



**Gender and age dimensions
in rural agricultural
employment: analysis using
Rural Livelihoods
Information System (RuLIS)**

HIGHLIGHTS

- In rural areas of low-income and lower-middle-income countries, both men and women, adults and youth, are largely engaged in agriculture, mostly as own-account work and contributing family workers.
- Rural women working in agriculture are more likely to be engaged as contributing family workers, whereas men are more likely to be engaged in own-account work.
- The statistics likely underestimate the full extent of men and women's engagement in agriculture, particularly in poor households. Enhanced collection of detailed data, sex and age-disaggregated, including on own-use production activities, is required in order to obtain more policy-relevant information.

Rural Livelihoods Information System (RuLIS)

RuLIS is a tool to support policies for reducing rural poverty, jointly developed by the Food and Agriculture Organization of the United Nations (FAO) Statistics Division, the World Bank and the International Fund for Agricultural Development (IFAD). RuLIS brings together harmonized indicators and comparable data across countries and over time on rural incomes, livelihoods and rural development.

INTRODUCTION

Using the surveys that are processed as part of the FAO Rural Livelihoods Information System (RuLIS) database project, this brief explores patterns and trends in rural employment for women and youth with a focus on agriculture in 16 low-income and lower-middle-income countries around the world: 11 from sub-Saharan Africa, two from East Asia and the Pacific, two from Latin America and the Caribbean, and one from Central Asia.¹

The methodology used to measure employment in RuLIS is aligned with the 13th International Conference of Labour Statisticians (ICLS) recommendations:² The employment statistics include subsistence agriculture production, which is the production and processing of goods from agriculture, fishing, hunting, and gathering that are mainly for own consumption. The numbers may not be strictly comparable with Labour Force Survey (LFS) estimates due to the differences in the survey design used to capture the employed population. Also, the rural employment indicators in RuLIS use the national definitions of rural and urban areas endorsed by the national statistical agencies. While the criteria used are typically linked to population density, the rural/urban threshold differs between countries (UNSD, 2017).

RURAL POPULATION AND EMPLOYMENT

Table 1 summarizes key information of the 16 low-income and lower-middle-income countries and the surveys used in RuLIS.

Table 1. Key information about the rural population

Region	Country	Survey year	Share of rural population (%)	Share of agricultural households (%)	Rural female employment-to-population ratio (%)	Rural male employment-to-population ratio (%)
AFRICA	Cameroon	2014	60	62	73	79
	Côte d'Ivoire	2008	59	57	64	81
	Ghana	2013	49	53	80	84
	Kenya	2005	80	70	62	65
	Mali	2014	77	66	82	90
	Mozambique	2009	70	86	95	92
	Niger	2014	84	82	69	91
	Nigeria	2013	63	54	51	60
	Senegal	2011	57	53	47	72
	Uganda	2016	77	80	75	75
	United Republic of Tanzania	2015	71	61	79	85
ASIA AND PACIFIC	Cambodia	2009	81	75	61	61
	Mongolia	2014	36	31	56	65
LATIN AMERICA AND THE CARIBBEAN	Bolivia (Plurinational State of)	2008	34	31	73	93
	Nicaragua	2014	43	65	30	88
CENTRAL ASIA	Kyrgyzstan	2013	66	63	42	67

Source: Rural Livelihoods Information System (RuLIS), 2021. Data are available at <http://www.fao.org/in-action/rural-livelihoods-dataset-rulis/>

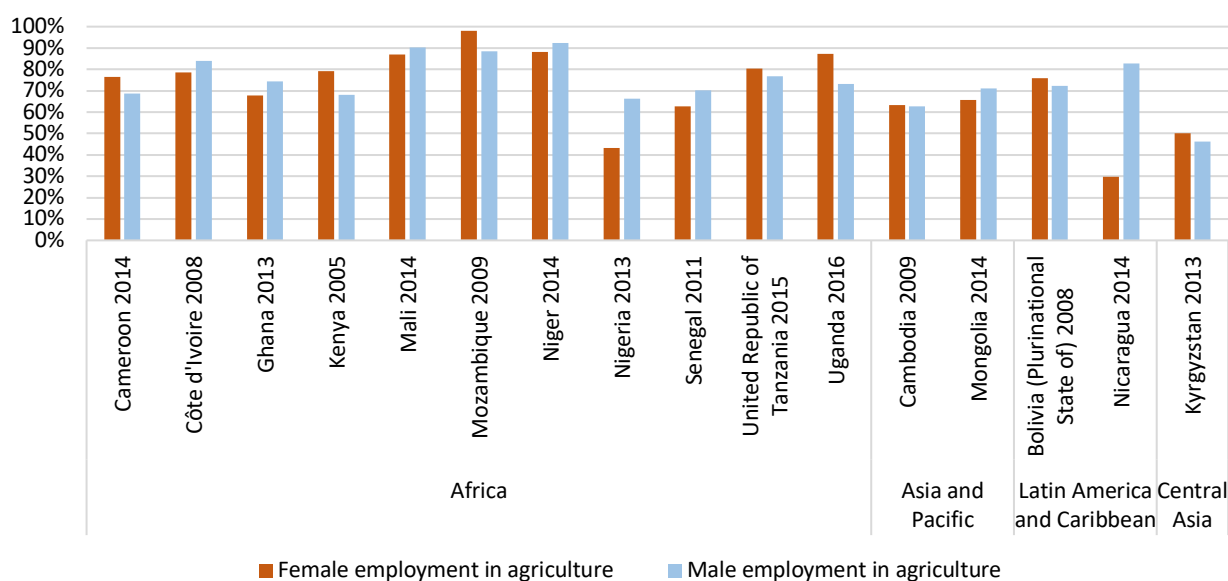
¹ RuLIS includes data from 39 countries, of which 27 of them are low-income and lower-middle-income countries. Within that group, 16 countries allow for the computation of main employment estimates that are in accordance with the 13th ICLS recommendations. The surveys are listed in the Annex.

² The latest international recommendations on the measurement of employment are contained in the "Resolution concerning statistics of work, employment and labour underutilization" adopted by the 19th ICLS in 2013 (ILO, 2013).

For the majority of these countries, the populations are largely rural, and a large share of households are engaged in agriculture. The exceptions are Mongolia and the Plurinational State of Bolivia, where only one-third of the households are agricultural households. While the rural male employment-to-population ratio ranges from 60 percent in Nigeria to 93 percent in the Plurinational State of Bolivia, the rural female employment-to-population ratio varies more widely: it is the lowest in Nicaragua at 30 percent, while the sub-Saharan African countries have some of the highest female employment-to-population ratios (Cameroon, the United Republic of Tanzania, Uganda, Ghana, Mali, and Mozambique all have rural female employment-to-population ratios between 70 and 95 percent).

Among those living in rural areas and employed, the majority - both females and males - are employed in agriculture as their main form of employment with only a few exceptions (Figure 1). In most of the countries the shares of females and males employed in agriculture are similar with the exception of Nicaragua, where men are much more likely to be employed in agriculture than women. In Nicaragua this is driven by the growth in tourism and personal services, including domestic work, sectors where a large share of women is engaged as their main form of employment (Herrera, Dijkstra and Ruben, 2019).

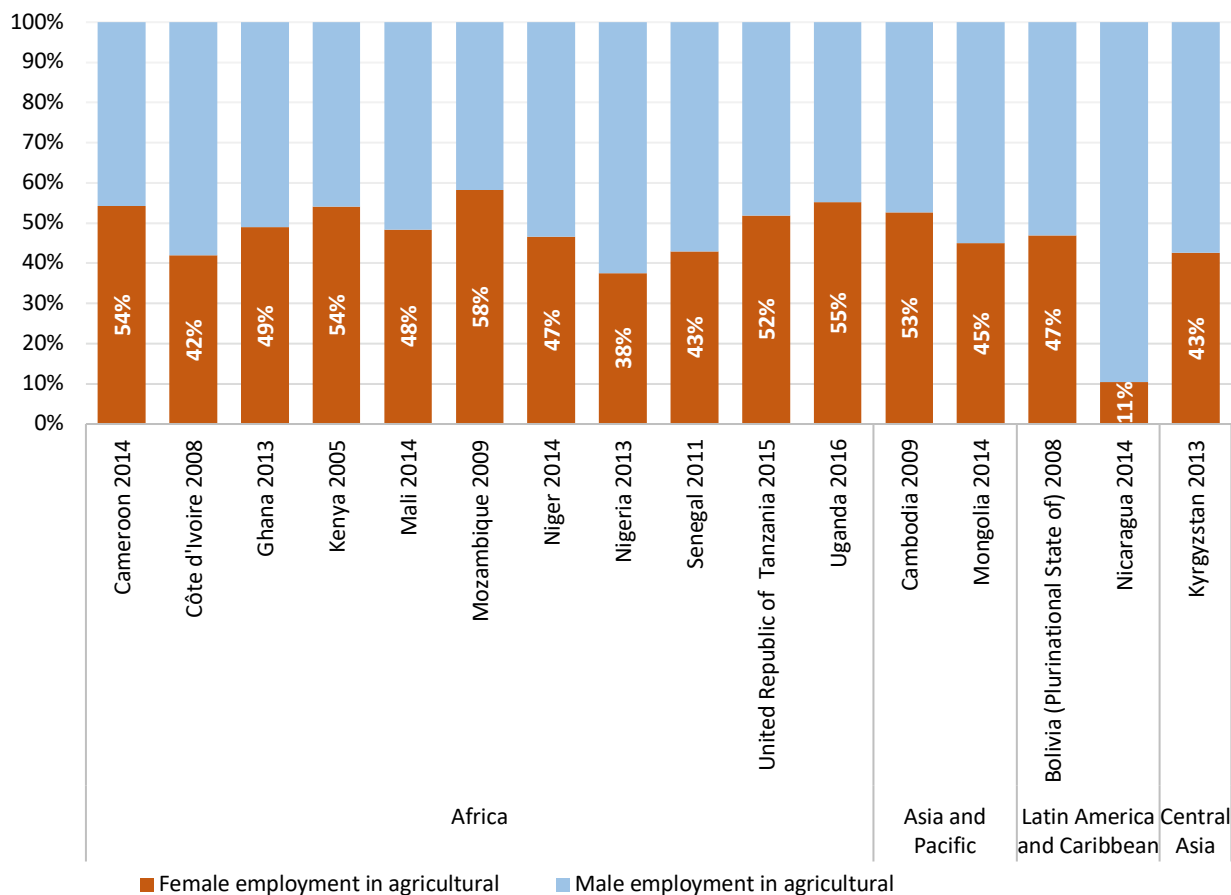
Figure 1 - Share of female and male employment in agriculture in total employment, rural areas



Source: RuLIS, 2021.

As a result, female employment makes up only 11 percent of agricultural employment in rural areas in the country (Figure 2). In contrast, the female share of those employed in agriculture as their main employment in rural areas is nearly 50 percent in Ghana, Mali, Niger, and the Plurinational State of Bolivia and surpasses men's share of employment in agriculture in rural areas in Cameroon, Kenya, Mozambique, Uganda and Cambodia. The share of female employment in agriculture is the highest in Mozambique at 58 percent (Figure 2).

Figure 2 - Share of females in employment in agriculture, rural areas



Source: RuLIS, 2021.

While employment statistics shown in Figure 1 suggest that rural men and women are heavily engaged in agricultural activities, they likely do not represent men and women’s full engagement in agriculture. This is because the statistics shown in this brief are based on the main job activity within the last seven days. Many individuals from poorer rural households are engaged in more than one employment activity at a time as a way to diversify income. In Malawi for example, rural women and men may be engaged on their own household farms as contributing family workers or own-account workers and, as a way to earn additional income, they may also engage in “ganyu” labour throughout the year, which is casual wage labour on other farms (see for example Michaelowam, Dimova and Weber, 2010). When these are additional employment activities in agriculture beyond the main employment activity, they are not captured in labour statistics based on the main employment activity. In addition, since agricultural activities are seasonal, these indicators depend on the timing of the survey, and therefore may vary from survey to survey even within the same country.

STATUS IN EMPLOYMENT IN AGRICULTURE

Figure 3 shows that within agricultural employment, the share of wage workers in agriculture is generally quite small.³ In most countries, nearly all rural men and women employed in agriculture as their main activity are engaged in: own-account work⁴ and contributing family labour^{5,6} which are considered vulnerable forms of work, usually informal and therefore not providing access to social security for instance. In most of the countries, rural women employed in agriculture are more likely to be engaged in contributing family labour whereas rural men employed in agriculture are more likely to be engaged in own-account work as the main employment activity. Own-account work often requires assets or other resources, and men are typically more likely than women to hold land and have access and control of productive assets that could allow for investment in an own-account enterprise in agriculture. In addition, men and women often face different constraints as well as different expectations around roles in the household and community. As part of these expectations, women often face greater time burdens than men in the own-use production of goods and services. This includes time spent on food processing and food preparation for the household, child and elderly care, water and fuel collection, and other unpaid household duties. Work as contributing family labourers on the family farm may be considered an extension of these duties. In addition, it may be work such as childcare that is done simultaneously with these other tasks.

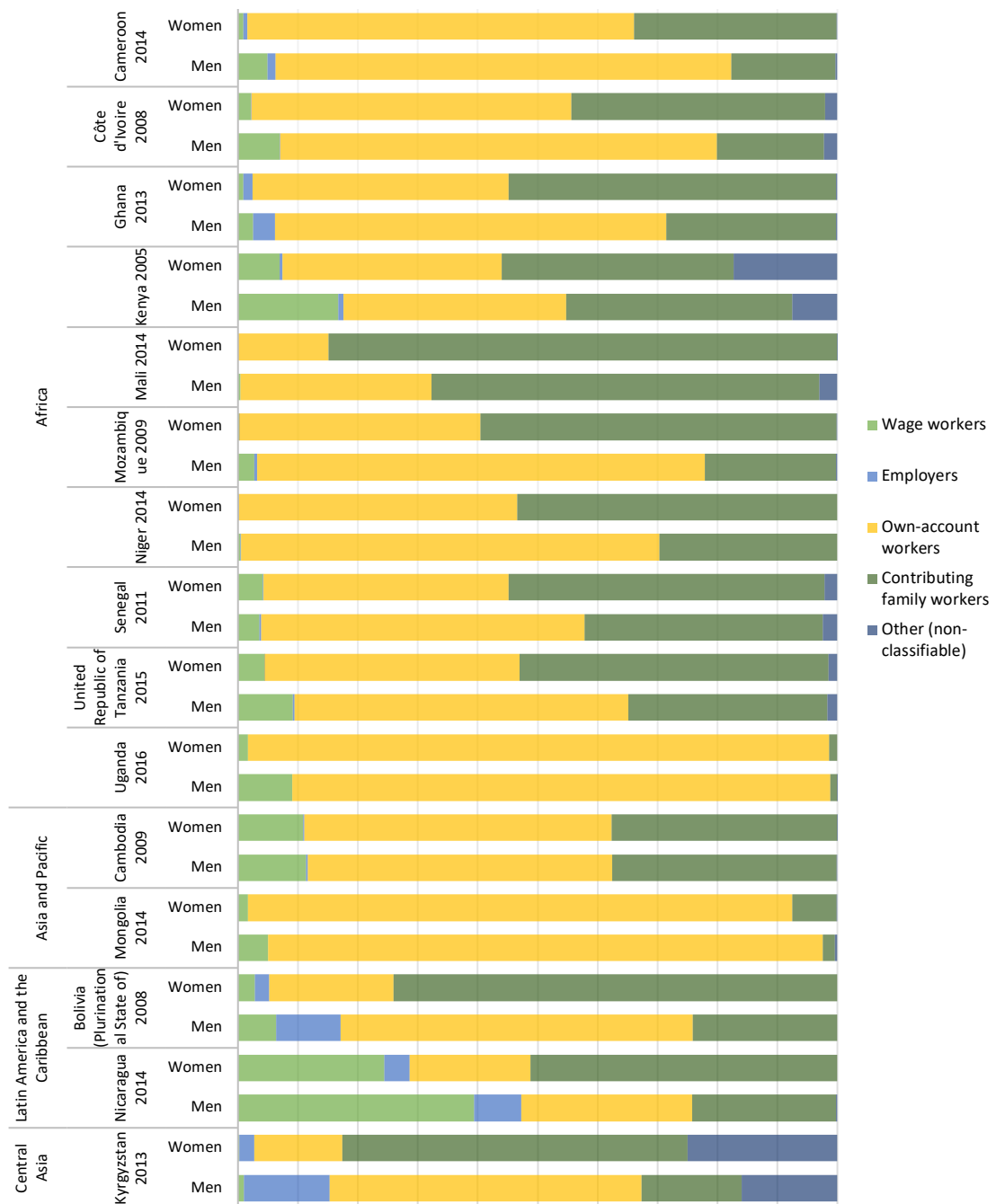
³ An exception is Nicaragua, where the share of wage workers among agricultural workers exceeds 20 percent for women and is nearly 40 percent for men. The Nigeria 2013 LSMS survey does not allow for a break up of self-employed individuals into employers, own-account workers and contributing family workers and is thus excluded from the Figures 3 and 4.

⁴ Own-account employment means that the individual is self-employed without any employees. In agriculture, it may include selling agricultural products in the street or at a stand in the market. Own-account workers are highly vulnerable to working poverty, but often they have more control over and autonomy in the work and income earned than contributing family labourers.

⁵ Contributing family labour is a form of employment where the individual is employed in market work – for example, they engage in cropping or livestock production that are intended to be sold in the market – however, their work is done for another family member's enterprise and is therefore not remunerated. It is considered as a vulnerable form of employment, with higher risk of working poverty, and the worker's protections, working conditions, and hours of work are more likely to depend on intra-household dynamics (in other words, gender relations within the household) rather than on a formal legal framework or even an arranged informal agreement. Additionally, workers are more likely to be dependent on income from other household members and may have little control in deciding how the income is used.

⁶ In Uganda 2016, the individuals who have worked on the household farm or with household livestock are considered as contributing family workers if they answered positively to the help without being paid in any kind of business run by the household, otherwise, they are considered as own-account workers.

Figure 3 - Distribution of status in employment in agriculture in rural areas by sex (%)



Source: RuLIS, 2021.

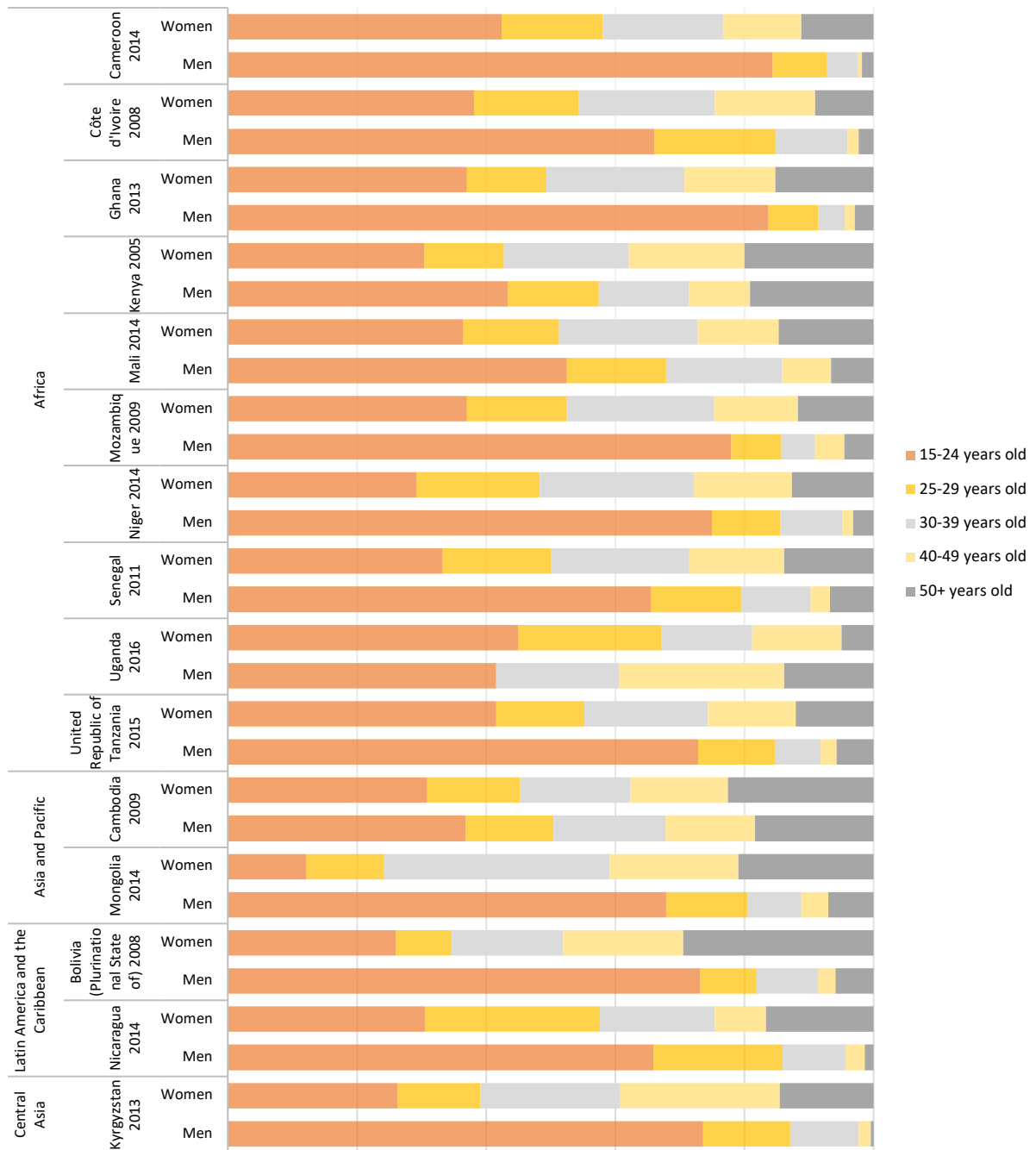
Figure 4 presents rural men and women’s engagement in contributing family work disaggregated by age group, and shows that a large proportion of contributing family workers in agriculture is the youth from 15 to 24 years old. The data about youth show significant variation between countries, but the number of country cases is too limited to make meaningful conclusions about regional patterns. Whether youth in agricultural households are contributing family workers rather than

own-account workers is likely driven, at least in part, by a lack of access to land and other resources and entitlements that would enable them to run their own enterprise.

Most male youth in rural areas are not unemployed; those who are from households that can afford to be unemployed are only from the wealthiest families (Fox, Senbet, and Simbanegavi, 2016). For the majority of rural male youth, making their own livelihood means attaining land and farming, finding the resources to start a non-farm enterprise, or finding the means to migrate in search of other opportunities. Those who are not able to secure their own livelihood or migrate are reliant on the older generation for their economic security. In this context, the high share of youth in contributing family work in agriculture could be seen as high rural youth unemployment or underemployment, which is likely to grow as the youth population continues to grow and as access to land becomes scarcer (Fox and Thomas, 2016).

In contrast, rural women who are employed in agriculture as contributing family workers as their primary employment are more evenly distributed across age groups. Figure 4 shows that women 50 years and older represent a substantial share of the female contributing family workers. This likely reflects, in a large part, youth's propensity to migrate in search for other employment opportunities and the growing proportion of older farmers as a result (Heide-Ottosen, 2014). While it varies by country, Heide-Ottosen (2014) highlights that agricultural employment is more likely to be the main source of employment for the older female age groups than the younger female age groups in sub-Saharan African, Asia, and Latin America. Older women engaged in contributing family work as their primary employment are particularly vulnerable as they may be less likely to have other means of earning a livelihood and, if land inheritance norms favor men, they may have more limited access to the farm when widowed.

Figure 4 - Distribution of contributing family workers in agriculture in rural areas by sex and age group (%)



Source: RuLIS, 2021.

BEYOND EMPLOYMENT INDICATORS

The employment statistics presented in the sections above help identify rural men and women's main employment activities and status in employment, suggesting that both rural men and women are heavily engaged in agriculture. The statistics also suggest that while the majority of rural men and women employed in agriculture in the countries selected are engaged in vulnerable types of employment, a large share of women and male youth are contributing family workers in agriculture as their main employment, which makes them particularly vulnerable economically.

The statistics shown in this brief are based on the main job activity within the last seven days. These statistics, however, likely underestimate the full extent of men and women's agricultural engagement because in the poor households in developing countries, men and women often have multiple employment activities, which may also be in agriculture. While the LSMS surveys take the seasonality of agriculture into account, the employment statistics in RuLIS are based on a short recall period (typically last seven days) following traditional employment statistics. As such, they also may capture a level of agricultural engagement that may be significantly lower than if the survey was taken in the peak agricultural season. In addition, there is evidence that individuals may underreport their employment activities as they may not see their work within the family as a market activity when contributing to the family enterprise (Benes and Walsh, 2018; Koolwal, 2018; Comblon and Robilliard, 2017). This may be particularly the case for women when the activities are carried out simultaneously with non-employment work such as childcare, which is typical in developing countries. Finally, while the employment statistics in RuLIS include subsistence agriculture, the line is blurred between which activities count as agricultural production (and thus would be considered as employment) and which would fall under food preparation, which is not considered a form of employment. Often, work in kitchen gardens is assumed to be part of food preparation and not counted as agricultural production. Likewise, while food processing for sale counts as employment, food processing for home consumption (even if it is the same activity) is often counted as food preparation and not part of agricultural production. Since women in many countries tend to engage in these types of activities much more than men, employment statistics can underestimate women's contribution to agriculture as compared to men's.

Beyond the employment indicators in agriculture, a large share of work in the rural economy in agricultural households is often not represented in statistics. When a given rural community lacks infrastructure such as access to clean water and sanitation, and social provisions such as affordable health care services, the own-use work burden can be particularly extensive within poor rural households (Bardasi and Wodon, 2006; Razavi and Cook, 2012). Often poorer rural households are unlikely to have labour-saving technologies, and compared to wealthier households, they are more likely to pursue services that are free or relatively cheap, which often takes more time than buying the services on the market. Production of goods and services for own final use in the household, which is work that women are more likely to engage in for longer hours than men, can be essential to the well-being and survival of the household. Often, it is the combination of own-use production of goods and services and income earned that sustains the household. By focusing exclusively on employment statistics, we risk underestimating the importance of own-use production of goods and services and downplaying a large amount of work that is more often done by women than men. It is also useful to have this information as hours spent in employment are not independent of the time spent in own-use production, and the gender inequality in the total work burden in rural areas can be particularly pronounced. This can

particularly affect rural girls, who often work longer hours than boys as they engage in own use production work but also share their mothers' domestic housework and caregiving chores, whilst their work contributions remain invisible in official employment statistics.

While the surveys used in RuLIS are extensive, they do not include information that could be used to measure men and women's work in own-use production of goods and services beyond water and natural fuel collection.⁷ This is in a large part because collecting information on respondents' activities on own-use production activities is complex and costly. Like the employment data, they are also often based on a short reference period (e.g. one week or the last 24 hours), which can also be problematic in a rural setting where work changes across seasons. Depending on how the survey is implemented, individuals may have cognitive difficulties answering the questions and enumerators need to be well trained. Even so, time use methodologies have improved and a number of new initiatives are under way testing innovative time use approaches. The latest international recommendations on the measurement of work were adopted by the 19th ICLS in 2013, which include recommendations for countries to improve the availability of time use data to measure differences among men and women's work burdens. We hope that this prompts countries to collect more detailed data on time spent on all types of work including own-use production activities.

⁷ One exception is the data from Uganda 2015/16 LSMS, which also collects time use data on construction and repairs; milling and food processing; producing pottery, textiles, and furniture and other handicrafts for the household's use; and domestic work.

REFERENCES

- Bardasi, E. & Wodon, Q.** 2006. *Measuring Time Poverty and Analyzing its Determinants: Concepts and Application to Guinea*. World Bank Working Paper. MPRA Paper No. 11082: 75-95.
- Benes, E. & Walsh, K.** 2018. Measuring Employment in Labor Force Surveys: Main findings from the ILO LFS pilot studies. International Labour Organization.
- Comblon, V. & Robilliard, A. S.** 2017. *Are Female Employment Statistics More Sensitive than Male Ones to Survey Design? Evidence from Cameroon, Mali and Senegal*. Working Paper DT/2015-22, DIAL.
- Cook, S. & Razavi, S.** 2012. *Work and Welfare Revisiting the Linkages from a Gender Perspective. Women in Informal Employment: Globalizing and Organizing*. UNRISD Research Paper, No. 2012-7.
- Fox, L., Senbet, L. W. & Simbanegavi, W.** 2016. Youth employment in Sub-Saharan Africa: challenges, constraints and opportunities. *Journal of African Economies*, 25 (suppl_1), i3-i15.
- Fox, L. & Thomas, A.** 2016. Africa's got work to do: A diagnostic of youth employment challenges in Sub-Saharan Africa. *Journal of African Economies*, 25, 6-36.
- Herrera, C. Dijkstra, G. & Ruben, R.** 2019. Gender Segregation and Income Differences in Nicaragua. *Feminist Economics*, 25:3, 144-170.
- ILO.** 2013. *Decent Work Indicators: Guidelines for producers and users of Statistical and Legal Framework Indicators*. ILO Manual, second version. Geneva, Switzerland.
- ILO.** 2013. Report II Statistics of Work, Employment, and Labour Underutilization. Report submitted for discussion at the Nineteenth International Conference of Labour Statisticians, 2-11 October 2013. Geneva, Switzerland.
- Koolwal, G.** 2018. Counting Rural Women's Work Under ICLS 19: New Insights from ILO's Country Pilots. Working Paper, Data 2X.
- Lowder, S. K., Scoet, J. & Raney, T.** 2016. The number, size, and distribution of farms, smallholder farms, and family farms worldwide. *World Development*, 87: 16-29.
- Michaelowa, K, Dimova, R. & Weber, A.** 2010. Ganyu Labour in Malawi: Understanding Rural Household's Labour Supply Strategies. *SSRN Electronic Journal*. 10.2139/ssrn.1578894.
- UNSD.** 2017. *Principles and Recommendations for Population and Housing Censuses*. Revision 3. United Nations, New York..

ANNEX

Country	Name of the survey	Year	Institution
Bolivia (Plurinational State of)	Encuesta de los Hogares	2008	Instituto Nacional de Estadística - Ministerio de Planificación del Desarrollo - Bolivia
Cambodia	Cambodia Socio-Economic Survey	2009	National Institute of Statistics
Cameroon	Fourth Cameroon Household Survey	2014	Institut National de la Statistique - Ministère de l'Economie, de la Planification et de l'Aménagement du Territoire
Côte d'Ivoire	Enquête sur le Niveau de Vie des Ménages	2008	Institut National De La Statistique (INS) - Ministère d'Etat, Ministère du Plan et du Développement
Ghana	Ghana Living Standards Survey	2012/13	Ghana Statistical Service (GSS)
Kenya	Integrated Household Budget Survey	2005/06	Kenya National Bureau of Statistics
Kyrgyzstan	Integrated Sample Household Budget and Labor Survey	2013	National Statistical Committee of the Kyrgyz Republic - NSC
Mali	Enquête Agricole de conjoncture intégrée aux Conditions de Vie des Ménages	2014/15	Cellule de Planification et de Statistiques - Ministère du Développement Rural Institut National de la Statistique - Gouvernement du Mali - Direction Nationale de l'Agriculture
Mongolia	Socioeconomic Survey	2014	National Statistical Office of Mongolia - NSO
Mozambique	Inquérito sobre Orçamento Familiar	2008/09	Direcção de Censos e Inquéritos - Instituto Nacional de Estatística (INE) - Ministry of Planning and Development
Nicaragua	Encuesta Nacional de Hogares sobre Medición de Nivel de Vida	2014	National Bureau of Statistics
Niger	National Survey on Household Living Conditions and Agriculture	2014	Survey and Census Division - National Institute of Statistics
Nigeria	General Household Survey	2012/13	National Bureau of Statistics (NBS)
Senegal	Enquête de Suivi de la Pauvreté au Sénégal	2011	Agence Nationale de la Statistique et de la Démographie
United Republic of Tanzania	National Panel Survey (Nps 2014/2015)	2015	United Republic of Tanzania National Bureau of Statistics
Uganda	The Uganda National Panel Survey	2015/16	Uganda Bureau of Statistics (UBOS)

Source: RuLIS, 2021.

The **Rural Livelihoods Information System (RuLIS)** is a set of harmonized household- and individual-level data and indicators on different aspects of livelihoods, including crops and livestock production, off-farm and non-farm income generating activities, households' composition and demographics, agricultural inputs, technology use, access to social protection, time use, shocks and migration. RuLIS currently includes information from 39 countries, with increasing data coverage in time and space as more micro-data becomes available. RuLIS aims to provide critical information for understanding medium- and long- term trends in the structural transformation of agriculture and rural economies; and for the design of policies that promote and accompany social and economic transformation and enhancement. RuLIS provides data on a wide set of indicators, cross-tabulated by rural vs urban areas, gender and other variables; and standardized variables at the household and individual level.⁸

For further information on RuLIS, and for accessing the data and indicators on the platform, please refer to <http://www.fao.org/in-action/rural-livelihoods-dataset-rulis>

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