

MEASUREMENT BRIEF: COUNTRY-LEVEL DATA ON WOMEN'S EMPOWERMENT



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INTRODUCTION

This measurement brief is designed to provide an overview of country-level data on women's empowerment. We will first explain how country-level measurements of women's empowerment are generated, what types of data are available, and how these data have been used within research on women's empowerment in the context of the global South. We will end the brief by addressing the challenges in this area that should be considered by future research.

Since the 1990s, the term 'women's empowerment' has been frequently used in the field of international development as a means to achieve gender equality and economic development. Consistent with this discourse, the UN in 2015 explicitly set out its fifth Sustainable Development Goal (SDG 5) as "to achieve gender equality and empower all women and girls" (SDG 5). While women's empowerment can be measured at various levels, measuring women's empowerment at country-level becomes particularly important for monitoring the progress of globally set targets like SDGs. This is primarily because most international agreements and treaties are made at the national level, with individual governments being the major agents. The systematic country-level measurements and outcomes (e.g. a country's ranking) can also enable individual governments to gauge their progress in combating gender inequality in different dimensions and adjust their laws and policies accordingly; and for activists, they are a useful tool to press governments to enact for change. In this regard, country-level data have the potential to generate significant trickle-down effects for individual women's increased empowerment levels within every nation.

An Overview of How Country-level Measurements are Made

The most common approach to measure women's empowerment at the country-level is through using composite measures or indices. These indices are considered useful as they cover more comprehensive dimensions of women's empowerment than a single indicator, and as a relatively straightforward and intuitive way to rank numerous countries on a global scale. Some of these available indices are based on national-level aggregate data, whereas others -more recently emerged- are constructed based on individual-level data.

Aggregate Data

There are several globally well-known aggregate measures that attempt to capture country-level gender inequalities and some aspects of 'empowerment' in their calculations. For example, in recognition of the need to engendering the human development paradigm, the

United Nations Development Program (UNDP) in the Human Development Report of 1995 introduced two new measures in addition to its Human Development Index (HDI): Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM). The GDI adjusts the HDI for gender inequality using the same component dimensions as the HDI: health, education, and income. The GEM, on the other hand, aims to measure more explicitly women's relative positions of power, through capturing "whether women and men are able to actively participate in economic and political life and take part in decision-making" (UNDP 1995:73). It is based on estimates of the proportions of seats held by women in national parliaments, the percentage of women in economic decision-making positions, and the female share of earned income. Many researchers, however, have questioned the usefulness of these two indices and pointed out several methodological limitations (e.g., Bardhan and Klasen 1999; Charmes and Wieringa 2003). This resulted

in the introduction of the Gender Inequality Index (GII) in 2010. Addressing some of the shortcomings of the two previous measures, the GII quantifies the loss of achievement within a country due to gender inequality, through measuring opportunity costs in reproductive health, empowerment (the share of parliamentary seats held by men and women, and higher education attainment levels), and labor market participation.

Other widely known country-level indices on gender equality and women's empowerment include The Global Gender Gap Index, The Social Institutions and Gender Index (SIGI), The African Gender and Development Index (AGDI), and The Africa Gender Equality Index (AGEI). The latter two composite measures are specifically designed for countries in the Africa region. The African Gender and Development Index and Global Gender Gap Index include similar dimensions and indicators as those developed by UNDP, focusing on women's work, education, health, and political participation at an elite level. Compared

with these indices, which focus on gendered 'outcomes' in various dimensions, the SIGI emphasizes the factors underlying women's lack of empowerment and gender inequality by measuring the women's restricted access to rights and resources derived from gender discriminative laws, practices, and customs at country-level. The AGEI intends to measure both the dimensions of gender unequal outcomes and the underlying factors behind gender inequality (African Development Bank Group 2015). Table 1 presents a summary of the above-mentioned indices and their measurements of women's empowerment.

The following are some limitations of these indices:

1. Most of their indicators suffer from statistical gaps in terms of the lack of country-level data available, despite the increase in gender desegregated data in recent years (UN 2014).
2. Many of the empowerment measures in the indices only reflect the situation of women in elite positions,

Table 1. Country-level Indices (using aggregate data)- Dimensions and Indicators to Measure Gender Inequality and the Extent of Women's Empowerment

Index	Starting year	Institution	Dimensions	Indicators
GDI	1995	UNDP	Health	Life expectancy
			Education	Adult literacy School enrollment
			Economic power	Per capita income
GEM	1995	UNDP	Political power	The proportions of seats held by women in national parliaments
			Economic power	The proportions of women in economic decision-making positions
			Economic power	Female share of earned incomes
GII	2010	UNDP	Reproductive Health	Maternal mortality ratio Adolescent fertility rate
			Political power	The proportions of seats held by women in national parliaments
			Education	Higher education attainment levels (secondary and above)
			Economic power	Labor force participation
Global Gender Gap Index	2006	The World Economic Forum	Economic power	Labor force participation Wage equality for similar work Estimated earned income Legislators, senior officials and managers Professional and technical workers
			Education	Literacy rate School enrollment
			Health	sex ratio at birth Healthy life expectancy
			Political power	Women in parliament Women in ministerial positions Years with female head of state

SIGI	2009	OECD	Discrimination in the family	Child marriage Household responsibilities Divorce Inheritance
			Restricted Physical Integrity	Violence against women Female genital mutilation Missing women Reproductive autonomy
			Restricted access to productive and financial resources	Secure access to land assets Access to non-land assets Secure access to formal financial services Workplace rights
			Restricted civil liberties	Citizenship rights Political voices Freedom of movement Access to justice
AGDI	2004	UN Economic Commission for Africa	Education	School enrollment School completion Literacy rate
			Health	Child health HIV/AIDS
			Economic power	Wages Income Time-use Employment Means of production Management
			Political power	Women in public sectors and civil society
AfDB Africa Gender Equality Index	2015	African Development Bank	Economic empowerment	Labor participation ratio Wage and salary workers ratio Wage Equality Estimated earned income Loan from financial institutions
			Education Reproductive health	Literacy rate School enrollment Maternal mortality ratio Births attended by skilled health staff Unmet need for contraception Prenatal care for pregnant women
			Laws and Institutions	Women in parliament Women in ministerial positions Proportions of women justices Series of women's legal rights and household rights

making it difficult to gauge the extent of empowerment for the majority women who do not occupy such high-level decision-making positions. Similarly, in countries where informal work is common for women, measures such as labor force participation are hardly sufficient to measure the empowerment of most women.

3. The focus largely remains on measuring gender-differentiated outcomes in more 'traditional' areas such as health, education, and employment, although indicators that reflect a women's level of empowerment (or disempowerment) in other areas such as violence against women and access to political voices and rights have started to emerge. Yet, some of the 'newer'

dimensions can also suffer from methodological issues, as they are often either difficult to quantify or accurately measure (e.g., the extent of violence against women, female genital mutilation, and legal rights).

4. Comparability is another common problem for all the country-level aggregate data, since women's empowerment is often context-specific, with different social norms making it difficult to determine any universal standards of empowerment.
5. These indices are only indirect proxies rather than direct measures of women's empowerment and cannot be delineated by regions or subgroups (Alkire et al., 2013; Yount et al. 2016).

Individual-level Data

Some country-level measurements on women's empowerment are constructed based on individual-level (or household level) data. Below we will discuss one of the most frequently used datasets (the Demographic and Health Surveys) of such, and some examples of research using the DHS, followed by an index created to specifically measure women's empowerment based on individual level data, that is not the DHS.

Common Individual Level Survey Datasets and Examples of How They are Used

One of the most frequently used survey-based datasets for women's empowerment is [the Demographic and Health Surveys \(DHS\)](#). The DHS has collected nationally representative data since 1984 on health and population in low-and middle-income countries (LMICs) including some common gender indicators such as women's education, employment, earnings, land ownership, polygamy, and those more directly related to women's agency such as decision-making power within the household, women's attitudes regarding gender roles, and their perception as to whether domestic violence is acceptable. Here are a few examples of the DHS questions asked to mostly married women across countries.

- Q. Who usually makes decision about _____ (Who has the final say on _____)?**
1. Making major household purchases
 2. Visits to her family or relatives
 3. How the money she earns will be used
 4. How husband's (partner's) earnings will be used
 5. Health care
 6. Using/not using contraception

The usual options are:

- a. Respondent,
- b. Spouse,
- c. Joint decision,
- d. Someone else,
- e. Other.

Q. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?

1. Getting permission to go?
2. Getting money needed for treatment?
3. The distance to the health facility?
4. Not wanting to go alone?

The usual options are:

- a. Big problem,
- b. Not a big problem

Q. In your opinion, is a husband justified in hitting or beating his wife in the following situations:

1. If she goes out without telling him?
2. If she neglects the children?
3. If she argues with him?
4. If she refuses to have sex with him?
5. If she burns the food?

The usual options are:

- a. Yes
- b. No
- c. Don't know

For other questions on domestic violence and individual health care, the DHS asks women if they tried to seek help or care for themselves.

Amongst the growing body of research that has used the country-level DHS data, we select and present a few examples of the recent empirical studies that aim to identify or construct women's empowerment measures. Hanmer and Klugman (2016), for instance, use pooled DHS micro data of 58 developing countries to quantify correlations between their selected domains of women's empowerment: social norms and attitudes; household decision-making; gender-based violence; sexual health and reproductive rights; and freedom of movement. The authors argue they chose the dimensions and indicators from the DHS that capture the exercise of agency rather than the preconditions.

Table 2. The Identified Dimensions and Indicators of Women's Empowerment in Selected Empirical Studies that use DHS Data.

DHS data		Hanmer and Klugman (2016)	Ewerling et al. (2017)	Miedema et al. (2018)
Dimension	Indicator			
Attitude towards gendered violence	If a wife beating is Justified	O	O	O
	Has ever experienced physical or sexual violence	O	X	X
Reproductive rights	Whether a wife would be justified in asking her husband to use a condom if she knew he had a sexually transmitted infection.; whether a wife would be justified to refuse sex with her husband if she knows he has sex with other women.	O	X	O
Decision-making	Who usually decides on women's health	X	O	O
	Who usually decides on large household purchases	O	O	O
	Who usually decides on visits to family/relatives	X	O	O
	Who usually decides on husband's/partners earnings	X	X	O
Control over movement	Movement restricted by husband in at least one of the following ways: not permitted to meet female friends; contact with your family restricted; insists on knowing whereabouts at all times.	O	X	X
Education	Woman's education in completed years of schooling	X	O	O
	Education difference: woman's minus husband's completed years of schooling	X	O	O
Work	Ever worked in past 12 months	X	O	X
	Her earnings compared with husband's earnings	X	X	O
	Work for pay	X	X	O
women's age at pivotal life events	First sexual experience	X	X	O
	First cohabitation (or married aged 18 years)	O	O	O
	First birth	X	O	O

Ewerling and others (2017) created the SWPER (a survey-based women's empowerment) index of women's empowerment using DHS data from 34 African countries. After identifying items available and deemed relevant to women's empowerment in most DHS surveys (including three domains of women's empowerment: social independence, decision making and attitude to violence), they use principal component analysis to extract the components and validate with the GDI as well as other general and reproductive health coverage cross-nationally. The index has been later expanded to other regions as well through the SWPER Global (Ewerling et al. 2020).

Miedema and others (2018), using DHS data from Ethiopia, Kenya, Rwanda, Tanzania, and Uganda, conducted multi-country confirmatory factor analysis to identify a standardized and invariant measure of women's empowerment that can be used to monitor women's empowerment across countries. They found three-domains as validated measures for monitoring the progress of women's empowerment across countries: human and social assets; gender attitudes and beliefs (intrinsic

agency); and participation in household decision-making (instrumental agency).

DHS micro data allow researchers to include measures of women's empowerment that are not available in aggregate level data such as women's attitudes and decision-making power. As can be seen from the Table 2, the common empowerment dimensions across all three studies include attitudes towards gender bias, decision-making, and women's age at pivotal life events. Some measures appear within more than one study: reproductive rights, education, and work. All three studies seem to agree on the relevant domains of women's empowerment included in the DHS, except for education and work, which Hanmer and Klugman perceive as precondition of agency and as 'women's own characteristics' rather than part of agency or empowerment.

However, it is still debatable whether the indicators in DHS are sufficient to capture the complex, multidimensional concept of empowerment. Take decision-making questions for example, and the ways in which they are operationalized

in the research. Usually, having final say in decisions alone or jointly is considered as empowered, and in the Ewerling et al (2017)'s work, decision alone is +1, jointly 0, and no say as -1. However, to what extent can we gauge women's empowerment through such questions. For example, is 'decision alone' necessarily more empowered than 'joint decisions'? A joint decision for women could range from no conversation to partial consideration but with final say for men (Acosta et al. 2020). DHS data do not include more nuanced indicators of decision-making that measure the specific context in which the decision is made, and how the respondents feel about the decisions, for instance.

Meanwhile one of the well-known indices of women's empowerment using individual level data other than DHS is [the Women's Empowerment in Agriculture Index \(WEAI\)](#). It is a survey-based index that measures the empowerment, agency, and inclusion of women specifically in the agricultural sector, which is used to report at the country or regional level (Alkire et al. 2013). The WEAI was launched by International Food Policy Research Institute (IFPRI), Oxford Poverty and Human Development Initiative (OPHI), and USAID's Feed the Future in February 2012. The index was constructed based on the pilot study in Uganda, Bangladesh, and Guatemala and included in 19 Feed the Future Baseline population-based surveys.

The index has two subindexes. The first subindex measures women's empowerment in five domains in agriculture: (1) decisions about agricultural production, (2) decision making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. The second subindex (Gender Parity Index), measured through data of women and men within the same household, shows the empowerment gap that needs to be closed for women to reach the same level of empowerment as men.

The survey questions used in WEAI include questions on decision-making power similar to those in the DHS. In capturing decision-making power about productive resources, the survey asks if the respondent has no, sole or joint rights over various types of agricultural resources (land, livestock, equipment etc.) and types of rights (sell, give, rent, and buy). Both the DHS and the questions used for the WEAI measure the decision-making power through who participates in the decision: women can have no say (considered disempowered or less empowered), or joint or sole (considered more empowered). Another of the WEAI's set of questions asked both women and men how much

input they have in making decisions about agricultural production, with responses that range from no input to all decisions, instead of the options of no, alone, or joint decisions.

Q1. If an individual participated in the activity, how much input did the individual have in making decisions about:

- a. food crop farming,
- b. cash crop farming,
- c. livestock raising, and
- d. fish culture,

Q2. To what extent does the individual feel he or she can make his or her own personal decisions regarding the following aspects of household life if he or she wanted to:

- a. agricultural production,
- b. which inputs to buy,
- c. which types of crops to grow for agricultural production,
- d. when to take or who should take crops to market, and
- e. whether to engage in livestock raising.

- A1.** a. no input,
b. input into very few decisions,
c. input into some decisions,
d. input into most decisions,
e. input into all decisions.

- A2.** a. not at all,
b. small extent,
c. medium extent,
d. high extent.

As the WEAI is an index specifically designed to measure women's empowerment, the domains and indicators included seem to align more with the concept's emphasis on choice and agency, when compared with the DHS. Another advantage of the data used in the WEAI over the DHS is the availability of the data from both male and female respondents, which allows researchers to compare attitudes between men and women in the same household and identify the discrete aggregate sources of disempowerment for men and women. Yet, the data for the WEAI are limited to agricultural sectors, whilst DHS are nationally representative. Below (Table 2) is a summary of domains and indicators of the WEAI.

Existing Gaps or Challenges in the Area

Women's empowerment is a complex and multidimensional process that is often difficult to measure (Malholtra

Table 3. The Dimensions and Indicators of Women's Empowerment in the WEAI.

Domain	Indicator	Definition of Indicator	Weight
Production	Input in productive decisions	Sole or joint decision-making over food and cash-crop farming, livestock, and fisheries	1/10
	Autonomy in production	Autonomy in agricultural production (that is, what inputs to buy, what crops to grow, what livestock to raise, and so on); reflects the extent to which the respondent's motivation for decision-making reflects his or her values rather than a desire to please others or avoid harm	1/10
Resources	Ownership of assets	Sole or joint ownership of major household assets	1/15
	Purchase, sale, or transfer of assets	Whether respondent participates in decision to buy, sell, or transfer his or her owned assets	1/15
Income	Access to and decisions on credit	Access to and participation in decision-making concerning credit	1/5
	Control over use of income	Sole or joint control over income and expenditures	1/15
Leadership	Group member	Whether respondent is an active member in at least one economic or social group (for example, agricultural marketing, credit, water users' groups)	1/15
	Speaking in public	Whether the respondent is comfortable speaking in public concerning various issues such as intervening in a family dispute, ensuring proper payment of wages for public work programs, and so on	1/15
Time	Workload	Allocation of time to productive and domestic tasks	1/10
	Leisure	Satisfaction with the available time for leisure activities	1/10

Source: Alkire et al. (2013).

et al. 2002; Ibrahim and Alkire 2007). In this brief, we have discussed how this complicated concept has been measured at country-level, through examining common datasets and some examples of its application. Despite that both recent aggregate and micro data offer indicators that potentially measure previously underexplored dimensions of empowerment, questions remain as to whether these common indicators such as decision-making and attitudes to gender equality truly capture the full extent of women's empowerment.

For example, across multiple dimensions of women's empowerment there are very few measures of women's political participation. Additionally, a broader focus on economic empowerment is needed, rather than a sole focus on labor force participation. The survey questions used for the WEAI, compared with the ones in DHS, better incorporate such broader aspects of economic empowerment through the questions on how much input respondents have with economic decisions. However, they are limited to respondents in agricultural sectors.

Another challenge is the drawback of the common approach taken to measure country-level women's empowerment, namely through constructing an index of women's empowerment. A form of indices can encompass multiple relevant dimensions of women's empowerment

and provide an overview of where a country approximately stands compared with others. However, average scores or scales within composite measures obscure a different range of women within a given country, and the unique compositions of multiple indicators that represent their circumstance. The patterns of intersectional inequality within a country get lost in country-level indices. Although the authors of the SWPER index, for example, argue that their index enables within-country comparison, it is unclear from their analysis how we go about doing this (Yount et al. 2018).

Lastly, it continues to be difficult for researchers to account for different contexts. Using the universal indicators of women's empowerment to compare countries entail the risk of ignoring the different contexts in which women's empowerment occurs (for example, cultural norms within a country might define what counts as 'empowered' differently from those in other countries). Recent works have developed comparable measures of empowerment through identifying consistent or invariant domains relevant to the multiple countries (Asaolu et al. 2018; Miedema et al. 2018). However, how the different domains or components of women's empowerment interrelate, and how the specific relationships vary by context remains uncertain.

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This brief is part of a series of measurement briefs prepared by *Women's Empowerment: Data for Gender Equality* (WEDGE) project undertaken by University of Maryland, College Park. Enhancing women's economic empowerment is a key objective of many public policies and Sustainable Development Goals seek to measure progress in this arena. Measurement briefs developed by WEDGE seek to bridge the gap between theoretical literature on gender and women's lived experiences by evaluating survey based measures of women's economic empowerment and serve as a reference for national statistical agencies as well as students and survey designers.

Suggested citation: Sojin Yu. 2022. "Measurement Brief: Country-level Data on Women's Empowerment," College Park: WEDGE Program, University of Maryland.

Funding for this program is provided by William and Flora Hewlett Foundation.

