

Gender Data: Sources, gaps, and measurement opportunities

Data2X
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Executive Summary

This module for the Data4SDGs provides guidance to countries on gender data collection for national data action plans. Consistent, internationally comparable statistics on women's and girls' outcomes remain scarce in key areas, hampering policies to narrow gender inequalities as well as monitor several gender-related targets under the SDGs. This module discusses the importance of individual, sex-disaggregated data for policy design and monitoring different SDG indicators related to gender, and how surveys can be augmented to address many important gender data gaps in the near term. New approaches to survey data collection and analysis are also discussed, along with increased availability of complementary data sources from mobile phone and global positioning system (GPS) data, which can help in identifying more vulnerable groups and communities. Existing household survey data — as well as community and country administrative data — should also be analyzed in greater detail (and, where feasible, analyzed together) to understand different socioeconomic and institutional factors affecting outcomes for men and women. This module also provides links to important resources by different agencies on collecting and analyzing sex-disaggregated data.

The following topics are covered in the module:

- 1. Introduction:** Underscores the policy consequences of missing or incomplete data on women's and girls' outcomes and discusses efforts among international agencies and countries to help improve the collection and quality of gender statistics.
- 2. Gender data that informs policy:** Highlights the need for representative data collected at the individual level to effectively guide gender-relevant policies targeted towards women and girls, as well as the role of institutional and big data sources in complementing traditional surveys.
- 3. Priority gender data gaps:** Based on a Data2X mapping report of gender data gaps, discusses important policy-relevant gaps in gender data, along with the SDG targets that can be addressed in the nearer term — across health, education, economic opportunities, political participation, and human security.
- 4. Near-term indicators for monitoring gender targets in the SDGs:** A recent report by Open Data Watch and Data2X identified a set of 20 "Ready to Measure" (R2M) indicators across eight SDG targets that can be measured from individual survey data and collected across countries now. In the Annex, we include additional examples of gender-sensitive indicators that can be measured in the near term through nationally representative surveys — which along with the R2M indicators span 14 out of the 17 SDGs.
- 5. Conclusions:** Discusses the need for sharing methods and data. Ongoing communication and collaboration is needed between member states, National Statistical Offices (NSOs), and other stakeholders on producing sex-disaggregated statistics and using them to inform policy.

1. Introduction: The need for improved gender statistics, and gender mainstreaming

“Gender data” (or gender statistics) is data disaggregated by sex as well as data that affects women and girls exclusively or primarily. Gender data provides meaningful insight into differences in wellbeing across women and men, and girls and boys, as well as actionable information for policy to address disparities. Gender statistics cut across economic, health, political, and social dimensions, and statistics in one area can inform other areas as well. Gender statistics elicit not only outcomes, but also the needs and capabilities of women across important policy areas (for example, access to output and labor markets, education, and facilities). There has been heightened emphasis on framing survey questions appropriately as policymakers work towards narrowing gender gaps in areas such as education, work, and health. There is also increased understanding of how these outcomes are interrelated.

The Sustainable Development Goals, adopted in September 2015 and slated to be in place through 2030, include a broad set of gender-related targets — including valuing unpaid work, eliminating child/forced marriage and violence against girls and women, greater participation by women in public life and institutions, equal rights to economic resources and assets, and using information and communications technology to help empower women.¹ For each of the SDG targets, the UN Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) proposed indicators that were approved by the UN Statistical Commission at its forty-seventh session in March 2016; monitoring efforts have since ensued.²

However, many outcomes underlying these targets are still not regularly measured by countries. According to a global survey of 126 countries conducted by the UN Statistics Division (UNSD) in 2011, only 30-40 percent regularly produce sex-disaggregated statistics on topics such as informal employment, unpaid work, entrepreneurship, agriculture, child marriage, violence against women, and access to clean water and/or sanitation, as well as technology. Further, among this group of less-covered topics, most of the remaining 60-70 percent of countries tend not to collect data at all or only infrequently.

Box 1. Objectives in gender data collection across domains

Key objectives when designing gender-targeted survey questions, and collecting gender data, should include:

1. Quantifying and explaining women’s and girls’ participation in society and their contributions to development.
2. Quantifying and measuring changes in women’s and girls’ outcomes in absolute terms (changes in levels) and in comparison, with men and boys, by tracking trends over time.
3. Documenting how women’s and girls’ outcomes vary across the distribution of other variables (some examples include age, years of schooling, ethnicity, income, as well as the ownership/control of property).
4. Collecting individual-level data within the household to understand how intra-household dynamics affect women’s and girls’ outcomes.

¹ The Open Working Group’s proposal is available at <http://sustainabledevelopment.un.org/content/documents/1579SDGs%20Proposal.pdf>

² See <http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>

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| 5. Producing data that assesses development interventions' impact on women's and girls' outcomes (wellbeing and participation in society). |
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The policy implications of poor quality or incomplete data on women's outcomes are significant. Women, for example, are heavily involved in subsistence and casual occupations in developing-country contexts. Data on these forms of work are not well covered by surveys, and consistent guidelines on sex-disaggregated data collection for these topics are also not available. Women's productive work and employment³ are therefore often underreported by official statistics across countries. Another example comes from data on access to resources and technology, including credit, extension services, ICTs, and mobile phones, which surveys typically ask only at the household level — clouding researchers' and policymakers' understanding of gender differences in access, and women's relative economic and social status and mobility.

Finally, even when data are collected, quality issues arise in the absence of consistent standards for data collection. Quality is also a concern for commonly used survey methods using proxy respondents to report on other household members' outcomes. Data on time use and earnings within households are often fraught with measurement error, for example, particularly for women since their work is often seasonal, combined with other unpaid tasks, or simply unreported by the proxy respondent. The way surveys are administered, including how questions are worded/framed, who else is present, and the choice of interviewer, also need to be considered carefully for more sensitive questions to ensure accurate responses — including data on women's aspirations and agency, as well as violence against women.

International momentum to highlight and address gender data gaps

To improve an understanding of gender inequalities and develop policies for women, several institutions have recently launched large-scale, cross-country initiatives geared at better gender data collection and analysis across domains. These include highlighting areas where gender data is scarce (with an emphasis on nationally representative surveys), developing measures to close these gaps, and identifying core gender indicators that national statistical agencies should focus on. Examples of recent initiatives, along with resources that catalog and analyze gender statistics across official and other household surveys worldwide, are highlighted in Table A1 in the Annex.

Country NSOs and international agencies are increasingly focused on measuring women's productive work across paid and unpaid activities. In 2013, the 19th International Conference of Labor Statisticians (ICLS)⁴, for the first time, recognized all productive activities, paid and unpaid, as work, but the definition of employment narrowed to work performed for pay or profit. A key consequence is that unpaid activities are no longer considered employment, and are instead to be surveyed in a separate module which countries have the option, but are not required, to implement.⁵ The new ICLS standards therefore have significant bearing on women in low-income contexts, who are heavily involved in unpaid but economically productive activities such as subsistence agriculture and contributing family work. **Understanding women's experience**

³ According to the 19th International Conference of Labour Statisticians definition, 'employment' is any activity performed for pay or for profit, while work covers unpaid and volunteer activities.

⁴ The ICLS governs the Labour Force Surveys conducted by the International Labour Organization (ILO), and also inform other cross-country surveys with detailed modules on employment.

⁵ See <http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/19/lang--en/index.htm>

in these areas requires that detailed data are available on their unpaid work, by type and extent of informal employment, including entrepreneurial activities.⁶

Integrating gender statistics into national statistics systems

National Statistics Offices (NSOs) play a crucial role in the collection, production, and dissemination of gender statistics within a country. To ensure that they are frequently and consistently produced and monitored, gender statistics should be integrated within national statistical systems (NSS), taking on a policy-oriented approach which goes beyond only providing sex-disaggregated data. Because the production of official gender statistics does not exist in isolation, it should be continuously integrated into the official statistical system, producing gender statistics based on problems and themes identified in national development policies and plans. This process of integrating a gender perspective into the overall system is referred to as *mainstreaming*.

As the gatekeepers of official statistics, the NSO within the NSS is strategically positioned to mainstream a gender perspective to ensure the production of unbiased data to inform decision-making, policy formulation, and monitoring. Ideally, a country will establish gender statistics as a priority under the responsibilities of the NSO. While no country system is the same and the mainstreaming will differ depending on the degree of centrality among the statistical system, there are a few components critical to the success of mainstreaming a gender perspective in national statistics. As described in *Developing Gender Statistics: A Practical Tool*,⁷ a collaboration between the UN and the World Bank Institute, these include partnerships and alliances inside and outside of the NSS; commitment and support from top-level management; sustainable funding streams; an incorporation into legal frameworks or legislation; and a definition and organization of a gender statistics program.

While gender statistics should be a priority within countries, national, regional and international statistical systems should not be overlooked. Cooperation among all these levels should be encouraged to promote compatible definitions, measurements, and methods of collection.

2. Gender data that informs policy: The importance of collecting individual-level data

Often, due to resource and time constraints, statistics on men and women are collected only at aggregate levels (e.g., average wage rates for men and women in the community). However, these aggregated statistics often provide a biased view of individuals' behavior. For example, in rural communities, enumerators typically ask a leader or a group of prominent members of the community about the outcomes of men and women who live there. This is an acceptable practice if community data is used to complement individual data, but if not, it provides biased information on individuals' outcomes. Similarly, asking one household member about outcomes for other household members, particularly on sensitive issues related to health, financial decision-making, and exposure to risk or violence, will not accurately capture constraints and opportunities within the household. Doing so will result in proxy respondent bias which has significant implications for women whose contributions are more likely to be underreported.

⁶ An additional difficulty with this topic is cross-country comparability. An internationally agreed definition of informal employment and employment in informal enterprises has been adopted by the ILO, but measures of informal employment across countries are still difficult to compare in practice.

⁷ Available at http://www.unece.org/fileadmin/DAM/stats/publications/Developing_Gender_Statistics.pdf

Individual-level data can also be summarized at the community or regional level to provide more precise estimates of education, employment, health and other outcomes by important characteristics, such as income, age, and marital status.

As a result, data that is disaggregated not only by sex, but by age, income, education, residence, and other socioeconomic and demographic characteristics is extremely important for well-targeted policy design. Data that is representative of the population is also important, particularly to understand outcomes of often-marginalized (and thus under-surveyed) groups such as women. Individual-level data also allows for better comparability of statistics across different types of surveys that are conducted across countries. Additional resources on the collection and use of sex-disaggregated data are available in Table A2 of the Annex. As discussed in the Introduction, relevant topics and guidelines can vary substantially by country, and the extent to which gender statistics across domains (employment, education, health and so on) are produced regularly. In addition to the SDG indicators on gender, we discuss priority data gaps in the following discussion that can help guide countries on areas of focus in the near term.

Broadly, national sources of gender data fall into three main categories, which we discuss in more detail below:

1. Nationally representative censuses and household/microeconomic surveys that provide information on individuals, households and enterprises, much of which is made publicly available (Box 2 provides a list of representative surveys conducted regularly across countries);
2. Country institutional data, including facility-generated service and administrative records (through hospitals, schools, civil registries, tax authorities etc.) as well as policies, laws, and regulations that are developed through the political process (often not publicly available);
3. “Big data,” or digital data, which can cover a wide range of sources including transactional and crowdsourced data from mobile phones and the internet, online search and social network feeds, as well as global remote sensing data from satellites.



1. Nationally-representative censuses and micro-level surveys

Existing international databases often have data that could be disaggregated by sex and analyzed to address gender data gaps. These data sources should be mined before initiating new data collection efforts. Many of these surveys also have panel data across countries, which can allow a closer examination of changes over time.

Box 2. Some examples of representative, individual-level surveys across countries

Economic opportunities and time use:

- [World Bank Living Standards and Measurement Study \(LSMS\)](#), and the newer [LSMS-Integrated Surveys on Agriculture \(LSMS-ISA\)](#): LSMS covers 41 countries, and the LSMS-ISA covers eight countries in Sub-Saharan Africa. These nationally-representative surveys cover demographics and economic participation of individual household members, as well as other modules on consumption, vulnerability to shocks and access to credit. The LSMS-ISA also has detailed

agricultural modules on men's and women's plot ownership, management, input use, production, and other farm-related activities. Both surveys also have separate household and community questionnaires, and recent LSMS surveys have also been including community-level GPS data (and, in the case of LSMS-ISA surveys, plot-level GPS data). Many LSMS and LSMS-ISA surveys are panel surveys.

- **ILO's Labour Force Surveys (LFS):** The LFS are nationally representative surveys covering individual men and women's paid and unpaid work, in addition to demographic characteristics. Topics on employment include: individual occupation, hours of work, industry, absence from work, unemployment and underemployment, job permanency, full time/part time status, characteristics of the last job, search for another job, reasons and methods for seeking another job, and unemployment benefits. Newer country LFS surveys will also be following the revised definitions of work and employment put forth by the 19th International Conference of Labour Statisticians. Between 2000-2010, 160 countries conducted at least one LFS or household survey to produce official labor force statistics. While links to individual country LFS are not available, country-level summary statistics from the LFS are available through the [Key Indicators of the Labour Market \(KILM\) database](#).
- **World Bank Enterprise Surveys:** The Enterprise Surveys survey 125,000 male and female-owned firms across 139 countries, and each survey provides a representative sample of an economy's private sector. On gender, the surveys aim to provide detailed statistics on women's entrepreneurship (including ownership and management roles) as well as employment.
- **Global Financial Inclusion Surveys (Findex):** The Findex, which has been conducted in 2011 and 2014 and is a joint initiative by the World Bank and Gallup, is a nationally representative survey covering men and women's financial access and decisions across 148 countries. In addition to questions on accounts with financial institutions (including commercial banks, microfinance, and post office accounts), the survey asks about sources and purpose of borrowing, reasons for not having an account, and mobile banking activity.
- **Country household welfare surveys:** Countries also conduct their own household surveys, sometimes in partnership with agencies like the World Bank (for instance, the [Core Welfare Indicators Questionnaire \(CWIQ\)](#) and Welfare Monitoring Survey), and IFPRI ([Women's Empowerment in Agriculture Index](#)). These country-specific surveys follow a similar structure to the LSMS, spanning multiple modules across household members' demographics, employment, education, and consumption.
- **Country censuses:** Typically conducted every 5-10 years, censuses broadly fall into population and agricultural censuses. Population censuses conducted by NSOs are another source of nationally-representative information for basic household indicators on demographics, education, employment, and consumption. Agricultural censuses are focused on structural characteristics of household agricultural operations. Censuses, however, are typically limited in more specialized questions on the topics above, as well as other gender-sensitive topics like individual asset/property ownership, and other characteristics of intra-household allocation.
- **Country-specific time use surveys:** Many country time use surveys are managed by the United Nations Statistics Division, and are typically set up as a time diary of paid and unpaid activities that individuals in the household spend their time on during a specific period – for example, over 24 hours of the day or 7 days of a week. These surveys are typically conducted independently of one another so there is no standardized questionnaire, although the UN's International Classification of Activities for Time-Use Statistics (ICATUS) helps harmonize definitions across countries. A common problem with time use surveys is that they are very resource-intensive, and a single snapshot may not provide an accurate picture of time use throughout the year. The recent ICLS changes to the definition of employment are also generating greater interest among countries and international agencies, including the ILO, on how questions on time use can be adapted for eliciting productive, but unpaid work.

Health and other aspects of women and children's welfare (marriage, violence, birth registration):

- **Demographic and Health Surveys (DHS):** The DHS are nationally representative, currently covering 92 countries. The surveys cover a wide range of health outcomes for women aged 15-49. For example, their birth histories, as well as birth registration and health outcomes of their children. Surveys also ask women and their spouses about outcomes related to marriage, education, employment, decision-making, and domestic violence. Data on household access to water and sources of energy, as well as who is responsible for water collection, are also included. Recent waves of the DHS also have GPS data for sampled reporting areas.
- **Multiple Indicator Cluster Surveys (MICS):** The MICS are nationally representative surveys conducted by UNICEF and are intended to address some gaps in data on women and children on areas of health, education, child protection and HIV/AIDS. MICS also covers information on children's birth registration. The MICS have been conducted in 149 countries so far, and closely follow the DHS format; in recent rounds for some countries, households can also be linked across the MICS and DHS so that a wider range of indicators are available.

Even within nationally representative, individual-level surveys, however, questions specifically regarding household decision-making, use of technology and financial services, asset ownership, and coping strategies for community and household shocks are often asked only of one household member (often the household head). As a result, analyses of gender differences for these outcomes are typically made across male and female heads of household instead of at the individual level, masking within-household gender inequalities. Box 3 below presents an example from Nepal on how land rights policy can be shaped using sex-disaggregated data on landownership. Comparisons by sex of the household head also tend to be biased, since the definition of headship can be interpreted very differently across contexts — particularly where joint family systems are common — making cross-country comparisons difficult. Furthermore, even within a certain context the concept of headship may not be constant (for example when spouses migrate for work).⁸ Surveys often also leave the designation of “household head” to members of the household who may use different criteria to make this assignment, making comparisons within countries difficult as well.

Further work is needed even within individual-level surveys to disaggregate questions by sex. Decision-making over economic, education, health, and other outcomes is often a complex process across different household members, so when questions are asked only at the household level they will likely mask outcomes for all men and women of interest in the sample.

Box 3. Country case study: expanding women's land ownership in Nepal

Individual-level data on landownership can motivate reforms and help track policy impact. In the case of Nepal, addressing gaps in asset ownership gender data helped improved policy, and as a result, women's access to land. In 2001, Nepal added questions on property, land and livestock under female ownership to the census.⁽²⁾ And in 2002 and 2007 two constitutional amendments were passed that significantly improved land ownership rights of Nepali women, stating that sons and daughters had equal rights to inheritance regardless of their age and marital status; prior to this, inheritance was largely patrilineal and women gained access to land or property through kinship or marriage.⁽³⁾ Furthermore, in 2008, Nepal introduced a 10 percent tax exemption for land registered in a woman's name to drive implementation of laws on property and inheritance. The exemption, aimed at incentivizing families to share their property with their daughters, sisters and wives was subsequently increased to 25 percent in cities and 30 percent in rural areas. As a result, between 2001 and 2009, women's land ownership increased threefold.

⁸ See, for example, Buvinic, M., & Gupta, G. R. 1997. “Female-headed households and female-maintained families: are they worth targeting to reduce poverty in developing countries?” *Economic Development and Cultural Change* 45(2): 259-280.

Source:

(1) <http://asiapacific.unwomen.org/en/countries/india/data-on-women>

(2) "Population results in Gender Perspective." Central Bureau of Statistics, Nepal, 2002; "Assessing Female Ownership of Fixed Assets in Nepal: A New Feature of the Population Census 2001.". Central Bureau of Statistics, Nepal, presented at the Global Forum on Gender Statistics, 26-28 January 2009.

(3) Mishra, Khushbu, and Abdoul G. Sam. 2016. "Does Women's Land Ownership Promote Their Empowerment? Empirical Evidence from Nepal." *World Development* 78: 360–371.

2. Institutional data

Institutional or administrative data is typically topic specific (relating to employment, education, or health, for example) and spans sources generated by different agencies or institutions within a country. These include facility-generated service and administrative records (through hospitals, schools, civil registries, tax authorities etc.) as well as policies, laws, and regulations that are developed through the political process.

Administrative data can be matched or triangulated with survey data when they cover the same geographic context and time period, although this depends on the quality and disaggregation of the administrative data. Similar to survey data, administrative data is most useful (and more easily linked with other data sources) when it represents individual-level outcomes. Since the quality and detail of administrative data also depends on institutional development, administrative data has thus far tended to be used much more frequently in high-income countries. There are recent exceptions in lower-income contexts, however, particularly using program-level data. Some examples of administrative data that can be used for better understanding gender inequalities in developing countries are discussed in Box 4 below.

Box 4. How institutional data can be used to understand outcomes for women and girls

- **Women's political participation:** To measure women's participation in national decision-making, the global [Inter-Parliamentary Union Women in National Parliaments database](#) draws on individual country records to present the number and percentage of women in lower or single houses of parliament. Where applicable, data on upper house or Senate seats are also available. Parliamentary data, provided by national parliaments, is available for 190 countries.
- **Land registration:** Public registries that provide transparent, comprehensive records of property ownership help support property rights for individuals, including women who are often in a more vulnerable position within traditional land tenure systems. In 2012-13, a national land tenure regularization program was implemented in Rwanda, the first of its kind in Africa, which allows the use of administrative data to be combined with data on household surveys to quantify the extent of informal land transfers. The administrative data, which includes gender of the landowner, and can be linked with survey data, can be used to help understand socioeconomic determinants of land transfers and acquisitions, and how this varies across men and women (Ali et al, 2016).⁹
- **Education and school achievement:** Administrative records on girls' and boys' test scores can shed light on measures of school achievement. Angrist, Bettinger and Kremer (2006)¹⁰, for example, linked administrative records from Colombia's PACES program, which provided over 125,000 poor children with vouchers that subsidized half the cost of private secondary school, with

⁹ Ali, Daniel Ayalew, Klaus Deininger, and Marguerite Duponchel. 2016. "Using Administrative Data to Assess the Impact and Sustainability of Rwanda's Land Tenure Regularization." World Bank Policy Research Working Paper 7705.

¹⁰ Angrist, J., Bettinger, E., and M. Kremer. 2006. "Long-term Educational Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia," *American Economic Review*, 96(3): 847-62.

administrative records on college entrance exams to understand the effect of the program on girls' and boys' graduation rates and achievement. And in a study from Mexico, Avitabile and de Hoyos Navarro (2015)¹¹ use administrative data on students' 9th grade standardized test scores to measure their ability before entering high school. As part of this study they tested whether providing 10th grade students with information about the returns to upper secondary and tertiary education and a source of financial aid for tertiary education can contribute to improve student performance. Their study finds a positive effect on students' learning outcomes, with larger effects for girls.

- **Adult identity documentation:** In most low-income countries, complete Civil Registration and Vital Statistics (CRVS) systems are lacking and adults cannot obtain identity documentation (ID). This lack of access has significant gender implications — not only because of the demographic data CRVS systems provide, but also because these systems serve as the gateway for exercising individual rights and protections. Institutional data on registration and constraints to registration can shed light on areas and groups that need better access. This information can also be helpful in establishing causal linkages between registration and longer-term outcomes (e.g., health, education, marriage, and employment). For example, a study from Pakistan found that 73 percent of women were accompanied when traveling to obtain an ID card compared to 31 percent of men. This showed that women's limited mobility led to their under-registration for ID cards. Special measures were adopted to make registration more accessible for women in the region, including mobile registration services staffed exclusively by women.¹²

3. Big data sources

In recent years, international organizations and countries (national statistical offices, line ministries, and civil society organizations) have begun exploring the use of “big data,” or digital data, for policymaking. Although not having a clearly agreed-upon definition, “big data” includes internet traffic, data from online social networking websites, remote sensing data, and data from mobile phone operators – all of which can provide real-time and abundant information on individuals' perceptions, behavior, and constraints, and be used to inform public policy.

Big datasets can help provide insight on mechanisms underlying policy trends – subjective issues that official data often does not include – like traditional qualitative data, but in real time. Big data can also contribute to development by providing interim evidence on different indicators between rounds of other official surveys. For example, data from social media can complement more standard program evaluation data by highlighting the perceptions and opinions of women clients and beneficiaries. Remote sensing data and mobile phone-based reporting can also help capture information that is difficult to elicit through regular surveys due to respondent error, proxy respondent bias, or difficulties in meeting respondents.

There are three major categories of big data in the developing world: transactional, crowdsourcing, and remote sensing. The key difference between these sources has to do with whether fine-grained information or big-picture patterns are desired. This data can provide interim evidence on different indicators between rounds of official surveys like census data. Further, digital data sources require ‘ground truthing’ through surveys or other data sources, and therefore should be considered as a complement to, rather than a replacement for, official statistics.

¹¹ Avitabile, Ciro, and Rafael E. De Hoyos Navarro. 2015. “The Heterogeneous effect of information on student performance: evidence from a randomized control trial in Mexico.” World Bank Policy Research Working Paper 7422.

¹² International Foundation for Electoral Systems (IFES). 2013. “Survey Assessing Barriers to Women Obtaining Computerized National Identity Cards (CNICs).” Washington, DC (February). Also see Knowles, James, and Gayatri Koolwal. 2016. “Gender Issues in CRVS and Access to Adult Identity Documentation.” Data2X.

The primary sources of transactional data are mobile phones and internet activity, which can provide information on both individual and group behavior. Data can be captured directly from the user through search engines, usage patterns, and social media, or through automated means, such as records of financial flows or consumer purchases. Transactional data yields disaggregated information on individual and group behaviors and can be useful in understanding disparities in access to services by key demographics.¹³ Box 5 below, for example, discusses how mobile phone data is being used to inform health outcomes in Ghana. Transactional data can shed light on individuals' perceptions, as well as narratives underlying health, political, and economic trends; these are subjective issues that official surveys typically collect through qualitative or expectations data, but which big data can provide in real time.

Remote sensing data is generally captured by automated devices such as satellites, temperature and rainfall gauges, and cameras, and provides information on population- and ecosystem-level patterns. This data can be used to identify spatial and temporal barriers to health clinics, schools, and markets, and is already being used extensively in research. The Data2X research agenda with academic partners sheds light on what big data sources can tell us about the lives of women and girls, through a report released in March 2017, [Big Data and the Well-Being of Women and Girls](#).

Box 5. Country case study: Mobile health services in Ghana

Mobile phones are currently used for a wide range of public health services across Africa; mobile health service programs have the capacity to service vulnerable and harder-to-reach communities and collect information on their health-seeking behavior. In Ghana, for example, mobile phone technology is available even in remote communities, and has proven to be a valuable tool to help bridge the gap between access to health information and service provision. The Mobile Technology for Community Health ([MOTECH](#)) initiative focused on improving maternal and child health by facilitating communication between health providers and patients outside of traditional doctor offices as well as improving data collection, compilation, and analysis.

The initiative uses mobile phones to increase access to and demand for health information and services among rural women. Services include mobile alerts and antenatal care reminders. Nurses working in rural health facilities are also able to record and track the care provided to women and newborns in their area. Rural health facilities are equipped with low-end mobile phones running the MOTECH software and data on health service delivery and outcomes are submitted to the Ghana Health Service, an autonomous public service agency under the control of the Ministry of Health. As of March 2013, 11,843 clients were served and 34 rural health care facilities were active.

3. Addressing global gender data gaps in the near term: Sources of data and priority areas

As discussed above, despite the importance of gender statistics, data on girls and women's is still lacking across domains and countries. Based on need (severity and disparities in outcomes affecting women), country coverage, and policy relevance, studies by Data2X¹⁴ and the World Bank/International Household

¹³ Note here that "transactional activity" refers not only to consumer behavior, but also to unpaid goods- and services-related interactions, for example community health worker activity.

¹⁴ Data2X: Mayra Buvinic, Rebecca Furst-Nichols and Gayatri Koolwal. 2014. *Mapping Gender Data Gaps*. Available at http://www.data2x.org/wp-content/uploads/2014/11/Data2X_MappingGenderDataGaps_FullReport.pdf.

Survey Network (IHSN)¹⁵ have highlighted a number of priority areas that countries could address in the nearer term. In particular, Box 6 lists 28 gender data gaps mapped in Data2X's [Mapping Gender Data Gaps](#) report across five domains of women's empowerment: (1) health, (2) education, (3) economic opportunities, (4) political participation, and (5) human security. For more information please refer to the full report which provides more detail on the gender data gaps and sources of data.

Box 6. Priority gender data gaps: Data2X Mapping Gender Data Gaps Report

	Type of gap (for developing countries)			
	Lacking coverage across countries and/or regular country production	Lacking international standards to allow for comparability	Lacking complexity (information across domains)	Lacking granularity (sizeable and detailed datasets allowing for disaggregation by demographic and other characteristics)
Health				
<ul style="list-style-type: none"> • Better vital registration data is needed on maternal deaths, including causes of death by age, in high mortality low-income countries, but very large samples are needed to collect valid data on maternal mortality. • Although the DHS surveys are increasingly collecting this information, only a small fraction of health surveys have modules to address indicators on physical or sexual violence due to the sensitivity and complexity of administering such questions. The UN recently published guidelines for collecting data on violence against women that emphasizes the need for specialized surveys in this area.¹⁶ • Data on children/adolescents aged 10-14 years are scarce because this age falls outside the reference group of standard modules and surveys on health seeking behaviors, including the Demographic and Health Surveys.¹⁷ • The determinants of healthy adolescent behaviors are particularly important since actions at this age chart the path for the rest of women's lives. • Few surveys examine reasons for not seeking health care, which is important for policymakers given the extent of women's and girls' underutilization of health services in developing countries. 				
	Lacking coverage	Lacking international standards	Lacking complexity	Lacking granularity
Maternal morbidity/mortality	X			X
Women's excess disease burdens	X			
Violence against women	X		X	
Mental health	X		X	X
Adolescent health	X		X	X
Utilization of health services by women	X			X

¹⁵ World Bank/IHSN: Masako Hiraga, Gayatri Koolwal, and Akiko Sagesaka. 2015. "How well are gender issues covered in household surveys and censuses? An analysis using the IHSN-World Bank Gender Data Navigator." Available at http://www.ihsn.org/sites/default/files/resources/Gender_Issues_July-2015.pdf

¹⁶ UN Department of Economic & Social Affairs (2014). "Guidelines for Producing Statistics on Violence Against Women." Available at http://unstats.un.org/unsd/gender/docs/Guidelines_Statistics_VAW.pdf

¹⁷ UNICEF defines adolescents as aged 10-19; this group is often broken up into early (10–13 years), middle (14–16 years) and late (17–19 years) adolescents.

Education

- Internationally comparable measures on learning outcomes disaggregated by sex are needed.
- Education quality measures across countries are largely based on inputs or use different exams to assess learning and are not sufficient to assess outcomes in a standardized way.
- Including reasons for not attending school in surveys would help in understanding reasons for exclusion in the near term.
- Household survey questions could be added to understand what factors constrain girls and boys from attending school: transportation or access issues, financial constraints including whether the child is engaged in work, lack of toilets and other sanitation facilities at school, and culture or beliefs.

	Lacking coverage	Lacking international standards	Lacking complexity	Lacking granularity
Learning outcomes	X	X		
Excluded girls	X	X		
Transition rates	X			

Economic Opportunities

- Quality sex-disaggregated data on all forms of employment (including informal and/or self-employed employment) is needed.
- Women across developing countries are overrepresented in unpaid but productive activities that are not accurately or officially counted (i.e. subsistence agriculture, informal sector work, and enterprises).
- Measuring women’s agricultural productivity and the factors determining this productivity is essential for the design of gender-sensitive agricultural policies.
- Better measurement of women’s assets and financial constraints, as well as access and use of technology, is needed to understand their economic empowerment — but most national surveys currently record this information at the household as opposed to individual level.
- Asset ownership, including landownings, is more complicated to address at the individual level owing to different joint ownership and management arrangements across countries.

	Lacking coverage	Lacking international standards	Lacking complexity	Lacking granularity
Unpaid work	X			
Informal employment	X			
Earnings and opportunity cost of paid work	X	X		
Conditions of migrant workers	X	X		
Employment mobility	X	X	X	X
Entrepreneurship	X		X	X
Asset ownership	X		X	X
Productivity in agriculture	X	X	X	X
Access to financial services	X			
Access to child care	X	X	X	X
Access to ICT (mobile phones & internet)	X	X	X	X

Political Participation

- Sex-disaggregated birth registration data at the national level and, concomitantly, providing national identity documentation could be used to track voter registration (and turnout) data disaggregated by sex.
- Closing these gaps would affect socially excluded groups in particular, who are often not counted and therefore unable to claim rights.
- Tracking women’s political representation at sub-national levels and their leadership roles in grassroots organizations/key professions can be paired with other data to study the dynamics and outcomes of women’s leadership.

	Lacking coverage	Lacking international standards	Lacking complexity	Lacking granularity
Representation in local governance, political organizations & the professions	X	X		
National identity documentation	X			X

Voter registration and turnout	X	X		
Human Security				
<ul style="list-style-type: none"> The collection of individual-level data in this domain is extremely challenging, and the use of technology such as GPS tracking can help in complementing traditional surveys. The UNHCR database¹⁸ intends to provide age and sex breakdowns of “persons of concern” (including refugees, asylum seekers, internally displaced, and stateless persons), but many of the demographic variables are missing. 				
	Lacking coverage	Lacking international standards	Lacking complexity	Lacking granularity
Conflict-related mortality and morbidity	X			X
Forcibly displaced and migrant profiles	X			X
Impact of conflict on gender variables; women’s adaptive responses to conflict	X		X	X
Conflict-related sexual and gender-based violence	X		X	X
Women’s participation in peace and security processes	X	X	X	X
Source: Mayra Buvinic, Rebecca Furst-Nichols and Gayatri Koolwal. 2014. Mapping Gender Data Gaps. Available at http://www.data2x.org/wp-content/uploads/2014/11/Data2X_MappingGenderDataGaps_FullReport.pdf				

4. Constructing near-term indicators for monitoring gender targets in the SDGs

Gender inequalities are a central theme in many of the SDG targets. Indicators serve as an important diagnostic tool for policy and program design, and are useful for holding institutions accountable for achieving gender-related targets. As discussed above, however, a lack of complete data hampers efforts to reach policy targets that reduce gender inequalities and to measure related outcomes.

Given the ambitious scope of the SDG targets, it is important in the near term to focus on indicators that can, for the most part, be measured from individual survey data, are currently available, and collected across countries. Understanding available trends in certain domains can also in turn inform data collection for areas where persistent gaps exist. For example, available data to construct indicators on the share of men and women who are own-account workers, by income quintile and sector of work, can shed light on which socioeconomic groups and sectors may be more relevant (and hence how survey questions should be designed) for constructing indicators on informal employment across men and women. In July 2016, the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) proposed a Global Indicator Framework spanning over 200 indicators across 169 targets covering the 17 SDGs.¹⁹ However, most of the IAEG-SDG indicators also require collection of new survey data that is comparable across countries, which could likely take years — moving well beyond the expected time for monitoring targets.

On the other hand, several of the gender-related SDG indicators can be measured in the near term through existing cross-country datasets, as discussed above. A joint paper by Open Data Watch and

¹⁸ Available at <http://popstats.unhcr.org/en/demographics>.

¹⁹ Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, July 2016. Available at <http://unstats.un.org/sdgs/indicators/Official%20List%20of%20Proposed%20SDG%20Indicators.pdf>

Data2X identified 20 “Ready to Measure” (R2M) indicators.²⁰ The indicators were selected using a list from UN Women, developed in support of the SDG agenda, of 47 indicators to monitor gender equality and women’s empowerment in the SDG framework, and a master list of 52 indicators identified by the IAEG-GS as being critical for monitoring progress on gender equality. Many of these indicators also appear on the list compiled by the Bureau of the UN Statistical Commission (UNSC). The R2M indicators track progress towards eight SDGs, including the one specifically on gender equality and women and girls, underscoring the cross-cutting nature of the gender equality and women’s empowerment objective. The remaining seven are, in brief: end poverty, end hunger, ensure health, ensure education, promote economic growth, reduce inequality, and promote peace and inclusion.

This R2M indicator list was purposely narrowed to a manageable number of universally applicable indicators following the criteria discussed in Box 7 below. In the development of gender-sensitive indicators, concepts and definitions should be adapted to different country/local contexts, and indicators should be disaggregated by sex, age, and, where possible, education level, wealth quintile, ethnicity, and geographic location (urban/rural).

Box 7. Ready to Measure (R2M) framework for selecting gender indicators

Key objectives in gender data collection should include:

1. Indicators focus on women and girls, measuring progress in their situation over time or in comparison with the situation of men and boys. Indicators that track changes in populations or children as a group, without disaggregating by sex, were excluded from this list.
2. Measure outcomes rather than processes or mechanisms. Outcomes are preferred, because processes and mechanisms are often specific to particular world regions and do not tell us the actual progress in women and girls’ lives. Laws, policies, and other public policy tools, although of great importance, were thus excluded.
3. Measure individual events, conveying unambiguously the particular circumstance of women and girls. Indicators that measure the characteristics or behaviors of households and cannot be empirically disaggregated by sex at the household or individual level were excluded, even when what they measure mostly reflects the situation of women and girls (as is the case with measures of indoor household pollution).
4. Give priority to tracking progress in expanding women’s choices and reducing gender gaps in access to modern services and resources (rather than to those documenting women’s unquestioned traditional household roles).
5. Are ‘Ready to Measure,’ that is, indicators that have internationally agreed definitions; are produced through available data collection instruments; already have wide coverage; and do not have built-in gender biases and, therefore, do not distort, visibly underrepresent or undercount the situation of women and girls, so SDG baseline data collection can start immediately in a majority of countries.

²⁰ Data2X and Open Data Watch (2015). “Ready to Measure: Twenty Indicators for Monitoring SDG Gender Targets.” Available at http://data2x.org/wp-content/uploads/2014/08/Ready-to-Measure_September-2015_WEB_1.pdf

Box 8 below presents the list of R2M indicators. All but two of these indicators can be constructed from population censuses and household surveys regularly administered in many countries.²¹ The principal survey sources in low- and lower-middle income countries with individual-level data (see Box 2 as well) are the Demographic and Health Survey (DHS), supported by USAID; the Multiple Indicator Cluster Survey (MICS), supported by UNICEF; Living Standards and Measurement Study (LSMS), supported by the World Bank; and country Labour Force Surveys (LFS), supported by the International Labor Organization (ILO). The Global Financial Inclusion Database (Findex), which is housed at the World Bank and was conducted as part of the Gallup World Poll in 2011 and 2014, covers individual financial outcomes across low-, middle-, and high-income countries. Finally, country-specific household welfare surveys, household budget and consumption surveys, as well as population and agricultural censuses are also an important resource, albeit not necessarily comparable across countries.

Table A3 in the Annex presents additional gender-sensitive indicators (beyond R2M) that can be measured with existing survey data. These indicators have been proposed by the IAEG-SDGs and Data2X (as part of a consultation with UN Women), across 13 of the 17 SDGs.²² The R2M indicators are referenced in the A3 Annex table as well, along with relevant data sources.

Box 8. Ready to Measure (R2M) indicators, by SDG Goals <i>(main data sources for each indicator available in Table A3 in Annex)</i>	
Goal 1: End poverty in all its forms everywhere	<ol style="list-style-type: none"> 1. Ratio of women to men (aged 15 and above) in households living under the international or national poverty line (<i>not suitable for making cross-country comparisons and should be used only to monitor national targets</i>)
Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.	<ol style="list-style-type: none"> 2. Prevalence of stunting (low height-for-age) in female children under 5 years of age, and ratio of female to male under-five stunting. 3. Prevalence of anemia in women of reproductive age (15 to 49), pregnant and non-pregnant.
Goal 3: Ensure healthy lives and promote well-being for all at all ages.	<ol style="list-style-type: none"> 4. Maternal deaths per 100,000 live births. 5. Female under-five mortality rate and ratio of female to male under-five mortality (<i>when comparing female to male ratios, expected biological sex differences in mortality at birth should be considered</i>) 6. Number of female new HIV infections per 1,000 susceptible population (by age and key populations), and ratio of female to male new HIV infections. 7. Adolescent birth rate per 1,000 women in that age group, by age of the mother (15-19). 8. Percentage of reproductive age women (15-49) using modern contraception.

²¹ The exceptions are the proportion of women holding seats in national parliaments, which is produced by the International Parliamentary Union, and the incidence of HIV/AIDS, which depends upon specialized surveys and reports from sentinel sites that are used to estimate prevalence of the epidemic using models developed by UNAIDS.

²² Goals 11, 13, 14, and 15 are not included in Table A3; the gender-relevant target under Goal 11 discusses women's safety in public, which is not well covered by cross-country, nationally-representative datasets. Goal 13 involves action to combat climate change, including bolstering resilience and adaptive capacity to cope with climate-related hazards; survey modules on shocks, however, tend to be asked at the household level. Goals 14 and 15 cover more macro-level targets on oceans and sustainable ecosystems, respectively.

Goal 4: Ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all.

9. Percentage of girls/young women aged 3-5 years above official age for last grade of each level of education (primary, lower secondary, upper secondary, and tertiary) who have completed the level, and female to male ratio.
10. Share of women aged 15-49 who use the computer and/or internet at least once a week, and every day

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

11. Percentage of women aged 20-24 who were married or in a union before age 18 (child marriage).
12. Proportion of seats held by women in national parliament.
13. Share of women among mobile telephone owners.

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

14. Proportion of young women who are idle (women 15-24 who are not employed and not in school and not looking for work).
15. Females employed as a ratio of the working-age female population (15 to 59), and female to male ratio.
16. Proportion of employed who are own-account (self-employed) workers by sex of worker.
17. Women's share of non-agricultural wage employment.
18. Percentage of adult women with a formal financial account or personally using a mobile money service in the past 12 months, and female to male ratio.

Goal 10: Reduce inequality within and among countries.

19. Growth rate in adult women's share of household earned income among the bottom 40 percent of the population, relative to that for all adult women.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

20. Proportion of female children under 5 whose births have been registered with a civil authority, and female to male ratio.

Source: Data2X and Open Data Watch (2015). "Ready to Measure: Twenty Indicators for Monitoring SDG Gender Targets." Available at http://data2x.org/wp-content/uploads/2014/08/Ready-to-Measure_September-2015_WEB_1.pdf

5. Conclusions: The need for sharing methods and data

Across developing countries, women often have lower levels of education and skills development relative to men, as well as insecure land rights and limited access to inputs, information, markets and credit — all of which can hamper their mobility, raise their vulnerability to external shocks, and depress their (as well as their children's) welfare. However, these channels are by no means consistent across countries (or areas within countries). The constraints women and girls face vary substantially across contexts, and

hence so do the policy instruments required to address these constraints. For informed, gender-responsive policy design, regularly collecting and analyzing representative, individual-level data across domains such as economic opportunities, health, education, decision-making and human security should be a priority.

Countries' commitments to gender equality across areas are underscored by the wide range of gender-relevant targets in the SDGs. However, countries have limited means to verify progress when underlying household surveys are lacking in relevant data and capacity. Ongoing communication is needed between member states, NSOs, and other stakeholders on producing sex-disaggregated statistics, developing related indicators to monitor men's and women's outcomes across areas, and fostering ongoing partnerships to integrate local priorities and assist with regular data collection across countries. Recent improvements in household survey data, for example, have been based on several partnerships between international agencies — to share knowledge and pinpoint data gaps, conduct pilot surveys to test new survey questions that address these gaps, and form recommendations on how surveys should be designed.²³ Coordination between countries and different international agencies on guidelines for data collection is a big step towards this objective.

The effectiveness of data also depends on how gender statistics are monitored and used. Given that gender statistics are an important instrument for policy change, ensuring collaboration between data producers (NSOs) and data users (including national policy-makers, analysts, researchers and other key stakeholders) is indispensable. Continuing research is needed to deepen country dialogue and highlight the value of collecting better sex-disaggregated data, and monitoring related indicators, including those related to the SDGs. Much remains to be understood on what policies are most effective in narrowing gender inequalities in access to inputs and resources, educational and employment outcomes, time use, health, vulnerability, and resilience.

²³ Data2X's Women's Work and Employment Partnership (WW+E) with the World Bank, ILO, and Food and Agriculture Organization (FAO) is one example; partners are working together to improve measures on paid and unpaid activities in subsistence agriculture through the testing of new survey questionnaires. Partnerships such as WW+E can help work towards standardization of survey modules to allow better comparability of statistics across country surveys.

Annex

Table A1. Recent cross-country initiatives to set standards for data collection, and improve the quality and availability of gender data across domains

Identifying and addressing gender data gaps	
UN Inter-Agency and Expert Group on Gender Statistics (IAEG-GS)	In 2012, the IAEG-GS published a minimum set of 52 gender indicators , based on whether they addressed key policy concerns as identified in the Beijing Platform for Action and other more recent international commitments. The UN Statistical Commission approved the IAEG-GS minimum set in 2013. Indicators cover economic opportunities, education, health, public life and decision-making, as well as human rights (including violence against women), and are ranked into three tiers by their availability and agreed-upon standards across countries. The IAEG-GS is continuing to develop and propose modifications of these indicators as well as their classification.
Initiative on Evidence on Data and Gender Equality (EDGE)	EDGE , a joint initiative by UNSD and UN Women, is working on methodological guidelines for measuring sex-disaggregated data on asset ownership that will be presented to the UN Statistical Commission in 2017. Pilots are also being conducted in eight countries (Georgia, Mexico, Maldives, Mongolia, Philippines, South Africa, and Uganda). EDGE plans to do the same for entrepreneurship, and will provide technical support to countries to implement these methodological guidelines.
UN Women	<p>In 2013, UN Women proposed a set of gender indicators — some of which overlap with the IAEG-GS minimum set — as part of a specific commitment to achieving gender equality, women’s rights and women’s empowerment in the post-2015 development framework.</p> <p>UN Women is also working on a flagship, biennial Global Monitoring Report on Gender Equality that will examine progress, gaps and key challenges in the implementation of the SDGs from a gender perspective. The report for 2017/2018, <i>Gender Equality in the 2030 Agenda for Sustainable Development</i>, will include analysis of available data across countries, as well as policies aiming to achieve gender-related targets.</p> <p>In 2016, UN Women launched its flagship gender data initiative, “Making Every Woman and Girl Count,” during the 71st UN General Assembly. This five-year public-private initiative will support countries to improve the production, accessibility and use of gender statistics. The initiative will build a supportive policy and institutional environment to prioritize gender data and effective monitoring of the SDGs, increase data production and improve access to data to inform policy and advocacy.</p>
UN Gender Statistics Manual	The UN Gender Statistics Manual , published in 2013, provides an important synthesis of how sex-disaggregated data as well as important topics on gender should be collected across the different policy areas discussed above, as well as such topics as poverty, environment, food security, power and decision-making, and migration/displacement.
Data2X	<p>In 2014, Data2X developed a comprehensive mapping report of global gender data gaps across health, economic opportunities, education, political participation and human rights/security, based on recommendations of these institutions, as well as a review of academic research in these areas. The report also provided a synthesis of international institutions’ efforts on constructing gender indicators.</p> <p>Data2X has also formed partnerships with UN agencies, governments, civil society, academics, and the private sector to close gender data gaps across different areas – big data and gender, civil registration and vital statistics, displaced populations, women’s work and employment, women’s financial inclusion, and improving the availability and use of gender data in the US.</p>
Databases and data portals	

[World Bank Gender Data Portal \(GenderStats\)](#)

The World Bank Gender Data Portal compiles data and background resources on a range of important gender topics, drawing on surveys from the World Development Indicators, national statistical agencies, UN databases, and surveys conducted or funded by the World Bank. Data at the country level are organized under thematic areas following those identified by the IAEG-GS, discussed above.

[OECD Gender Data Initiative](#)

The OECD Gender Data portal that provides internationally comparable indicators on gender in the areas of education, employment, and entrepreneurship, for OECD countries as well as Russia, Brazil, China, India, Indonesia, and South Africa.

[Gender Data Navigator \(GDN\)](#)

Joint partnership by the World Bank and the International Household Survey Network (IHSN) recently led to the construction of the Gender Data Navigator (GDN), a searchable database of national survey and census questionnaires from 144 low- and middle-income countries between 2000-2012, covering 1,485 surveys — spanning topics across demographics, economic activity, education, health, and violence against women as well as the IAEG-GS minimum set gender indicators

Table A2. Additional links to training modules, toolkits, and other resources to support national statistical systems and other agencies in the production and use of gender statistics

Technical guidelines and manuals for countries:

- **Manual on methodologies and analytical information necessary to improving the availability, quality and use of gender statistics:** [Gender Statistics Manual: Integrating a gender perspective into statistics](#) (2016). A product of the United Nations Statistical Division (UNSD), this manual is intended for statisticians working in less developed national statistical systems and can be used as resource material for training in gender statistics.
- **A consolidated reference on how to produce high quality gender statistics as well as advancing progress towards gender equality:** [Developing Gender Statistics: A Practical Tool](#) (2010). Prepared by the United Nations Economic Commission for Europe Task Force on Gender Statistics Training for Statisticians and the World Bank Institute, this manual aims to guide statistical organizations in the production and use of gender statistics.
- **A resource manual for NSOs:** [Engendering Statistics: A Tool for Change](#). This manual can also be used by users who wish to understand the problems involved in the production of gender statistics to be better able to use statistics correctly. The training material is produced by Statistics Sweden and The Swedish International Development Cooperation Agency (SIDA).
- **Collecting data on violence against women:** [Guidelines for Producing Statistics on Violence against Women](#). This manual, produced by UNSD, provides methodological advice regarding selection of topics, sources of data, relevant statistical classifications, outputs, wording of questions and all other issues relevant for national statistical offices to conduct statistical surveys on violence against women.

Data and statistics:

- **To access the latest sex-disaggregated data and gender statistics:** [Gender Data Portal](#). Users can access time series gender data by searching for indicators, get tools data visualization and analysis, explore country and topic dashboards, browse household surveys and censuses, explore guidelines, manuals and training materials, among others. The [database](#) is updated four times a year (April, July, September, and December).
- **A reference for sex-disaggregated data on education, health, access to economic opportunities, and public life and decision-making:** [The Little Data Book on Gender](#) (2016). This handbook by World Bank presents sex-disaggregated data for more than 200 economies in an easy country-by-country reference. Regional profiles and income group aggregates are also available.
- **Cross-country assessment of a large set of available gender data from international and national statistical agencies:** [The World's Women 2015: Trends and Statistics](#). Provides an assessment of gaps in gender statistics, highlighting progress in the availability of statistics, new and emerging methodological developments, and areas demanding further attention from the international community. A statistical annex also provides a selection of statistics and indicators at the global, regional and country levels.

Regional resources:

- **A toolkit for countries in Eastern Europe, Caucasus and Central Asia:** [Using Gender Statistics: A toolkit for training data users](#). Prepared by the United Nations Economic Commission for Europe, this toolkit aims to support statistical systems in their understanding and use of gender statistics and is intended to guide training sessions to increase statistical literacy. Each module includes descriptions of key concepts and indicators, practical examples, and hands-on exercises. The toolkit also contains five PowerPoint presentations that illustrate country examples.
- **A gender statistics knowledge product for African countries:** [Africa Glossary of Gender Statistics](#). This Glossary has been prepared by the African Centre for Statistics (ACS) of ECA in partnership with the United Nations Population Fund (UNFPA) with the main objective of providing African countries with adequate knowledge and understanding on various terminologies and definitions used to develop and implement gender statistics program in the region.
- **An online course for data practitioners:** [United Nations Economic Commission for Africa Gender Statistics Toolkit](#). The four-module course is intended to share best practices in planning, collecting, and disseminating unbiased gender statistics so they can be used for informed decision-making, policy formulating, and monitoring at the country level. It has been designed by UNSSC in partnership with the African Centre for Statistics of ECA.

Table A3. Additional examples of indicators for measuring SDG gender targets that are available with existing micro-level surveys

Target	Recommended Indicators	Data Source(s) (across individual-level, nationally representative surveys)
Goal 1: End poverty in all its forms everywhere		
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	R2M: Ratio of women to men (aged 15 and above) in households living under the international or national poverty line (not suitable for making cross-country comparisons and should be used only to monitor national targets)	World Bank LSMS, and other country-specific household welfare surveys
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		
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 microfinance	Share of men and women who have a financial account with a formal institution, and with a microfinance institution (also see under Goal 8) Share of women among mobile telephone owners (also see under Goal 5) Share of men and women who own their dwelling Share of men and women farmers who have tenure rights to agricultural land	Global Findex DHS DHS World Bank LSMS-ISA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture		
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	For Targets 2.1 and 2.2: R2M: Prevalence of anemia in women of reproductive age (15 to 49), pregnant and non-pregnant. Share of women aged 15-49, and 15-24, whose BMI is less than 18.5 (underweight) R2M: Prevalence of stunting (low height-for-age) in female children under 5 years of age, and ratio of female to male under-five stunting.	DHS
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.		
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	Average share of annual household income earned by women plot owners/livestock owners Share of men and women farmers using improved technologies and infrastructure (ranging from irrigation, seeds or other inputs) in the last year Share of men and women farmers using agricultural extension services in the last year Share of men and women farmers with a financial account	World Bank LSMS-ISA World Bank LSMS-ISA World Bank LSMS-ISA Global Findex
Goal 3: Ensure healthy lives and promote well-being for all at all ages		
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	R2M: Maternal deaths per 100,000 live births	DHS

Target	Recommended Indicators	Data Source(s) (across individual-level, nationally representative surveys)
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	R2M: Female under-five mortality rate and ratio of female to male under-five mortality.	DHS
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	R2M: Number of female new HIV infections per 1,000 susceptible population (by age and key populations), and ratio of female to male new HIV infections	DHS
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	R2M: Adolescent birth rate per 1,000 women in that age group, by age of the mother (15-19). R2M: Percentage of reproductive age women (15-49) using modern contraception.	DHS
Goal 4: Ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all		
4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	R2M: Percentage of girls/young women aged 3-5 years above official age for last grade of each level of education (primary, lower secondary, upper secondary, and tertiary) who have completed the level, and female to male ratio	LSMS
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	R2M: Share of women aged 15-49 who use the computer and/or internet at least once a week, and every day (also see Goals 9, 17 below)	DHS, MICS
Goal 5: Achieve gender equality and empower all women and girls		
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	R2M: Percentage of women aged 20-24 who were married or in a union before age 18 (child marriage)	DHS, MICS
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	R2M: Proportion of seats held by women in national parliament	Inter- Parliamentary Union (IPU) and International IDEA
5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	R2M: Share of women among mobile telephone owners	DHS
Goal 6: Ensure availability and sustainable management of water and sanitation for all		
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water.	Average weekly time spent by women and girls in water collection	MICS
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all		
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.	Share of women who spend time collecting firewood for household use	Some LSMS surveys have time spent on firewood collection for household members; a new forestry survey module is also being developed by FAO to be used in LSMS
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		

Target	Recommended Indicators	Data Source(s) (across individual-level, nationally representative surveys)
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	<p>For Targets 8.3 and 8.5:</p> <p>R2M: Females employed as a ratio of the working-age female population (15 to 59), and female to male ratio</p> <p>R2M: Proportion of employed who are own-account (self-employed) workers by sex of worker</p>	<p>LSMS, LFS</p> <p>LSMS, LFS</p>
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	<p>R2M: Women's share of non-agricultural wage employment</p> <p>R2M: Percentage of adult women with a formal financial account or personally using a mobile money service in the past 12 months, and female to male ratio</p>	<p>LSMS, LFS</p> <p>Global Findex</p>
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	<p>R2M: Proportion of young women who are idle (women 15-24 who are not employed and not in school and not looking for work)</p>	<p>LSMS, LFS</p>
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		
9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	<p>Share of men and women who, in the last 12 months, have set aside money to start, operate, or grow a business or farm (Global Findex 2014)</p> <p>Share of men and women who, in the last 12 months, have borrowed money to start, operate, or grow a business or farm (Global Findex 2014)</p> <p>Share of private firms with a financial account, across firms owned/not owned by women (World Bank Enterprise Surveys)</p> <p>Share of private firms with a bank loan/line of credit, across firms owned/not owned by women (World Bank Enterprise Surveys)</p> <p>Share of private firms whose recent loan application was rejected, across firms owned/not owned by women (World Bank Enterprise Surveys)</p>	<p>Global Findex 2014; World Bank Enterprise Surveys</p>
9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	<p>Share of women aged 15-49 who use the computer and/or internet at least once a week, and every day (also see Goal 4, Goal 17)</p>	<p>DHS, MICS, World Bank LSMS</p>
Goal 10: Reduce inequality within and among countries		
10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average	<p>R2M: Growth rate in adult women's share of household earned income among the bottom 40 percent of the population, relative to that for all adult women.</p>	<p>World Bank LSMS</p>
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.	<p>Share of women who would like to work for an income but are not allowed to (household or community constraints)</p> <p>Share of women who face constraints on their mobility outside the household</p>	<p>World Bank LSMS and other household welfare surveys</p> <p>DHS</p>

Target	Recommended Indicators	Data Source(s) (across individual-level, nationally representative surveys)
10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.	Share of men and women in informal/casual employment (LFS)	Labour Force Surveys (LFS), World Bank LSMS Surveys
10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies	Labor force participation rates of adult migrants and non-migrants, by sex Number of refugees (adults and children, by sex)	ILO Labour Force Surveys UNHCR database
Goal 12: Ensure sustainable consumption and production patterns		
12.2 By 2030, achieve the sustainable management and efficient use of natural resources	Share of men and women who earn income from agroforestry and/or other natural resource-based activities <u>Within agriculture:</u> Main source of water, separately for household and agricultural use, by sex of plot owner/farmer Share of farmers who use water conservation methods, separately for traditional and improved methods, by sex Among women who collect forestry products: walking time to the nearest forestry source (minutes, one way) Share of adult men and women who are members of, and participate actively in, local institutions and community associations on the management of water and forestry resources	LSMS, LFS LSMS-ISA surveys
Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.		
16.9 By 2030, provide legal identity for all, including birth registration	R2M: Proportion of female children under 5 whose births have been registered with a civil authority, and female to male ratio.	DHS, MICS
Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development		
17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.	Share of women aged 15-49 who use the computer and/or internet at least once a week, and every day (also see Goal 4, Goal 9)	DHS, MICS