technical and financial support from LSMS-ISA and LSMS+; and using the World Bank *Survey Solutions* Computer-Assisted Personal Interviewing (CAPI) platform. All surveys, as well as the sample size for individual interviews supported by LSMS+, are nationally representative.

² For the ESS 4, the household questionnaire (which included the LSMS+ modules) was implemented between June-August 2019. The agricultural questionnaire, which is separate from the LSMS+ modules, was implemented in rural areas from September 2018-March 2019.

3.

LSMS+ implementation in SSA (2016-2020)

3.1. Share of eligible respondents interviewed for modules on asset ownership

The asset modules in the surveys that have been supported by the LSMS+ in Malawi, Ethiopia and Tanzania covered ownership and rights of dwelling and non-dwelling (primarily agricultural) land; mobile phones; and financial accounts. In Ethiopia, ownership of livestock was also covered. The assets modules were self-reported, although there was some non-response among eligible individuals, as discussed below. The last section of this report discusses the assets questions and outcomes across countries in detail.

At the individual-level, **Tables 1.1a** and **1.1b** present the share of eligible respondents that were successfully interviewed in the assets modules — by comparing interviews conducted in these modules, where there was full self-reporting, with the eligible respondent sample in the roster. In Malawi, because the number of adult interviews was capped at four, the number of eligible respondents in this table includes the household head and/or spouse when available, as well as additional adult (age 18 and older) respondents up to four per household.



All respondents self-reported in the LSMS+ assets modules

Table 1.1a shows that among households with non-dwelling land, 94.7 percent of respondents in Ethiopia were interviewed; these shares were 78.5 percent in Tanzania and 82.9 percent in Malawi. The interview rates were somewhat higher for dwelling land across countries. **Table 1.1b** also shows that in Ethiopia, 95.8 percent of eligible respondents were interviewed in the mobile phone module; these shares were 80.2 percent in Tanzania and 82.4 percent in the Malawi IHPS.

Overall, urban-rural differences in interview rates were not very large, but there were substantial gender differences — particularly in Tanzania and Malawi, where eligible women respondents were much more likely to be available for interviews than eligible men.

Table 1.1a Share of eligible respondents interviewed in LSMS+ asset modules¹

| | Malawi IHPS 2016 | | | Tanzania NPS5 2019-20 | | | Ethiopia ESS4 2018-19 | | |
|---|------------------|-------|-------|-----------------------|-------|-------|-----------------------|-------|-------|
| | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| (1) Among HH with non-dwelling land: | | | | | | | | | |
| Number of eligible individuals | | | | | | | | | |
| Total | 3,450 | 1,562 | 1,888 | 1,661 | 795 | 866 | 5,417 | 2,701 | 2,716 |
| Rural | 2,988 | 1,335 | 1,653 | 1,255 | 599 | 656 | 4,211 | 2,128 | 2,083 |
| Urban | 462 | 227 | 235 | 406 | 196 | 210 | 1,206 | 573 | 633 |
| Share responding: | | | | | | | | | |
| Total | 82.9 | 77.0 | 87.8 | 78.5 | 75.0 | 81.6 | 94.7 | 94.5 | 95.0 |
| Rural | 83.9 | 77.5 | 89.0 | 78.2 | 74.0 | 82.0 | 93.2 | 93.0 | 93.5 |
| Urban | 76.6 | 74.0 | 79.2 | 79.3 | 78.1 | 80.5 | 100.0 | 100.0 | 100.0 |
| (2) Among HH with dwelling land: | | | | | | | | | |
| Number of eligible individuals | | | | | | | | | |
| Total | 4,719 | 2,173 | 2,546 | 2,676 | 1,246 | 1,430 | 14,535 | 6,831 | 7,704 |
| Rural | 3,436 | 1,543 | 1,893 | 1,681 | 777 | 904 | 6,805 | 3,318 | 3,487 |
| Urban | 1,283 | 630 | 653 | 995 | 469 | 526 | 7,730 | 3,513 | 4,217 |
| Share responding: | | | | | | | | | |
| Total | 83.3 | 77.5 | 88.4 | 80.3 | 76.5 | 83.6 | 97.0 | 96.4 | 97.6 |
| Rural | 83.8 | 77.5 | 89.1 | 79.7 | 74.8 | 84.0 | 93.6 | 92.6 | 94.6 |
| Urban | 82.1 | 77.5 | 86.5 | 81.3 | 79.3 | 83.1 | 100.0 | 100.0 | 100.0 |

Table 1.1b Share of eligible respondents interviewed in LSMS+ asset modules¹

| | Malawi IHPS 2016 | | | Tanzania NPS5 2019-20 | | | Ethiopia ESS4 2018-19 | | |
|--|------------------|-------|-------|-----------------------|-------|-------|-----------------------|-------|-------|
| | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| Number of eligible individuals | | | | | | | | | |
| Total | 4,774 | 2,196 | 2,578 | 2,989 | 1,407 | 1,582 | 15,388 | 7,235 | 8,153 |
| Rural | 3,458 | 1,550 | 1,908 | 1,789 | 833 | 956 | 7,315 | 3,560 | 3,755 |
| Urban | 1,316 | 646 | 670 | 1,200 | 574 | 626 | 8,073 | 3,675 | 4,398 |
| Share of eligible respondents interviewed across modules: | | | | | | | | | |
| (1) Assets: mobile phone ownership: | | | | | | | | | |
| Total | 82.4 | 76.7 | 87.3 | 80.2 | 76.1 | 83.9 | 95.8 | 95.4 | 96.2 |
| Rural | 83.3 | 77.2 | 88.3 | 79.2 | 74.1 | 83.6 | 92.4 | 91.7 | 93.1 |
| Urban | 80.1 | 75.7 | 84.3 | 81.8 | 78.9 | 84.5 | 98.9 | 98.9 | 98.9 |
| (2) Assets: financial account ownership: | | | | | | | | | |
| Total | 82.4 | 76.7 | 87.3 | * | * | * | 96.9 | 96.2 | 97.4 |
| Rural | 83.3 | 77.2 | 88.3 | * | * | * | 93.4 | 92.4 | 94.4 |
| Urban | 80.1 | 75.7 | 84.3 | * | * | * | 100.0 | 100.0 | 100.0 |

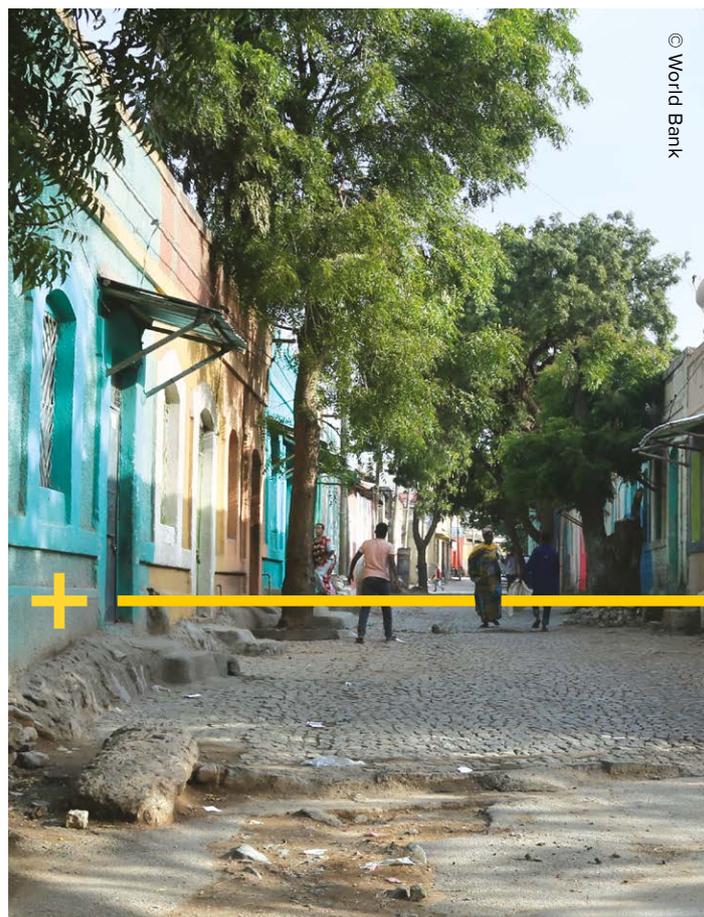
¹ For each country, the number of eligible adults from the roster (those 18 years and older, and the household head or spouse) was compared with the interviews conducted in the assets modules. In Malawi, because the number of adult interviews was capped at four, the number of eligible respondents in this table includes the household head and/or spouse when available, as well as additional adult (age 18 and older) respondents up to four per household.

² For the mobile phones module in Ethiopia, there were 120 respondents who refused to answer, and in this table were not counted as interviewed.

³ Within each of the assets modules, all respondents self-reported.

* In Tanzania, the financial accounts data file only includes details on those reporting owning a financial account. As a result, the share of eligible respondents who were interviewed cannot be constructed for this table, since eligible respondents who were interviewed but self-reported that they did not own an account are not identifiable. Given the trends in Malawi and Ethiopia, however, the share of eligible respondents reporting for this module are likely to be similar to the mobile phone module.

Focusing on the mobile phone module, at the household level, 98.7 percent of the 2,508 Malawi IHPS households completed at least one individual interview⁶; these shares were 99.8 percent for the Tanzania NPS 5 and 99.4 percent for the Ethiopia ESS4. **Table 1.2** shows the within-household interview success rate, breaking down the number of eligible adults versus the number of individual interviews completed, across countries. Across all households, regardless of the number of adults, 60 percent of the 4 randomly selected eligible adults per household were successfully interviewed in Malawi, 69 percent of all eligible adults in Tanzania, and 94 percent of all eligible adults in Ethiopia. The remaining share of households had more than one adult but failed to interview at least one of them, mostly concentrated in two-person households where only one was successfully interviewed, or where two out of three eligible adults were interviewed.



⁶ For the remaining 1.3 percent of households, the reasons for non-completion included (i) refusal due to the already lengthy household interview that had been completed; (ii) refusal due to the request to conduct the interviews in private, and (iii) loss of individual questionnaires due to Android tablet malfunction.

Table 1.2 Distribution of LSMS+ households, by the number of adults interviewed in assets module¹

| | Malawi IHPS 2016 | | Tanzania NPS5 2019-20 | | Ethiopia ESS4 2018-19 | |
|--|------------------|------------|-----------------------|------------|-----------------------|------------|
| | Total | % | Total | % | Total | % |
| Households Interviewed | 2,476 | | 1,182 | | 6,727 | |
| All Eligible Adults Interviewed | 1,495 | 60% | 812 | 69% | 6,325 | 94% |
| 4 or more adults | 115 | 5% | 88 | 7% | 672 | 10% |
| 3 adults | 209 | 8% | 80 | 7% | 979 | 15% |
| 2 adults | 872 | 35% | 441 | 37% | 3,340 | 50% |
| 1 adult | 299 | 12% | 203 | 17% | 1,334 | 20% |
| Subset of Eligible Adults Interviewed | 981 | 40% | 370 | 31% | 402 | 6% |
| 3 out of 4 | 124 | 5% | 78 | 7% | 82 | 1% |
| 2 out of 4 | 153 | 6% | 43 | 4% | 38 | 1% |
| 1 out of 4 | 55 | 2% | 7 | 1% | 8 | 0% |
| 2 out of 3 | 238 | 10% | 83 | 7% | 143 | 2% |
| 1 out of 3 | 92 | 4% | 19 | 2% | 12 | 0% |
| 1 out of 2 | 319 | 13% | 140 | 12% | 119 | 2% |

¹ For each country, the number of eligible adults from the roster (those 18 years and older, and the household head or spouse) was compared with the interviews conducted in the assets modules (specifically, the mobile phones module).

3.2. Extent of self-reporting in modules on education, health, and labor

Table 1.3 shows that the share of eligible individuals interviewed across the labor, education and health modules, and who self-reported, varied across the LSMS+ supported surveys — although within each country, the shares of self-reporting eligible respondents were quite similar across the three modules. In Ethiopia, 68-69 percent of men and 77-78 percent of women self-reported across labor, education, and health; in Tanzania, these shares were 74-75 percent of men and 84-85 percent of women; and in Malawi, 77 percent of men and 88 percent of women. Although the LSMS+ implementation pushed for self-reporting,

Surveying multiple individuals per household captures intra-household dynamics in labor and economic decision-making

there was therefore still some degree of proxy reporting among eligible respondents, and more so for men. However, as discussed in Section 2, proxy respondent reporting rates in the LSMS+ were substantially lower than proxy reporting in similar (LSMS-ISA) surveys in those countries.

Table 1.3 Share of eligible respondents who self-report in labor/health/education modules

| | Malawi IHPS 2016 | | Tanzania NPS5 2019-20 | | Ethiopia ESS4 2018-19 | |
|---|------------------|-------|-----------------------|-------|-----------------------|-------|
| | Men | Women | Men | Women | Men | Women |
| (A) Number of eligible respondents covered in each module¹ | | | | | | |
| Total | 2,793 | 3,076 | 1,407 | 1,582 | 7,235 | 8,153 |
| Rural | 1,948 | 2,257 | 833 | 956 | 3,560 | 3,755 |
| Urban | 845 | 819 | 574 | 626 | 3,675 | 4,398 |
| (B) Within (A): share of total eligible respondents self-reporting² | | | | | | |
| Labor | | | | | | |
| Total | 0.77 | 0.88 | 0.75 | 0.85 | 0.69 | 0.78 |
| Rural | 0.78 | 0.89 | 0.74 | 0.85 | 0.71 | 0.74 |
| Urban | 0.76 | 0.86 | 0.77 | 0.85 | 0.67 | 0.82 |
| Education | | | | | | |
| Total | 0.77 | 0.88 | 0.75 | 0.84 | 0.69 | 0.78 |
| Rural | 0.76 | 0.89 | 0.74 | 0.85 | 0.71 | 0.74 |
| Urban | 0.76 | 0.86 | 0.76 | 0.83 | 0.66 | 0.82 |
| Health | | | | | | |
| Total | 0.77 | 0.88 | 0.74 | 0.85 | 0.68 | 0.77 |
| Rural | 0.78 | 0.89 | 0.73 | 0.85 | 0.71 | 0.73 |
| Urban | 0.75 | 0.85 | 0.75 | 0.84 | 0.65 | 0.81 |

¹ For (A), the number of eligible respondents was the same across the labor, education and health modules (with the exception of Tanzania, where the health and labor modules had the same number of eligible respondents, but the education module had slightly fewer). For simplicity, the labor/health module numbers are presented for Tanzania.

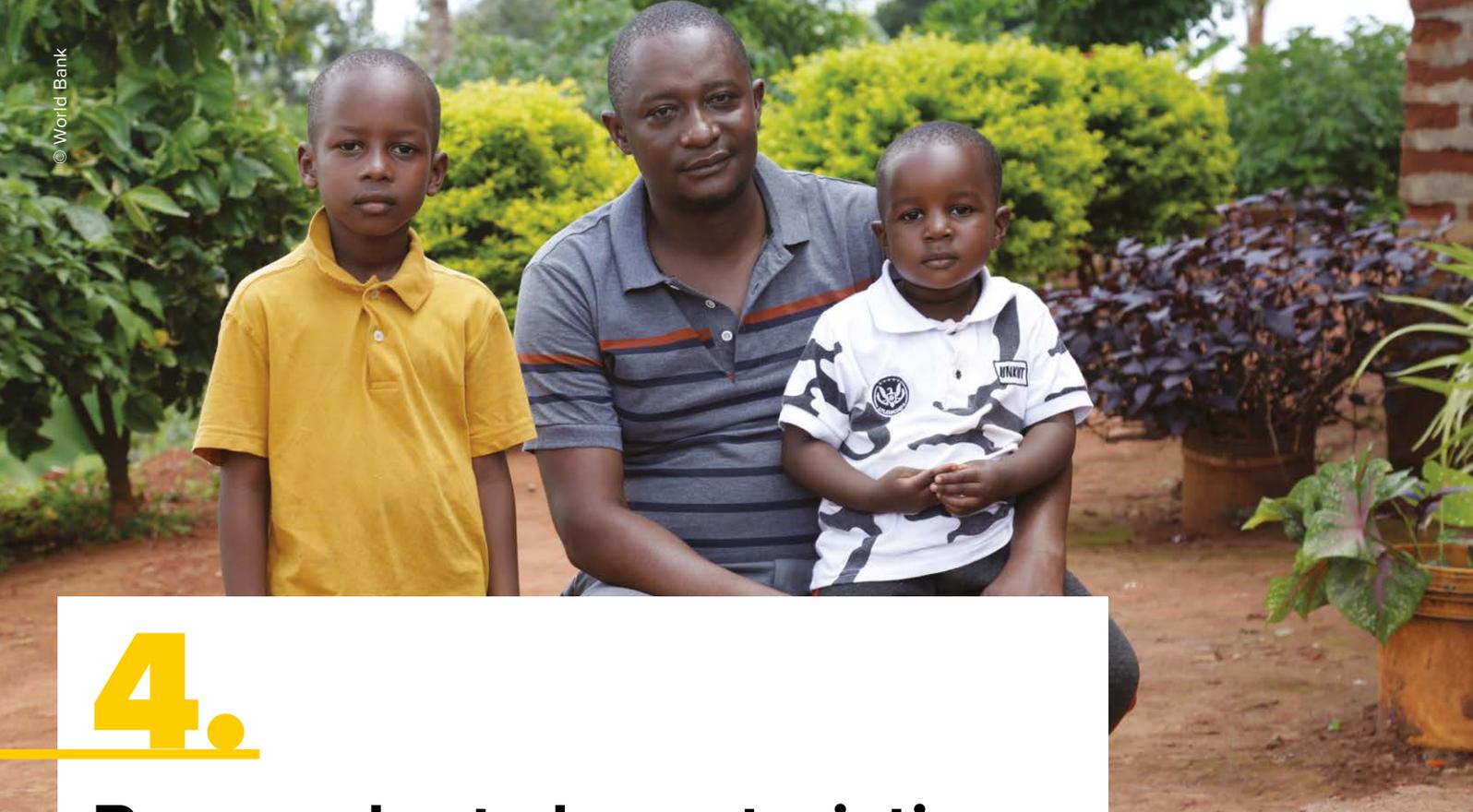
² (B) was calculated by separately merging the labor, education, and health modules with the household roster, calculating the number of eligible respondents who matched/were interviewed, and then calculating the share of those respondents who self-reported.



3.3. Additional time spent in the field

To get a better understanding of the additional costs of implementing individual interviews, the metadata extracted from the Survey Solutions CAPI application also allows for the calculation of the amount of time enumerators spend on an interview. In the case of the Malawi, the IHPS and the nationally representative 2016-17 Malawi Fourth Integrated Household Survey (IHS4) were conducted concurrently using the same field teams. The IHS4 covered the same socioeconomic and demographic characteristics, as well as asset ownership and rights, as the IHPS but followed the business-as-usual approach of interviewing the most knowledgeable household member(s) about asset ownership and rights, as well as a greater reliance on proxy reporting when the targeted respondent was not available. Because the surveys were conducted concurrently it allows for a true comparison of the additional time needed for LSMS+ individual interviews.

For the IHPS, the field teams took, on average, 4.51 days in an enumeration area that, on average, contains 16 households. As mentioned earlier, field teams for the IHPS tried to ensure as much as possible that each available adult household member was interviewed in private by an enumerator of the same sex, and that all private interviews for a given household were conducted at the same time. For the IHS4, these field teams took a total of 3.37 days to administer the IHS4 questionnaires to 16 households in each enumeration area, with one enumerator visiting each household. As a result, in Malawi, field teams needed approximately one extra day in an enumeration area to conduct individual interviews.



4.

Respondent characteristics across surveys supported by LSMS+ versus LSMS-ISA

How do characteristics of respondents in the LSMS+ supported surveys compare with other recent surveys in these countries? In **Table 1.4**, respondent and household characteristics are presented spanning age, education, marital status, household composition, household access to infrastructure, as well as urban locality.

Characteristics of respondents in the earlier LSMS-ISA surveys that were conducted these countries are presented for comparison and to provide additional context (i.e., the Malawi IHS4 2016-17, discussed earlier; the Tanzania National Panel Survey (NPS4) 2014-15; and the Ethiopia Socioeconomic Survey (ESS3) 2015-16). These three LSMS-ISA surveys are nationally representative and covered a similar range of socioeconomic and demographic characteristics as the LSMS+ supported surveys but followed more standard survey approaches including a greater reliance on proxy reporting when targeted respondents were not available and conducting interviews in non-private settings as opposed to one-on-one. In the case of Malawi, the IHS4 2016-17 also asked a similar line of questioning on agricultural

land ownership and rights as the IHPS, but only asked these questions of one “most knowledgeable” respondent in each household on their and other members’ ownership and rights.⁷

Comparisons of the two sets of surveys within each country, however, do need to be conditioned on differences not only in survey design/ implementation, but also time-varying factors that can affect the interpretation of differences across the two sets of surveys within each country. This is particularly the case for Ethiopia and Tanzania, where the LSMS+ and LSMS-ISA surveys for each country were conducted 3-4 years apart.

Across countries/surveys, **Table 1.4** shows that most of the respondent sample is rural, with about 25-30 percent of LSMS+ respondents living in urban areas. Some stark differences emerge across countries.

⁷ This comparison was the basis for Kilic et al. (2020b)’s examination, using both Malawi surveys, of the effects of individual interviews vis-à-vis standard survey approaches in measuring asset ownership and rights.

Table 1.4 Demographic and socioeconomic characteristics of individuals aged 18+, or household head/spouse: LSMS+ and comparison (LSMS-ISA) surveys¹

| | Ethiopia | | | | Tanzania | | | | Malawi | | | |
|---|-------------------------|---------|-----------------|---------|-------------------------|---------|-----------------|---------|----------------------|---------|-----------------|---------|
| | LSMS+ (ESS4) 2018-19 | | ESS3 2015-16 | | LSMS+ (NPS5) 2019-20 | | NPS4 2014-15 | | LSMS+ (IHPS) 2016 | | IHS4 2016-17 | |
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| HH head | 0.66*** | 0.22*** | 0.64*** | 0.21*** | 0.64*** | 0.20*** | 0.64*** | 0.19*** | 0.67*** | 0.21*** | 0.70*** | 0.25*** |
| Age: 18-24 | 0.25 | 0.25 | 0.24** | 0.22** | 0.22* | 0.27* | 0.31** | 0.29** | 0.30 | 0.29 | 0.28 | 0.28 |
| Age: 25-34 | 0.28** | 0.30** | 0.25*** | 0.28*** | 0.36*** | 0.27*** | 0.26 | 0.26 | 0.26 | 0.28 | 0.25*** | 0.27*** |
| Age: 45-54 ² | 0.12** | 0.11** | 0.14 | 0.13 | 0.12 | 0.12 | 0.11* | 0.15* | 0.11 | 0.11 | 0.12*** | 0.10*** |
| Age: 55+ | 0.16*** | 0.13*** | 0.18** | 0.16** | 0.15 | 0.18 | 0.15 | 0.14 | 0.13* | 0.15* | 0.14*** | 0.16*** |
| Ever attended school | 0.42*** | 0.61*** | 0.38*** | 0.59*** | 0.10*** | 0.20*** | 0.14*** | 0.24*** | 0.07*** | 0.15*** | 0.10*** | 0.19*** |
| Years of school, if attended | 7.82 | 7.67 | 7.36 | 7.44 | 7.43 | 7.67 | 7.51 | 7.57 | 8.14*** | 6.93*** | 8.32*** | 7.22*** |
| Married | 0.63 | 0.62 | 0.64** | 0.62** | 0.53 | 0.49 | 0.51 | 0.50 | 0.67 | 0.67 | 0.68*** | 0.62*** |
| Separated/divorced | 0.02*** | 0.08*** | 0.03*** | 0.08*** | 0.06*** | 0.11*** | 0.03*** | 0.11*** | 0.03*** | 0.10*** | 0.03*** | 0.12*** |
| Widowed | 0.01*** | 0.10*** | 0.02*** | 0.13*** | 0.01*** | 0.10*** | 0.01*** | 0.11*** | 0.01*** | 0.11*** | 0.01*** | 0.05*** |
| Number of months individual is away from HH | 0.38*** | 0.32*** | 0.20*** | 0.12*** | 1.00 | 0.91 | 0.66** | 0.61** | 0.67*** | 0.47*** | 0.56*** | 0.36*** |
| HH size | 5.42*** | 5.19*** | 6.72*** | 6.33*** | 6.29 | 6.13 | 5.88 | 5.94 | 5.47 | 5.45 | 5.03*** | 4.93*** |
| HH dependency ratio ³ | 0.68 | 0.72 | 1.12* | 1.04* | 0.81*** | 0.95*** | 0.81*** | 0.96*** | 0.82*** | 0.98*** | 0.86*** | 1.03*** |
| HH has electricity | 0.30*** | 0.34*** | 0.30*** | 0.32*** | 0.66 | 0.64 | 0.34 | 0.32 | 0.20** | 0.17** | 0.17*** | 0.15*** |
| HH has piped water | 0.17*** | 0.19*** | 0.18** | 0.20** | 0.41 | 0.40 | 0.36 | 0.38 | 0.19** | 0.16** | 0.17*** | 0.15*** |
| HH: walls made of concrete | 0.06*** | 0.07*** | 0.05 | 0.06 | 0.20 | 0.22 | 0.22 | 0.24 | 0.03 | 0.02 | 0.02 | 0.02 |
| Lives in urban area | 0.28*** | 0.31*** | 0.25*** | 0.28*** | 0.31 | 0.28 | 0.30 | 0.32 | 0.31*** | 0.26*** | 0.23*** | 0.21*** |
| Observations | 7,235 | 8,153 | 5,569 | 6,247 | 1,407 | 1,577 | 1,238 | 1,329 | 2,118 | 2,631 | 6,988 | 8,005 |

¹ All estimates are weighted. Statistically significant differences between men and women, within each survey, are indicated by asterisks (***p<0.01, **p<0.05, *p<0.10).

² Excluded category is 35-44.

³ Indicates dependency ratio of children and elderly.

70-75%
of respondents
across countries live in rural areas

About 65 percent of respondents in the Tanzania LSMS+ live in electrified households, for example, compared to only around 20 and 30 percent, respectively, in the Malawi and Ethiopia LSMS+.

The Tanzania LSMS+ also has a larger share of households with piped water and with concrete construction. The Ethiopia LSMS+ has a larger share of respondents who never attended school — 61 percent for women and 42 percent for men, also a significant gap — compared to Tanzania and Malawi.

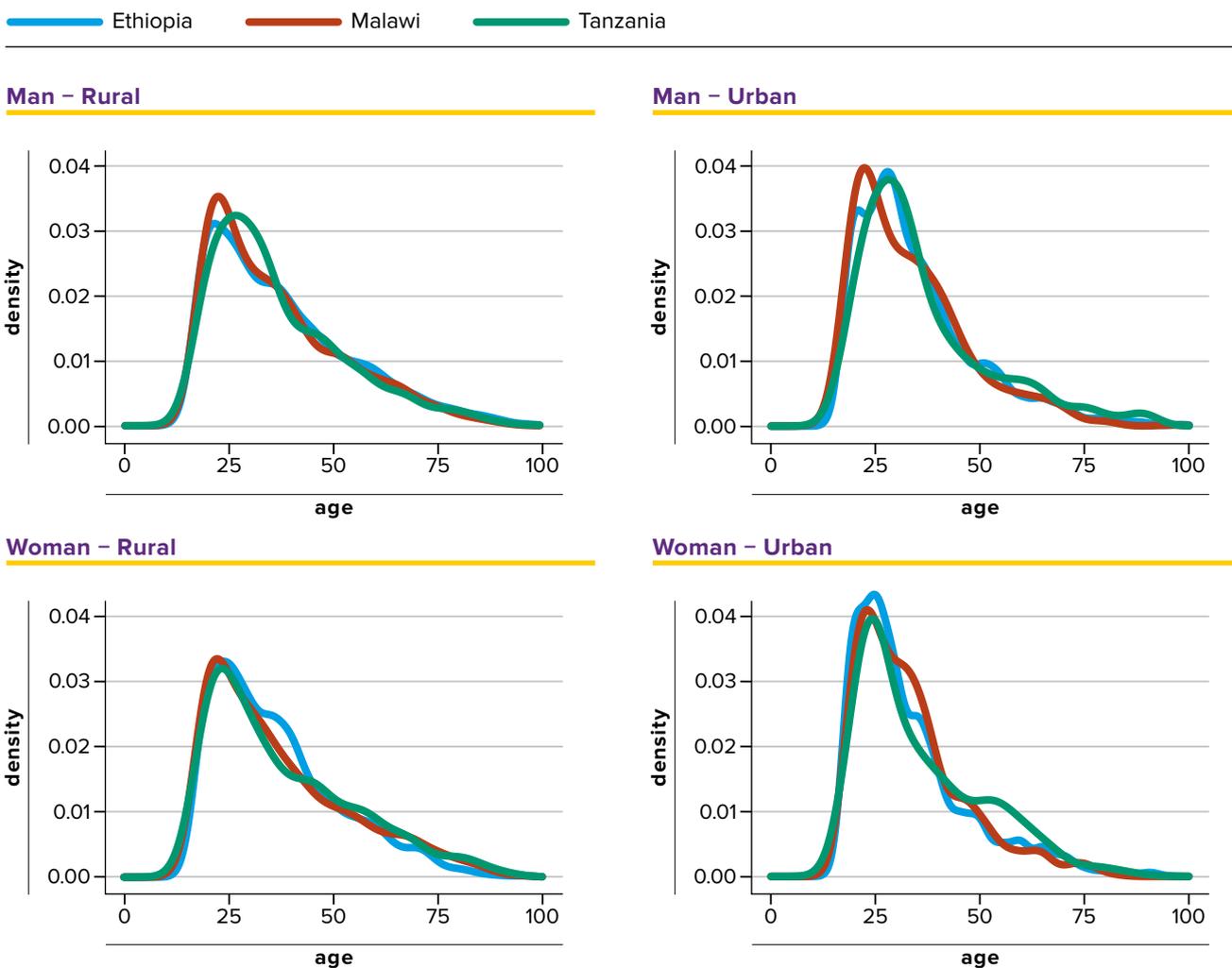
Among demographic characteristics, the Tanzania LSMS+ has a substantially lower share of married men and women (53 and 49 percent, respectively), compared to the Ethiopia and Malawi LSMS+ samples where more than 60 percent of men and women were married. **Figure 1.1** below also presents the age distribution of respondents across the three

LSMS+ supported surveys. Age distributions are quite similar across urban and rural areas, for all three samples. Rural areas tend to have a greater share of elderly, compared to urban areas.

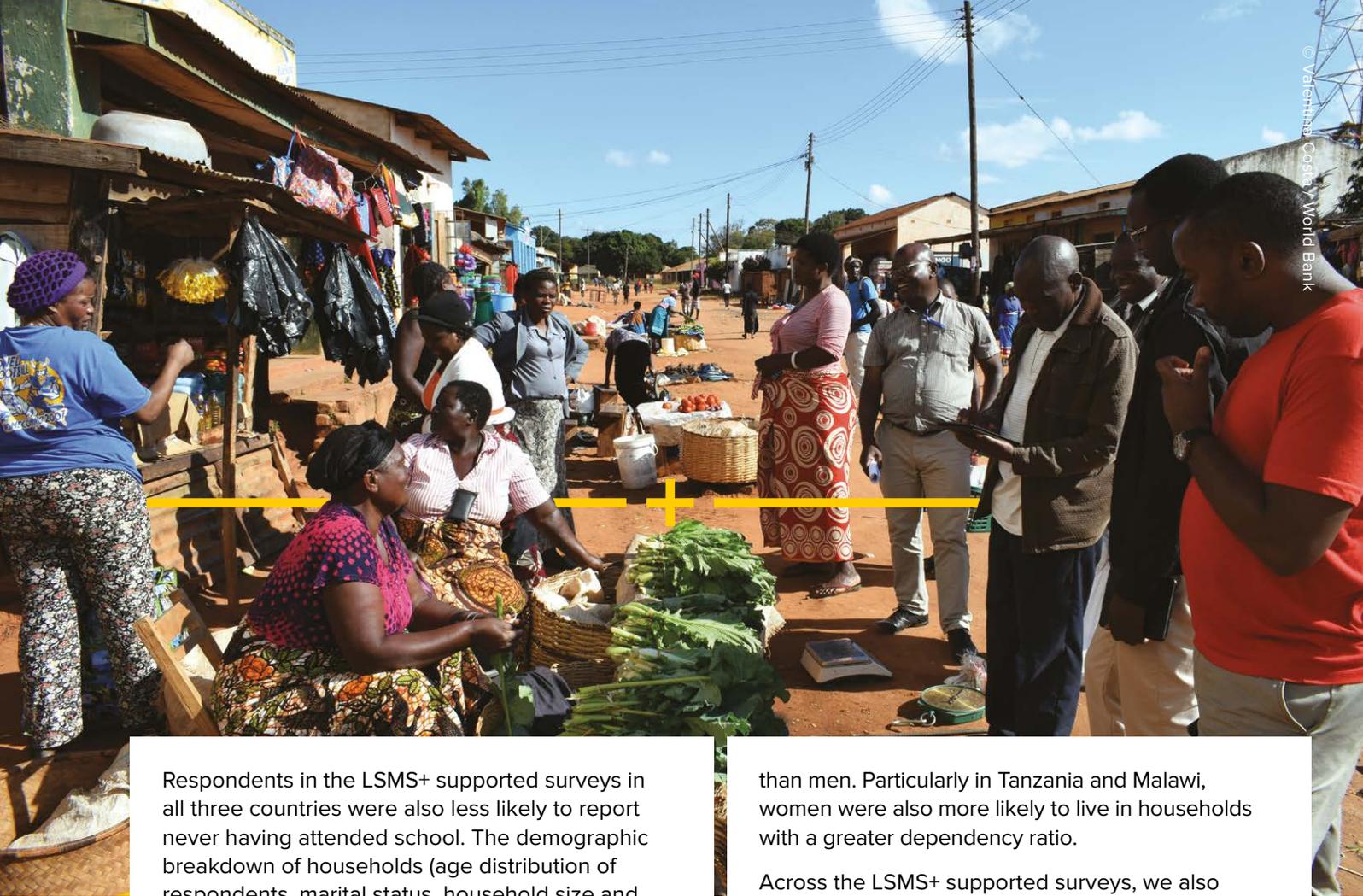
Within each country, there were some notable differences across the LSMS+ and comparison survey samples. Some of these differences (in Ethiopia and Tanzania, specifically) might be attributable to the time elapsed between these surveys. Within countries, all three LSMS+ samples had greater access to electricity and piped water relative to their comparison surveys (with greater increases in the Tanzania LSMS+), as well as the respondent spending greater time away from the household. Within Malawi and Ethiopia, greater shares of the LSMS+ sample lived in urban areas.⁸

⁸ Average annual nonfood per capita consumption expenditure in Ethiopia LSMS+ households was also significantly higher relative to the ESS3 conducted in 2015/16. The differences were not significant in the Malawi LSMS+ compared to the Malawi IHS4 conducted in the same year.

Figure 1.1 Age Distribution of LSMS+ Eligible Sample



¹ Cross-country comparison of ages by rural/urban and gender. Sample weights included.



Respondents in the LSMS+ supported surveys in all three countries were also less likely to report never having attended school. The demographic breakdown of households (age distribution of respondents, marital status, household size and dependency ratio) was not very different across the LSMS+ and comparison survey within each country.

Table 1.4 also shows that differences between men and women within each sample are statistically significant, although the magnitude and direction of differences vary by country. Within countries, the direction of gender differences was more or less consistent across the LSMS+ and comparison samples. In Tanzania and Malawi, women were significantly more likely to never have attended school, whereas men were more likely in Ethiopia.⁹ There are some differences in the incidence of men and women living in households with greater access to electricity and piped water, and in urban areas, although these differences are small (greater share of women in Ethiopia and lower in Malawi, with no difference in Tanzania). Men were significantly more likely across countries to spend greater time away from the household. Among demographic characteristics, men were much more likely to be designated as the household head. While the majority of individuals are married in all three samples, women in each sample were significantly more likely to be widowed or separated/divorced

⁹ The difference in years of schooling, however, was not significantly different across men and women generally, except in the case of Malawi.

than men. Particularly in Tanzania and Malawi, women were also more likely to live in households with a greater dependency ratio.

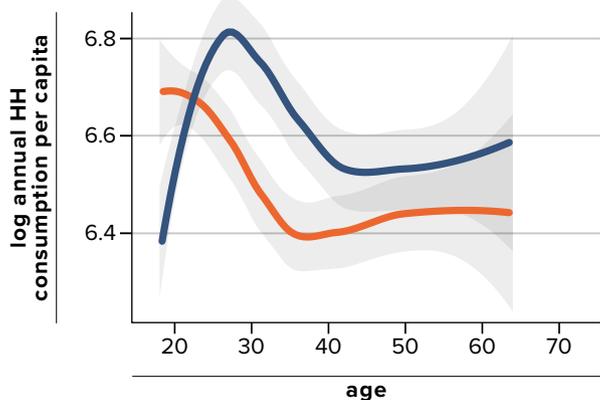
Across the LSMS+ supported surveys, we also observe that men and women in rural Malawi, as well as Ethiopia, often reside in households with significantly different household consumption (as reflected by log annual household non-food consumption per capita, in **Figure 1.2**). In particular, **Figure 1.2** presents trends for men and women, by age groups and urban/rural, for each LSMS+ sample, with 95 percent confidence intervals of log consumption per capita. In both rural Malawi and Ethiopia (urban and rural), men of ages from about 25 up to 40 years of age are significantly more likely to live in households with higher average non-food consumption, compared to women in the same age range. In the urban Ethiopia sample, significant differences persisted through much older age (up until about age 50) as well.

Among men and women aged 25-40 man are more likely to live in households with higher non-food consumption (in rural Malawi and urban/rural Ethiopia).

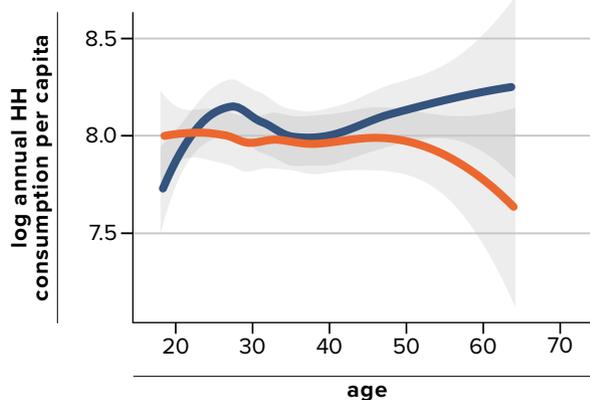
Figure 1.2 Annual household consumption per capita, by men and women

Men Women

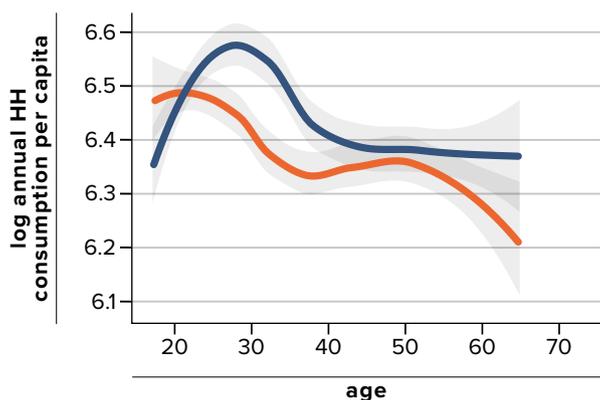
Malawi – Rural



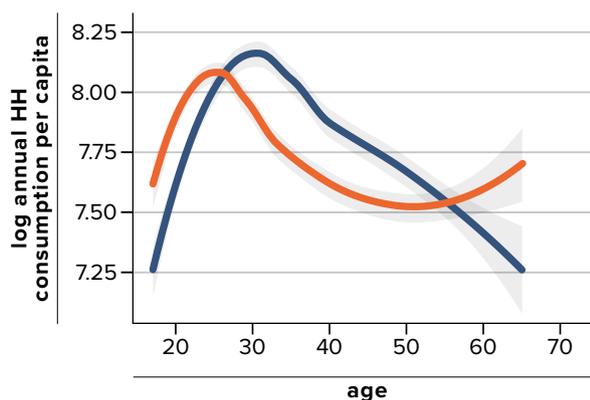
Malawi – Urban



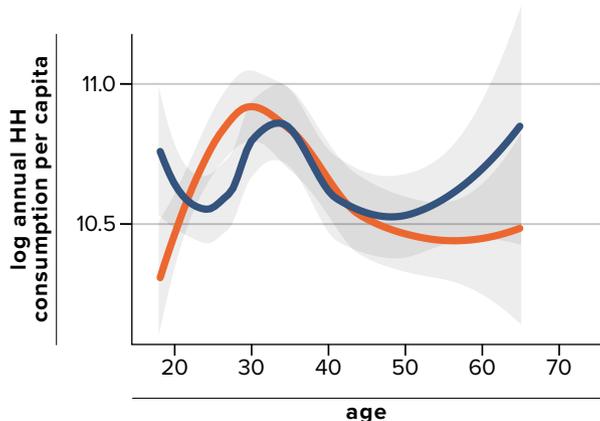
Ethiopia – Rural



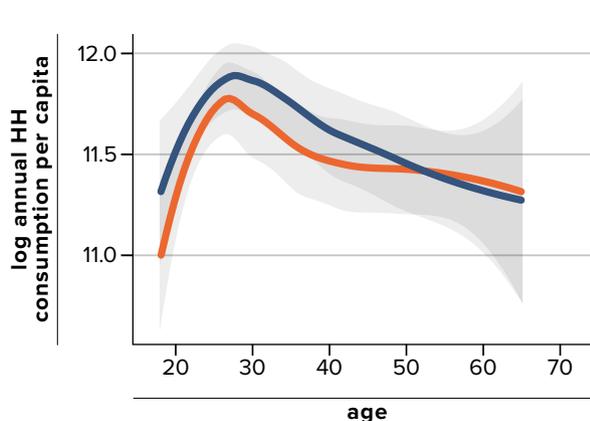
Ethiopia – Urban



Tanzania – Rural



Tanzania – Urban



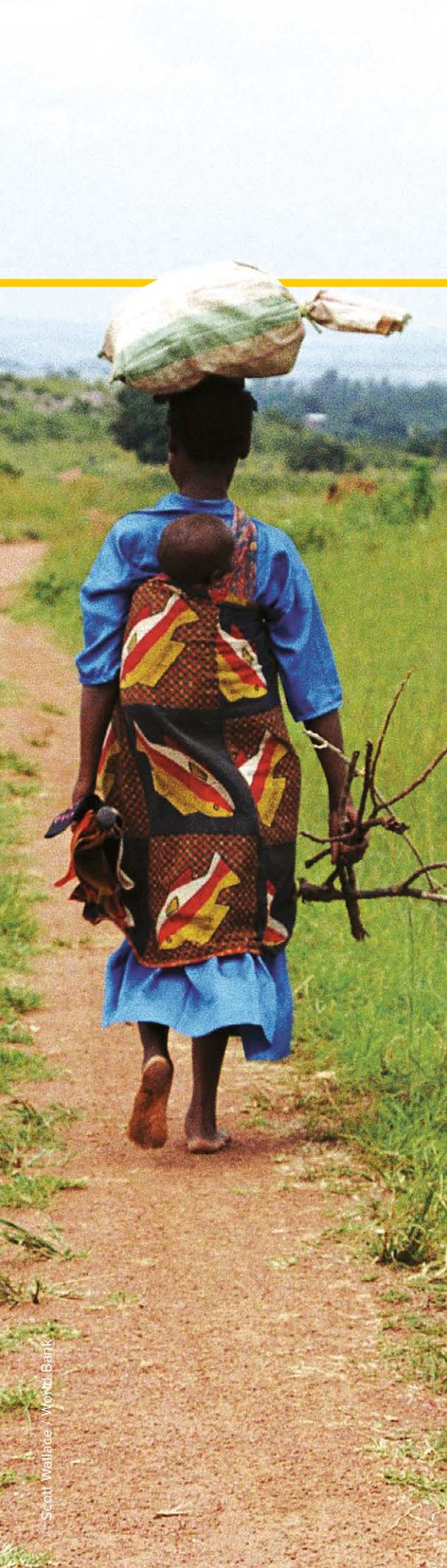
¹ The figures show estimated lowest curves with 95% confidence intervals of log annual household consumption per capita for the LSMS+ sample.

Section 1 / Summary

- +** The World Bank Living Standards Measurement Study-Plus (LSMS+) program has been established in 2016 **to improve the availability and quality of individual-disaggregated survey data collected in low- and middle-income countries on key dimensions of men's and women's economic opportunities and welfare.**
- +** Within Sub-Saharan Africa, the Malawi IHPS (2016), Tanzania NPS5 (2019-20), and Ethiopia ESS4 (2018-19) have been supported under the LSMS+ program over the period of 2016-2020. **Respondents were considered eligible for the LSMS+ individual interviews if they were 18 years and above.**
- +** Individual-level survey modules were administered on work and employment, non-farm enterprises, and ownership of and rights to selected physical and financial assets, including **dwelling land, non-dwelling land, financial assets and mobile phones.** Pre-existing individual-level survey modules on other topics, such as **education and health**, are also integrated into the individual questionnaire.
- +** **Among eligible respondents who were interviewed** (ranging from 73 percent of the randomly selected respondents in Malawi, 80 percent of all eligible adults in Tanzania, and 96 percent of all eligible adults in Ethiopia), **all self-reported in the assets modules.** In the labor, education and health modules, there was some degree of proxy reporting, albeit lower compared to the previous rounds of the LSMS-ISA surveys conducted in these countries, which followed more standard survey approaches including a greater reliance on proxy respondents.

LSMS+ respondents that live in electrified households





Section 2

Labor outcomes

- 1. Emphasizing self-reporting of labor in surveys**
- 2. Labor outcomes covered in the LSMS+ supported surveys (2016-2020)**
 - 2.1. Participation in different labor activities across LSMS+ supported surveys
 - 2.2. Hours and earnings
 - 2.3. Non-Market Activities
- 3. Respondents' engagement in multiple economic activities**
- 4. Individual, household and geographic correlates of labor participation**

Section 2 / Summary

1.

Emphasizing self-reporting of labor in surveys

As discussed in **Section 1**, multi-topic household surveys with a focus on work and employment often rely on standard approaches such as proxy reporting and non-private interviews to construct labor statistics for all members of the household. While often easier to implement, these approaches can lead to measurement error in understanding both men's and women's labor outcomes across households. A lower incidence of accurate, self-reported data can also mask intra-household dynamics in labor and economic decision-making, an understanding of which is critical for designing policy around improving economic mobility, and notably for women who typically face poorer economic opportunities. These concerns have also been reflected in international recommendations on the on improving the measurement of work and employment in surveys — including changes to international definitions of work and employment under the 19th International Conference of Labour Statisticians (19th ICLS) to better capture total (paid and unpaid) work burdens for men and women¹⁰ as well as ILO recommendations on improving the measurement of informal employment.¹¹

While full self-reporting was not achievable in the LSMS+ supported surveys, enumerators focused on ensuring private, self-reported interviews whenever possible. **Table 2.1** presents the share

of eligible respondents who reported by proxy in the LSMS+ and comparison/LSMS-ISA surveys in those countries, which did not necessarily rely on self-reporting.¹² Proxy reporting in the LSMS+ surveys tends to be lower than the comparable LSMS-ISA surveys in Malawi and Tanzania, and particularly the case in Malawi (the proxy reporting variable was not available in the Ethiopia LSMS-ISA). **In the Malawi LSMS+, the share of proxy reporting in labor for the full sample was 21 percent for men and 11 percent for women, compared with 48 and 29 percent of men and women, respectively, in the Malawi IHS4.** In Tanzania, 25 percent of men and 15 percent of women in the LSMS+ sample were reported by proxy, compared with 30 percent of men and 20 percent of women in the NPS4. Labor proxy reporting in Ethiopia was also similar to the Tanzania LSMS+; around 28 percent for men and 19 percent for women. **Table 2.1** also presents the share reporting by proxy for the youth (up to age 24) age sample, which as seen in **Section 1** is about one-quarter to nearly one-third of the total sample, depending on the country. Information on youth labor market outcomes is key to understanding school-to-work transitions, as well as other important policies around education, skills training and employment, but information can be more difficult to collect directly for this group.¹³ While proxy reporting for youth goes up relative to the overall sample, it is still lower in the LSMS+ compared in the comparable surveys for those countries. This gap also widens considerably for the youth sample in Malawi.

¹⁰ The ICLS, which meets every five years, affects how country labor force surveys — guided by the ILO — are designed and undertaken. Also see International Labour Organization (ILO). 2013. [Resolution 1 concerning statistics of work, employment and labour underutilization](#). 19th International Conference of Labour Statisticians, Geneva.

¹¹ International Labour Organization (ILO). 2018. Women and Men in the informal economy: A statistical picture (3rd edition). Geneva. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf

¹² In Ethiopia and Malawi, the shares reporting by proxy in the labor module are presented (although in Ethiopia, the ESS3 did not have a self-reporting/proxy question). In Tanzania, since the NPS4 only had this question in the health module, reporting in the LSMS+ health module is presented — within the LSMS+, as seen as Section 1, the incidence of proxy reporting was similar across modules for each country.

¹³ See, for example, Desiere, Sam and Valentina Costa. 2019. "Employment Data in Household Surveys Taking Stock, Looking Ahead." World Bank Policy Research Working Paper No. 8882.

Table 2.1. Share of men and women reporting by proxy, in the LSMS+ and comparison (LSMS-ISA) surveys

| | Ethiopia (labor module) ² | | | | Tanzania (health module) ² | | | | Malawi (labor module) | | | |
|---|---|-------|-----------------|-------|--|-------|-----------------|-------|--------------------------|-------|-----------------|--------|
| | LSMS+ (ESS4) 2018-19 | | ESS3 2015-16 | | LSMS+ (NPS5) 2019-20 | | NPS4 2014-15 | | LSMS+ (IHPS) 2016 | | IHS4 2016-17 | |
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Share of eligible sample reporting by proxy (full sample):¹ | | | | | | | | | | | | |
| Total | 0.28 | 0.19 | - | - | 0.25 | 0.15 | 0.30 | 0.20 | 0.21 | 0.11 | 0.48 | 0.29 |
| Rural | 0.23 | 0.21 | - | - | 0.25 | 0.14 | 0.31 | 0.20 | 0.20 | 0.09 | 0.45 | 0.28 |
| Urban | 0.33 | 0.18 | - | - | 0.25 | 0.15 | 0.29 | 0.20 | 0.22 | 0.13 | 0.61 | 0.34 |
| Share of eligible sample reporting by proxy (aged 18-24):¹ | | | | | | | | | | | | |
| Total | 0.43 | 0.27 | - | - | 0.38 | 0.24 | 0.45 | 0.26 | 0.30 | 0.18 | 0.64 | 0.45 |
| Rural | 0.44 | 0.31 | - | - | 0.38 | 0.25 | 0.47 | 0.26 | 0.30 | 0.18 | 0.62 | 0.43 |
| Urban | 0.42 | 0.25 | - | - | 0.39 | 0.22 | 0.40 | 0.26 | 0.30 | 0.20 | 0.71 | 0.51 |
| Number of eligible respondents (full sample): | | | | | | | | | | | | |
| Total | 6,967 | 7,945 | 5,745 | 6,462 | 1,386 | 1,565 | 1,216 | 1,319 | 2,723 | 3,027 | 12,103 | 14,063 |
| Rural | 3,292 | 3,547 | 3,871 | 4,151 | 814 | 945 | 714 | 759 | 1,898 | 2,224 | 9,594 | 11,350 |
| Urban | 3,675 | 4,398 | 1,874 | 2,311 | 572 | 620 | 413 | 461 | 825 | 803 | 2,509 | 2,713 |

¹ The eligible sample included those aged 18 and older, or who were either the household head or spouse of the household head.

² The self-reporting proxy variable was not available in the labor module for the Ethiopia ESS3. In Tanzania NPS4, only the health module had a self-reporting/proxy variable.

Quantitatively assessing whether proxy versus self-reporting leads to significant differences in outcomes (and where proxy reporting may have a greater effect on reporting) relies on an experimental setup with different survey approaches conducted in the same timeframe and country context. In Malawi, the concurrently-conducted IHS4 alongside the LSMS+ supported IHPS, and the broader approach in the IHS4 to surveying household members on labor — allowing for proxy reporting and non-private interviews, for example, as well as not ensuring a gender match between respondents and enumerators — was the basis for Kilic et al, (2020a)'s examination of how the LSMS+ recommendations on individual-level data collection can better elicit labor outcomes for men and women.¹⁴ Comparing the IHPS with the IHS4, the study finds that the use of proxy respondents and non-private interviews in the IHS4 leads to significant underreporting of employment across a range of wage and self-employment activities,

with stronger effects for women and for a longer (12-month) recall period. The study also finds links between underreporting and household wealth, proxy reporting, as well as potential difficulties associated with interpreting/answering questions on household non-farm enterprises. A key aim of this report, by providing a descriptive analysis of the survey sample, men's and women's responses to questions, is to motivate future work and research in this area across countries by users interested in the data.

The following discussion examines trends across the LSMS+ supported surveys in Sub-Saharan Africa more broadly, exploring participation across different age groups, multiple employment activities, work in non-market activities, and regression analysis to understand what variables correlates with participation. We also discuss, where possible and interpretable, differences in labor market outcomes between the LSMS+ survey and comparison surveys conducted under the LSMS-ISA program (see **Section 1**). Again, the Malawi survey provides a unique perspective since the LSMS+ survey/IHPS and IHS4 were implemented concurrently, accounting for time-varying factors that could otherwise affect how differences across survey types are interpreted.

¹⁴ Kilic, Talip, Goedele Van den Broeck, Gayatri Koolwal, and Heather Moylan. 2020a. "Are You Being Asked? Impacts of Respondent Selection on Measuring Employment." World Bank Policy Research Working Paper 9152.

2.

Labor outcomes covered in the LSMS+ supported surveys (2016-2020)

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2.1. Participation in different labor activities across LSMS+ supported surveys

The LSMS+ supported surveys included labor modules include questions on individual activities over the last seven days and 12 months. This section focuses on the sample of eligible individuals who self-reported in the labor modules (as discussed in [Section 1](#)), and on three kinds of activities:

- a. any agricultural activities** (production for own consumption or sale);
- b. running or working in a non-farm enterprise;** and
- c. wage employment.** Within wage employment, annual hours and earnings were also covered across the three surveys.

There are some country-specific activities — in Malawi, for example, LSMS modules asked questions about ganyu labor which is short-term informal farming labor not on the household's own farm. In Ethiopia, LSMS+ modules also asked about casual/temporary employment.

Table 2.2 presents the share of individuals working across different activities. Certain questions are only available for the 12-month period and, as mentioned above, some activity categories vary slightly across countries. In all three countries, the gender gap is statistically significant for the share of individuals in wage employment. **In Tanzania, for example, where the share of men and women in wage employment is higher compared to the other two countries, 48 percent of men were in wage employment in the last 12 months, compared to 22 percent of women.** The shares of men and women in non-farm enterprise (NFE) work are not significantly different in Ethiopia and Tanzania, although there are significant differences in Malawi (particularly for running an NFE in the last 12 months for urban and rural respondents, as well as rural respondents for the last 7 days). For Ethiopia, 83 percent of men also report being in any agricultural work compare to 55 percent for women. These overall country descriptive statistics highlight how gender gaps differ depending on the activity type but also by country.

How does participation vary by age? **Figure 2.1** reports locally weighted regressions of labor participation in the last 7 days, across activities by age in rural and urban areas.¹⁵ The shares are relatively stable across ages with some groups exhibiting an inverse-U pattern — in particular, urban

men in wage or salaried employment in Tanzania and Ethiopia. In urban Malawi, older men and women are also more likely to be engaged in NFE activity. Further research is needed to understand these dynamics in how age-associated gender gaps evolve for salary work.

¹⁵ Trends were also similar for labor participation in the last 12 months.

Table 2.2. Share of Activities Across LSMS+ Supported Surveys, by Reference Periods

| | Last 7 days | | | | | Last 12 months | | | | |
|--------------------------------|-------------|------------|-------------------|------------------|-----------------|----------------|------------|-------------------|------------------|-----------------|
| | Agr. (any) | Agr. (CFW) | NFE (ran/managed) | NFE (supporting) | Wage employment | Agr. (any) | Agr. (CFW) | NFE (ran/managed) | NFE (supporting) | Wage employment |
| Malawi IHPS 2016/2017 | | | | | | | | | | |
| Urban | | | | | | | | | | |
| Men | 0.12 | 0.05 | 0.18 | 0.05 | 0.34 | 0.32 | - | 0.23 | 0.12 | 0.39 |
| Women | 0.15 | 0.06 | 0.20 | 0.06 | 0.15 | 0.38 | - | 0.31 | 0.10 | 0.18 |
| T-test | 0.21 | 0.45 | 0.30 | 0.61 | 0.00 | 0.03 | - | 0.00 | 0.42 | 0.00 |
| Rural | | | | | | | | | | |
| Men | 0.47 | 0.15 | 0.12 | 0.03 | 0.11 | 0.90 | - | 0.19 | 0.08 | 0.14 |
| Women | 0.48 | 0.21 | 0.09 | 0.03 | 0.03 | 0.90 | - | 0.14 | 0.06 | 0.03 |
| T-test | 0.95 | 0.00 | 0.00 | 0.91 | 0.00 | 0.79 | - | 0.00 | 0.08 | 0.00 |
| Ethiopia ESS4 2018/2019 | | | | | | | | | | |
| Urban | | | | | | | | | | |
| Men | 0.13 | - | - | - | 0.27 | - | - | 0.28 | 0.02 | 0.37 |
| Women | 0.07 | - | - | - | 0.13 | - | - | 0.24 | 0.03 | 0.18 |
| T-test | 0.00 | - | - | - | 0.00 | - | - | 0.08 | 0.31 | 0.00 |
| Rural | | | | | | | | | | |
| Men | 0.83 | - | - | - | 0.03 | - | - | 0.09 | 0.01 | 0.06 |
| Women | 0.55 | - | - | - | 0.01 | - | - | 0.10 | 0.01 | 0.02 |
| T-test | 0.00 | - | - | - | 0.00 | - | - | 0.70 | 0.52 | 0.00 |
| Tanzania NPS5 2019/2020 | | | | | | | | | | |
| Urban | | | | | | | | | | |
| Men | 0.22 | - | - | - | 0.43 | 0.33 | 0.08 | 0.29 | 0.01 | 0.55 |
| Women | 0.20 | - | - | - | 0.20 | 0.31 | 0.10 | 0.24 | 0.02 | 0.32 |
| T-test | 0.64 | - | - | - | 0.00 | 0.58 | 0.54 | 0.27 | 0.09 | 0.00 |
| Rural | | | | | | | | | | |
| Men | 0.63 | - | - | - | 0.27 | 0.83 | 0.22 | 0.13 | 0.01 | 0.48 |
| Women | 0.60 | - | - | - | 0.11 | 0.81 | 0.32 | 0.10 | 0.02 | 0.22 |
| T-test | 0.50 | - | - | - | 0.00 | 0.59 | 0.01 | 0.34 | 0.83 | 0.00 |

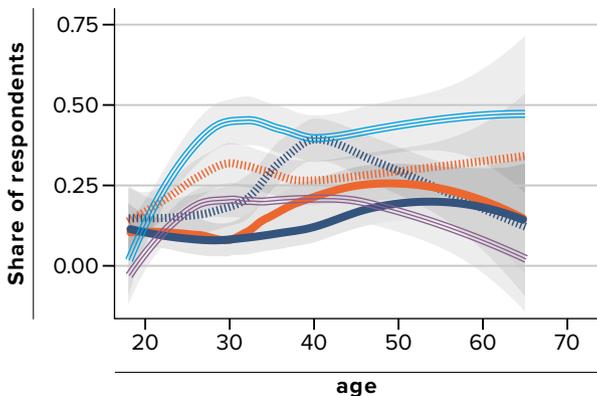
¹ All estimates use household sampling weights; only self-reporting sample included. “-” indicates data was not available for that variable.

² Ethiopia does report participation in NFE for the past 7 days, however, it did not divide this measurement into manager and supporting role thus not included in this table.

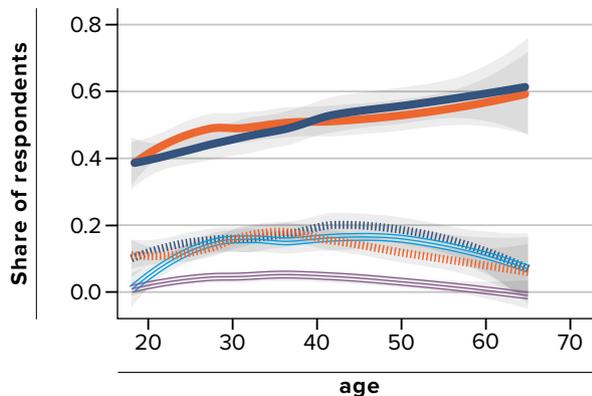
Figure 2.1 Participation Rate for Selected Activities in the Last 7 days



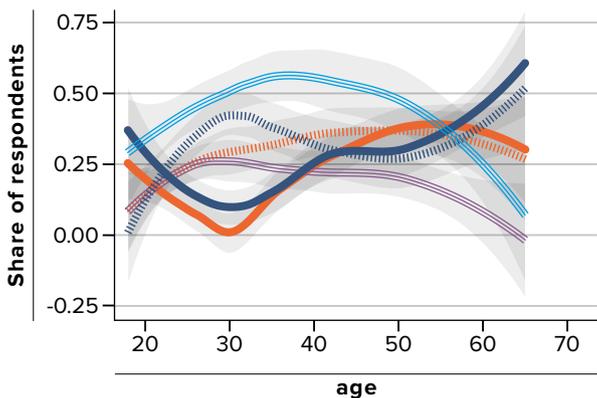
Malawi – Urban



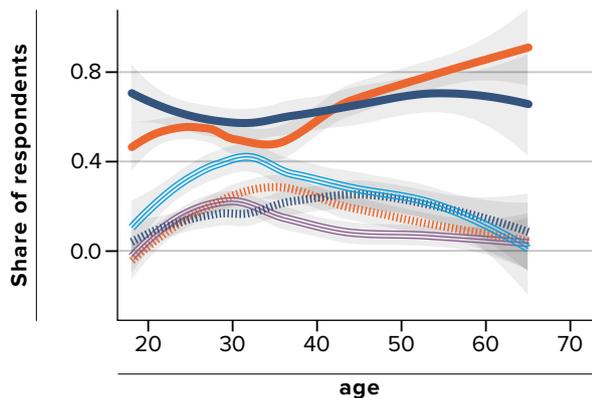
Malawi – Rural



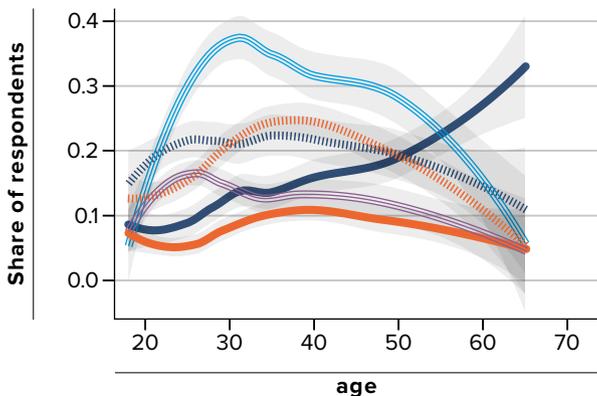
Tanzania – Urban



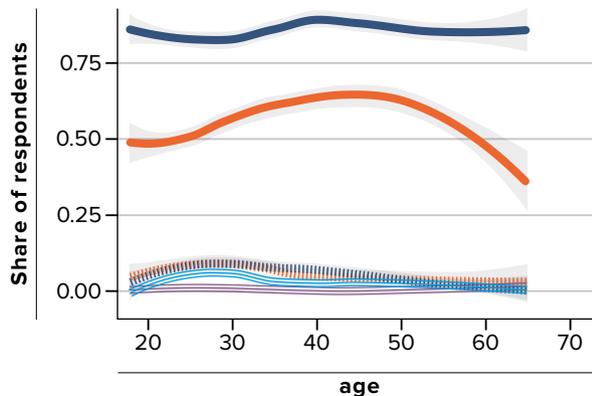
Tanzania – Rural



Ethiopia – Urban



Ethiopia – Rural



¹ All estimates use household sampling weights; only self-reporting sample included. 95% confidence intervals also presented for each curve.

² For Malawi, individuals working in an NFE either as a manager/owner or supporting worker were aggregated for NFE work.

2.2. Hours and earnings

On wage employment, **Figures 2.2** and **2.3** present the distribution of yearly hours and earnings across men and women, as well as in rural/urban areas.

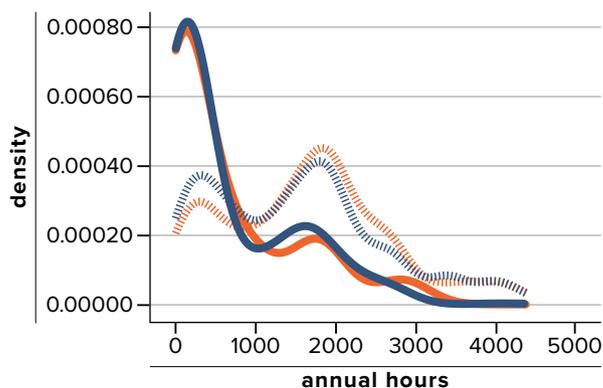
Figure 2.2 shows that urban workers work longer hours on average annually. In Ethiopia, gender differences are not statistically significant across rural and urban areas. In rural Malawi, and in Tanzania in particular, men are significantly likely to work more in wage employment.

Figure 2.4 also presents the log annual earnings for Malawi and Ethiopia. As expected, within each country, urban men have higher earnings than urban women; these differences were statistically significant in Malawi. The similarity in earnings distribution for some groups (rural Malawi, for example) is quite interesting since the annual hours distributions are different. In Kilic et al. (2020a), when comparing the annual hours and earnings distributions of the IHPS and IHS4 samples in Malawi, women’s conditional annual hours worked in wage employment are higher in the IHS4 compared to the IHPS, and conditional hours and earnings in ganyu for both men and women are also higher in the IHS4. However, with the exception of men’s hours in ganyu, the differences are weakly significant. The choice of survey approach may also matter more with longer recall periods as well as seasonality of different activities among this population.

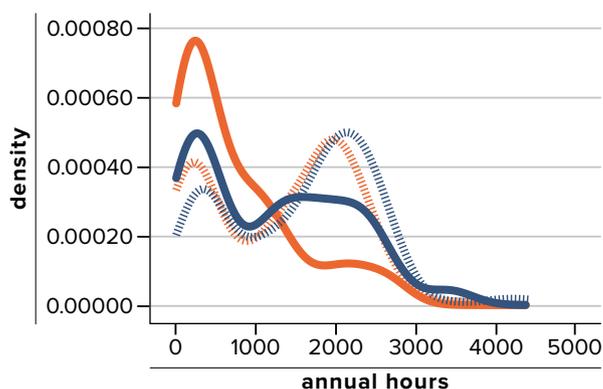
Figure 2.2 Annual hours in main wage employment (conditional on working), men and women

— Men Rural ······ Men Urban
 — Women Rural ······ Women Urban

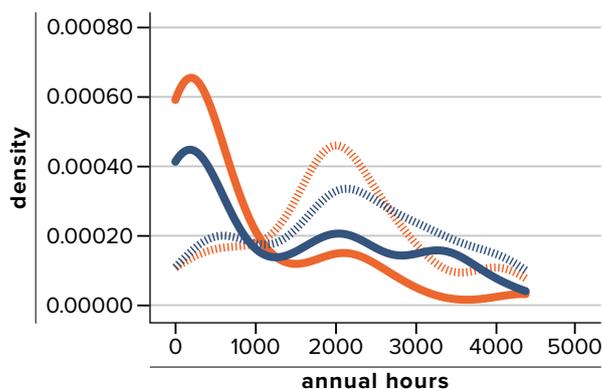
Ethiopia



Malawi



Tanzania

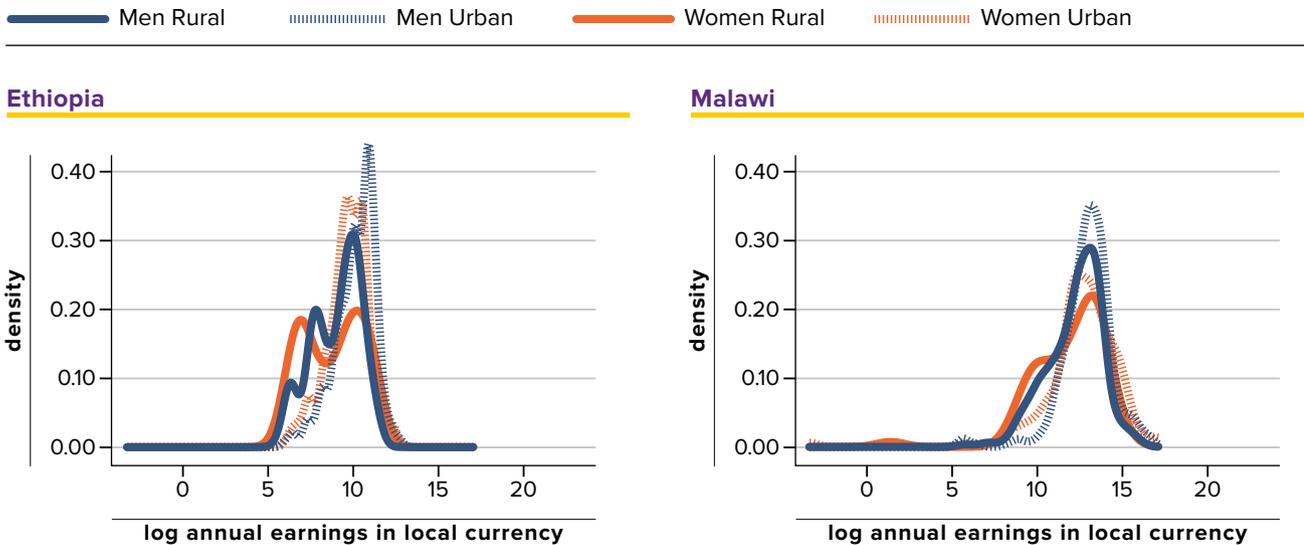


¹ All estimates use household sampling weights; only self-reporting sample included.

² Distribution of annual hours work in main salary occupation. Only answered for those with a salary job.

³ Gender differences in distribution across all groups (country and rural/urban) are significant at $p < 0.01$ level.

Figure 2.3 Annual earnings in main wage employment (conditional on working), men and women



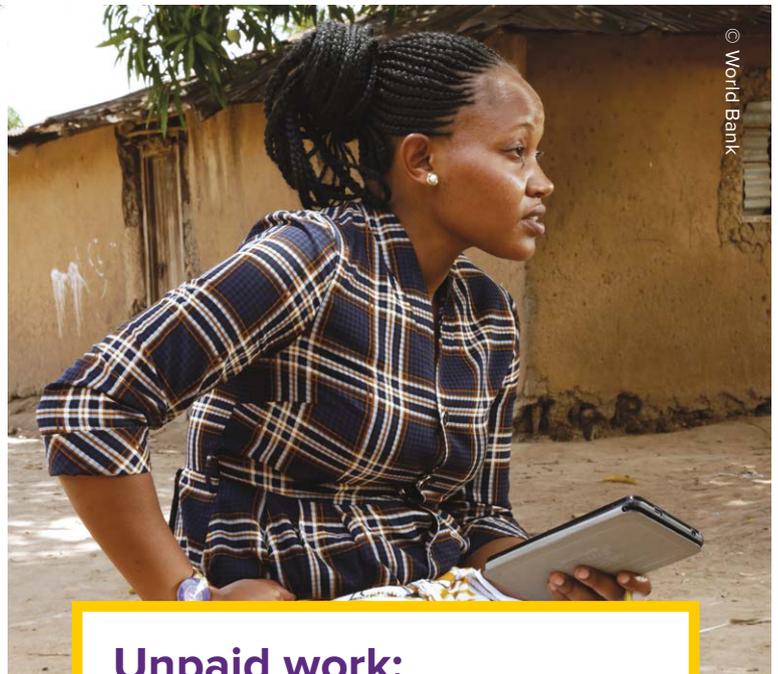
¹ All estimates use household sampling weights; only self-reporting sample included.
² Annual earnings for Tanzania were not yet available. Earnings include cash and in-kind transfers combined.
³ Gender differences in distribution across are significant at the $p < 0.01$ level for urban Ethiopia, and at the $p < 0.05$ level for urban Malawi.

2.3. Non-Market Activities

In Tanzania as well as Ethiopia, women spend disproportionately more time in non-market work, with the exception of agriculture in own-use production (reflected in Table 2.3 among those who are engaged in agricultural work). In Ethiopia, the gap between men and women is also much larger in rural areas. The average hours spent in water collection of women is more than twice that of men in rural areas, and about 1.5 times in urban areas.

Table 2.3 also compares the data on non-market work as elicited in LSMS+ supported surveys in Malawi and Ethiopia versus their LSMS-ISA counterparts (the IHS4 2016/17 in Malawi and the ESS3 2018/19 in Ethiopia).¹⁶ The LSMS+ supported surveys, in particular, reveal greater time spent by men and women in water and fuel collection than the comparison/LSMS-ISA surveys.

¹⁶ In the Tanzania NPS4, only fuel and water collection time in the last 24 hours was asked, and so couldn't be compared one-to-one with the LSMS+/NPS5.



Unpaid work: the LSMS+ highlights greater time spent by both men and women in unpaid work than other recent national surveys, particularly in Ethiopia

Table 2.3 Work in Non-Market Activities

| Malawi | Rural | | | Urban | | |
|---|--------------|--------------|---------------|--------------|--------------|---------------|
| (A) LSMS+ round (IHPS 2016/17) | Men | Women | T-test | Men | Women | T-test |
| Hours spent in own-use production: last 24 hours | | | | | | |
| Water collection | 0.27 | 0.33 | 0.00 | 0.15 | 0.20 | 0.05 |
| Fuel collection | 0.14 | 0.17 | 0.02 | 0.04 | 0.06 | 0.15 |
| Engages in agriculture for own use (Y=1 N=0): | | | | | | |
| Those in agr: mainly for own production (as opposed to market) [‡] | 0.71 | 0.78 | 0.01 | 0.95 | 0.92 | 0.30 |
| (B) IHS4 2016/17 | | | | | | |
| Hours spent in own-use production: last 24 hours | | | | | | |
| Water collection | 0.13 | 0.24 | 0.00 | 0.09 | 0.12 | 0.00 |
| Fuel collection | 0.11 | 0.15 | 0.00 | 0.03 | 0.05 | 0.05 |
| Engages in agriculture for own use (Y=1 N=0): | | | | | | |
| Those in agr: mainly for own production (as opposed to market) [‡] | 0.74 | 0.75 | 0.21 | 0.82 | 0.88 | 0.02 |
| Ethiopia | | | | | | |
| (A) LSMS+ round (ESS4 2018/19) | | | | | | |
| Hours spent in own-use production: last 7 days | | | | | | |
| Water collection | 0.25 | 0.65 | 0.00 | 0.28 | 0.45 | 0.00 |
| Fuel collection | 0.21 | 0.61 | 0.00 | 0.13 | 0.26 | 0.00 |
| Engages in agriculture for own use (Y=1 N=0): | | | | | | |
| Those in agr: mainly for own production (as opposed to market) [‡] | 0.90 | 0.92 | 0.14 | 0.84 | 0.83 | 0.89 |
| (B) ESS3 2015/16 (where data are available) | | | | | | |
| Hours spent in own-use production: last 7 days | | | | | | |
| Water collection | 0.08 | 0.40 | 0.00 | 0.04 | 0.12 | 0.00 |
| Fuel collection | 0.13 | 0.37 | 0.00 | 0.04 | 0.13 | 0.00 |
| Engages in agriculture for own use (Y=1 N=0): | | | | | | |
| Those in agr: mainly for own production (as opposed to market) [‡] | | | | | | |
| Tanzania | | | | | | |
| (A) LSMS+ round only (NPS5 2019/20) | | | | | | |
| Hours spent in own-use production: last 7 days | | | | | | |
| Food-related activities | 0.49 | 1.67 | 0.00 | 0.27 | 1.98 | 0.06 |
| Nonfood-related activities | 0.36 | 0.23 | 0.13 | 0.12 | 0.18 | 0.40 |
| Water collection | 0.79 | 2.63 | 0.00 | 0.69 | 1.62 | 0.00 |
| Fuel collection | 0.50 | 1.46 | 0.00 | 0.33 | 0.42 | 0.46 |
| Engages in agriculture for own use (Y=1 N=0): | | | | | | |
| Those in agr: mainly for own production (as opposed to market) | 0.85 | 0.90 | 0.80 | 0.87 | 0.92 | 0.49 |

¹ All estimates use household sampling weights; only self-reporting sample included.

3.

Respondents' engagement in multiple economic activities

Tables 2.4-2.7 examine whether the individual interview approach in the LSMS+ supported surveys also reveals information about multiple economic activities that men and women are involved in, both over the last 7 days as well as last 12 months¹⁷.

Table 2.4 below examines men's and women's participation in more than one activity across

any agricultural work (for own-production and for market); supporting or owning non-farm enterprises (NFE); and work as an employee — either wage, casual (included in Ethiopia), and ganyu (included in Malawi). For each country, the share of men and women reporting multiple activities in the comparison/LSMS-ISA surveys are also presented.

Looking across surveys, the share of individuals engaged in multiple activities is quite high, particularly in Malawi and Tanzania. **In the Malawi LSMS+, for example, the majority of rural workers (71 percent for men and 55 percent for women)**

¹⁷ The variable on multiple activities was constructed based on the introductory yes/no questions in the labor module on participation in the last 7 days and 12 months in agriculture, wage, and non-farm enterprise activity. Specifically, a respondent was considered to be involved in multiple activities if they reported "yes" to more than one of these yes/no questions (with separate variables constructed for engagement in multiple activities over the last 7 days and 12 months).

Table 2.4 Share of men and women engaged in multiple activities, conditional on working
(LSMS+ supported survey versus comparator LSMS-ISA survey in each country)

| | Malawi | | | | Ethiopia | | | | Tanzania | | | |
|-------------------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | IHPS 2016/17 | | IHS4 2016/17 | | ESS4 2018/19 | | ESS3 2015/16 | | NPS5 2019/20 | | NPS4 2014/15 | |
| | Last 7 days | Last 12 months |
| Urban | | | | | | | | | | | | |
| (a) Men | 0.15 | 0.41 | 0.18 | 0.41 | 0.11 | 0.20 | 0.12 | 0.17 | 0.15 | 0.30 | 0.12 | 0.26 |
| (b) Women | 0.19 | 0.40 | 0.19 | 0.40 | 0.10 | 0.16 | 0.09 | 0.13 | 0.09 | 0.21 | 0.16 | 0.29 |
| T-test: (a)-(b) (p-val) | 0.09 | 0.73 | 0.75 | 0.85 | 0.26 | 0.10 | 0.30 | 0.00 | 0.21 | 0.08 | 0.82 | 0.18 |
| Rural | | | | | | | | | | | | |
| (a) Men | 0.28 | 0.71 | 0.30 | 0.67 | 0.08 | 0.24 | 0.13 | 0.27 | 0.23 | 0.49 | 0.27 | 0.45 |
| (b) Women | 0.24 | 0.55 | 0.23 | 0.54 | 0.07 | 0.14 | 0.08 | 0.15 | 0.16 | 0.27 | 0.20 | 0.33 |
| T-test: (a)-(b) (p-val) | 0.05 | 0.00 | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.01 | 0.00 |

¹ All estimates use household sampling weights; only self-reporting sample included.

² Multiple activities include any agricultural work, non-farm enterprise, and wage employment. For Ethiopia, 12 months of agricultural work was not reported. 7-day agricultural work questions were used instead.



were engaged in multiple activities over the last 12 months. At this more aggregate level, large differences do not emerge when comparing the LSMS+ supported surveys with their LSMS-ISA counterparts; further investigation can also shed light as to whether differences emerge by respondents' age or other individual/household characteristics.

Men also typically show a higher proportion of working in multiple activities across these categories, especially in rural areas. Other forms of unpaid work that women are engaged in are not included in this table, which likely explains this pattern. In most urban groups, the gender gap is not statistically significant.

For each of the three countries, **Tables 2.5-2.7** below present a more detailed activity-wise breakdown for the individuals are engaged in (across main and secondary activities in the last 12 months). Comparisons are presented as well across the supported by the LSMS+ versus the LSMS-ISA. The share of respondents in multiple areas of work can be calculated from the shares in the off-diagonal of each matrix in the tables.

Similar patterns do emerge across the individual-level approach in the LSMS+ and the LSMS-ISA, with a few exceptions. In Ethiopia, a greater concentration of rural men and women are engaged solely in agriculture in the LSMS+ as opposed to the ESS3.

In urban Tanzania, a greater share of LSMS+ respondents report work in agriculture along with wage work, compared to the NPS4 where more were concentrated completely in agriculture. There are fewer differences across the IHPS and IHS4 in Malawi. Some of these changes in the composition of work in Ethiopia and Tanzania may be due to time-varying factors, but again could be explored in more detail (particularly in Tanzania, where the LSMS+ is part of an ongoing panel survey in the country).

Within the LSMS+ supported surveys, there are not many gender differences in Ethiopia among those working in multiple activities. **In Tanzania, a much greater share of rural men (36 percent) report working in agriculture as well as wage work, compared to rural women (16 percent). A greater share of urban women in the Malawi IHPS (about 13 percent) also report working in agriculture as well as NFE work, compared to men (5 percent).**

Apart from multiple activities, one interesting similarity across countries is that urban women who are in non-agricultural work are much more likely to be engaged in non-farm enterprises, whereas men are more likely to be in wage work. **In Ethiopia, for example, 46 percent of urban women working in non-agriculture were in NFEs, compared to 31 percent of urban men, with almost all of these men and women working solely in this area of work.**

Table 2.5 Ethiopia: share of employment activities by survey year (LSMS+ and comparison LSMS-ISA survey) versus comparator LSMS-ISA survey in each country)

Table A. Among those working: share across activities (last 12 months; LSMS+ ESS4 2018/19)

| Table A1. Men. LSMS+ | | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.13 | 0.02 | 0.00 | 0.02 | 0.00 |
| NFE (run/manage) | | 0.28 | | 0.05 | 0.00 |
| NFE (supporting role) | | | 0.02 | 0.01 | 0.00 |
| Wage (salaried) | | | | 0.35 | 0.07 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.82 | 0.07 | 0.01 | 0.02 | 0.00 |
| NFE (run/manage) | | 0.02 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.01 | 0.00 |
| Wage (casual) | | | | | 0.00 |

Table A2. Women. LSMS+

| | Urban | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.12 | 0.03 | 0.00 | 0.00 | 0.00 |
| NFE (run/manage) | | 0.43 | | 0.03 | 0.00 |
| NFE (supporting role) | | | 0.05 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.27 | 0.03 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.80 | 0.07 | 0.01 | 0.00 | 0.00 |
| NFE (run/manage) | | 0.08 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.01 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.01 | 0.00 |
| Wage (casual) | | | | | 0.00 |

Table B. Among those working: share across activities (last 12 months; ESS3 2015/16)

| Table B1. Men | | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.07 | 0.02 | 0.01 | 0.02 | 0.00 |
| NFE (run/manage) | | 0.30 | | 0.05 | 0.01 |
| NFE (supporting role) | | | 0.04 | 0.01 | 0.00 |
| Wage (salaried) | | | | 0.42 | 0.02 |
| Wage (casual) | | | | | 0.03 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.69 | 0.09 | 0.01 | 0.02 | 0.05 |
| NFE (run/manage) | | 0.06 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.01 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.03 | 0.00 |
| Wage (casual) | | | | | 0.02 |

Table B2. Women

| | Urban | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.06 | 0.04 | 0.01 | 0.01 | 0.00 |
| NFE (run/manage) | | 0.43 | | 0.03 | 0.01 |
| NFE (supporting role) | | | 0.06 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.30 | 0.01 |
| Wage (casual) | | | | | 0.03 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.68 | 0.08 | 0.01 | 0.00 | 0.02 |
| NFE (run/manage) | | 0.13 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.02 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.02 | 0.00 |
| Wage (casual) | | | | | 0.02 |

¹ All estimates use household sampling weights; only self-reporting sample included. Blank cells = no observations.

² 12-day agricultural activity for Ethiopia is not reported. A 7-day measure is used instead.

³ 2.2 percent of those working across men and women has more than 2 activities and not counted in the table above. For ESS3, 1.6% of working individuals had more than 2 activities.

Table 2.6 Share of Employment Activities by Survey Year (Tanzania)

Table A. Among those working: share across activities (last 12 months; LSMS+ NPS5 2019/20)

| Table A1. Men. LSMS+ | | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.11 | 0.10 | 0.00 | 0.15 | 0.00 |
| NFE (run/manage) | | 0.18 | | 0.08 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.37 | 0.00 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.32 | 0.13 | 0.01 | 0.36 | 0.00 |
| NFE (run/manage) | | 0.03 | | 0.01 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.09 | 0.00 |
| Wage (casual) | | | | | 0.00 |

Table A2. Women. LSMS+

| Table A2. Women. LSMS+ | | | | | |
|------------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.20 | 0.08 | 0.00 | 0.12 | 0.00 |
| NFE (run/manage) | | 0.29 | | 0.03 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.26 | 0.00 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.58 | 0.12 | 0.01 | 0.16 | 0.00 |
| NFE (run/manage) | | 0.04 | | 0.01 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.04 | 0.00 |
| Wage (casual) | | | | | 0.00 |

Table B. Among those working: share across activities (last 12 months; NPS4 2014/15)

| Table B1. Men | | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.23 | 0.07 | 0.00 | 0.14 | 0.00 |
| NFE (run/manage) | | 0.17 | | 0.03 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.34 | 0.00 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.41 | 0.14 | 0.00 | 0.27 | 0.00 |
| NFE (run/manage) | | 0.03 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.07 | 0.00 |
| Wage (casual) | | | | | 0.00 |

Table B2. Women

| Table B2. Women | | | | | |
|-----------------------|-------|------------------|-----------------------|-----------------|---------------|
| | Urban | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.27 | 0.17 | 0.00 | 0.08 | 0.00 |
| NFE (run/manage) | | 0.19 | | 0.03 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.24 | 0.00 |
| Wage (casual) | | | | | 0.00 |
| | Rural | | | | |
| | Agr. | NFE (run/manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.55 | 0.14 | 0.02 | 0.18 | 0.00 |
| NFE (run/manage) | | 0.04 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.03 | 0.00 |
| Wage (casual) | | | | | 0.00 |

¹ All estimates use household sampling weights; only self-reporting sample included. Blank cells = no observations.

² 3.7 percent of those working across men and women has more than 2 activities and not counted in the table above. For ESS3, 4.4 percent of working individuals had more than 2 activities.

Table 2.7 Share of Employment Activities by Survey Year (Malawi)

Table A. Among those working: share across activities (last 12 months; LSMS+ IHPS 2016/17)

Table A1. Men. LSMS+

| | Urban | | | | |
|-----------------------|-------|-------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.08 | 0.04 | 0.02 | 0.07 | 0.08 |
| NFE (run/ manage) | | 0.13 | | 0.02 | 0.01 |
| NFE (supporting role) | | | 0.03 | 0.01 | 0.02 |
| Wage (salaried) | | | | 0.25 | 0.04 |
| Wage (<i>ganyu</i>) | | | | | 0.12 |
| | Rural | | | | |
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.22 | 0.10 | 0.02 | 0.07 | 0.38 |
| NFE (run/ manage) | | 0.01 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.02 | 0.00 |
| Wage (<i>ganyu</i>) | | | | | 0.03 |

Table A2. Women. LSMS+

| | Urban | | | | |
|-----------------------|-------|-------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.18 | 0.14 | 0.04 | 0.04 | 0.05 |
| NFE (run/ manage) | | 0.18 | | 0.02 | 0.02 |
| NFE (supporting role) | | | 0.04 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.15 | 0.01 |
| Wage (<i>ganyu</i>) | | | | | 0.07 |
| | Rural | | | | |
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.41 | 0.08 | 0.02 | 0.02 | 0.35 |
| NFE (run/ manage) | | 0.01 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.01 | 0.00 |
| Wage (<i>ganyu</i>) | | | | | 0.02 |

Table B. Among those working: share across activities (last 12 months; IHS4 2016/17)

Table B1. Men

| | Urban | | | | |
|-----------------------|-------|-------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.11 | 0.05 | 0.00 | 0.10 | 0.09 |
| NFE (run/ manage) | | 0.13 | | 0.02 | 0.01 |
| NFE (supporting role) | | | 0.02 | 0.00 | 0.01 |
| Wage (salaried) | | | | 0.25 | 0.03 |
| Wage (<i>ganyu</i>) | | | | | 0.10 |
| | Rural | | | | |
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.26 | 0.07 | 0.01 | 0.06 | 0.42 |
| NFE (run/ manage) | | 0.01 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.03 | 0.00 |
| Wage (<i>ganyu</i>) | | | | | 0.03 |

Table B2. Women

| | Urban | | | | |
|-----------------------|-------|-------------------|-----------------------|-----------------|---------------|
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.20 | 0.12 | 0.03 | 0.05 | 0.08 |
| NFE (run/ manage) | | 0.14 | | 0.01 | 0.02 |
| NFE (supporting role) | | | 0.05 | 0.01 | 0.00 |
| Wage (salaried) | | | | 0.17 | 0.01 |
| Wage (<i>ganyu</i>) | | | | | 0.05 |
| | Rural | | | | |
| | Agr. | NFE (run/ manage) | NFE (supporting role) | Wage (salaried) | Wage (casual) |
| Agriculture | 0.42 | 0.06 | 0.02 | 0.02 | 0.36 |
| NFE (run/ manage) | | 0.01 | | 0.00 | 0.00 |
| NFE (supporting role) | | | 0.00 | 0.00 | 0.00 |
| Wage (salaried) | | | | 0.01 | 0.00 |
| Wage (<i>ganyu</i>) | | | | | 0.02 |

¹ All estimates use household sampling weights; only self-reporting sample included. Blank cells = no observations.

² 10.8 percent of those working across men and women has more than 2 activities and not counted in the table above. For ESS3, 9.1 percent of working individuals had more than 2 activities. The most common multiple activity in Malawi among the 10.8 percent is agriculture, NFE, and Wage (*ganyu*) that accounts for almost half of the 10.8 percent



4.

Individual, household and geographic correlates of labor participation

In this section, we investigate what variables correlate with participation in agricultural or non-agricultural activities in the last 7 days. Non-farm enterprises and wage employment is part of the non-agricultural activities in the analysis below. The main goal is to understand how the correlates may differ across gender, urban/rural, and survey rounds.

Table 2.8 below, specifically, also examines the correlation of individual-level ownership of assets (mobile phones, financial accounts, and reported land ownership) with participation in agricultural or non-agricultural work for women. Full regressions, controlling for individual, household and geographic (urban/rural, as well as interview month fixed effects) are available in the Annex. The regressions, while not causal, reflect a strong link across countries with financial account ownership and women's labor participation in non-agricultural activities, even after controlling for individual and household socioeconomic status, as well as geography. Mobile phone ownership is also linked with women's non-agricultural work in Tanzania. Women's individual ownership of land, as expected, is strongly associated with agricultural activity across countries, and particularly so in Tanzania.

Table 2.8 Women’s labor market participation: association with individual-level asset variables

| Dependent variable: Individual in the past 7 days participated in agr./non-agr. activities (Y=1, N=0) | Tanzania NPS5 | | Ethiopia ESS4 | | Malawi IHPS | |
|---|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| | Agr. | Non-agr. | Agr. | Non-agr. | Agr. | Non-agr. |
| Individual owns a mobile phone (Y=1 N=0) | 0.064 [1.12] | 0.113** [2.22] | -0.046* [-1.79] | 0.032 [1.27] | -0.002 [-0.08] | 0.009 [0.34] |
| Individual owns a financial account (Y=1 N=0) | -0.063 [-0.89] | 0.165** [2.14] | 0.007 [0.28] | 0.073*** [3.30] | 0.034* [1.80] | 0.083*** [4.02] |
| Individual owns any land (reported ownership; Y=1 N=0) | 0.244*** [4.47] | -0.031 [-0.61] | 0.087*** [2.93] | -0.012 [-0.75] | 0.070*** [3.09] | -0.025 [-1.16] |
| Observations | 760 | 760 | 6,293 | 6,293 | 2,596 | 2,596 |
| R-squared | 0.503 | 0.390 | 0.324 | 0.221 | 0.218 | 0.098 |

¹ All regressions weighted by the household sampling weight. Only the self-reporting sample included. Regressions also control for geographic, and interview month fixed effects.

² Dependent variable was =1 if the woman respondent reported participating in the last 7 days in any agr. (non-agr.) activity.

³ Annex Tables A1-A3 provide full results with all right-hand side variables, across individual, household and geographic controls.

Among other associations with individual and household characteristics, **Annex Tables A1-A3** show that women at the extremes of the age distribution (18-24, and 55+) are less likely to report being in non-agricultural work, whereas in Malawi and Tanzania, women ages 55+ are more likely to be involved in agriculture. There is some positive association with women’s non-agricultural work and household access to piped water in Tanzania, as well as electricity in Ethiopia, and the reverse relationship with agricultural work.

Generally, **Annex Tables A1-A3** also show that similar patterns emerge with the same regressions for the LSMS-ISA surveys conducted in these countries. One pattern that does stand out when comparing the LSMS+ with their LSMS-ISA counterparts is the importance of geographic/ enumeration-area fixed effects in the LSMS+ supported surveys. **Annex Tables A1-A3** reflect a higher R-squared in general, particularly in Tanzania and Ethiopia, for the LSMS+ supported surveys when controlling for the same right-hand-side variables. **Table 2.9** below examines the extent to which these geographic effects, that typically help account for local unobserved effects, may be contributing to this difference.

Specifically, **Table 2.9** shows that the increase in the share of variation in outcomes for women’s work is much greater in the Tanzania and Ethiopia LSMS+ when controlling for geographic/enumeration area fixed effects, and in particular compared to their LSMS-ISA counterparts. In separate results in **Table 2.10**, this pattern is consistent for men’s work across agriculture and non-agriculture in Tanzania and Ethiopia. For Malawi, the same differences did not emerge.

Across all countries, individual ownership of financial accounts is strongly linked with women’s non-agricultural employment

Table 2.9 Role of enumeration-area fixed effects in explaining women's labor market participation, LSMS+ versus comparison LSMS-ISA surveys in each country

| | Work in non-agriculture (Y=1 N=0): | | Work in agriculture (Y=1 N=0) | |
|---------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | EA fixed effects included | EA fixed effects not included | EA fixed effects included | EA fixed effects not included |
| Tanzania | | | | |
| LSMS+ (NPS 5, 2019-20) | | | | |
| R-squared | 0.318 | 0.206 | 0.401 | 0.287 |
| Observations | 1,004 | 1,004 | 1,004 | 1,004 |
| LSMS-ISA (NPS 4, 2014-15) | | | | |
| R-squared | 0.286 | 0.152 | 0.482 | 0.339 |
| Observations | 866 | 866 | 866 | 866 |
| Ethiopia | | | | |
| LSMS+ (ESS4, 2018-19) | | | | |
| R-squared | 0.203 | 0.177 | 0.281 | 0.271 |
| Observations | 6,293 | 6,293 | 6,293 | 6,293 |
| LSMS-ISA (ESS3, 2015-16) | | | | |
| R-squared | 0.172 | 0.148 | 0.157 | 0.144 |
| Observations | 6,198 | 6,198 | 6,198 | 6,198 |
| Malawi | | | | |
| LSMS+ (IHPS, 2016) | | | | |
| R-squared | 0.128 | 0.064 | 0.271 | 0.164 |
| Observations | 2,596 | 2,596 | 2,596 | 2,596 |
| LSMS-ISA (IHS4, 2016-17) | | | | |
| R-squared | 0.181 | 0.101 | 0.326 | 0.164 |
| Observations | 8,002 | 8,002 | 8,002 | 8,002 |

¹ All regressions weighted by the household sampling weight. Only the self-reporting sample included. The same individual and household characteristics in Annex Tables A1-A3 are included in the regressions, along with interview month fixed effects.

² Dependent variable was =1 if the woman respondent reported participating in the last seven days in any agr. (non-agr.) activity.



Table 2.10 Role of enumeration-area fixed effects in explaining men’s labor market participation, LSMS+ versus comparison LSMS-ISA surveys in each country

| | Work in non-agriculture (Y=1 N=0): | | Work in agriculture (Y=1 N=0) | |
|---------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | EA fixed effects included | EA fixed effects not included | EA fixed effects included | EA fixed effects not included |
| Tanzania | | | | |
| LSMS+ (NPS 5, 2019-20) | | | | |
| R-squared | 0.403 | 0.278 | 0.442 | 0.355 |
| Observations | 867 | 867 | 867 | 867 |
| LSMS-ISA (NPS 4, 2014-15) | | | | |
| R-squared | 0.426 | 0.297 | 0.494 | 0.399 |
| Observations | 875 | 875 | 875 | 875 |
| Ethiopia | | | | |
| LSMS+ (ESS4, 2018-19) | | | | |
| R-squared | 0.301 | 0.276 | 0.509 | 0.495 |
| Observations | 4,937 | 4,937 | 4,937 | 4,937 |
| LSMS-ISA (ESS3, 2015-16) | | | | |
| R-squared | 0.254 | 0.216 | 0.253 | 0.254 |
| Observations | 5,534 | 5,534 | 5,534 | 5,534 |
| Malawi | | | | |
| LSMS+ (IHPS, 2016) | | | | |
| R-squared | 0.233 | 0.190 | 0.295 | 0.129 |
| Observations | 2,075 | 2,075 | 2,075 | 2,075 |
| LSMS-ISA (IHS4, 2016-17) | | | | |
| R-squared | 0.218 | 0.136 | 0.320 | 0.166 |
| Observations | 6,988 | 6,988 | 6,988 | 6,988 |

¹ All regressions weighted by the household sampling weight. Only the self-reporting sample included. The same individual and household characteristics in Annex Tables A1-A3 are included in the regressions, along with interview month fixed effects.

² Dependent variable was =1 if the woman respondent reported participating in the last seven days in any agr. (non-agr.) activity.

In general, more precise, self-reported data on individual labor outcomes can allow for clearer policy links on how work is associated with individual and household demographics, education, access to infrastructure, and local factors. Multiple areas of work, as well as intra-household dynamics can also be explored in greater detail. All of this presents an important opportunity to improve assessments of economic constraints and choices that men and women make, and pathways to improving economic mobility.



Section 2 / Summary

- +** Improved self-reporting in labor modules can **reduce measurement error in understanding key outcomes across paid and unpaid work**, as well as shed greater light on **intra-household variation** in men's and women's economic opportunities.
- +** While full self-reporting was not achievable in the LSMS+, enumerators focused on ensuring one-on-one, self-reported interviews whenever possible. **Proxy reporting of labor and health outcomes was significantly lower in the Malawi and Tanzania LSMS+ compared to LSMS-ISA surveys conducted in these countries** (i.e., the Malawi IHS4 and the Tanzania NPS4).
- +** There are **significant gender gaps** in participation in wage employment across the LSMS+ supported surveys in Malawi, Tanzania and Ethiopia. In general, **gender gaps in participation across activities differ depending on the activity type but also by country**. Comparisons by Kilic et al. (2020a) of the Malawi IHPS/LSMS+ and the concurrently-conducted IHS4, show that the IHS4 leads to significant underreporting of employment across a range of wage and self-employment activities, with stronger effects for women and for a longer (12-month) recall period.
- +** **Women spend disproportionately more time in non-market work compared to men**, including activities such as fuel and firewood collection. The LSMS+ supported surveys, in particular, reveal greater time spent by respondents in water and fuel collection than the comparison LSMS-ISA surveys conducted in these countries.
- +** Across surveys, **the share of working individuals engaged in multiple activities (main and secondary activities as elicited in the labor module questionnaire) is quite high**, particularly in Malawi and Tanzania. Men also typically show a higher proportion of working in multiple activities across these categories, especially in rural areas. Other forms of unpaid work that women are engaged in are not included in these estimates, which likely explains this pattern.
- +** In regressions examining effects on **women's labor participation**, individual-level ownership of assets collected in the LSMS+ supported surveys (land, mobile phones and financial accounts) **are strongly correlated with women's labor participation, and particularly ownership of financial accounts with women's participation in non-agricultural** (wage and NFE) work. Geographic and enumeration-area fixed effects also appear to have a stronger role in explaining variation in women's labor participation, across agriculture and non-agriculture, in the LSMS+ supported surveys.



Section 3

Asset ownership and rights

- 1. The importance of individual-level interviews in measuring asset ownership/rights**
- 2. LSMS+ survey modules on asset ownership**
 - 2.1. Asset classes
 - 2.2. Interview approach
- 3. Land ownership and rights, and livestock ownership, across the LSMS+ supported surveys**
 - 3.1. What patterns emerge across men and women?
 - 3.2. Bundles of land ownership and rights
 - 3.3. Reporting discrepancies among couples
 - 3.4. Livestock ownership in Ethiopia
- 4. Financial account and mobile phone ownership**
 - 4.1. Individual-level estimates
 - 4.2. Does individual-level data collection affect household estimates of mobile and financial account ownership?

Section 3 / Summary



1.

The importance of individual-level interviews in measuring asset ownership/ rights

International momentum behind improving the availability and quality of individual-disaggregated survey data on asset ownership and control has accelerated, in large part to the United Nations Evidence and Data for Gender Equality (EDGE) initiative. Specifically, the UN EDGE initiative supported survey experiments and pilots across countries between 2014-16, including the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA) in Uganda (see **Box 3.1**; Kilic and Moylan, 2016),¹⁸ aimed at understanding how to better collect individual-level data on asset ownership and rights. This work ultimately resulted in the United Nations Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective (UNSD, 2019).¹⁹

¹⁸ Additional country pilots supported by UN EDGE were implemented by the national statistical offices across Georgia, Maldives, Mexico, Mongolia, the Philippines and South Africa.

¹⁹ The guidelines can be accessed at https://unstats.un.org/edge/publications/docs/Guidelines_final.pdf.

Box 3.1 Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA) in Uganda (Kilic and Moylan, 2016)

MEXA is a randomized **household survey experiment** that was implemented by the Uganda Bureau of Statistics in 2014, in collaboration with the UN EDGE Initiative and the World Bank Living Standards Measurement Study (LSMS), providing a unique opportunity for **more in-depth analysis of gender disparities in asset ownership, with a focus on land ownership**.

The experiment targeted 140 enumeration areas (EAs) across Uganda, and randomly allocated four households in each EA to each of five treatments/arms that differed in terms of respondent selection. Regardless of the treatment, the respondent(s) were interviewed alone.

The first four treatments/arms included interviewing

- 1. the self-identified most knowledgeable household member;**
- 2. a randomly selected member of the principal couple;**
- 3. the principal couple together;**
- 4. all adult household members, simultaneously.**

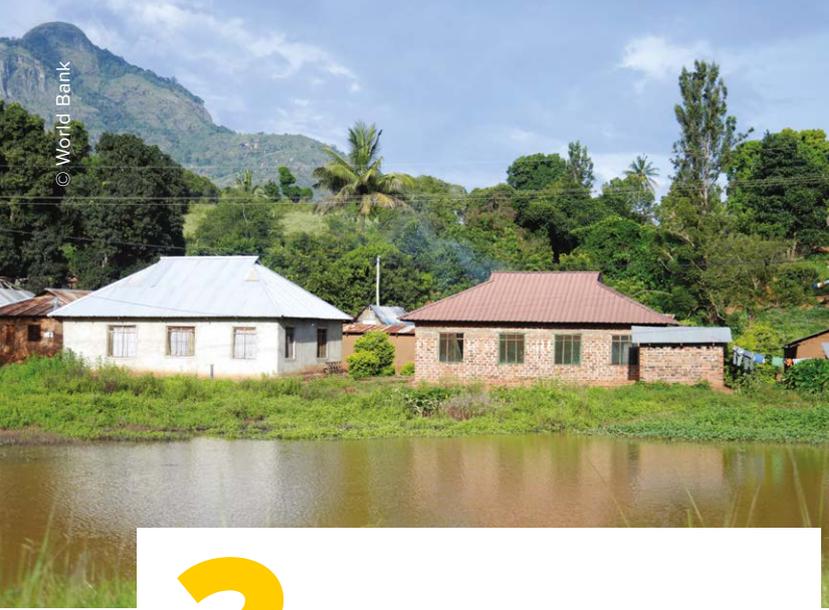
In Arms 1-4, the respondents reported on all assets owned, either exclusively or jointly, by members of the household. Arm 5 was identical to Arm 4, except that respondents reported only on assets they themselves owned, either exclusively or jointly. The asset types included: dwelling, agricultural land, livestock, agricultural equipment, other real estate, non-farm enterprises/enterprise assets, financial assets and liabilities, and valuables. Differentiation across legal, reported, and economic ownership and the bundle of rights (sell, rent out, use as collateral, bequeath, and make investments) at the asset level was key. Individuals associated with each of these constructs were uniquely identified.

On the design, implementation and analysis of MEXA, please refer to: Kilic, T., and Moylan, H. (2016). "Methodological experiment on measuring asset ownership from a gender perspective: technical report." Washington, DC: World Bank.

The 2019 UN guidelines provide empirical evidence that support a number of methodological shifts in how survey questions on asset ownership and rights are designed and administered. This includes moving away from the common practice of relying on a "most knowledgeable" household member who also reports for other household members; emphasizing interviewing multiple adults per household; and private interviews regarding respondents' personal ownership of and rights to assets, either exclusively or jointly with someone else.²⁰ As seen in the MEXA experiment in Uganda, following these recommendations provides a more complete picture of ownership of and rights to assets within households, particularly among women; minimizes distortionary proxy respondent effects and intra-household discrepancies in reporting; and reveals hidden assets.

²⁰ Also see related work by Grown et al. (2005) and Doss et al. (2011): Grown, C., Rao Gupta, G., and Kes, A. (2005). Taking action: achieving gender equality and the millennium development goals. London: Earthscan Publications.; and Doss C., Deere, C. D., Oduro, A., Swaminathan, H., Suchitra, J., Lahoti, R., Baah-Boateng, W., Boakye-Yiadom, L., Twyman, J., Catanzarite, Z., Grown, C., and Hillesland, M. (2011). "The gender asset and wealth gaps: evidence from Ecuador, Ghana, and Karnataka, India." Bangalore: Indian Institute of Management.

As seen in the MEXA experiment in Uganda, following these recommendations provides a more complete picture of ownership of and rights to assets within households, particularly among women; minimizes distortionary proxy respondent effects and intra-household discrepancies in reporting; and reveals hidden assets



2.

LSMS+ survey modules on asset ownership

The LSMS+ modules delve into intra-household ownership across different types of assets — and in turn highlight important patterns of ownership and decision-making that can inform policy efforts to expand access to financial services, land, and property rights in general. For all countries where the LSMS+ has been implemented — including Malawi, Tanzania, and Ethiopia — individual-level modules on assets span (a) ownership and rights to land parcels²¹, as well as (b) respondents' ownership (exclusive or joint) over other assets including financial accounts, and mobile phones. Ownership of livestock was also included in Ethiopia.

The module on land, specifically, addresses the data needs for both SDG indicators 1.4.2 and 5.a.1 — covering all land owned or accessed via use rights, and following recent recommendations in 2019 by the Food and Agricultural Organization (FAO), the World Bank, and UN Habitat.²² The modules on mobile phones and financial accounts cover SDG indicators 5.b.1 and 8.10.2.

²¹ A parcel is defined as a continuous piece of land which can have more than one plot.

²² The World Bank, FAO and UN Habitat (2019). [Measuring Individuals' Rights to Land: An Integrated Approach to Data Collection for SDG Indicators 1.4.2 and 5.a.1.](#)

2.1. Asset classes

On **land**, both dwelling and non-dwelling land are covered in the LSMS+. Parcels were first identified and rostered through the household questionnaire are carried forward to individual interviews. For each parcel, respondents are asked about different types of ownership (reported, economic, and documented); rights (to sell, bequeath, use as collateral, rent out, and make improvements/invest); as well as decision-making in the case of agricultural parcels (**Box 3.2**).²³ Respondents are also asked about perceived tenure security. The questions on rights were not asked of the respondent if he/she did not name himself/herself as a reported owner for a given parcel.²⁴ Respondents are also asked to identify, in the case of joint ownership or where permission is needed to exercise rights, up to three household members. In Malawi they also recorded two non-household members who share ownership/give permission through a network roster capturing the name and relationship to the household. In Tanzania and Ethiopia, the numbers of male and the number of female non-household owners were collected.

For **other asset classes**, questions on the household dwelling follow the same structure as the parcel module (following household-level questions on the dwelling and then asking the same individual-level questions on different types of ownership and rights). For financial accounts, mobile phones, and livestock, respondents were asked about whether they owned these assets exclusively or jointly with others (and, if jointly, with which other household members).

²³ Along with rights/ownership, respondents reported on how each parcel was acquired; identified the individuals from whom the asset was inherited or received as a gift, as applicable; and provided the current hypothetical sales value for each asset (and the construction costs specifically for the dwelling) and limited information on their knowledge of asset transactions in their communities.

²⁴ The scope of rights included in the questionnaire was influenced by Schlager and Ostrom's (1992) theoretical framework which focuses, in the context of natural resources, on issues related to access, withdrawal, management, exclusion and alienation while defining a bundle of rights.

2.2. Interview approach

The LSMS+ modules on asset ownership and rights attempted to carry out personal interviews of adult household members, inquiring about their personal ownership of and rights to assets in the aforementioned asset classes - corresponding to Treatment 5 (“T5”) of MEXA described in **Box 3.1**, and leveraging the contextualized and improved versions of the MEXA T5 questionnaire instrument (Kilic and Moylan, 2016). **Appendix I** includes the protocol for administering the individual questionnaire.

The individual interviews were capped at four per household in Malawi and it was ensured that the head of household and his/her spouse (if one exists) were among the individuals interviewed.²⁵ In Tanzania and Ethiopia all eligible adults were

²⁵ This was an upper limit that only applied to 1 percent of the sampled household population that had more than four adults. If a sampled household had more than four adult household members, following the preference given to the head of the household, and his/her spouse if applicable, the remaining interview targets (2 or 3 depending on the presence of a spouse) were selected at random from the remaining pool of adult household members.

interview targets. Within-household interviews were always administered in private and, depending on the fieldwork set-up in the country, were attempted to be administered simultaneously, as well as, to the best extent possible, with gender matching between the enumerator and respondent.^{26 27}

Regarding agricultural land, following the creation of a roster of all owned and/or cultivated agricultural parcels and the identification of those that are “owned” by at least one household member, this common list of owned parcels that is generated as part of the household interview was fed forward to each individual interview in that household.^{28,29}

²⁶ For more information on the organization and implementation of the individual-disaggregated data collection as part of the IHPS, please consult the survey’s basic information document, which can be accessed here: <https://microdata.worldbank.org/index.php/catalog/2939/download/47216>.

²⁷ See Operational Guidance.

²⁸ Parcel is defined as a continuous piece of land which can have more than one plot; in the IHPS this is referred to as “Garden”.

²⁹ In this process, the enumerator for each individual interview in each household copied the garden roster from the tablet of the primary enumerator assigned to the household into his/her tablet that generated a new questionnaire (under Survey Solutions census mode) for each interview target. To better facilitate the process, the enumerators also had paper booklets of household, garden and plot rosters to ensure unique identification of household members and parcels across the individual interviews in the same household.

Box 3.2 LSMS+ questions over parcel ownership and rights, as well as decision-making

Reported owner

Do you own this [PARCEL], either alone or jointly with someone else?
(If jointly, list others – up to three members from HH roster, and number of non-HH members)

Economic owner

If this [PARCEL] were to be sold today, would you be among the individuals to decide how the money is used?
(if others also involved, list up to three members from HH roster, and number of non-HH members)

Documented owner

Does your household have a document for this [PARCEL], such as an application receipt, land investigation paper, certificate (title) from the government, paper from local authority, lease or rental contract?

Are you listed on the title or ownership document as owner of this parcel?
(If others also listed, name up to three members from HH roster, and number of non-HH members)

Rights¹

With regard to this [PARCEL], are you among the individuals who have this right, even if you need to obtain consent or permission from someone else?

If yes, do you need permission or consent from anyone else (name those members; and number of non-HH members)?

With regard to this [PARCEL], who else has this right, even if they needed to obtain consent or permission from someone else? Does the person need permission or consent? From whom does the person need permission or consent?

Decision-making (agricultural parcels)

Are you among the decision-maker(s) on this [PARCEL] regarding the timing of crop activities, crop choice, and input use?
(if others also involved, list up to three members from HH roster, and number of non-HH members)

¹ Questions on rights are asked separately for rights to sell, bequeath, use as collateral, rent out, and make improvements/invest in it.

² For non-dwelling land in Ethiopia, the right to sell was not asked because land is State-owned.

3.

Land ownership and rights, and livestock ownership, across the LSMS+ supported surveys

3.1. What patterns emerge across men and women?

What do the LSMS+ supported surveys reveal on men's and women's land ownership and rights? **Figures 3.1** and **3.2** present summary statistics on variables capturing exclusive versus joint ownership and rights of non-dwelling and dwelling land, respectively, along with a dichotomous variable, "SDG owner", based on the definition of the SDG indicator 5.a.1 (if the individual is a documented owner of a parcel, has the right to sell, or has the right to bequeath). Shares of ownership/rights are broken out by women and men overall, as well as for women non-heads of household.³⁰ Adjusted Wald tests for equality of means were conducted across these three groups, with significant differences ($p < 0.05$) indicated by darker-colored bars.

³⁰ As compared to women where there was greater diversity in household status by head, spouse, or other household members, nearly all men reporting ownership were household heads.



Apart from gender, the distribution of ownership and rights varies by country, rural/urban residence, as well as type of land. As expected, a greater share of rural respondents claim ownership and rights over land (dwelling or non-dwelling) than urban respondents. In Tanzania and Malawi, exclusive economic ownership for both types of land also tends to be much lower than exclusive reported ownership across both urban and rural areas. As a result, even when reported land ownership is exclusive, decision making over the proceeds from selling land is more likely to be distributed across multiple household members.

Interesting gender differences also emerge across the three countries, when comparing **(a) all men with all women**, and **(b) all men with non-household head women**.³¹ In Tanzania, women are significantly less likely to have exclusive ownership over both types of land compared to men, with wider disparities for non-household head women. In Ethiopia, non-household head women are also significantly less likely to have exclusive ownership over land, although women overall have higher exclusive dwelling land ownership than men (a closer look at the data shows this is driven by women heads of household, who are less likely to have a spouse living with them). Women are also significantly less likely than men in Ethiopia to have joint ownership of non-dwelling and dwelling land. In Tanzania and Ethiopia, women are also significantly less likely to be SDG owners of non-dwelling and dwelling land, with wider disparities for Tanzania.

³¹ As seen in Section 1, Table 1.4, most men respondents were household heads, whereas women's relationship to the household head varied more. This is why the additional category of women respondents (non-household head) was broken out.

With the exception of dwelling land in Malawi, the gender gap in ownership and rights tends to widen among men and women above

50 years of age

In rural Tanzania, Malawi and Ethiopia

25-30%
of non-dwelling land is jointly owned

In Malawi, on the other hand, where the majority of ownership and rights over land follow matrilineal traditions, the shares of women with exclusive reported and economic ownership over non-dwelling and dwelling land are significantly higher than that for men. Country context therefore matters. A recent study by Kilic et. al (2020b)³² also compared the Malawi LSMS+/IHPS with the concurrent IHS4 that asked only one “most knowledgeable” respondent about household members’ agricultural land ownership and rights—finding that the IHS4 resulted in higher rates of exclusive reported and economic ownership of agricultural land among men, and lower rates of joint reported and economic ownership among women. Malawi was a unique case where this comparison could be made, since the IHS4 was conducted at the same time, and with the same questionnaire format as the non-dwelling land assets module in the LSMS+, but with a different interview approach.

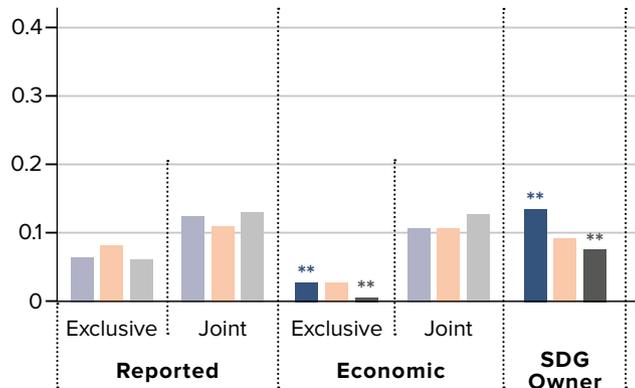
Figure 3.3 also presents, by dwelling and non-dwelling land, how land ownership and rights vary by age. The higher share of respondents owning dwelling as opposed to non-dwelling land is also reflected in the figure. With the exception of dwelling land in Malawi, the gender gap in ownership and rights tends to widen among men and women above 50 years of age. Trends in reported, economic and SDG ownership, by age, also tend to be similar in most contexts, except for Tanzania where there is a much larger gap between reported ownership and economic as well as SDG ownership for respondents below 50 years of age, with this gap narrowing somewhat (more so for men) among the elderly.

³² Kilic, Talip, Heather Moylan, and Gayatri Koolwal. 2020b. “Getting the (Gender-Disaggregated) Lay of the Land: Impact of Survey Respondent Selection on Measuring Land Ownership and Rights.” World Bank Policy Research Working Paper 9151.

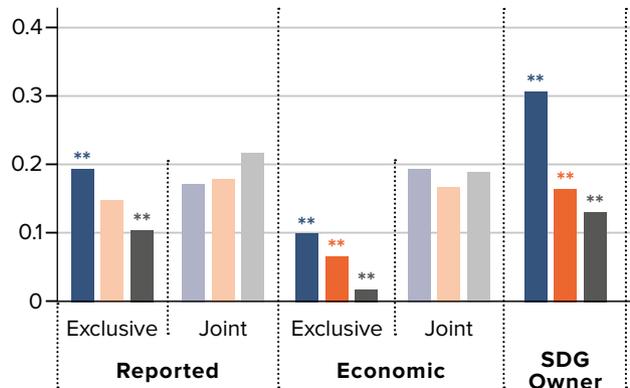
Figure 3.1 Shares of men and women with different ownership and rights, non-dwelling land
(Darkened bars = significant gender differences at $p < 0.05$)¹

■ All men ■ All women ■ Non - HH head women

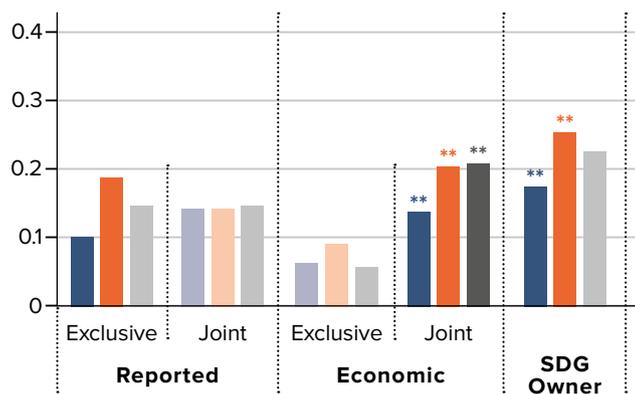
Tanzania - Urban



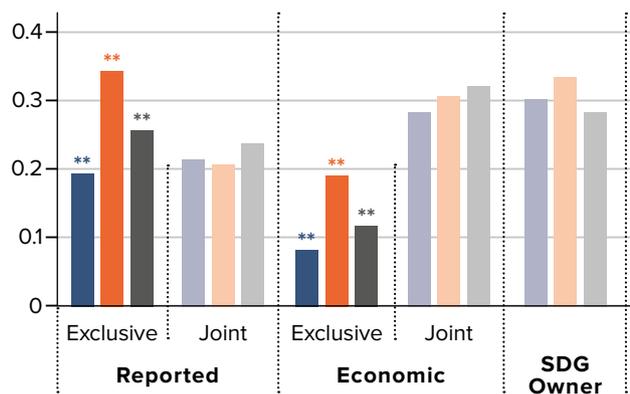
Tanzania - Rural



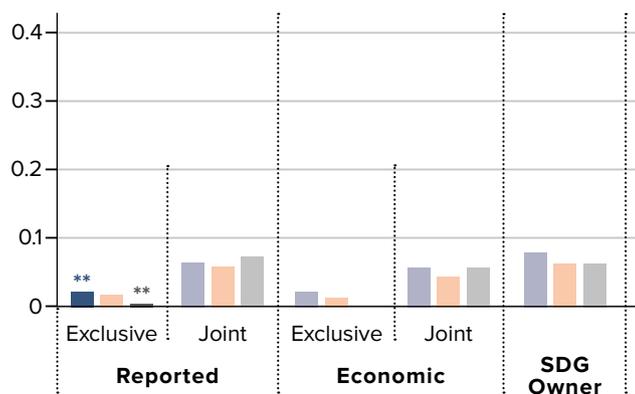
Malawi - Urban



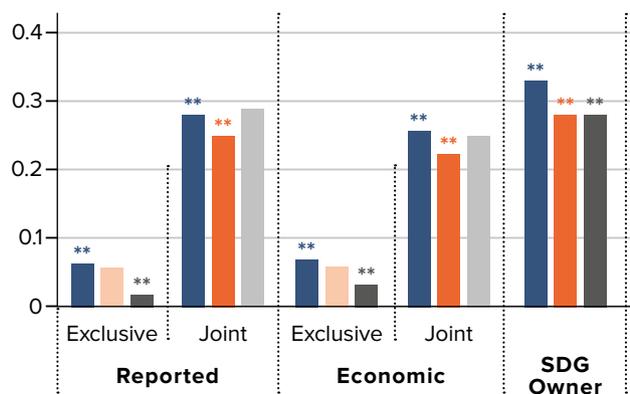
Malawi - Rural



Ethiopia - Urban



Ethiopia - Rural



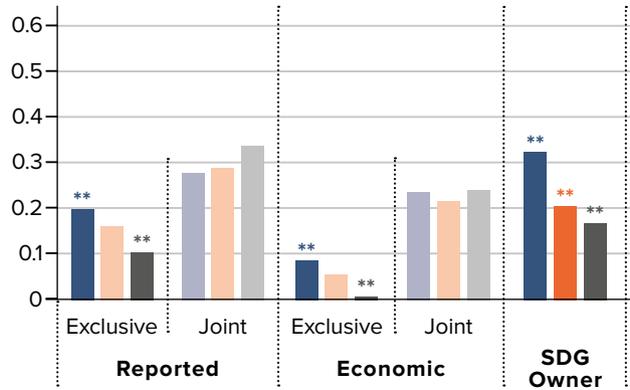
¹ Dark blue bars with ** reflect cases where men's outcomes are significantly different ($p < 0.05$) from (a) the full sample of women (when significant, indicated by dark orange bars with**), or (b) from non-household head women (when significant, indicated by black bars with **). In all other cases (light colored bars) there were no significant differences across these two sets of groups. All estimates are weighted using household sampling weights.

² "SDG owner" is based on the definition of the SDG indicator 5.a.1. (takes the value one if the individual is a documented owner, has the right to sell, or has the right to bequeath).

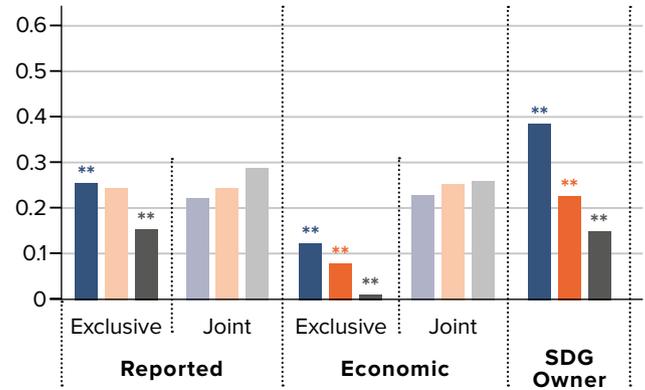
Figure 3.2 Shares of men and women with different ownership and rights, dwelling land
(Darkened bars = significant gender differences at $p < 0.05$)¹

■ All men ■ All women ■ Non - HH head women

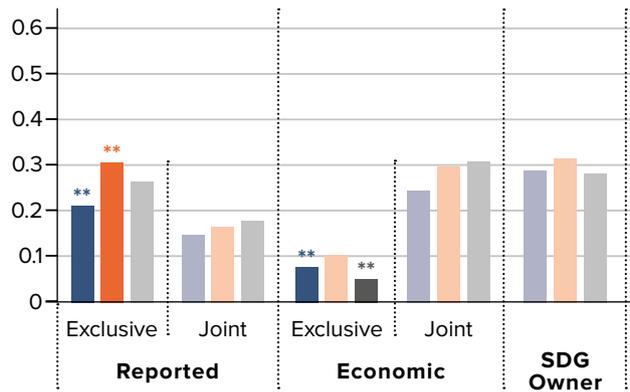
Tanzania - Urban



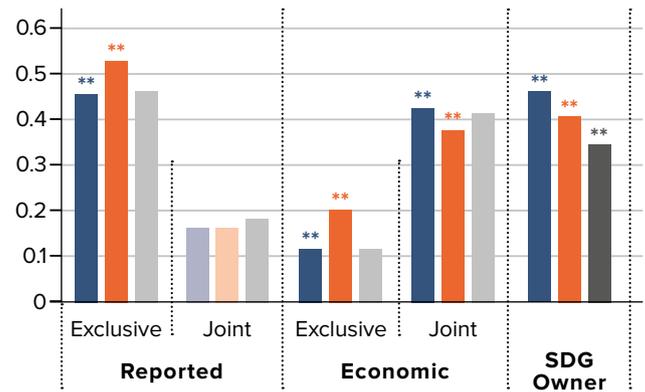
Tanzania - Rural



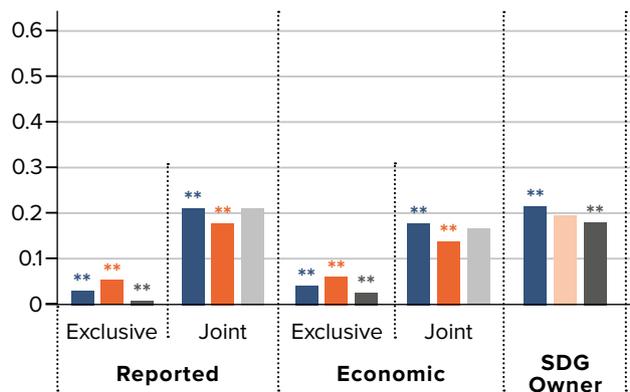
Malawi - Urban



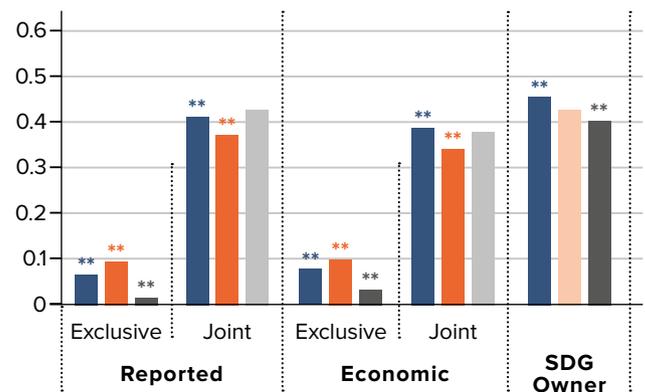
Malawi - Rural



Ethiopia - Urban



Ethiopia - Rural



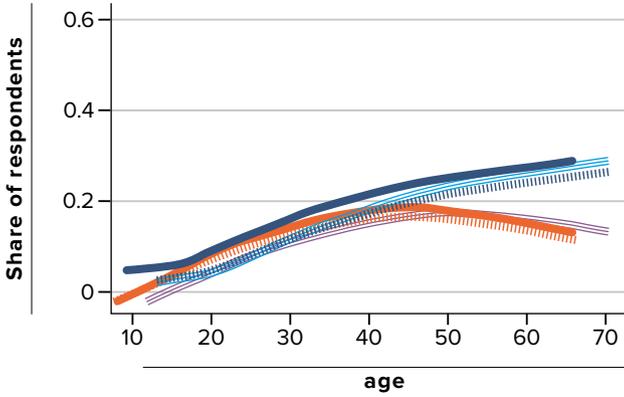
¹ Dark blue bars with ** reflect cases where men's outcomes are significantly different ($p < 0.05$) from (a) the full sample of women (when significant, indicated by dark orange bars with**), or (b) from non-household head women (when significant, indicated by black bars with **). In all other cases (light colored bars) there were no significant differences across these two sets of groups. All estimates are weighted using household sampling weights.

² "SDG owner" is based on the definition of the SDG indicator 5.a.1. (takes the value one if the individual is a documented owner, has the right to sell, or has the right to bequeath).

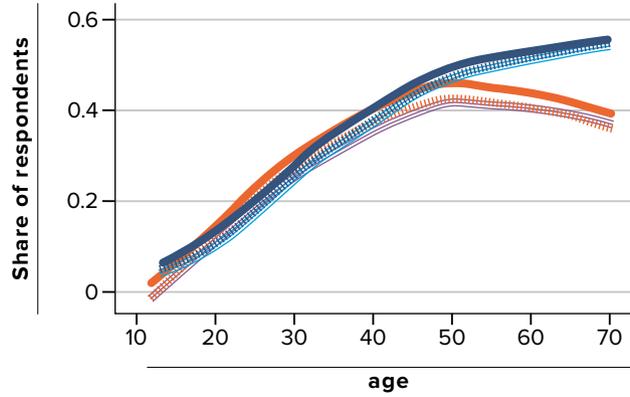
Figure 3.3 Land ownership and rights, by age of respondents

— Reported owner Men
 - - - - Economic owner Men
 — SDG owner Men
 — Reported owner Women
 - - - - Economic owner Women
 — SDG owner Women

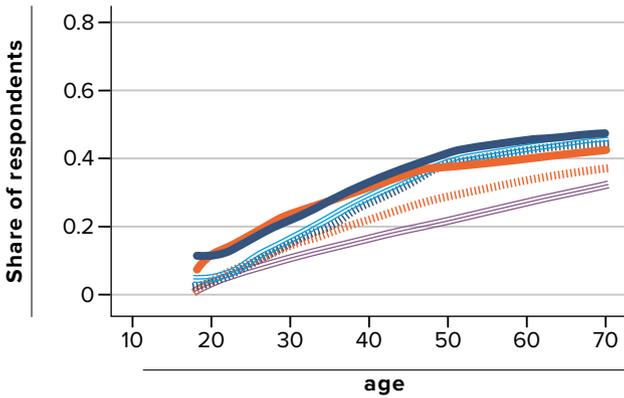
(1a) Ethiopia: Non-dwelling land



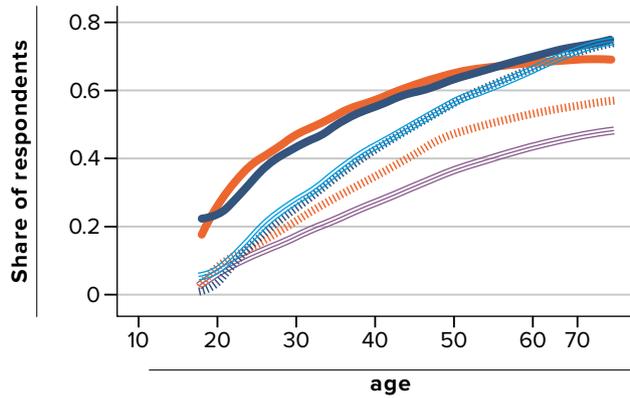
(1b) Ethiopia: Dwelling land



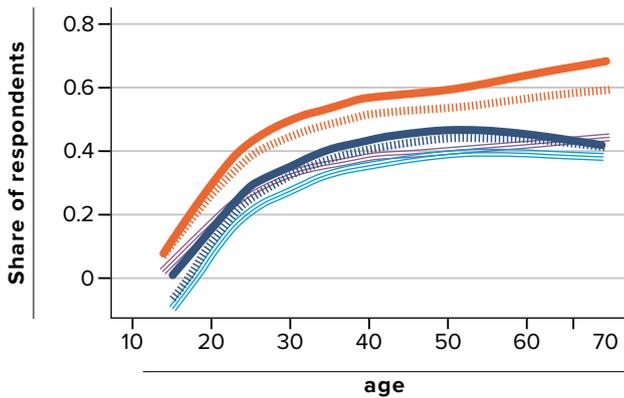
(2a) Tanzania: Non-dwelling land



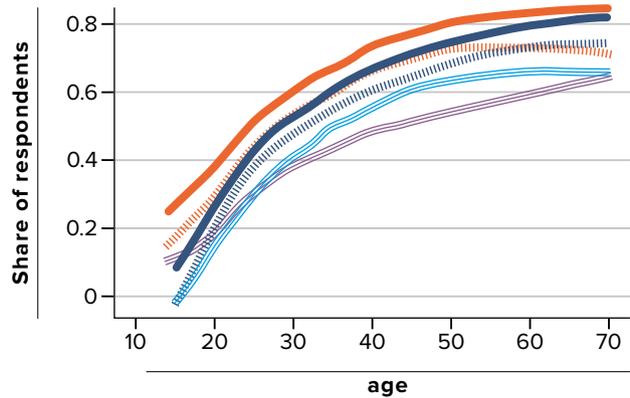
(2b) Tanzania: Dwelling land



(3a) Malawi: Non-dwelling land



(3b) Malawi: Dwelling land



¹ In Ethiopia, right to sell was not asked for non-dwelling land.



3.2. Bundles of land ownership and rights

Understanding how ownership is linked with specific rights is also important for policy design. **Figure 3.4** presents the share of women and men with different bundles of ownership and rights, for dwelling as well as non-dwelling land.³³ Generally, only small shares of men and women claim all ownership and rights to land. Within Ethiopia — and Tanzania in particular — wider gender inequalities are also apparent, where men were more likely to claim they had all ownership and rights over different types of land compared to women. **In Tanzania, for example, only about 10 percent of women claimed they had all ownership and rights to non-dwelling land (compared to 21 percent of men); for dwelling land, these shares were 15 percent of women and 27 percent of men. Within Ethiopia, 18 and 23 percent of women and men, respectively, claimed all ownership and rights to non-dwelling land, compared to 25 and 31 percent of women and men for dwelling land. In Malawi, relative shares of men and women with all ownership and rights were similar – about 23 percent for non-dwelling land, and 30 percent for dwelling land.** As compared to the other countries, a greater share of women in Malawi also claimed both reported and economic ownership of dwelling and non-dwelling land.

³³ For both non-dwelling and dwelling land, rural/urban patterns for Tanzania and Ethiopia matched the patterns for the total sample fairly closely.

Reported and economic ownership are also generally tightly linked — either with respondents claiming neither reported nor economic ownership, or both. In Tanzania, there was some variation, albeit small — about 9 percent of women claimed reported but no economic ownership over non-dwelling land (and 16 percent of women for dwelling land); for men, these shares were about 6 and 16 percent, respectively.³⁴ Similarly, among men and women landowners, rights to sell and bequeath overlapped substantially. The main exception was for dwelling land in Ethiopia, and for non-dwelling land in Malawi, where a little more than 10 percent of men and women claimed they had rights to bequeath, but not sell, land.

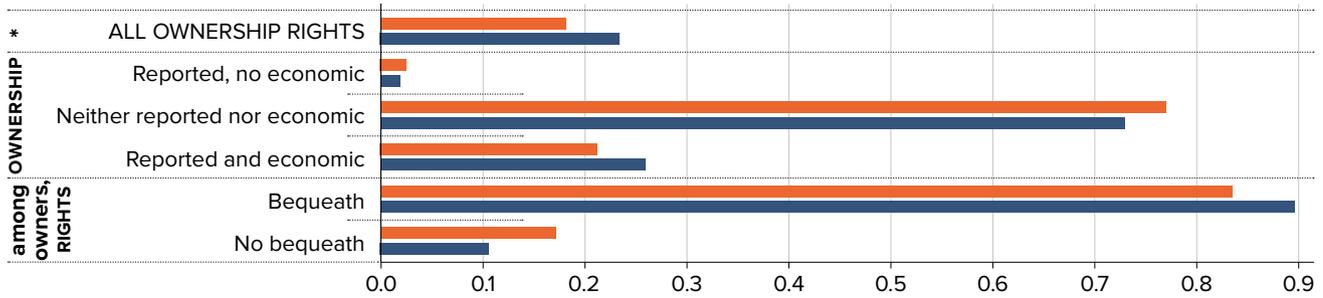
Interestingly, as compared to ownership, gender disparities tended to widen among landowners in rights to sell and bequeath, with the exception of Ethiopia where gender gaps were roughly similar across landownership and rights. In Tanzania, for example, the share of women landowners reporting neither the right to sell nor bequeath their land (51 percent for non-dwelling land, and 56 percent for dwelling land) was more than twice that of men landowners. This was the case even in Malawi, where a greater share of women had both reported and economic ownership of non-dwelling land compared to men. The findings therefore point to a need to better understand and compare specific nuances of asset ownership and rights across men and women.

³⁴ Because of the way the individual interviews were conducted, “economic but not reported ownership” was not a possible response option.

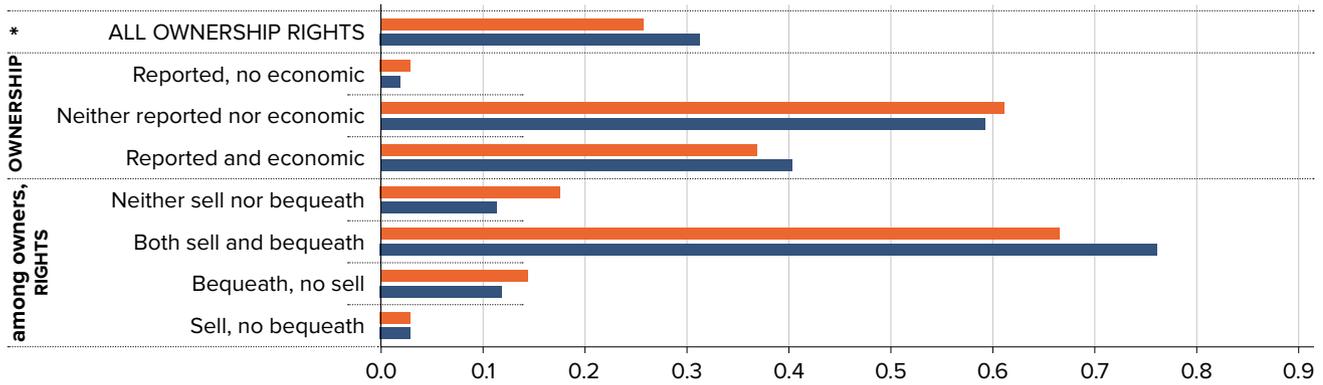
Figure 3.4 Share of women and men with different bundles of ownership and rights (1/2)

Men Women

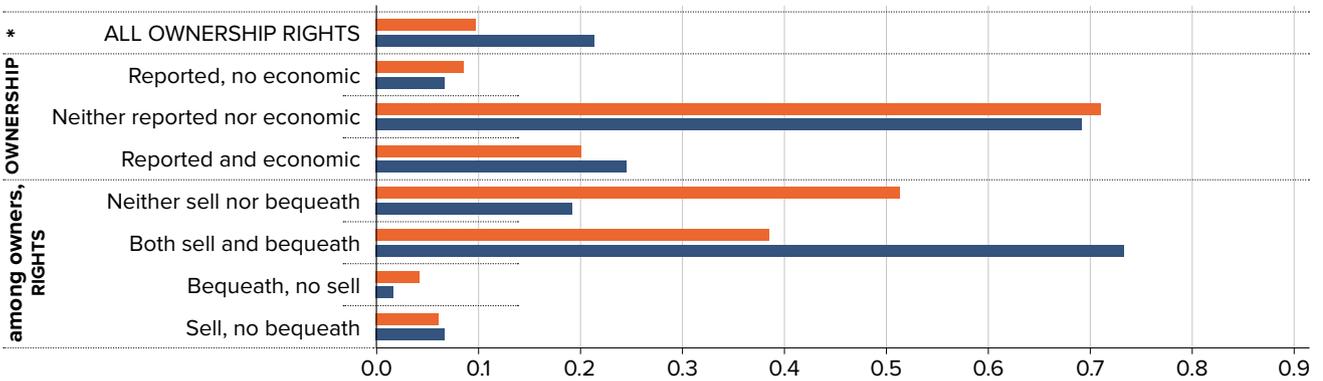
Ethiopia: Non-dwelling land



Ethiopia: Dwelling land



Tanzania: Non-dwelling land



Tanzania: Dwelling land

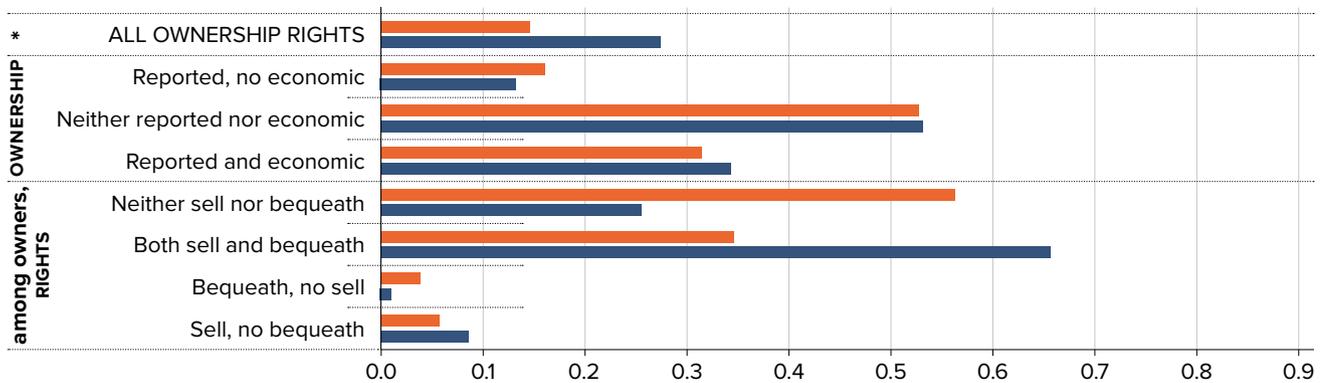
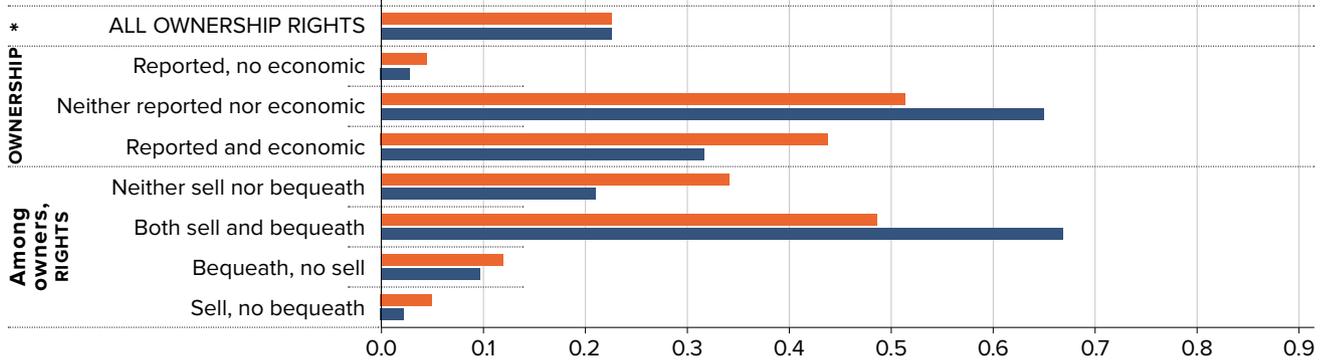


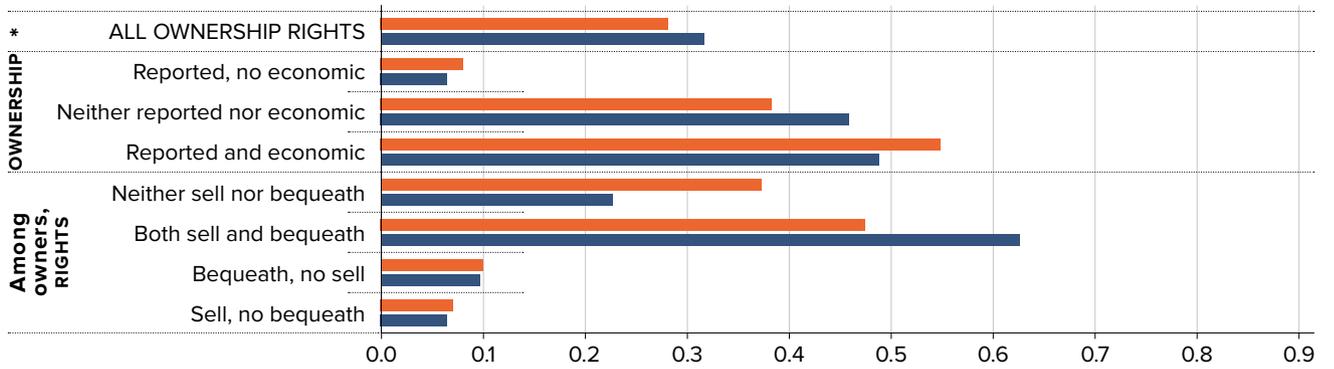
Figure 3.4 Share of women and men with different bundles of ownership and rights (2/2)

Men Women

Malawi: Non-dwelling land



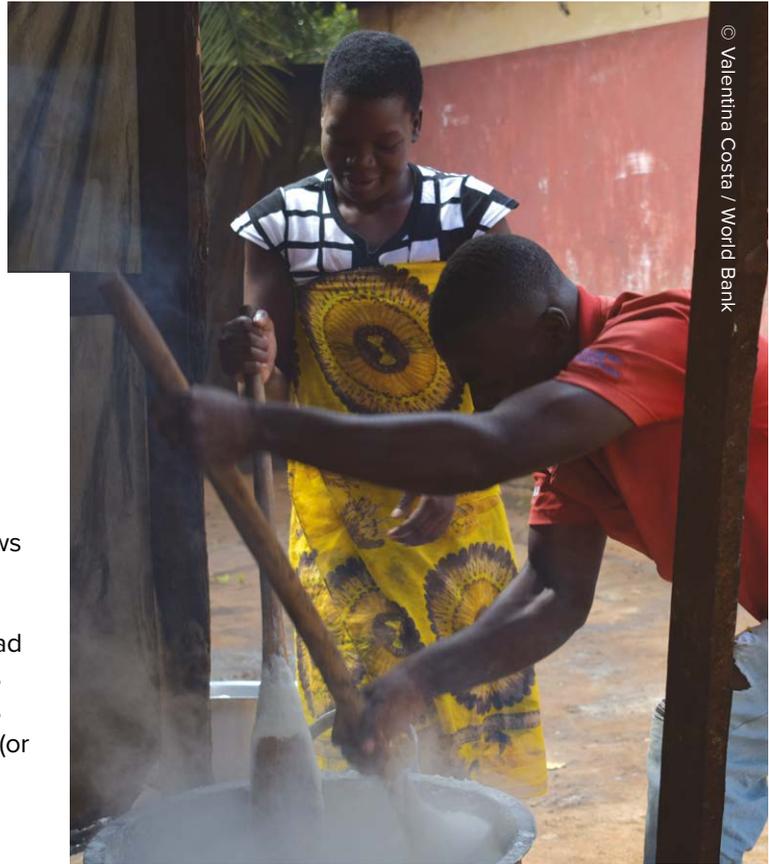
Malawi: Dwelling land



¹ All estimates are weighted using household sampling weights.

² Because of the order in which questions were administered, no respondents across countries had economic but not reported ownership.

³ In Ethiopia, right to sell was not asked for non-dwelling land.



3.3. Reporting discrepancies among couples

Along with the insight that individual-level interviews can provide on gender differences in ownership and rights, as well as intra-household inequalities, there are risks that individual reporting can also lead to discrepancies among household members. This includes differences in household members' views on who in fact owns/has rights over certain assets (or whether assets are owned at all).

Figure 3.5 examines reports from married couples across the three countries, and finds that the share of parcels where couples agree on **(a) rights to bequeath, (b) rights to sell, (c) economic ownership, and (d) reported ownership are relatively high, although there are specific cases where disagreement exists. In Ethiopia, for more than 85 percent of parcels, couples agree on economic and reported ownership of both categories of land (and among owners, most agree that ownership is joint).** Agreement over economic and reported ownership is also high in Tanzania (couples agree on reported ownership for about 70 percent of parcels, with higher shares of agreement on economic ownership and rights to sell and bequeath). Among owners, most agree that ownership is joint, with a smaller share agreeing that ownership is solely the husband's—and almost all agree that the husband maintains rights to sell and bequeath. In Malawi, couples agree on reported ownership for about 70 percent of non-dwelling parcels, and agree on economic ownership for more than 80 percent of dwelling parcels.³⁵ About 80 percent or more of non-dwelling and dwelling parcels also have agreement on rights to sell and bequeath, and among owners that these rights lie either with the wife or the husband.

Across countries, couples that disagree are not necessarily concentrated in any one particular scenario or category of ownership/rights. In Ethiopia, for example, there is more substantial disagreement over the right to bequeath — about 29 percent for non-dwelling land, and 36 percent for dwelling land, with most cases of disagreement being concentrated where the husband says he has sole rights, whereas the wife says she does. In Tanzania, disagreement occurs mainly over reported ownership, and where the wife claims ownership (either sole or joint) when the husband says he is the sole owner. And in Malawi, most disagreement occurs for reported or economic ownership, but mostly where the husband says ownership is joint, but the wife says she does not own land.

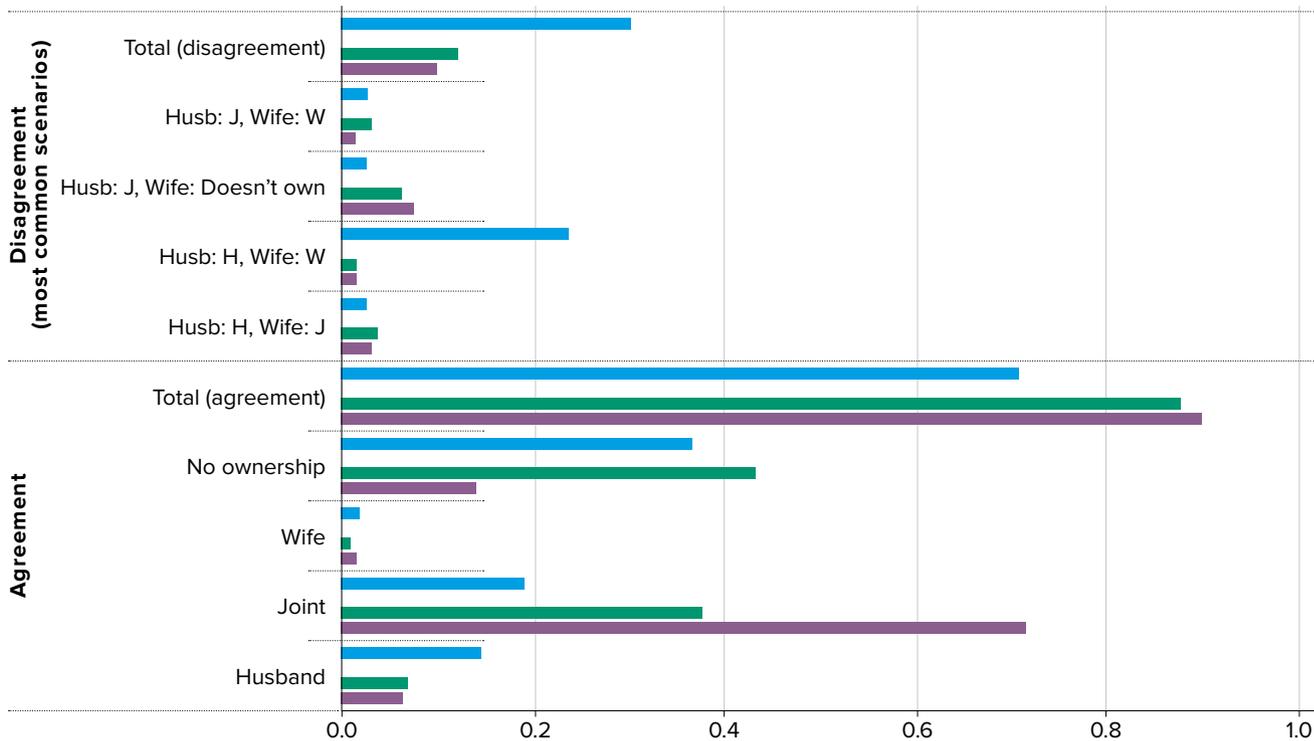
Country context therefore matters in interpreting disagreement, and in particular **Figure 3.5** — along with earlier results in **Figures 3.1-3.2** — show that prevailing gender differences in ownership and rights claimed by men and women also tend to be associated with the direction of disagreement (whether the husband or wife claims a greater role, for example).

³⁵ In Malawi, for reported ownership of dwelling land, there was an issue with how other joint owners were coded, so the discrepancy results for reported ownership of dwelling land are not reported in Figure 3.5.

Figure 3.5 Spousal agreement and disagreement over ownership and rights to land parcels (1/3)

Bequeath Sell Economic Reported

Ethiopia: Non-dwelling land



Ethiopia: Dwelling land

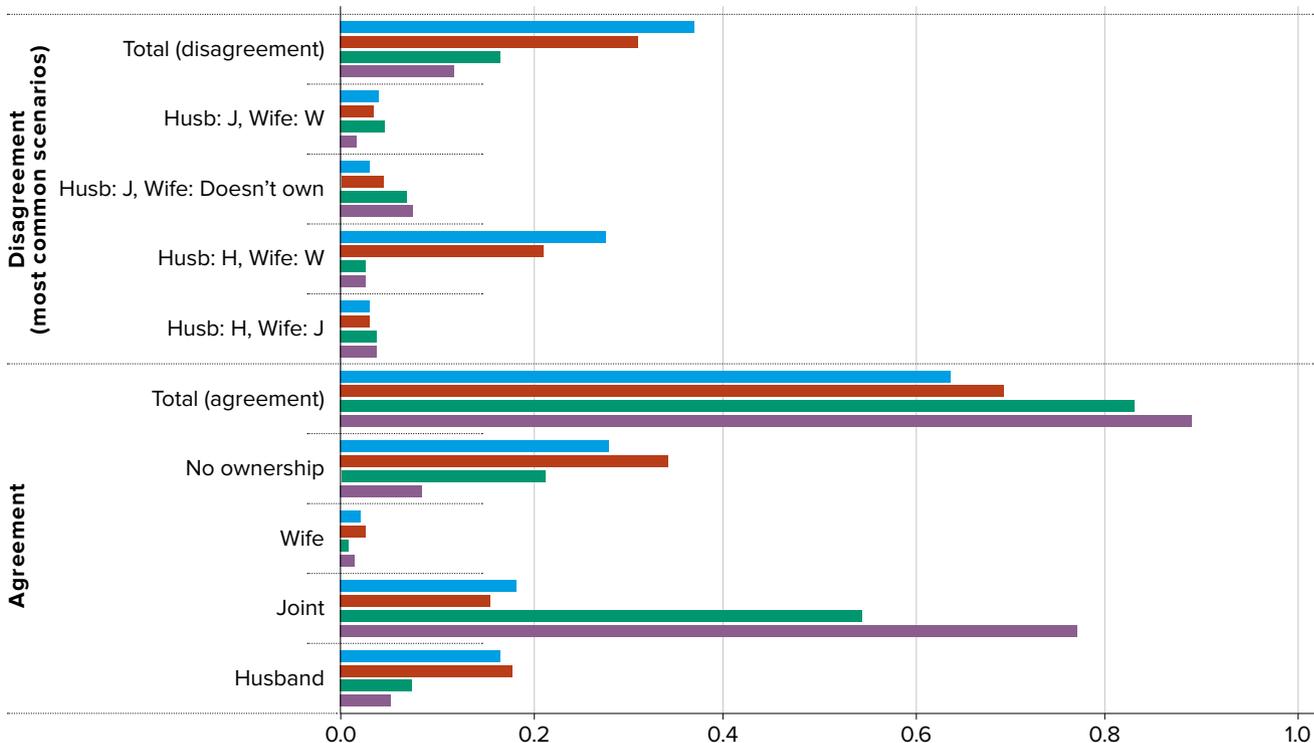
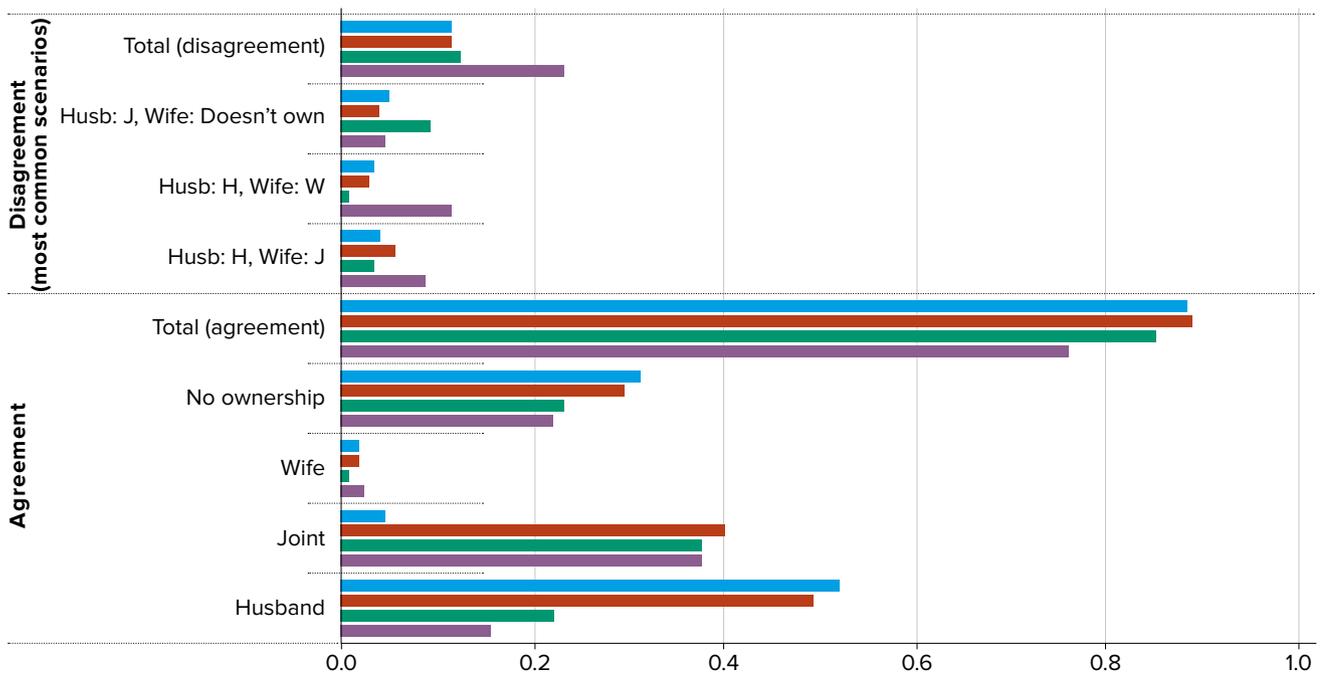


Figure 3.5 Spousal agreement and disagreement over ownership and rights to land parcels (2/3)

Bequeath Sell Economic Reported

Tanzania: Non-dwelling land



Tanzania: Dwelling land

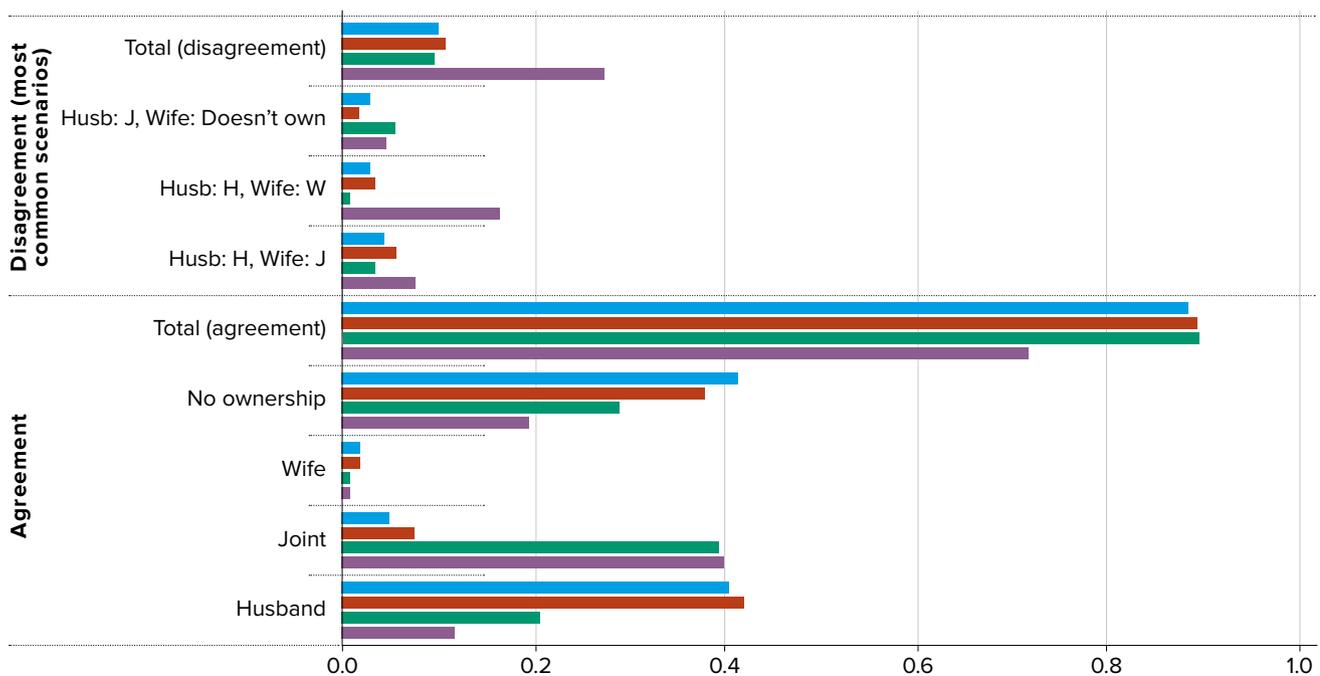
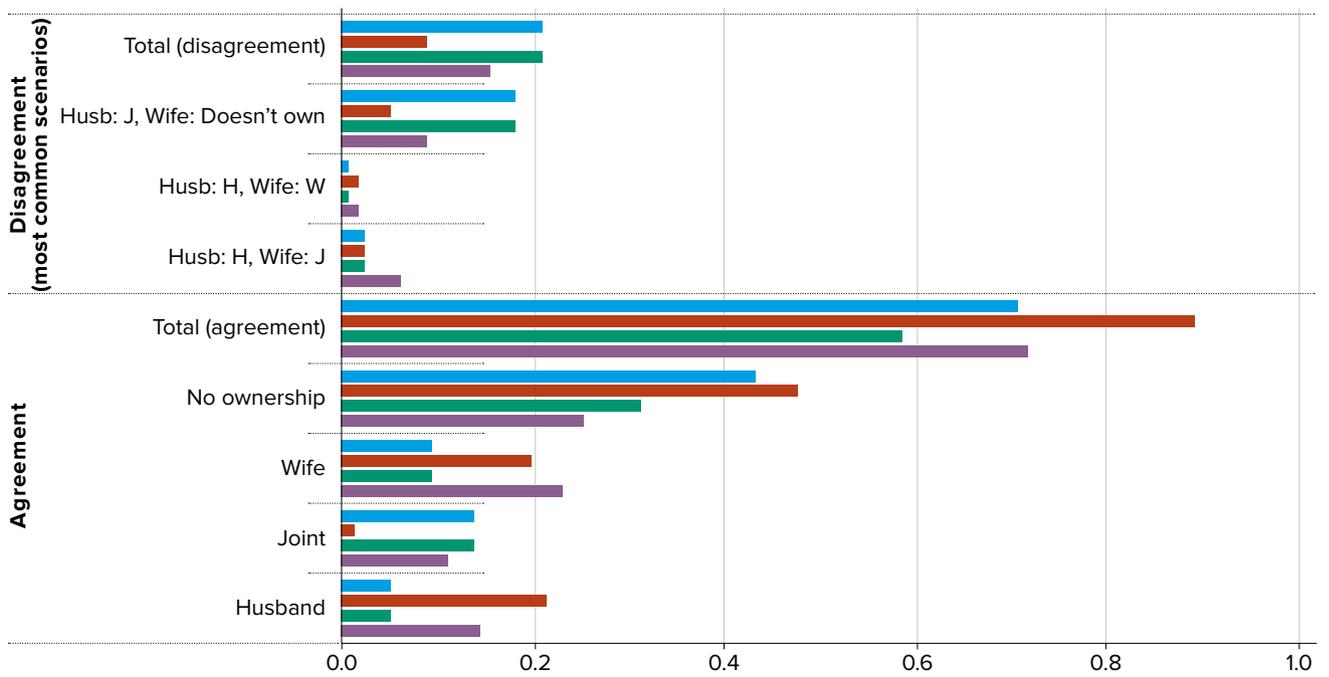


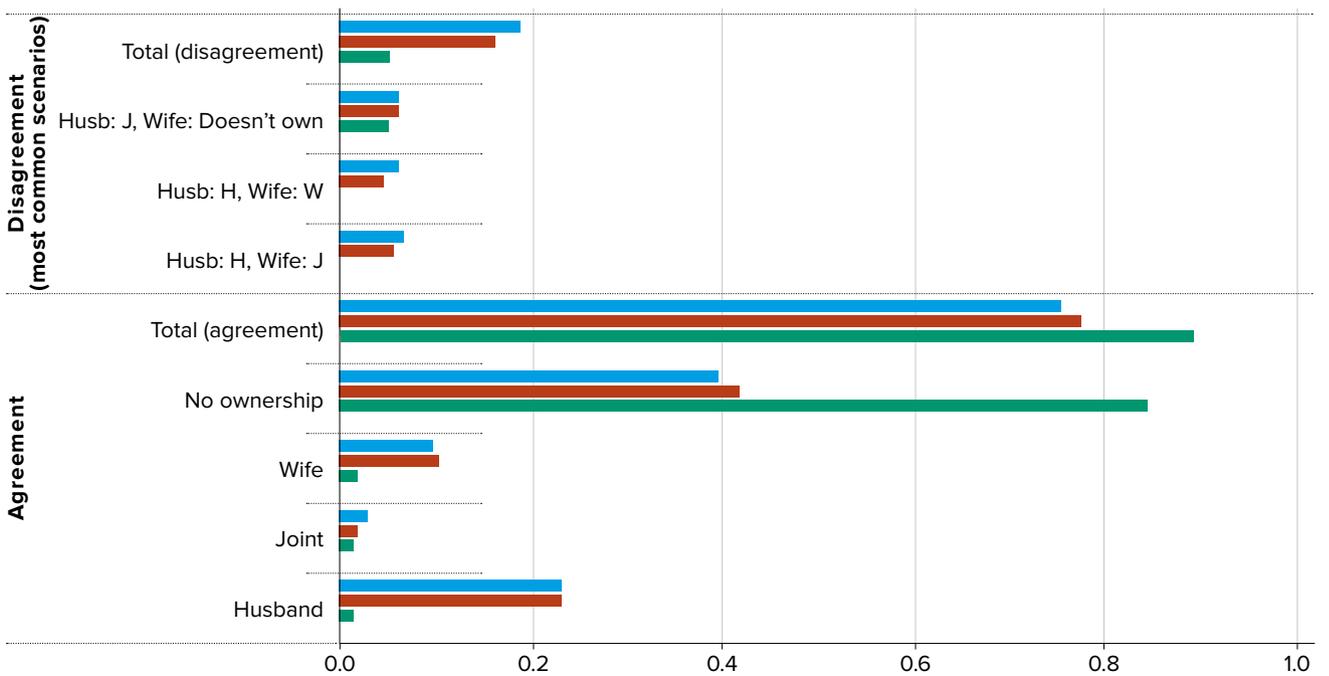
Figure 3.5 Spousal agreement and disagreement over ownership and rights to land parcels (3/3)

Bequeath Sell Economic Reported

Malawi: Non-dwelling land



Malawi: Dwelling land



¹ All estimates are weighted using household sampling weights. H = husband, W = wife, J = joint.

² Because of the order in which questions were administered, no respondents across countries had economic but not reported ownership.

³ In Ethiopia, right to sell was not asked for non-dwelling land.

Rural livestock ownership in Ethiopia is also more likely to be joint as opposed to exclusive

3.4. Livestock ownership in Ethiopia

The Ethiopia LSMS+ also included a module on exclusive/joint ownership of large livestock. **Table 3.1** presents differences in ownership across men and women, as well as by rural and urban areas. The share of respondents owning large livestock was, as might be expected, much higher in rural areas, and with significant gender differences (**about 58 and 64 percent of rural women and men, respectively, with significant differences across the two groups arising from joint ownership**). However, sizeable shares of urban respondents also reported ownership (17 percent of urban women, and 20 percent of urban men, with significant gender differences in urban areas stemming mainly from a very small increase in exclusive ownership among urban men). Similar to land ownership in Ethiopia, **Table 3.1** also shows that rural livestock ownership is also more likely to be joint as opposed to exclusive—for example, **37 percent of rural women and 44 percent of rural men reported joint ownership of large livestock, compared to 26-27 percent that claimed exclusive ownership**.

Table 3.1 Share of men and women owning large livestock, in rural and urban areas: Ethiopia LSMS+

| | Women | Men |
|--------------|---------------------|---------------------|
| Rural | | |
| Overall | 0.577*** (0.494) | 0.636*** (0.481) |
| Exclusive | 0.260 (0.439) | 0.268 (0.443) |
| Joint | 0.367*** (0.482) | 0.444*** (0.497) |
| Observations | 3,755 | 3,560 |
| Urban | | |
| Overall | 0.166** (0.372) | 0.197** (0.398) |
| Exclusive | 0.083*** (0.276) | 0.101*** (0.302) |
| Joint | 0.093 (0.290) | 0.110 (0.313) |
| Observations | 4,398 | 3,675 |

- 1 All estimates are weighted using household sampling weights. Standard deviations in parentheses. Statistically significant differences between men and women indicated by asterisks (**p<0.01, ***p<0.05, * p<0.10).
- 2 Livestock categories included the following: bulls, oxen, cows, steers, heifers, calves, goats, sheep, camels, horses, mules, and donkeys.
- 3 Because a household can own multiple livestock, a respondent could have exclusive as well as joint ownership of different animals.

4.

Financial account and mobile phone ownership

4.1.

Individual-level estimates

Table 3.2 presents reporting on financial accounts and mobile phone ownership among men and women, and **Figure 3.6** breaks this down by urban and rural areas. Overall, the share of individuals owning a financial account is quite low, and there are significant gender inequalities, particularly in Ethiopia and Tanzania. **In Ethiopia, 18 percent of women and 31 percent of men owned a financial account; these shares were 9 and 15 percent, respectively, in Tanzania; and in Malawi the share of men and women reporting owning a**

financial account was roughly similar (around 24-25 percent). Greater shares of respondents across countries own a mobile phone, although they are mostly concentrated in urban areas (**Figure 3.6**), and men are also significantly more likely than women to own one. Gender disparities in mobile phone ownership also widen in rural areas. For both financial accounts and mobile phones, nearly all respondents reported exclusive as opposed to joint ownership.

Table 3.2 Share of women and men owning a mobile phone and financial account

| | Ethiopia | | | Tanzania | | | Malawi | | |
|------------------------------------|----------|-------|-----------------|----------|-------|-----------------|--------|-------|-----------------|
| | Women | Men | Diff. (p-value) | Women | Men | Diff. (p-value) | Women | Men | Diff. (p-value) |
| Mobile phone | | | | | | | | | |
| Overall | 0.27 | 0.50 | 0.00 | 0.58 | 0.78 | 0.00 | 0.36 | 0.56 | 0.00 |
| Exclusive | 0.25 | 0.48 | 0.00 | 0.56 | 0.76 | 0.00 | 0.35 | 0.55 | 0.00 |
| Joint | 0.01 | 0.03 | 0.00 | 0.02 | 0.02 | 0.63 | 0.01 | 0.01 | 0.39 |
| Number of respondents ² | 7,846 | 6,899 | | 1,325 | 1,070 | | 2,595 | 2,075 | |
| Financial account | | | | | | | | | |
| Overall | 0.18 | 0.31 | 0.00 | 0.09 | 0.15 | 0.00 | 0.25 | 0.24 | 0.90 |
| Exclusive | 0.16 | 0.27 | 0.00 | 0.09 | 0.15 | 0.00 | 0.23 | 0.22 | 0.83 |
| Joint | 0.03 | 0.06 | 0.00 | 0.001 | - | 0.62 | 0.02 | 0.03 | 0.16 |
| Number of respondents ² | 7,945 | 6,965 | | 1,557 | 1,407 | | 2,595 | 2,075 | |

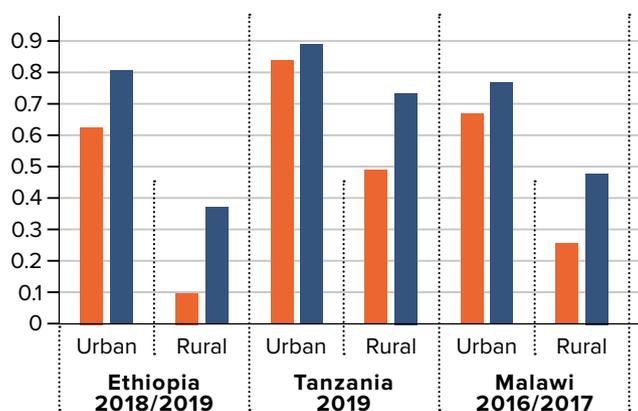
¹ All estimates are weighted using household sampling weights.

² Because of missing responses among the eligible sample in either the mobile phones or financial accounts module, the number of observations can vary.

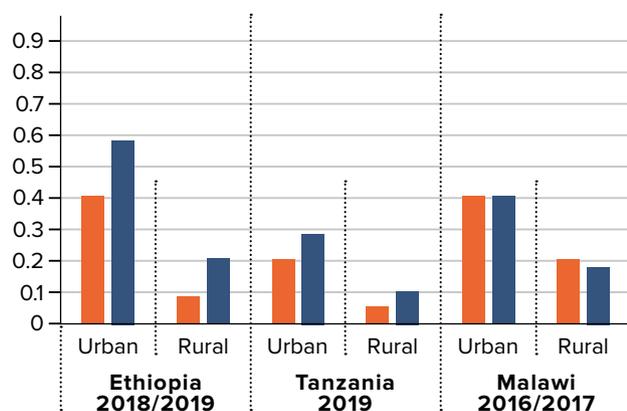
Figure 3.6 Mobile phone and financial account ownership across countries

Men Women

Share owning a mobile phone



Share owning a financial account



¹ All estimates are weighted using household sampling weights.

² All differences between men and women were statistically significant, with the exception of financial account ownership (urban and rural) in Malawi, as well as mobile phone ownership (urban) in Tanzania.



4.2. Does individual-level data collection affect household estimates of mobile and financial account ownership?

Another perspective on the value of individual-level interviews arises from understanding how this data might change household-level estimates of financial account and mobile phone ownership, compared to the traditional survey approach of asking one individual per household.

Table 3.3 compares aggregated household-level statistics on financial account and mobile phone ownership for the LSMS+ supported surveys, along with national surveys from the same countries under the LSMS-ISA program. As discussed in **Section 1**, comparisons of the two sets of surveys within each country, however, do need to be conditioned on differences not only in survey design/implementation, but also time-varying factors that can affect the

interpretation of differences across the two sets of surveys within each country. This is particularly the case for Ethiopia and Tanzania, where the LSMS+ and LSMS-ISA surveys for each country were conducted 3-4 years apart, and where the trends in mobile phone and financial account ownership should be linked to changes in access over time as well as, potentially, survey design.

The comparisons do show that the LSMS+ supported surveys reveal a higher share of households reporting financial account ownership, and mobile phone ownership in rural areas for Tanzania and Malawi — although the Malawi comparison is the only one to address external time-varying factors, such as country-level improvements in infrastructure and economic growth, that could affect mobile phone and financial

Table 3.3 Comparing household-level estimates of financial account and mobile phone ownership, by LSMS+ and LSMS-ISA surveys conducted in the same countries¹

| | Ethiopia | | | Tanzania | | | Malawi | | |
|----------------------------------|------------------------|-----------------------------------|---------------------------------|------------------------|-----------------------------------|---------------------------------|------------------------|--------------------------------|---------------------------------|
| | ESS3 2015-16 (1) | LSMS+ (ESS4) 2018-19 (2) | Diff. (p-value) (1) - (2) | NPS4 2014-15 (3) | LSMS+ (NPS5) 2018-19 (4) | Diff. (p-value) (1) - (2) | IHS4 2016-17 (5) | LSMS+ (IHPS) 2016 (6) | Diff. (p-value) (1) - (2) |
| Full sample | | | | | | | | | |
| Owns financial account (Y=1 N=0) | 0.35 | 0.44 | 0.00 | 0.21 | 0.26 | 0.14 | 0.26 | 0.36 | 0.00 |
| Number of financial accounts | 0.58 | 0.85 | 0.00 | 0.28 | 1.46 | 0.00 | - | - | - |
| Owns mobile phone (Y=1 N=0) | 0.54 | 0.55 | 0.71 | 0.79 | 0.88 | 0.00 | 0.53 | 0.60 | 0.00 |
| Number of households | 4,953 | 6,770 | | 989 | 1,184 | | 6,894 | 2,457 | |
| Urban | | | | | | | | | |
| Owns financial account (Y=1 N=0) | 0.70 | 0.76 | 0.04 | 0.40 | 0.46 | 0.30 | 0.50 | 0.58 | 0.09 |
| Number of financial accounts | 1.37 | 1.71 | 0.00 | 0.50 | 2.78 | 0.00 | - | - | - |
| Owns mobile phone (Y=1 N=0) | 0.86 | 0.87 | 0.78 | 0.96 | 0.96 | 0.78 | 0.83 | 0.84 | 0.56 |
| Number of households | 1,681 | 3,655 | | 1,557 | 1,407 | | 2,595 | 2,075 | |
| Rural | | | | | | | | | |
| Owns financial account (Y=1 N=0) | 0.22 | 0.28 | 0.02 | 0.12 | 0.17 | 0.14 | 0.20 | 0.28 | 0.00 |
| Number of financial accounts | 0.29 | 0.43 | 0.00 | 0.14 | 0.87 | 0.00 | - | - | - |
| Owns mobile phone (Y=1 N=0) | 0.43 | 0.40 | 0.40 | 0.72 | 0.84 | 0.00 | 0.45 | 0.51 | 0.01 |
| Number of households | 3,272 | 3,115 | | 550 | 682 | | 5,509 | 1,804 | |

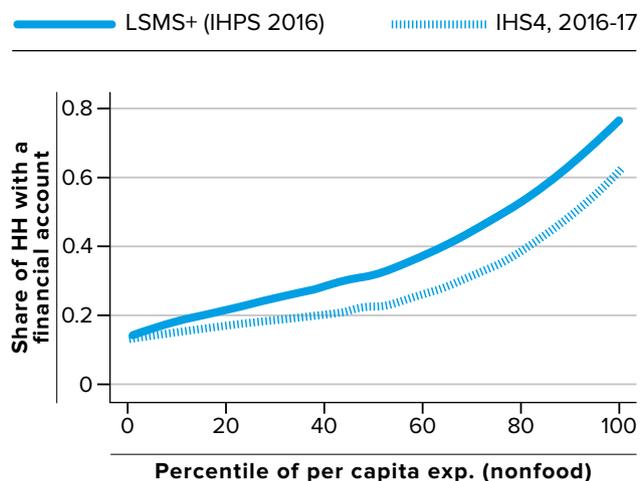
¹ All estimates are weighted using household sampling weights. “-” indicates data was not available for that variable.

² Because of missing responses among the eligible sample in either the mobile phones or financial accounts module, the number of observations can vary.

account ownership. **Figure 3.7** also shows, across the distribution of household nonfood per capita expenditure, that higher reporting of financial account ownership in Malawi under individual-level interviews occurs among households at relatively higher percentiles (above the 50th percentile).

As a result — along with the advantages of having individual-level data — from a basic household welfare perspective, understanding the extent to which households overall have access to certain services and technology is also critical, and how more nuanced collection of this information within households contributes to this understanding.

Figure 3.7 Share of households with a financial account in LSMS+ and comparison survey, by percentile of per capita expenditure (Malawi)



Share owning a financial account:

in Ethiopia

18% **31%**
women men

in Tanzania

9% **15%**
women men

in Malawi

24-25%
men and women



Section 3 / Summary



Individual interviews following recommendations under 2019 UN guidelines on self-reported data over different types of ownership and rights, and exclusive and joint roles, **(a) provide a clearer picture of ownership of and rights to assets within households, particularly among women; (b) minimize distortionary proxy respondent effects and intra-household discrepancies in reporting; and (c) can reveal hidden assets.**



Within the LSMS+ supported surveys, individual-level modules on land span exclusive and joint ownership (reported, economic, documented) and rights (sell and bequeath) over dwelling and non-dwelling land. Individual modules on financial accounts and mobile phone ownership also ask about exclusive versus joint roles.

Findings on land ownership/ rights, and livestock ownership:



Even among exclusive reported landowners, economic ownership/decision making over the proceeds from selling land is more likely to be joint/distributed across multiple household members.



In Malawi, matrilineal traditions over land ownership and inheritance lead to a more equitable distribution of reported and economic ownership across men and women, compared to Ethiopia and Tanzania. Gender disparities tended to widen, however, among landowners in rights to sell and bequeath across all countries. A separate study (Kilic et al., 2020b) compared the Malawi LSMS+/IHPS with the concurrent IHS4 that asked only one “most knowledgeable” respondent about household members’ land ownership and rights—finding that the IHS4 resulted in higher rates of exclusive reported and economic ownership of agricultural land among men, and lower rates of joint reported and economic ownership among women.



Across countries, agreement among couples over ownership and rights is relatively high, with agreement spanning a range of 70-85 percent of parcels depending on the country and type of ownership/rights. There are still substantial areas of disagreement, although disagreement is not necessarily concentrated in any one particular scenario or category of ownership/rights, and country context matters in interpreting disagreement.



In Ethiopia, large livestock ownership was high in rural areas, and significantly higher for men **(about 58 percent of rural women and 64 percent of rural men)**. There was, however, also substantial ownership in urban areas **(about 17 and 20 percent of urban women and men, respectively)**. Livestock ownership in rural areas was also much more likely to be joint.

Findings on financial account/ mobile phone ownership:



The share of individuals owning a financial account is quite low, and there are significant gender inequalities, particularly in Ethiopia and Tanzania.



Greater shares of respondents across countries do own a mobile phone, although they are mostly concentrated in urban areas, and men are also significantly more likely than women to own one. Gender disparities also widen in rural areas.



For both financial accounts and mobile phones, nearly all respondents reported exclusive as opposed to joint ownership.



The individual-interview approach in LSMS+ supported surveys also leads to a higher share of households reporting financial account ownership across all countries, and mobile phone ownership in rural areas for Tanzania and Malawi.

Annex 1.

SDG targets and indicators requiring individual-level data on economic outcomes

Goal 1. End poverty in all its forms everywhere

Target 1.2 / By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions (also Target 1.1 on eradicating extreme poverty for all).

1.2.1 / *Proportion of population living below the national poverty line, by sex and age.*

Target 1.4 / By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including micro-finance.

1.4.2 / *Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure.*

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.3 / By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

2.3.1 / *Volume of production per labor unit (day) by classes of farming/pastoral/forestry enterprise size.*

2.3.2 / *Average income of small-scale food producers, by sex and indigenous status.*

Goal 5. Achieve gender equality and empower all women and girls

Target 5.4 / Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.

5.4.1 / *Proportion of time spent on unpaid domestic and care work, by sex, age and location.*

Target 5.a / Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

5.a.1 / *(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.*

Target 5.b / Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

5.b.1 / *Proportion of individuals who own a mobile telephone, by sex.*

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.3 / Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-,

small- and medium-sized enterprises, including through access to financial services.

8.3.1 / *Proportion of informal employment in non-agriculture employment, by sex.*

Target 8.5 / By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.5.1 / *Average hourly earnings of female and male employees, by occupation, age and persons with disabilities.*

8.5.2 / *Unemployment rate, by sex, age and persons with disabilities.*

Target 8.6 / By 2020, substantially reduce the proportion of youth not in employment, education or training.

8.6.1 / *Proportion of youth (aged 15–24 years) not in education, employment or training.*

Target 8.10 / Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

8.10.2 / *Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider.*

Goal 10. Reduce inequality within and among countries

Target 10.2 / By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

10.2.1 / *Proportion of people living below 50 percent of median income, by sex, age and persons with disabilities.*



Annex Table A1. Tanzania. OLS Regressions: Women's labor market participation

| Dependent variable: Individual in the past 7 days participated in ... activities (Y=1, N=0) | LSMS+ (NPS5, 2019-20) | | | | NPS4 (2014-15) | |
|---|-----------------------|----------------------|------------------------------------|----------------------|----------------------|----------------------|
| | Baseline | | Baseline w/asset ownership vars | | | |
| | Agr. | Non-agr. | Agr. | Non-agr. | Agr. | Non-agr. |
| HH head | -0.119 [-1.56] | 0.072 [0.98] | -0.094 [-1.36] | 0.072 [1.05] | -0.077 [-1.04] | 0.109 [1.25] |
| Age: 18-24 | -0.109 [-1.37] | -0.231*** [-3.40] | -0.017 [-0.23] | -0.212*** [-3.13] | -0.132*** [-2.95] | -0.150 [-1.64] |
| Age: 25-34 | -0.010 [-0.16] | -0.082 [-1.23] | 0.022 [0.34] | -0.078 [-1.19] | -0.035 [-0.61] | -0.047 [-0.50] |
| Age: 45-54* | 0.066 [0.95] | -0.106 [-1.36] | 0.052 [0.80] | -0.112 [-1.51] | 0.067 [1.05] | -0.146* [-1.76] |
| Age: 55+ | 0.184** [2.09] | -0.268*** [-3.12] | 0.185** [2.23] | -0.263*** [-3.11] | 0.018 [0.16] | -0.326*** [-3.70] |
| Years of school, if attended | 0.016 [0.53] | -0.088*** [-2.91] | 0.014 [0.45] | -0.097*** [-3.14] | 0.020 [0.58] | -0.013 [-0.46] |
| Years of school sq. | 0.000 [0.01] | 0.008*** [4.16] | 0.000 [0.04] | 0.007*** [3.95] | -0.001 [-0.51] | 0.001 [0.77] |
| Married | -0.017 [-0.18] | -0.040 [-0.80] | -0.043 [-0.50] | -0.035 [-0.70] | 0.125*** [2.73] | -0.113 [-1.63] |
| Separated/divorced | -0.111 [-1.23] | 0.092 [1.14] | -0.116 [-1.43] | 0.088 [1.18] | -0.008 [-0.10] | -0.007 [-0.07] |
| Widowed | 0.047 [0.45] | -0.052 [-0.62] | 0.074 [0.74] | -0.062 [-0.74] | 0.141 [1.59] | -0.040 [-0.40] |
| Months away from HH | -0.008 [-0.42] | -0.015* [-1.77] | -0.010 [-0.52] | -0.016* [-1.79] | 0.007 [0.54] | 0.001 [0.07] |
| Log HH size | 0.133*** [2.70] | -0.092** [-2.34] | 0.140*** [2.93] | -0.067* [-1.73] | 0.051 [1.42] | -0.072 [-1.54] |
| HH dependency ratio [†] | -0.060* [-1.95] | 0.011 [0.51] | -0.070** [-2.24] | 0.009 [0.40] | 0.005 [0.23] | -0.033 [-1.51] |
| HH has electricity [‡] | -0.095* [-1.88] | -0.037 [-0.72] | -0.065 [-1.32] | -0.058 [-1.13] | -0.125*** [-2.64] | 0.118** [2.61] |
| HH has piped water [‡] | -0.014 [-0.26] | 0.127** [2.11] | 0.002 [0.03] | 0.125** [2.14] | -0.034 [-0.75] | 0.066 [1.36] |
| HH: walls made of concrete [‡] | -0.121 [-1.60] | -0.009 [-0.11] | -0.093 [-1.19] | -0.032 [-0.39] | -0.191*** [-3.42] | 0.077 [1.06] |
| Individual owns a mobile phone | | | 0.064 [1.12] | 0.113** [2.22] | | |
| Individual owns a financial asset | | | -0.063 [-0.89] | 0.165** [2.14] | | |
| Individual reported to own land | | | 0.244*** [4.47] | -0.031 [-0.61] | | |
| Rural | 0.073 [0.96] | -0.046 [-0.76] | 0.115* [1.69] | -0.016 [-0.26] | 0.314*** [4.96] | -0.024 [-0.38] |
| Constant | 0.754** [2.09] | 1.164*** [2.81] | 0.507 [1.54] | 1.106*** [2.73] | 0.407* [1.74] | 0.535** [2.18] |
| Observations | 760 | 760 | 760 | 760 | 734 | 734 |
| R-squared | 0.469 | 0.376 | 0.503 | 0.390 | 0.376 | 0.204 |

¹ All estimates weighted by household sample weight. Standard errors in brackets, ***p<0.01, **p<0.05, *p<0.10.

Annex Table A2. Malawi. OLS Regressions: Women's labor market participation

| Dependent variable: Individual in the past 7 days participated in ... activities (Y=1, N=0) | LSMS+ (IHPS, 2016) | | | | IHS4 (2016-17) | |
|---|----------------------|----------------------|------------------------------------|----------------------|----------------------|-----------------------|
| | Baseline | | Baseline w/asset ownership vars | | Agr. | Non-agr. |
| | Agr. | Non-agr. | Agr. | Non-agr. | | |
| HH head | 0.019 [0.62] | 0.074*** [2.72] | 0.005 [0.16] | 0.076*** [2.78] | 0.024 [1.45] | 0.217*** [12.82] |
| Age: 18-24 | -0.054 [-1.62] | -0.121*** [-4.10] | -0.040 [-1.19] | -0.106*** [-3.64] | -0.081*** [-4.58] | -0.115*** [-6.22] |
| Age: 25-34 | -0.025 [-0.91] | -0.008 [-0.33] | -0.022 [-0.78] | -0.004 [-0.17] | -0.022 [-1.34] | -0.012 [-0.76] |
| Age: 45-54* | 0.027 [0.86] | -0.043 [-1.21] | 0.024 [0.75] | -0.044 [-1.24] | 0.024 [1.20] | -0.089*** [-4.43] |
| Age: 55+ | 0.096** [2.53] | -0.236*** [-7.28] | 0.091** [2.39] | -0.231*** [-7.06] | -0.028 [-1.42] | -0.247*** [-13.55] |
| Years of school, if attended | 0.005 [0.98] | -0.001 [-0.22] | 0.005 [0.84] | -0.004 [-0.65] | 0.008** [2.57] | -0.007** [-2.53] |
| Years of school sq. | -0.000 [-0.78] | 0.001** [2.57] | -0.000 [-0.82] | 0.001** [2.37] | -0.000*** [-2.73] | 0.001*** [4.80] |
| Married | 0.065* [1.67] | 0.025 [0.70] | 0.045 [1.14] | 0.017 [0.46] | 0.109*** [7.64] | 0.096*** [7.02] |
| Separated/divorced | -0.055 [-1.08] | 0.046 [0.96] | -0.063 [-1.23] | 0.039 [0.82] | 0.068*** [3.05] | 0.107*** [4.40] |
| Widowed | -0.139** [-2.47] | -0.006 [-0.11] | -0.150*** [-2.69] | -0.010 [-0.19] | -0.017 [-0.56] | -0.019 [-0.63] |
| Months away from HH | 0.005 [0.96] | -0.007 [-1.24] | 0.006 [1.05] | -0.007 [-1.20] | -0.009*** [-3.21] | 0.002 [0.66] |
| Log HH size | 0.052** [1.99] | 0.027 [1.13] | 0.050* [1.88] | 0.029 [1.21] | 0.033** [2.39] | -0.008 [-0.62] |
| HH dependency ratio [†] | -0.021 [-1.65] | -0.010 [-0.73] | -0.022* [-1.72] | -0.008 [-0.60] | -0.011 [-1.63] | 0.006 [0.99] |
| HH has electricity [‡] | -0.090*** [-2.71] | 0.011 [0.28] | -0.094*** [-2.69] | 0.004 [0.12] | -0.065*** [-3.22] | 0.030 [1.32] |
| HH has piped water [‡] | -0.056 [-1.56] | 0.019 [0.54] | -0.054 [-1.48] | 0.005 [0.14] | -0.074*** [-2.98] | 0.023 [0.99] |
| HH: walls made of concrete [‡] | -0.103* [-1.93] | -0.001 [-0.01] | -0.098* [-1.85] | -0.000 [-0.01] | 0.057 [1.46] | 0.043 [1.10] |
| Individual owns a mobile phone | | | -0.002 [-0.08] | 0.009 [0.34] | | |
| Individual owns a financial asset | | | 0.034* [1.80] | 0.083*** [4.02] | | |
| Individual reported to own land | | | 0.070*** [3.09] | -0.025 [-1.16] | | |
| Rural | 0.266*** [8.13] | -0.082** [-2.14] | 0.249*** [7.45] | -0.081** [-2.15] | 0.114*** [2.82] | -0.100*** [-3.50] |
| Constant | 0.427* [1.92] | 0.201* [1.96] | 0.441* [1.92] | 0.215** [2.09] | 0.700*** [8.86] | 0.260*** [4.04] |
| Observations | 2,596 | 2,596 | 2,596 | 2,596 | 8,002 | 8,002 |
| R-squared | 0.213 | 0.094 | 0.218 | 0.098 | 0.210 | 0.113 |

¹ All estimates weighted by household sample weight. Standard errors in brackets, ***p<0.01, **p<0.05, *p<0.10.

Annex Table A3. Ethiopia. OLS Regressions: Women's labor market participation /01

| Dependent variable: Individual in the past 7 days participated in ... activities (Y=1, N=0) | LSMS+ (ESS4, 2018-19) | | | | ESS3 (2015-16) | |
|---|-----------------------|-----------|------------------------------------|-----------|----------------|-----------|
| | Baseline | | Baseline w/asset ownership vars | | | |
| | Agr. | Non-agr. | Agr. | Non-agr. | Agr. | Non-agr. |
| HH head | 0.024 | 0.053*** | 0.025 | 0.045** | 0.033 | 0.081*** |
| | [0.86] | [2.64] | [0.91] | [2.20] | [1.41] | [3.60] |
| Age: 18-24 | -0.083*** | -0.057** | -0.075*** | -0.048** | -0.030 | -0.092*** |
| | [-3.00] | [-2.56] | [-2.70] | [-2.15] | [-1.06] | [-4.98] |
| Age: 25-34 | -0.037 | 0.018 | -0.033 | 0.020 | 0.013 | -0.035** |
| | [-1.56] | [1.01] | [-1.39] | [1.10] | [0.48] | [-2.45] |
| Age: 45-54* | -0.002 | -0.040** | -0.004 | -0.036* | -0.012 | -0.036* |
| | [-0.08] | [-1.97] | [-0.13] | [-1.81] | [-0.39] | [-1.81] |
| Age: 55+ | -0.101** | -0.085*** | -0.099** | -0.085*** | -0.015 | -0.104*** |
| | [-2.42] | [-3.15] | [-2.27] | [-3.10] | [-0.42] | [-4.18] |
| Never attended school | -0.015 | 0.041 | -0.004 | 0.035 | -0.075* | 0.061** |
| | [-0.28] | [1.24] | [-0.07] | [1.01] | [-1.74] | [2.05] |
| Years of school, if attended | -0.002 | -0.014 | -0.002 | -0.014 | 0.016 | -0.016 |
| | [-0.13] | [-1.47] | [-0.19] | [-1.46] | [1.61] | [-1.64] |
| Years of school sq. | -0.000 | 0.002*** | -0.000 | 0.002*** | -0.001** | 0.002*** |
| | [-0.61] | [3.06] | [-0.46] | [2.74] | [-2.55] | [2.60] |
| Married | 0.006 | -0.022 | -0.005 | -0.024 | 0.026 | 0.005 |
| | [0.22] | [-1.05] | [-0.17] | [-1.14] | [0.92] | [0.29] |
| Separated/divorced | -0.078* | 0.107*** | -0.076* | 0.107*** | -0.032 | 0.042 |
| | [-1.87] | [3.25] | [-1.83] | [3.31] | [-0.81] | [1.58] |
| Widowed | -0.042 | -0.013 | -0.045 | -0.010 | -0.034 | -0.021 |
| | [-0.92] | [-0.45] | [-1.00] | [-0.37] | [-0.84] | [-0.71] |
| Months away from HH | -0.010 | -0.005 | -0.009 | -0.007 | 0.003 | -0.006 |
| | [-1.34] | [-1.19] | [-1.29] | [-1.38] | [0.32] | [-1.10] |
| Log HH size | 0.040* | -0.003 | 0.036* | 0.003 | 0.004 | -0.025** |
| | [1.94] | [-0.16] | [1.75] | [0.15] | [0.20] | [-2.06] |
| HH dependency ratio [†] | 0.047 | -0.021 | 0.040 | -0.007 | -0.087* | -0.031 |
| | [0.85] | [-0.90] | [0.70] | [-0.30] | [-1.76] | [-1.10] |
| HH has electricity [‡] | -0.107* | 0.156*** | -0.104* | 0.144*** | -0.093** | 0.085*** |
| | [-1.89] | [3.40] | [-1.85] | [3.07] | [-2.56] | [3.53] |
| HH has piped water [‡] | -0.101*** | -0.033 | -0.092*** | -0.040 | 0.023 | 0.018 |
| | [-3.36] | [-0.79] | [-3.03] | [-0.90] | [0.81] | [0.60] |
| HH: walls made of concrete [‡] | -0.041* | -0.005 | -0.033 | -0.016 | 0.002 | 0.004 |
| | [-1.65] | [-0.17] | [-1.35] | [-0.50] | [0.07] | [0.12] |

Annex Table A3. Ethiopia. OLS Regressions: Women's labor market participation /02

| Dependent variable: Individual in the past 7 days participated in ... activities (Y=1, N=0) | LSMS+ (ESS4, 2018-19) | | | | ESS3 (2015-16) | |
|---|-----------------------|-----------|------------------------------------|-----------|----------------|----------|
| | Baseline | | Baseline w/asset ownership vars | | | |
| | Agr. | Non-agr. | Agr. | Non-agr. | Agr. | Non-agr. |
| Religion: Catholic* | 0.211** | -0.024 | 0.238*** | -0.020 | 0.317*** | 0.034 |
| | [2.50] | [-0.78] | [2.77] | [-0.67] | [3.45] | [0.65] |
| Religion: Protestant | -0.017 | 0.003 | -0.006 | 0.003 | 0.091** | 0.005 |
| | [-0.44] | [0.08] | [-0.16] | [0.11] | [2.33] | [0.29] |
| Religion: Muslim | -0.101*** | -0.055*** | -0.094*** | -0.049*** | 0.023 | 0.008 |
| | [-3.28] | [-3.27] | [-3.00] | [-2.92] | [0.59] | [0.48] |
| Religion: Traditional | -0.140 | 0.175** | -0.119 | 0.180** | 0.149 | -0.006 |
| | [-0.77] | [2.22] | [-0.68] | [2.36] | [1.49] | [-0.09] |
| Religion: Pegan | 0.193** | -0.080 | 0.155** | -0.076 | 0.153 | 0.152 |
| | [2.55] | [-1.44] | [2.13] | [-1.35] | [0.79] | [0.89] |
| Religion: Wakefta | 0.144 | 0.043 | 0.152 | 0.048 | 0.370* | -0.080** |
| | [1.13] | [0.38] | [1.18] | [0.44] | [1.78] | [-2.48] |
| Religion: Other | -0.128 | -0.254*** | -0.102 | -0.319*** | -0.108 | -0.046 |
| | [-1.10] | [-3.48] | [-0.93] | [-4.10] | [-1.30] | [-1.58] |
| HH faced shock affecting income/assets | -0.044 | 0.005 | -0.044 | 0.009 | 0.005 | -0.005 |
| | [-0.63] | [0.09] | [-0.60] | [0.16] | [0.18] | [-0.36] |
| Individual owns a mobile phone | | | -0.046* | 0.032 | | |
| | | | [-1.79] | [1.27] | | |
| Individual owns a financial asset | | | 0.007 | 0.073*** | | |
| | | | [0.28] | [3.30] | | |
| Individual reported to own land | | | 0.087*** | -0.012 | | |
| | | | [2.93] | [-0.75] | | |
| Rural | 0.279*** | -0.059 | 0.254*** | -0.048 | -0.137*** | 0.056*** |
| | [5.26] | [-1.37] | [4.88] | [-1.09] | [-5.48] | [3.16] |
| Constant | 0.094 | 0.072 | 0.103 | 0.052 | 0.629*** | 0.171** |
| | [0.84] | [1.09] | [0.95] | [0.80] | [4.85] | [2.01] |
| Observations | 6,341 | 6,341 | 6,293 | 6,293 | 6,198 | 6,198 |
| R-squared | 0.318 | 0.213 | 0.324 | 0.221 | 0.189 | 0.180 |

¹ All estimates weighted by household sample weight. Standard errors in brackets, ***p<0.01, **p<0.05, *p<0.10.

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