CHAPTER 12

The Promise and Challenges of Gender Data

Mayra Buvinic and Eleanor Carey[1]

1 The authors would like to acknowledge the contribution of Isabel Schmidt of Statistics South Africa, Kanobana Muchochori of UN Women Rwanda, Michel Ndakize of the National Institute of Statistics Rwanda, and Omar Seidu of Ghana Statistical Service, who were interviewed for this piece.

A major difficulty in assessing the economic contribution of women at the present time is lack of or incomplete data and indicators to measure their situation as it affects the process of development and is in turn affected by it.

—World Plan of Action, adopted by the World Conference of the International Women's Year, Mexico City, July 2, 1975

Good data form the backbone of effective policy. While much progress has been made since 1975, the epigraph at the beginning of this chapter still, unfortunately, describes accurately the state of gender data in Africa south of the Sahara (SSA). Women and girls in these largely rural economies are widely acknowledged to be among those suffering the worst life outcomes and are among the groups most poorly represented in the data. The content of their days do not fit neatly into categories but straddle and blur the boundaries between "productive" and "nonproductive," "public" and "private," and "home" and "work," challenging the conceptual frameworks for measurement that have largely been devised to capture the roles that men have traditionally played in more advanced economies. In some cases, this has led to poor measurement, and in others, no measurement at all. In recent years, however, the measurement community has begun undertaking methodological work to produce more accurate and policy-relevant information aimed at improving the lives of marginalized women and girls.

This chapter examines the state of gender data on rural women and girls in SSA on three key Sustainable Development Goals (SDGs) outcomes in line with the focus areas for this year's Annual Trends and Outlook Report (ATOR): assets, income, and work; social and political empowerment; and food security and nutrition. The second section outlines some of the benefits of improved data on rural women and girls, offers guiding principles for good evidence, identifies major sources of data and their limitations, and explores methodological issues and advancements in measurement. The third section selects 32 indicators from the SDG and related frameworks to measure these three outcomes and assesses the availability and quality of data for these indicators in 15 SSA countries using an assessment carried out by Open Data Watch (ODW). The chapter concludes by summarizing suggestions for further gender data work in the region. This chapter was enriched by interviews we conducted with data experts in Ghana, Rwanda, and South Africa.

Addressing Gender Data Gaps in 2019 ATOR Priority Focus Areas

Better data on rural African women and girls in the priority focus areas for the 2019 ATOR are needed to (1) account for all of women's work; (2) help improve women's productivity and food security and nutrition; and (3) better understand and ultimately more effectively tackle poverty.

Accounting for All of Women's Work

Close to half a century ago, Ester Boserup (Boserup 1970) was among the first to call attention to the problems of measuring rural women's economic participation, pointing out that subsistence activities, usually omitted in official labor statistics, were largely women's work. She also was among the first to document that the modernization of agriculture in developing countries could hinder rather than help women's economic participation and widen the productivity gap between the sexes. In the intervening decades, the measurement of rural women's work has improved notably (Box 12.1 lists important recent data initiatives), but measurement issues arising from the tradition of not counting unpaid work in systems of national accounts linger. Further, the gender gap in productivity has not budged (O'Sullivan et al. 2014; World Bank 2012). These problems in both measurement and outcomes are particularly salient in rural Africa, which records women's highest contribution to subsistence production globally (Doss 2011).

The problems of substandard data have been well documented. In Uganda, for instance, the use of insufficient screening questions to define "activity" led to significant undercounting (close to 10 percent of the labor force) of subsistence workers, the majority women (Fox and Pimhidzai 2013). In Tanzania, the use of response by proxy in household surveys led to lower reported employment for men, while a short employment module led to higher working hours for both men and women (Bardasi et al. 2011). The paucity of time use data also means that we have little reliable information on rural women's unpaid care and domestic work (Buvinic and King 2018)

Helping Improve Women's Productivity and Food Security and Nutrition

Studies have repeatedly shown that female farmers in Africa have lower yields than male farmers, stemming from unequal access to agricultural inputs (information, land, capital, and equipment) as well as biases in extension service provision (O'Sullivan et al. 2014; Ali et al. 2015; Oseni et al. 2015).

Reduced productivity contributes to increased food insecurity and poor nutritional outcomes. However, poor data hamper our ability to determine women's exact contribution to agriculture and the magnitude of improvement to their productivity required to tackle food insecurity, or, more generally, to design effective policy responses to observed gender inequalities in farming (Doss et al. 2015). *The State of Food Security and Nutrition Report* (FAO 2018) notes that for the third year in a row, hunger is on the rise, and Africa is the region with the highest prevalence of undernourishment at 20.4 percent. To keep pace with rising demand, the Food and Agriculture Organization of the United Nations (FAO) estimates that agricultural output in SSA needs to more than double by 2050; however, climate change has already begun to reduce yields (World Bank 2018a). Because women often play the role of caregiver and food provider, and in many cases are working the most vulnerable land, climate shocks can increase their workload, reduce their yields, and harm their ability to feed their families.

Better Understanding and Ultimately More Effectively Tackling Poverty

Current projections estimate that by 2030 global poverty will become concentrated in SSA, with the share of global poor living in the region projected to reach 87 percent (World Bank 2018b). Moreover, while Africa is rapidly urbanizing, in the majority of countries 65 to 70 percent of the population still resides in rural areas where poverty is more prevalent, and higher for rural women when compared with their urban counterparts (Beegle et al. 2018). Better understanding and measuring rural women's and girls' poverty, including the economic, social, psychological, and political correlates, is a first necessary step to effective policy solutions.

Guiding Principles and Main Features of Good Gender Evidence in SSA

Two main principles should guide the collection of data on rural women and girls:[2]

- **Women's economic and social roles, especially in rural economies in developing countries, are interdependent.** This means that barriers to either dimension can prevent progress on the other; for instance, women's family roles may influence business choices and returns to those businesses, and vice versa. Data, therefore, need to be generated on both economic and social outcomes, and measures need to track their interdependence.
- **Women's individual experience is difficult to separate from that of the household.** It is difficult to separate and measure changes in income for the individual woman without considering possible positive or negative spillover effects on the income of other household members. While this challenge is applicable in theory to all household members, it is particularly an issue in farm households, where substantial subsistence production occurs alongside market production, and for women because of the strong interdependence between their family and economic roles. Ideally, therefore, data on rural women and girls should be generated and analyzed at both individual and household levels.

Good evidence on women and girls, above all, is of high quality—that is, based on data that are reliable, valid, representative, and free of gender biases. Good evidence also[3]

- has good *coverage*, across countries and produced at regular intervals;
- is *comparable* across countries in terms of concepts, definitions, and measures;
- has desirable features of *complexity*, where data from different domains in women's lives can be cross-referenced and cross-tabulated, and *granularity*, where the data can be disaggregated into smaller units by race and ethnicity, age, and geographical location, as well as sex; and

2 Based on ""Measuring Women's Economic Empowerment" (United Nations Foundation and ExxonMobil 2014).

3 Based on Buvinic, Furst-Nichols, and Koolwal (2014).

BOX 12.1—STEPS TOWARD BETTER GENDER DATA

In recent years, the measurement community has pursued methodological improvements to increase and improve gender data production, which in turn holds promise to provide insight on rural African women's lives:

- **2012:** World Health Assembly agrees on common indicators on food security and nutrition.
- **2012:** Women's Empowerment in Agriculture Index (Alkire et al. 2013) and its derivatives highlight the importance of generating knowledge about women's role in the agricultural setting.
- **2013:** The Minimum Set of Gender Indicators includes a call for information on women's wages and their work in agriculture (UNSD, "Minimum Set," n.d.).
- **2013:** The International Conference of Labor Statisticians agrees on new definitions of work and employment that make both the paid and unpaid working activities more visible (Data2X and ILO 2018).
- **2014:** Indicators for the Malabo Declaration include women's empowerment and call for sex disaggregation (CAADP and NEPAD 2015).
- **2015:** The Sustainable Development Goals indicators call for the sex disaggregation of data on a broad range of topics including assets, livelihoods, institutional contexts, and those that reveal women's vulnerability (UNSD 2015).
- **2017:** The International Classification of Activities for Time Use Statistics, or ICATUS 2016, is adopted by the UN Statistical Commission at its 48th session, providing agreement on key concepts and definitions for the production of internationally comparable time use data and helping to capture women's activities that other frameworks often fail to (UNSD 2017).
- **2017:** The 2020 Round of Agricultural Census guidelines build on the previous round's commitment to sex-disaggregated data by encouraging the collection of data on managerial decisions and the identification of ownership of the holding by sex (FAO 2017b).
- **2017:** The FAO, under the Global Strategy to Improve Agricultural and Rural Statistics, releases Guidelines for Collecting Data for Sex-Disaggregated and Gender-Specific Indicators in National Agricultural Surveys (FAO 2017a).
- **2018:** The International Labour Organization releases guidelines for implementation of new definitions of work and employment (ILO 2018).
- **2018:** The 50 x 2030 Initiative to Close the Agricultural Data Gap is launched at the Data to End Hunger event with a target to scale up agricultural surveys to 50 low- and lower-middle-income countries by 2030 (GPSDD 2018).
- **2019:** The UN Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective are released under the Evidence and Data for Gender Equality (EDGE) project, a joint initiative of the UN Statistics Division and UN Women (UNSD 2019).

Source: Authors.

- is *parsimonious* and *policy relevant*, that is, able to reflect the reality of women's and girls' lives with a minimum amount of information and indicators and can readily inform public policies.

These principles and qualities of good data should be the basis for measurement on rural women. However, executing against these principles is challenging, as the following section outlines.

Measuring Key Outcomes for Rural African Women and Girls

The SDGs require African countries to have data on rural women to measure, among other outcomes, those that are the focus of the 2019 ATOR: income, assets, and work; social and political empowerment; and food security and nutrition. Below we examine for these three key outcomes (1) sources of data and their limitations and (2) methodological issues and advancements in measurement.

Sources of Data and Their Limitations

Agricultural surveys and censuses are central (Doss 2013) to generate data on these three key outcomes, but so too are the population and housing censuses (UNFPA 2014), labor force surveys and general household surveys (ILO 2018), time use surveys (Buvinic and King 2018), income and expenditure surveys, and data collection on issues specifically relating to women's experiences, such as maternal health and domestic violence. There are international and national data collection efforts. Administrative data are a potentially especially useful national-level data source that can be disaggregated by sex and into smaller administrative or geographical units (ODW 2019). However, quality issues with this source of data, particularly in low-income settings, are considerable. Alternative data sources may also hold promise in reaching populations that have been historically poorly represented by traditional data collection instruments. If properly combined with traditional data sources, satellite data, for example, have shown promising results—for example, by improving spatial resolution of existing data on girls' stunting, women's literacy, and access to modern contraception (Vaitla 2017).

To generate high-quality data on rural women, a number of overarching technical issues must be addressed:

- A central issue that has been highlighted is the need to **collect data at an individual level as well as at the level of the household** (FAO 2016). Many surveys are designed to sample households, and when deployed in the field, questionnaires are often administered to the "household head" or a proxy respondent and important questions, such as assets, consumption, and poverty status, elicit information about the entire household, rather than individuals within the household. This only allows for comparisons between female- and male-headed households, which are usually systematically different, and cannot take into account intrahousehold inequalities. Studies find that using household-level gender indicators tends to underestimate gender differences and suggests that the level of disaggregation of gender indicators must be considered from the beginning of instrument design (Peterman et al. 2010). Disaggregation increases the cost of data collection, which can be a deterrent. Some methodological efforts have been made to resolve this issue, including the 2017 FAO guidelines on sex-disaggregated agricultural data (FAO 2017a), which lay out approaches to generating individual-level insights, and the 2019 EDGE guidelines, which also discuss the sample design implications of interviewing one or more household members (UNSD 2019). Using proxy respondents instead of self-reporting can also present data quality issues, particularly where males in the household are relied on to provide information on women (UNSD 2019).
- While generating data on rural women by comparing households based on the sex of the household head is limited, this does not imply doing away with the concept of female headship; rather, it **calls for improving the operationalization and measurement of this term**. Research (Milazzo and van de Walle 2015) shows that the incidence of female headship is on the rise in SSA, and that widowhood—a main determinant of female headship—is strongly associated with poverty.
- Most **surveys often do not have large enough sample sizes to simultaneously disaggregate the data by sex as well as by location and other individual and household-level characteristics (that is, allow for the multiple disaggregations called for by the SDGs)**. This hugely limits the opportunities to generate meaningful evidence on the women and girls that are most marginalized due to the intersecting inequalities they face. The challenge is to ensure, for instance, that both sex disaggregation and geographical disaggregation are pursued in tandem in survey design and analysis.
- Another constraint in data collection design that particularly disadvantages rural women is that **survey samples may overrepresent urban**

populations and underrepresent rural populations, given the higher demand for data on employment, which tends to be more prevalent in urban areas.[4] The focus on employment may also crowd out the possibility of gathering high-quality data on the myriad economic activities that rural women often engage in but that are not strictly classified as "employment."**Other sources of data may also underrepresent rural women.** Agricultural surveys can have holding-size limitations that exclude women farming the smallest plots or may be limited to holdings conducting commercial agricultural activities. Administrative data, such as vital statistics, may fail to capture rural women when they live far from registration centers or are less likely to register births, marriages, divorces, or death because of gender-related constraints (Buvinic and Carey 2019). Big data may provide some opportunities to generate information on groups that are difficult to reach, for example, through satellite information to improve spatial resolution (see above). However, for some forms of big data, such as mobile operator data, rural African women may again be underrepresented as women's access to mobile phones lags behind men's in the region (GSMA 2018) and careful consideration of how to use this type of data to map women's well-being is required (Vaitla 2017).

- **Data to track gender dynamics over time require longitudinal studies**, which are largely absent. In some cases, pseudo-panels can be constructed from repeated cross-sections to allow analysis over time, but this comes with limitations in terms of data quality (Lambrecht et al. 2017). Some survey programs, such as MICS, are beginning to experiment with repeated data collection using mobile phones (UNICEF 2018), which is helpful for rapid feedback, for example, crisis monitoring, but is less suitable for tracking long-term changes in gender dynamics. Big data may offer some opportunities for frequent and time series data, but in most countries engagement with big data is outside of national statistical offices' budget parameters or expertise and partnerships with specialized organizations are necessary to pursue innovative projects.

Methodological Challenges and Advancements

(1) Income, assets, and work

Income: Rural women's income is particularly challenging to capture because it may be more sporadic, variable, and difficult to disentangle from household income than men's rural income. In addition, income measurement itself is not straightforward, particularly for the smallest household and farm enterprises in rural areas (Knowles 2014). Measuring profits is difficult since it requires respondents to recall figures on sales and costs, information they may not have or may not be willing to provide. Studies have shown that revenues can be easier for respondents to recall than profits, particularly for high-value crops (FAO 2016).

Another challenge is to identify who (the man or the woman) is the main owner or manager of the firm or farm (or plots within the farm) when the enterprise or the farm has more than one owner or may be jointly owned. In this case, a further issue is who controls the profits. Work from IFPRI and partners, in particular, has shown that individual and joint ownership as well as control of both income and assets (see below) are distinct and important concepts to operationalize and measure since they significantly affect outcomes for rural women (Johnson et al. 2016). However, these concepts and measures have seldom been included in traditional survey work, though recent methodological work under the EDGE project is beginning to address this issue (UNSD 2019).

Assets: Assets, loosely defined as resources that individuals, families, or other groups control to produce economic or social value, are preferable to income as a measure of rural women's economic status as they are less sensitive to recall bias, especially for women farmers and rural producers, particularly physical and financial assets (such as land, livestock, bank accounts, and access to Internet and mobile phone technology) (Knowles 2014). A focus on assets can also help in measuring the impacts of climate shocks and coping strategies (FAO 2018), understanding how poverty affects members of the household differently, and adding information on empowerment and livelihoods (UNSD 2019).

Asset measures, however, are less sensitive than income measures to detecting short-term variations, so they are better medium- and long-term

4 Data2X interview with Isabel Schmidt, Statistics South Africa.

indicators of wealth (Knowles 2014; UNSD 2019). Measuring access to, control of, and ownership of assets for rural African women is challenging. For example, women tend to farm smaller plots, which can be overlooked by agricultural censuses and surveys if they fall below the minimum cutoff for plot sizes to be included.

Suggested improvements to data collection to capture male-owned, female-owned, and jointly owned assets have included careful consideration of who should be interviewed, and identifying which people are involved in activities as owners, managers, workers, and decision makers (Doss 2013; World Bank 2015). In general, household surveys are considered the most appropriate instrument to collect information on assets, and that is where attention should be focused to improve data quality (UNSD 2019). Increased attention to intra-household bargaining should underpin improved data collection (Peterman et al. 2010), as should the fact that men and women may use different assets to cope with different types of shocks (Meinzen-Dick et al. 2011). Valuation of assets can also be used to assess various aspects of the gender wealth gap including whether women and men possess similar levels of wealth, concentrate their wealth in the same types of assets, how the composition of wealth varies by sex among wealth quintiles, and whether women are overrepresented in the poorest wealth quintiles (UNSD 2019).

Recent advances on measuring women's ownership and control of assets have included FAO's *Guidelines for Collecting Data for Sex-Disaggregated and Gender Specific Indicators in National Agricultural Surveys* (including 26 indicators measuring landownership, access to financial resources, labor, and paid and unpaid work in agricultural households, among others) (FAO 2017a). The Women's Empowerment in Agriculture Index (WEAI) and its abbreviated form (A-WEAI) include an indicator on asset ownership (Alkire et al. 2013; Malapit et al. 2017). The Evidence and Data for Gender Equality program led by UNSD has devised measures of ownership rights (including reported, documented, and economic ownership) that should shed significant light on rural women's relationships to ownership and control over assets. Priority assets include principal dwellings, agricultural land, other real estate, and financial assets (UNSD 2019).

Work: Definitions and methodologies deployed across labor force and household surveys have compounded the issue of lack of quality data on women's work as they have, to date, not allowed for accurate measurement of much of rural women's work in producing goods and services for the family's consumption or for the market. For example, contributing or unpaid family work has been found to have low coverage across survey instruments (World Bank 2015) and because women who are doing agricultural production often report homemaking as their primary activity, unless specific probing questions are built in to uncover these activities (ILO 2018) rural women's work is often missed in data collection. Custodian agencies are pursuing necessary adjustments to these surveys (see below).

Women in both urban and rural settings carry out unpaid work activities, but for women in rural areas with less infrastructure, access to public services, and market alternatives, the burden of unpaid care and domestic work is larger, with implications for the availability of time for income-generating activities, as well as the reproduction of gender inequalities that hamper women's empowerment more generally (Buvinic and King 2018). For girls, their domestic and care burdens may increase as their mothers pursue income-generating activities. Time use data are the primary source of information on unpaid work activities and can also add insight into women's contribution to agriculture, and provide contextual information to build good policy and interventions (Doss 2011). However, as of 2018, SSA was the world region with the lowest number of time use surveys conducted (Buvinic and King 2018). Data on childcare arrangements, a significant constraint on women's work, would also provide highly policy-relevant information (Buvinic and King 2018).

The new definitions of work and employment, agreed by the International Conference of Labor Statisticians (19th ICLS) in 2013, have changed the conceptualization of work—both paid and unpaid activities are now considered work, while "employment" is restricted to activities that are only for pay or profit. When fully implemented, these new definitions should improve the measurement of rural women's work (Data2X and ILO 2018). As of late 2018, however, a review of 14 lower- and middle-income countries found that only Malawi and Nigeria had adopted the new definitions in their survey instruments (Desiere and Costa 2018; Koolwal 2018). At the 20th International Conference of Labor Statisticians in 2018, 29 out of 41 low- and lower-middle-income countries reported that they had conducted or were planning to conduct some kind of test regarding the implementation of new definitions, with a focus on measurement of employment and subsistence foodstuff production (Benes and Walsh 2018). Therefore, while

uptake to date has been slow, there are signs of accelerated implementation in the coming years.

There are methodological and policy challenges in the adoption of these new definitions. Among the former is identifying the boundary between which production is for sale and which is for subsistence, especially when, in rural households, production for sale may change over time to production for own use and vice versa (Benes and Walsh 2018). Another issue that has plagued the measurement of work in agriculture is which reference period is appropriate to capture employment and its seasonality, and the restriction of employment to only work for pay or profit makes it even more salient to use a suitable reference period that will not undercount employment.

An obvious policy issue is the reduction in the size of the labor force once subsistence activities (which still predominate in rural African economies and are performed mostly by women) are taken out of "employment" and moved into "own use production work" and the implications that this could have for policy makers who may not be well informed about what caused the shift in numbers (Data2X and ILO 2018). The ILO is working with partner agencies and governments to operationalize the new definitions, harmonize relevant indicators, and produce guidelines for countries to use in forthcoming rounds of labor force surveys (ILO, n.d.).

(2) Women's empowerment

Empowerment can be social, economic, or political. Regardless of the domain, empowerment includes both an objective outcome dimension (such as income and employment) and a subjective sense of autonomy or agency, mostly unobservable, that does not translate easily into empirical measures. These increasingly popular but also complex concepts are largely context and culture specific, which adds to the challenge of testing and building robust indicators to develop standardized cross-culturally comparable empowerment measures (UN Foundation and Exxon Mobil 2017).

While objective outcomes are in theory easier to measure than subjective ones, when it comes to empowerment there are problems with measuring both kinds of indicators across domains. For instance, in the social domain, prevalence and incidence data on different forms of gender-based violence are difficult to obtain. In the economic domain, the quality of data on often-used objective empowerment indicators, such as income and gainful employment, is questionable for rural women (see above). Data on political empowerment are generally limited to the proportion of female representation in the national legislature, unlikely to correlate very highly with rural women's ability to participate in community/local decision making (which is included in the SDG indicator framework [5]). The WEAI and project-level WEAI are among the only instruments that collect information on group membership and participation at the local level (Alkire et al. 2013; Malapit et al. 2019). In general, a review of data collection instruments found that indicators on public life and decision making have very low coverage (World Bank 2015).

A commonly used measure to tap subjective empowerment has been self-reports of independence in or control over individual or household decision making. Reliable and cross-country comparable data are currently only available for exercising control over decisions in relation to healthcare and family planning (largely due to the wide coverage of household surveys such as the Demographic and Health Surveys Program, which focuses on these issues). Different features of subjective empowerment, such as ability to decide on family planning, autonomy over how to use individual savings, or freedom to vote, mediate different empowerment outcomes. These features will vary across different empowerment domains (social, economic, and political) and may even vary within domains for different groups; for instance, while financial autonomy may be the core feature to measure for women entrepreneurs, control over agricultural inputs or reduction in time spent in subsistence production may be the appropriate economic empowerment measure for women farmers.

Recent significant attempts to better capture the complexities of empowerment have included the construction of indexes that integrate a number of the main features of empowerment, such as the WEAI and its abbreviated form (A-WEAI) and project-level form (pro-WEAI), self-reported measures of decision-making power within the household (influence on or control over household expenditures, decision making on agricultural production and on resources such as credit) and, increasingly, psychological testing to capture

5 However, metadata have recently been agreed for SDG indicator 5.5.1(b) on representation of women in local government. Data for this indicator will rely on administrative electoral records (UN Women 2018b).

subjective states or feelings, including autonomy and sense of agency (Donald et al. 2017). UNECE is also currently leading methodological work to better measure intrahousehold decision making (UNECE 2017).

Fox and Romero (2016) suggest empowerment indicators encompassing both attitudes and behaviors for the different empowerment domains. Collection of data on attitudes would be a significant step forward, layering nuance on findings from outcome indicators. Examples of attitudinal indicators for the economic domain include whether the respondent believes women can work outside the home or thinks that she has a right to be involved in financial decisions. Data on attitudes toward gender-based violence, control over fertility and sexual health, and belief in women's ability to learn and apply knowledge may provide insight into levels of social empowerment. Attitudinal indicators to measure political empowerment may include willingness to participate in community activities or desire to know and exercise legal rights. Psychological empowerment indicators encompass measurements of self-esteem, self-confidence, optimism, and self-regulation (Fox and Romero 2016). Big data has also been explored as a source of attitudinal data—for example, through analysis of social media feeds (Vaitla 2017). Again, however, we must remember that rural African women are less likely to be represented in this type of data at present. A task ahead is to identify regionally comparable, easy to implement behavioral and attitudinal indicators of social, economic, and political empowerment.

(3) Food security and nutrition

Food security and nutrition measures overall have fewer methodological issues than income, assets, and work, and empowerment measures; they have more tangible qualities and are less difficult to operationalize. Direct measures of food security and nutrition such as wasting and stunting of children under five largely have sex-disaggregated data available (UNICEF 2019) but are not always reported by sex and location (see, for example, data for indicator 2.2.1 on stunting in the SDG global database (UNSD, *SDG Indicators*, n.d.), while this reporting can help to identify the most vulnerable groups of girls and boys (UN Women 2018c). Other common food security and nutrition measures include childhood overweight, exclusive breastfeeding, anemia in women, and adult obesity, which were agreed by the World Health Assembly in 2012 (FAO 2018). Some of these have been absorbed into the SDG indicators while all are reported in the *State of the World's Food Security and Nutrition Report*. These are a subset of a wider set of food security indicators and an underlying database managed by the FAO that covers issues of availability, access, overall stability, and utilization of basic infrastructure such as sanitation and drinking water. However, the majority of these indicators cannot be sex disaggregated, nor would it be meaningful to do so (FAO, "Food Security," n.d.). For example, sex disaggregating indicators on populations with access to safe drinking water would not be meaningful at the individual level; rather it has been suggested that this be disaggregated by "type of household" to assess inequality of access (UNEP and IUCN 2019). However, as no international standardization exists for "type of household," this is an area in need of more methodological research.

The 2018 *State of the World's Food Security and Nutrition Report* calls for examining food insecurity at the individual level to assess gender differentials in decisions and behaviors within food-insecure households. Given women's critical roles in the provision of food security and nutrition at the family level in rural African households, a well-rounded assessment should include measuring changes in both household- and individual-level indicators of food security and nutrition (tracking "spillovers" among household members) and complementing these measures with indicators of women's and girls' efforts (that is, time use) in the provision of food since, in times of food insecurity, they may notably increase their time in food production and processing to achieve household food security.

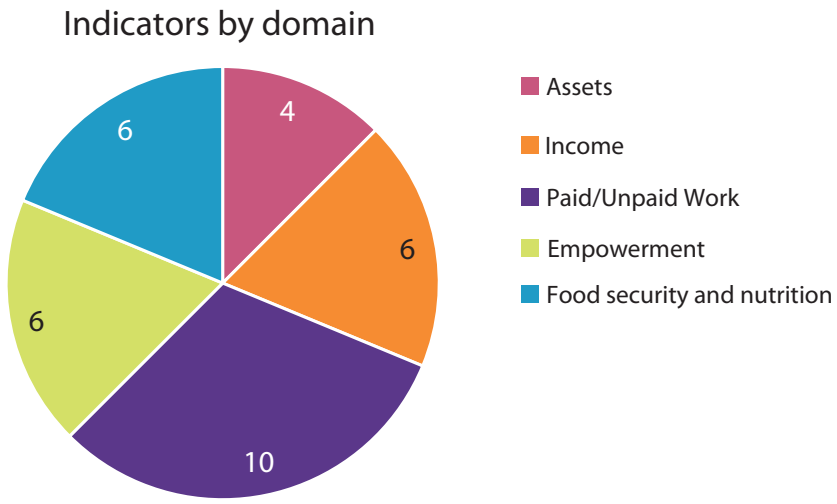
Individual-level direct measures of food security and nutrition should be cross-tabulated with observable indicators of economic outcomes (such as landownership, land quality, and access to assets and resources) and subjective measures of empowerment to understand the drivers of food security and the possible effects of climate change on individual food security and nutrition and, ultimately, women's well-being.

Current Data Availability and Opportunities for Improvement

Bridging the Gap Indicator Assessment

The SDGs have provided an overall framework and a list of indicators, agreed by 193 countries, for measuring development progress. Selecting from this master list and related indicator frameworks (the Minimum Set of Gender Indicators [UNSD, "Minimum Set," n.d.]) and supplementary indicators outlined in UN Women's recent SDG report (UN Women 2018c), ODW assessed the availability

FIGURE 12.1—NUMBER OF SELECTED INDICATORS IN EACH DOMAIN



Source: Authors.

and quality of data for 104 gender-relevant indicators across 15 SSA countries in both international and national databases, from 2010 to 2018.[6] These countries represent 60 percent of the population of SSA and cover a range of income levels (ODW 2019).[7]

For this chapter we selected the 32 indicators that best measured the three key outcomes of interest for rural women and girls in the 15 SSA countries. Four indicators measure assets, six measure income (and expenditures), 10 measure paid and unpaid work, and six each measure social and political empowerment, and food security and nutrition (Figure 12.1). Appendix A[8] lists the 32 indicators. We used the assessment to identify, first, how available are these indicators (does the indicator exist in any form?) and, second, whether the available indicators are sex disaggregated, in international and national databases, for the 15 SSA countries.

The ODW dataset does not consider tier III indicators (those with no agreed methodology and that are not regularly produced). The indicators discussed in this section, therefore, represent just the very minimum information we need to deliver on current promises for improving the lives of rural women and girls in SSA. Taking stock of this current state of data availability and outlining the basic data structure that exists highlights where advances are urgently needed to confront the methodological challenges outlined in the previous section of this chapter.

Findings on Availability

Table 12.1 presents for the 15 SSA countries the total availability score per domain, calculated based on availability at the international and national level of any data at all for a given indicator per country (expressed in percentages), and also based on whether the indicator is sex disaggregated[9] (also in percentages). Appendix A lists availability scores for all indicators. An average of the availability score for indicators in each domain provides the overall availability score for the domain. ODW also examined the frequency and timeliness of each indicator in each country, and results can be found in Appendix A. These elements are not included in the total availability score.

6 Uganda, Senegal, Rwanda, Kenya, Botswana, Lesotho, Malawi, Tanzania, Ethiopia, Nigeria, South Africa, Zambia, Zimbabwe, Côte d'Ivoire, and Ghana.

7 Assessing data availability for SDG indicators in international databases was a two-step process: the team first looked for data in the SDG Global Database maintained by the UN Statistics Division and then looked for data on the website(s) of the so-called custodian agencies or the World Bank's World Development Indicators. For non-SDG indicators, assessors looked for data published by intergovernmental organizations that are primarily responsible for publishing relevant statistics for the topic of interest. At the national level, databases maintained by national statistical offices as well as data sources from other government actors were investigated.

8 See Chapter 12 Appendix A (https://www.resakss.org/node/6747?region=aw).

9 Indicators that relate only to women are counted as having sex disaggregation.

TABLE 12.1—AVAILABILITY AND SEX-DISAGGREGATION SCORES BY DOMAIN, IN NATIONAL AND INTERNATIONAL DATABASES (PERCENTAGE), AND TOTAL FOR 15 SSA COUNTRIES

Domain	Availability at international level (a)	Sex disaggregated at international level (b)	Availability at national level (c)	Sex disaggregated at national level (d)	Total availability score (e)
Assets, income, work: (20 indicators)	0.77	0.33	0.67	0.42	0.55
Assets	0.82	0.15	0.78	0.35	0.53
Income	0.70	0.11	0.40	0.18	0.35
Work	0.79	0.72	0.83	0.75	0.77
Empowerment: (6 indicators)	0.81	0.81	0.74	0.74	0.77
Social	0.61		0.75		0.68
Political	1.00		0.73		0.87
Food security and nutrition: (6 indicators)	0.98	0.77	0.72	0.64	0.78
Total	0.85	0.64	0.71	0.60	0.7

Source: Authors.

Overall, on average, around 70 percent of all indicators have some data available across international and national databases. Assets, income, and work show the lowest total availability across domains for these 15 SSA countries, while availability is higher and almost equal for women's empowerment and food security and nutrition (Table 12.1, column e). The lower scores for assets, income, and work are largely because asset and income indicators are available at international and national levels but are not sex disaggregated (Table 12.1, b and d). Across domains, availability of data (not considering sex disaggregation) is lower at the national level (71 percent) than at the international level (85 percent),[10] thus dragging the average of total availability downward. This suggests that the international level is performing better in terms of producing headline indicators (Table 12.1, a and c).

Interestingly, when considering the availability of sex-disaggregated asset and income indicators, national data sources score somewhat better than international data sources, although sex disaggregation remains a significant challenge. For instance, 15 percent of asset indicators are sex disaggregated in international databases versus 35 percent in national databases. For income these percentages are 11 percent and 18 percent, respectively. Women's empowerment indicators, by definition, provide information on women so they are considered here to be sex disaggregated if produced. In this domain too, average overall availability at the international level is higher than at the national level (81 percent versus 74 percent), but availability for political indicators is higher at the international level (100 percent versus 73 percent) while availability for social indicators is higher at the national level (75 percent versus 61 percent). Food security and nutrition performs best, but there are still significant gaps in terms of availability of sex disaggregation at both levels—of 11 percentage points at the international level and 8 percentage points at the national level.

Availability of the indicators by outcomes varies significantly between countries, and country rankings are different for international versus national databases (Figure 12.2 and Appendix B[11]). Sorted by international availability and sex disaggregation, Tanzania, Uganda, and Ghana are the top performers with Botswana, South Africa, and Lesotho at the bottom, largely driven by the low levels of data on women's empowerment indicators. However, sorted by national availability of sex-disaggregated data, Ethiopia, Ghana, and Malawi perform best with high levels of coverage, particularly for empowerment measures as well as indicators on assets, income, and work. Lesotho, Botswana, and Senegal have the lowest levels of information available at the national level, driven by different components for each country. Lesotho has no nationally available data on food security

10 International databases may be reporting indicators based on modeled estimates. Moreover, data may exist at the national level but be reported in international rather than national databases. Methodologies may also differ between national and international databases.

11 See Chapter 12 Appendix B (https://www.resakss.org/node/6747?region=aw).

FIGURE 12.2—AVAILABILITY SCORES FOR DATA FOR DOMAINS AT THE NATIONAL AND INTERNATIONAL LEVELS

Source: Authors.

and nutrition, while low levels of empowerment data for Botswana and low levels of assets, income, and work data in Senegal contribute to their weaker overall performance.

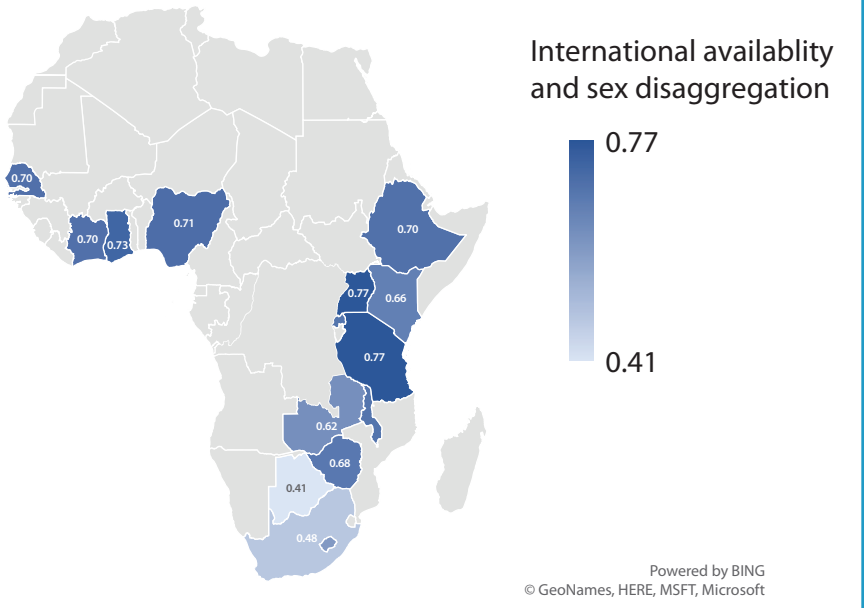
Overall, these findings are promising in that they indicate that, on average, around three-fourths of all indicators have some data available across the 15 countries in SSA. Their availability, however, drops by more than 20 percentage points when considering sex disaggregation at the international level and by 11 percentage points when considering sex disaggregation at the national level, suggesting that investments in sex disaggregation of currently available indicators and stronger feedback loops between international- and national-level data collection and indicator generation could help to improve significantly data availability for decision making regarding rural women and girls (Figures 12.3 and 12.4).

Economic measures of assets, income, and work remain challenging to disaggregate by sex; collaboration between national efforts, which are doing comparatively better, and international data efforts should be encouraged. In addition, there is the need to operationalize new guidelines on data collection on asset ownership and use, and more generally work toward increased individual-level data collection would be beneficial in filling data gaps in this area. While women's social and political empowerment and food security and nutrition performed better, there is still work to be done. We found only one relevant indicator on political empowerment (proportion of women in national parliaments) that was either tier I or tier II in the SDG indicator framework, which is limited as a proxy measure for political empowerment of rural women. Advances on measuring representation at the local level, as well as decision making in areas apart from health, are needed.

Social empowerment indicators, such as making informed decisions over family planning or being the victim of intimate partner violence, performed better at the country level, largely due to the lack of information at the international level about violence from those other than an intimate partner. This is an area where international sources may be able to learn from national methods of data production.

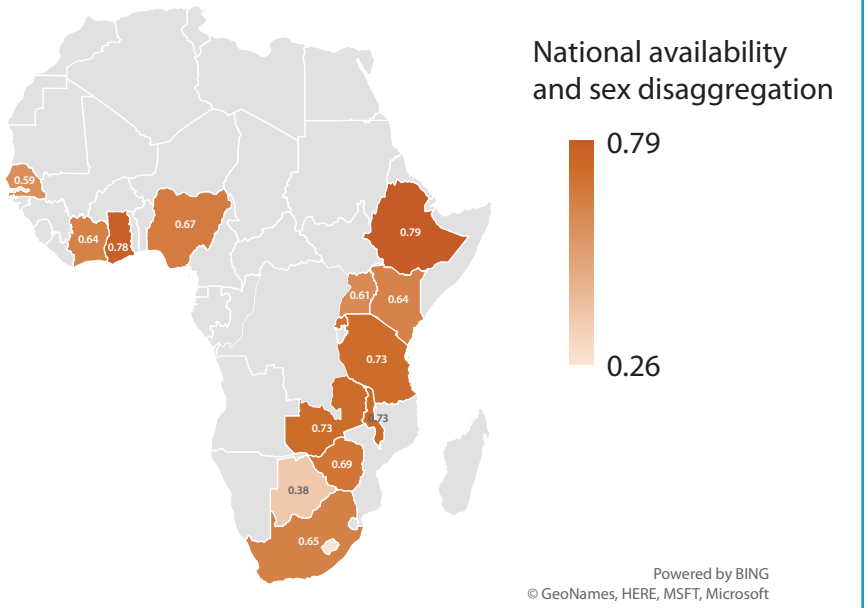
While food security and nutrition indicators overall performed best, their level of sex disaggregation varied significantly between countries—ranging from 17 percent to 83 percent for country availability at the international level and from 26 percent to 79 percent for country availability at the national level. The 15 SSA countries are all at very different levels of sex disaggregation, which indicates that whereas some countries will require little additional effort to bridge the gender data gap, others will require significant effort. While bridging these gender data gaps will necessitate increased and improved data collection, it is also likely that the data that are available are relatively underused and could be further analyzed. The ODW assessment and the country scores presented in this chapter can help channel the right level of assistance and collaboration that is customized to countries' specific data needs.

FIGURE 12.3—AVAILABILITY OF ANY DATA FOR INDICATORS AND SEX DISAGGREGATION AT THE INTERNATIONAL LEVEL



Source: Authors.

FIGURE 12.4—AVAILABILITY OF ANY DATA FOR INDICATORS AND SEX DISAGGREGATION AT THE NATIONAL LEVEL



Source: Authors.

Discussion and Recommendations

Rural women and girls in SSA are a key group to target in the drive to leave no one behind. Generating high-quality data on this group should advance our understanding of both paid and unpaid work, help tackle multidimensional poverty, and boost food security and nutrition. But generating good evidence at the individual and household levels that acknowledges the interdependence between economic and social aspects of rural women's and girls' lives is challenging for both conceptual and practical reasons.

The first section of this chapter covered some of the conceptual and methodological challenges for measuring three main SDG-relevant outcomes for women and girls. The second section took a more practical view—it chose existing (tier I and II) indicators that offer at best a proxy and often an imperfect measure of the outcomes we were interested in measuring, and used an ODW assessment to ask basic questions about their availability. While in an ideal world we would like to have had measures that tracked income and assets at the household and individual levels, captured the different dimensions of objective and subjective empowerment separately, and had food security and nutrition indicators that reflected the gendered intrahousehold dynamics of food-insecure households, in the practical world we can first improve on those indicators we have available. Assessing availability, therefore, is a first basic step.

ODW's assessment yielded promising results for these 15 countries—the most salient being that approximately three-fourths of the indicators have some data available—as well as sobering ones, reminding us that sex disaggregation is a major challenge, especially for economic indicators. It also yielded the somewhat unexpected result that sex disaggregation for indicators on assets, income, and work and social empowerment, while lacking overall, was better at the national than the international level. If one (safely) assumes that nationally generated

indicators are more likely to be demand driven or more likely to be used by policy makers at the country level, the ODW assessment reminds us that sex disaggregating these indicators may be more of a policy priority at the national level, when compared with international priorities. It also sends the strong message that partnerships between international- and national-driven data efforts are needed for both international- and national-generated expertise.

In an effort to improve coverage, comparability, complexity, granularity, and policy relevance, we make the following recommendations:

1. Where possible and appropriate, **collect data at the individual and household level**. In the absence of individual-level data collection, implement data collection and analytical approaches to derive individual-level estimates from household-level surveys.
2. Invest in efforts to better **combine and harmonize data sources** to achieve the disaggregations required to generate insights on rural women and girls. This also implies strengthening data sources such as administrative data and improving the frequency and timeliness of data.
3. Support the widespread **implementation of new guidelines and technical assistance** to countries in areas that will improve measurement on rural women and girls, in particular the 19th ICLS resolution on work, the UNSD 2019 guidelines on asset measurement, and the FAO's guidelines on sex-disaggregated data and indicators in agriculture.
4. Undertake work to **agree on methodology for tier III indicators** and devise indicators that are better at capturing objective and subjective measures of empowerment. There are opportunities for national- and international-level data collection exercises to learn from and reinforce each other.
5. **Prioritize disaggregating data by sex** for indicators on income and assets—such data are particularly low in the 15 countries, especially from international databases.
6. ***Emphasize secondary analysis*** of data in addition to improving primary data collection, especially because of the availability of data in particular domains.
7. In addition, data producers require support to **build connections to decision makers** to improve the potential for data uptake and impact.

This last point is, perhaps, the most crucial. During background interviews with data experts at the national level, it was clear that for most national statistical offices their measure of success ends at data release. Whether the data are used to change outcomes, is, understandably, seen as out of their control. However, the complexities of designing policies to meet the needs of rural women and girls require equally sophisticated data production and analyses. Understanding the relevant policy questions will be crucial to guide data producers in where to focus their efforts, while a reciprocal understanding on the part of decision makers of the possibilities and limits of data on this group will help to bring the realities of rural women and girls into sharper focus and, hopefully, lead to real change.