

Gender Data for Macroeconomists

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What is gender data?

- Gender-disaggregated data
 - Data where we can identify the sex of the person
- Data about gender equality

Outline

- Types of data and sources:
 - National level indicators on gender, focusing on social institutions or laws
 - Aggregates at the national level of individual level data
 - Individual level data from household surveys
- Measuring Bargaining Power and Empowerment
 - Asset ownership
 - Sexual harassment/ gender based violence
 - Decision-making
 - Indices of women's empowerment

National Level Indicators on Gender

Useful sources of data on discrimination, legal frameworks, or other social institutions at the national level.

Data may be based on an analysis of documents (such as the laws) or aggregated from individual level data (attitudes about women working).

They may provide information on specific indicators as well as more aggregate indices.

Women, Business and Law (WBL)

- WBL data 1.0 has annual data for 190 countries from 1971-2024.

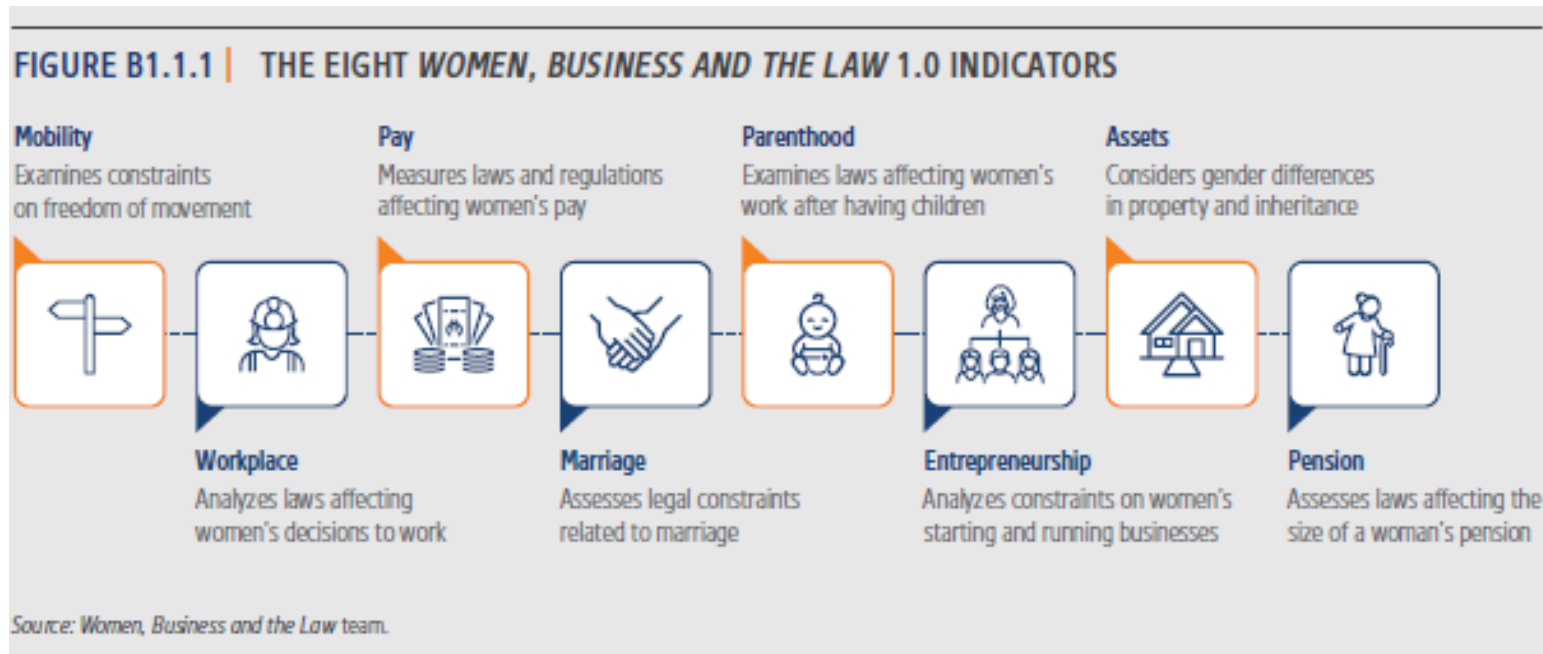
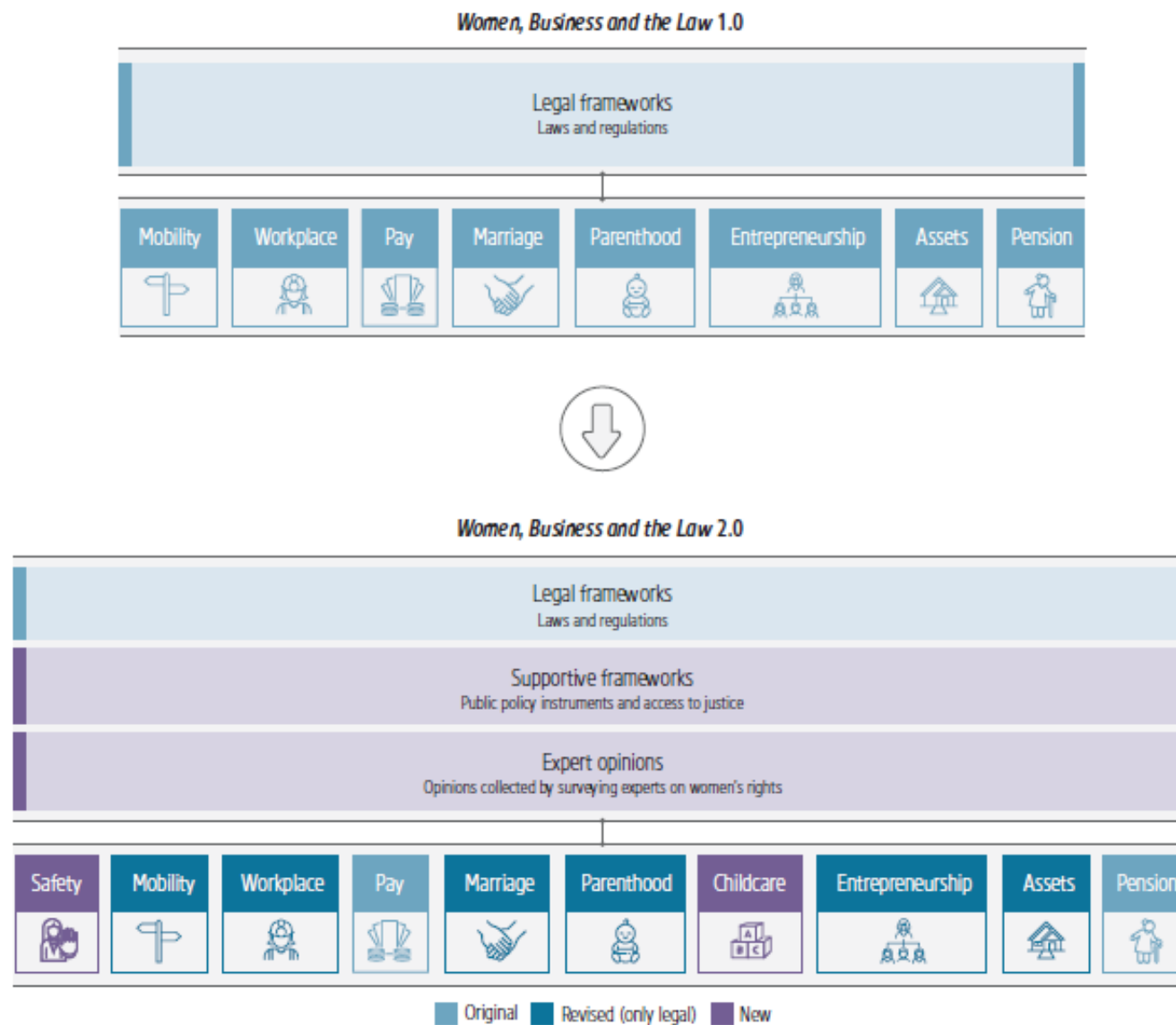


FIGURE ES.1 | WOMEN, BUSINESS AND THE LAW 2.0 INTRODUCES NEW MEASUREMENTS TO TRACK GLOBAL PROGRESS TOWARD GENDER EQUALITY



Source: Women Business and the Law team.

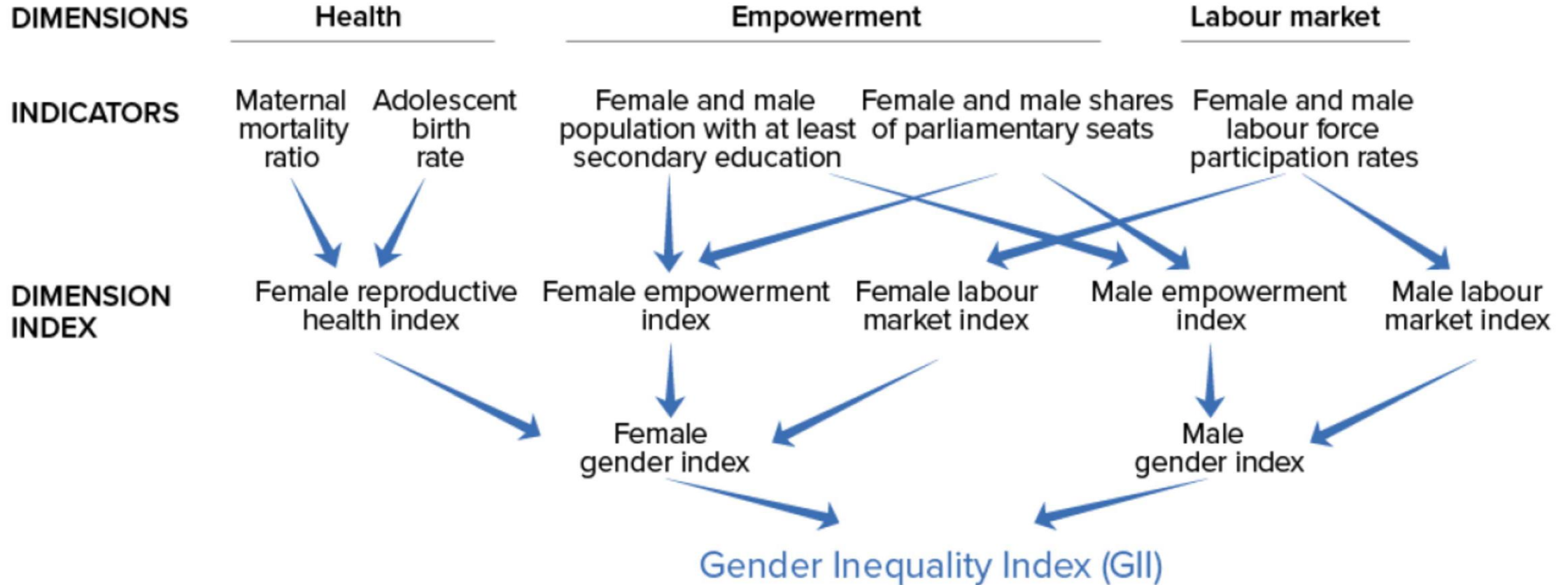
Social Institutions and Gender Index (SIGI)

- Measures discrimination against women in social institutions in 179 countries.
- 4 Dimensions
 - Discrimination in the family
 - Restricted physical integrity
 - Restricted access to productive and financial resources
 - Restricted civil liberties

SIGI

- Example: Restricted physical integrity
 - Laws on violence against women
 - Women's social acceptance of intimate partner violence
 - Prevalence of intimate partner violence
 - Laws, acceptance and prevalence of female genital mutilation
 - Sex ratio at birth
 - Laws on reproductive autonomy
 - Unmet need for family planning

Gender Inequality Index (GII)



Gender Social Norms Index (GSNI)

- Captures people's attitudes on women's roles along four key dimensions: political, educational, economic and physical integrity.
- Based on three waves of the World Values Survey
- Aggregated through United Nations Development Program

World Development Indicators (WDI)

- World Development Indicators aggregates available data and makes it easily available.
- Includes a wide range of indicators that are gender-disaggregated
 - Aggregates data that was collected at the individual levels
 - But provides averages for each country, so misses within country variation
 - Also, includes indicators from World Bank sources
- Examples:
 - Life expectancy at birth, by sex
 - Health and education measures, by sex

Survey data

- Household surveys often include a household roster, that lists all members with basic demographic info on each, including gender.
- Some information in the survey may be matched to individuals – education, health, labor, employment.
- Some surveys also have information on owns the assets, who makes decisions, who manages the family enterprise, etc.
- These allow for disaggregation by gender, and also by age, marital status, education level.....
- Can also then aggregate using household or regional characteristics – women and men living in households below the poverty line, or rural women and men.

Challenges with survey data across countries

- Survey questions may be constant across countries or be adapted to local context.
- There is tension between having data that is internationally comparable and locally relevant.
- And these may be particularly relevant to gender analyses.
- Example: “land ownership” varies across countries
 - In some countries, land cannot be formally owned, it is owned by the state; but people will have rights (often similar to ownership rights) over land
 - Or, land may be held under customary tenure, with plots allocated to households to farm
 - Or, people may hold legal title to plots of land
 - The understandings of who owns the land within the household, may be based on gender. And what joint ownership means may differ across countries.

Sampling:

Who is sampled?

- Is the survey nationally representative?
- Who may be missed? Very wealthy, those in conflict areas, pastoralists, internal migrants, people in informal settlements
- May sample households or individuals

Who within household is interviewed?

- One person may provide information about each household member, such as education level or type of employment (sometimes called a proxy respondent)
- Household surveys may interview multiple people – each responding about themselves. May interview both spouses in the “primary couple.”
- Need responses from individuals not proxies for questions such as perceptions, attitudes, knowledge...
- Some things may be at either the household level or the individual level – such as shocks.
- Microeconomists now asking what we can learn from different responses from household members.

Demographic and Health Surveys (DHS)

- Focus is on issues of health, particularly reproductive health.
- There are questionnaires for both men and women.
- Women's interviews limited to women ages 15-49 since the focus is on reproductive health issues. (Upper limit on men's ages vary across countries.)
- Some surveys have some modules that include older women.
- These are standardized questions across countries – useful for consistency, but may have very different meanings across countries.

World Values Survey ([WVS](#))

- 7 waves of cross-section data in almost 100 countries
- Collects data on cultural values, attitudes and beliefs towards gender, family, and religion; attitudes and experience of poverty, education, health, and security; social tolerance and trust; attitudes towards multilateral institutions; political trust, authoritarianism and populism; migration; climate change; and family planning.
- Data is collected from men and women.
- Same questions asked in every country.
- Some demographic information included on respondent.

Financial Inclusion, FINDEX

- Began in 2011; Fourth round was in 2021.
- Nationally represented surveys of 128,000 adults in 123 economies.
- Includes indicators on access to and use of formal and informal financial services and digital payments, and offers insights into the behaviors that enable financial resilience.
- Their analyses identify gaps in access to and usage of financial services by women and poor adults.

Living Standards Measurement Study ([LSMS](#))

- Many multi-purpose household surveys that have detailed information on many issues. Each survey has questions adapted for use in the specific country.
- Typically have modules on education, health, employment, agriculture, household enterprises, and potentially others.
- [LSMS-ISA](#) Integrated Surveys on Agriculture 8 countries in Africa very detailed agricultural modules, panel data with
- [LSMS-Plus](#) Six surveys that interview multiple members of the household on asset ownership, employment and entrepreneurship.

Labor Force Surveys

- These are collected by individual countries.
- These are at the individual level.
- Previous lecture on labor data in this series.
- Gender issue continues to be whether women who are working, but not for pay, are reported as working. This is particularly true of contributing family members, working in family farms or small businesses. They and their household members may not view them as working.

Time Use Surveys

- Next week's lecture is on time use surveys.
- An extensive literature talks about gender and time use data. There are gender differences in the patterns of responses.
- Women may not see what they are doing as “work”.
- The method of handling multi-tasking is especially relevant to understanding women's work.

Comparisons of male- and female-headed households

- Used when only household level data is available
- This confounds household structure and gender. In many contexts, households are only defined as female-headed if there are no adult men present. Most male-headed households include adult women. Thus, the differences are not primarily about the sex of the head, but instead about household composition.
- There are times when it might be useful to compare households based on their structure – whether headed by a single adult or a couple; intergenerational; extended; polygamous....

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Measuring bargaining power and empowerment

- A rich literature analyses the importance of women's bargaining power and women's empowerment on a wide range of outcomes.
- But there is no consistent definition or usage of these terms.
- It is important to clearly define how you are using these terms and what data you are using.
- I will discuss three areas that are relevant to bargaining power and empowerment –
 - Asset ownership, sexual/harassment, and decision-making
 - And indices of empowerment

Women's Asset Ownership

- Assets are related to bargaining power and empowerment.
- Some data on individual level asset ownership, particularly of land financial assets, is available.
- A number of different indicators can be used. The appropriate one depends on the research question being asked.
- I will discuss a set of indicators that can be calculated at the national level (or any other aggregation) in a bit of depth, because many of the points will be relevant to discussion of other areas.

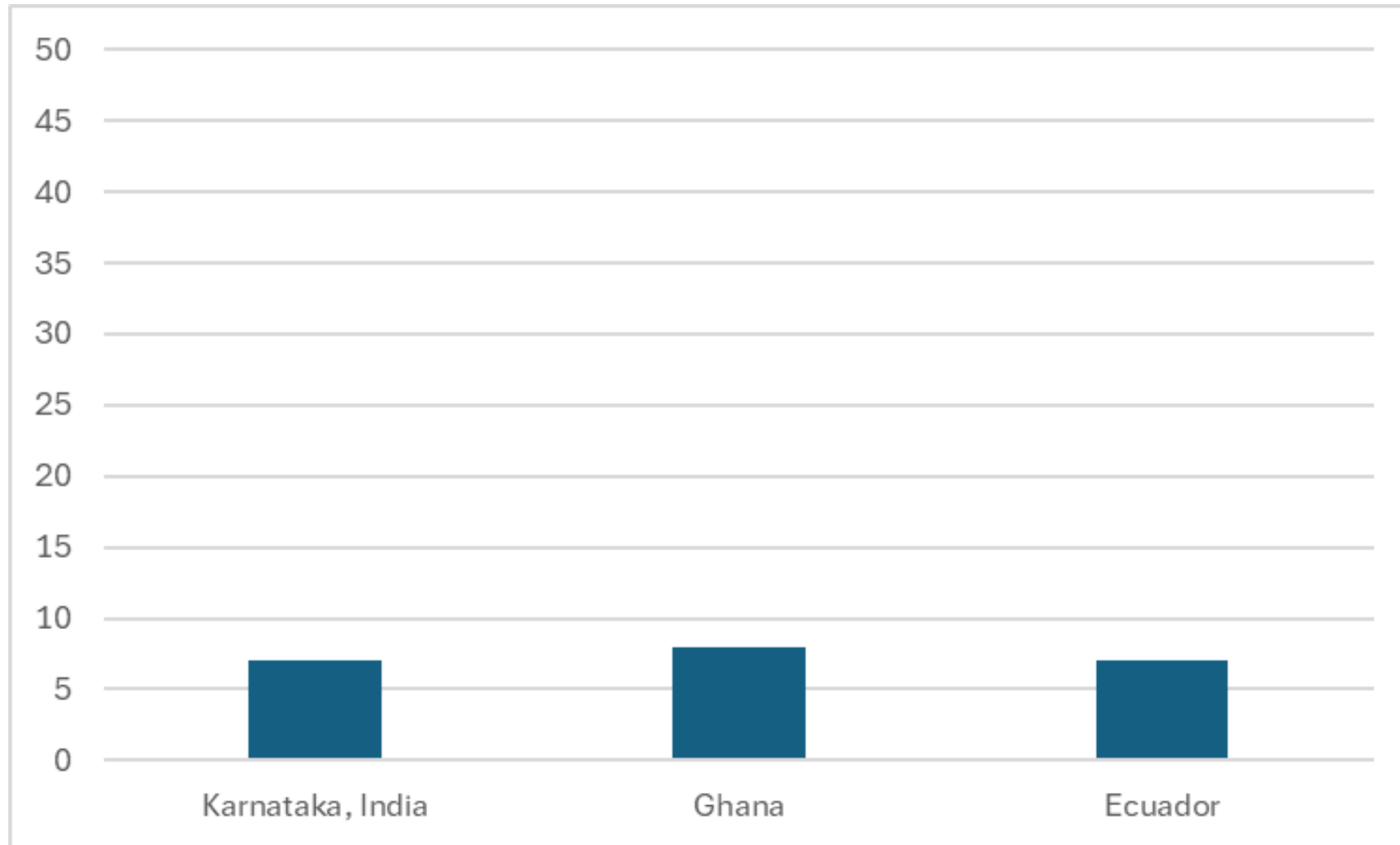
Incidence of asset ownership

$$\frac{\# \text{ of women owners}}{\text{Total \# of women}}$$

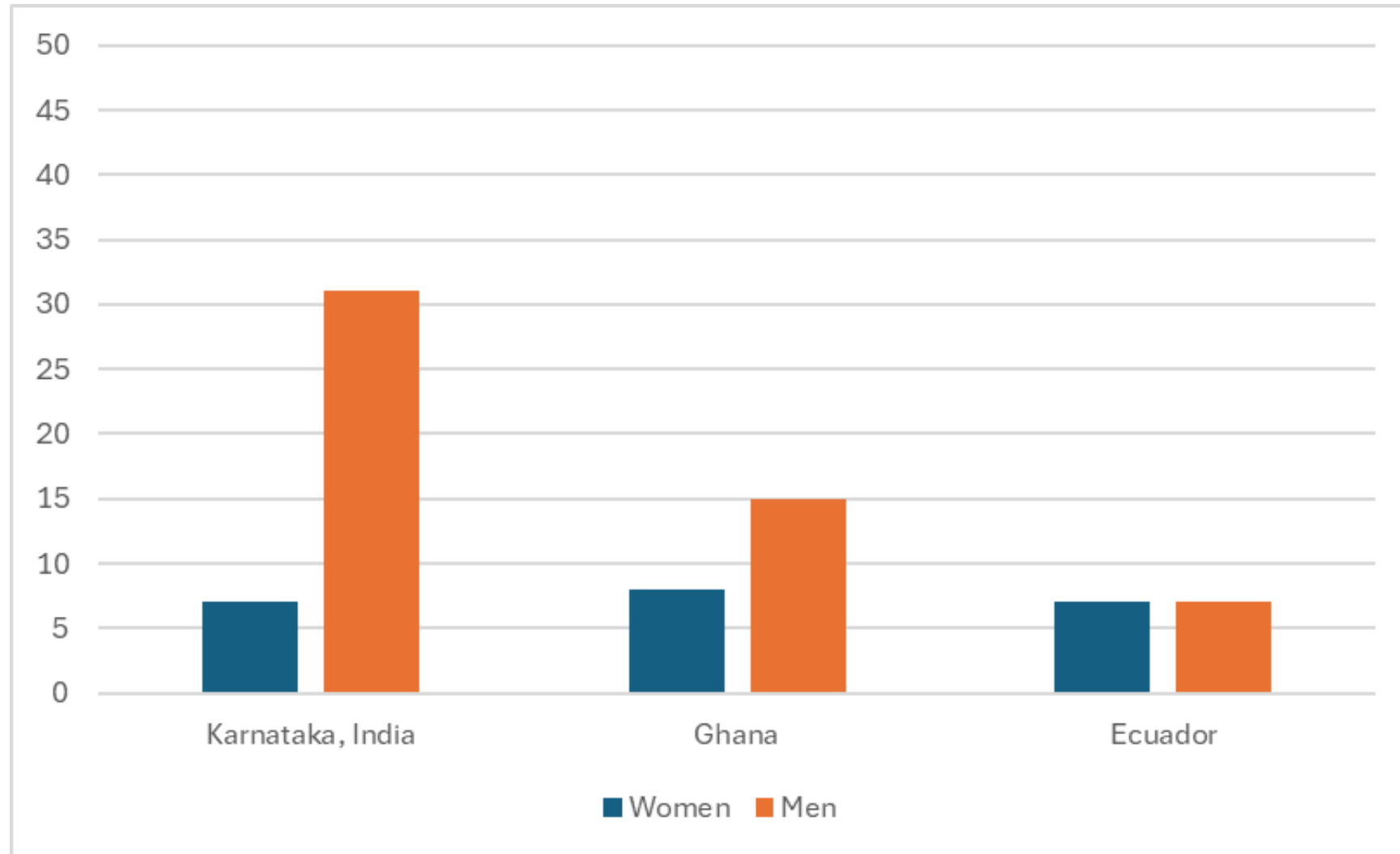
$$\frac{\# \text{ of men owners}}{\text{Total \# of men}}$$

- Identifies whether each individual man or woman is an owner (regardless of whether they own it individually or jointly).
- Doesn't tell us anything about *how much* they own.

Incidence of landownership, women



Incidence of landownership, by gender

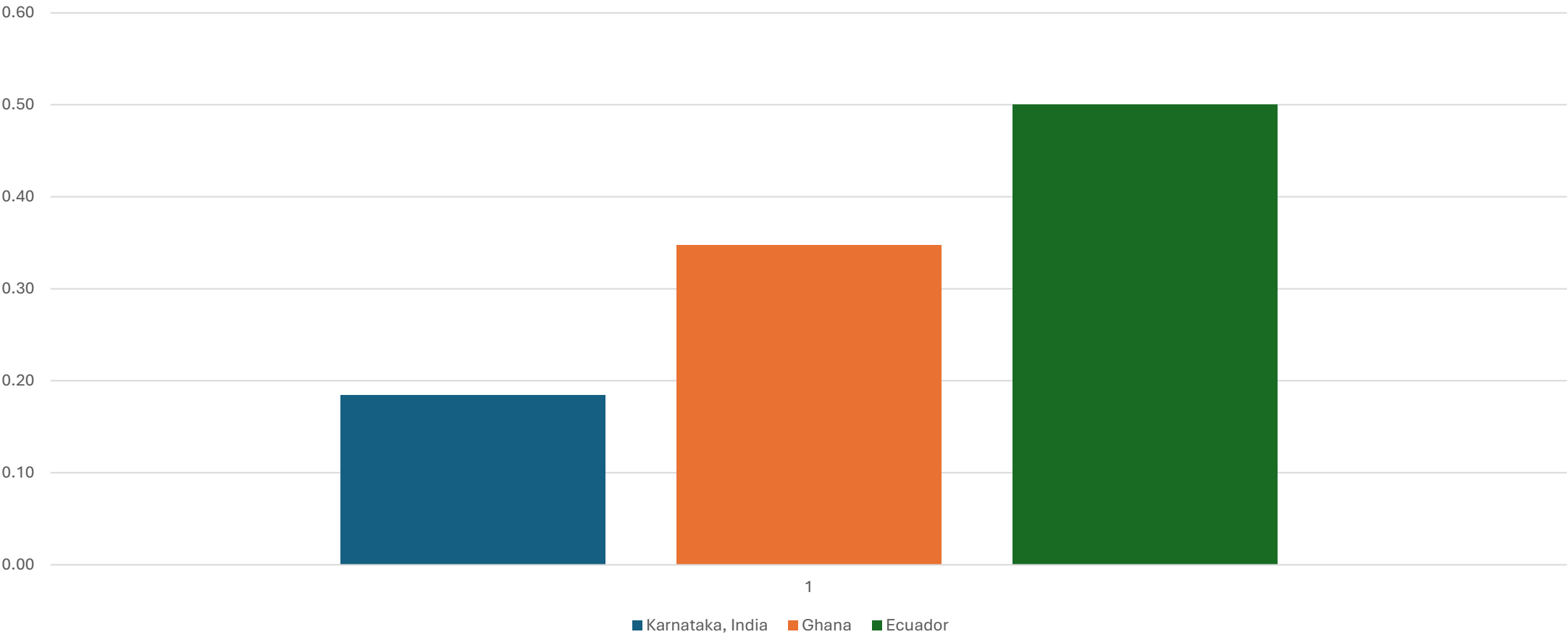


Share of asset owners who are women

$$\frac{\text{\# of women owners}}{\text{\# of men owners} + \text{\# of women owners}}$$

- Compares women's and men's ownership in one number
- Doesn't tell us anything about widespread ownership is

Share of landowners who are women



Distribution of assets, by form of ownership

$$\frac{\# \text{ of assets owned by a woman}}{\# \text{ of assets owned}}$$

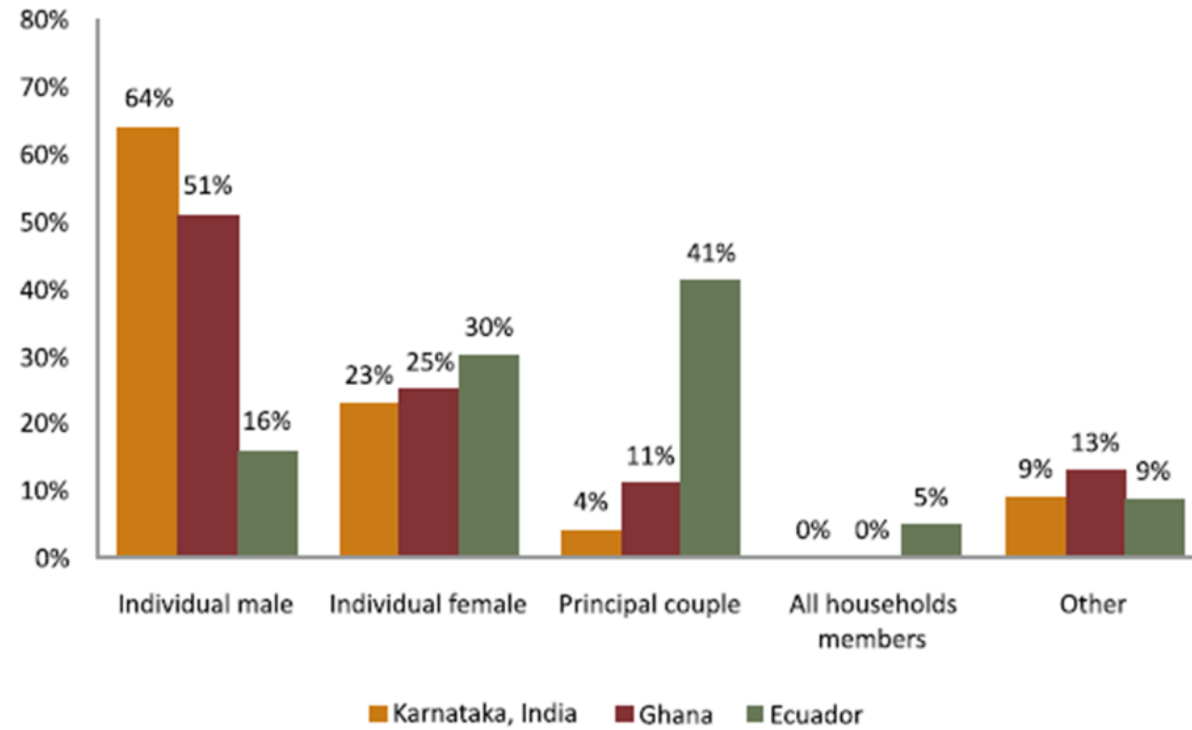
$$\frac{\# \text{ of assets owned by a man}}{\# \text{ of assets owned}}$$

$$\frac{\# \text{ of assets owned joint by couple}}{\# \text{ of assets owned}}$$

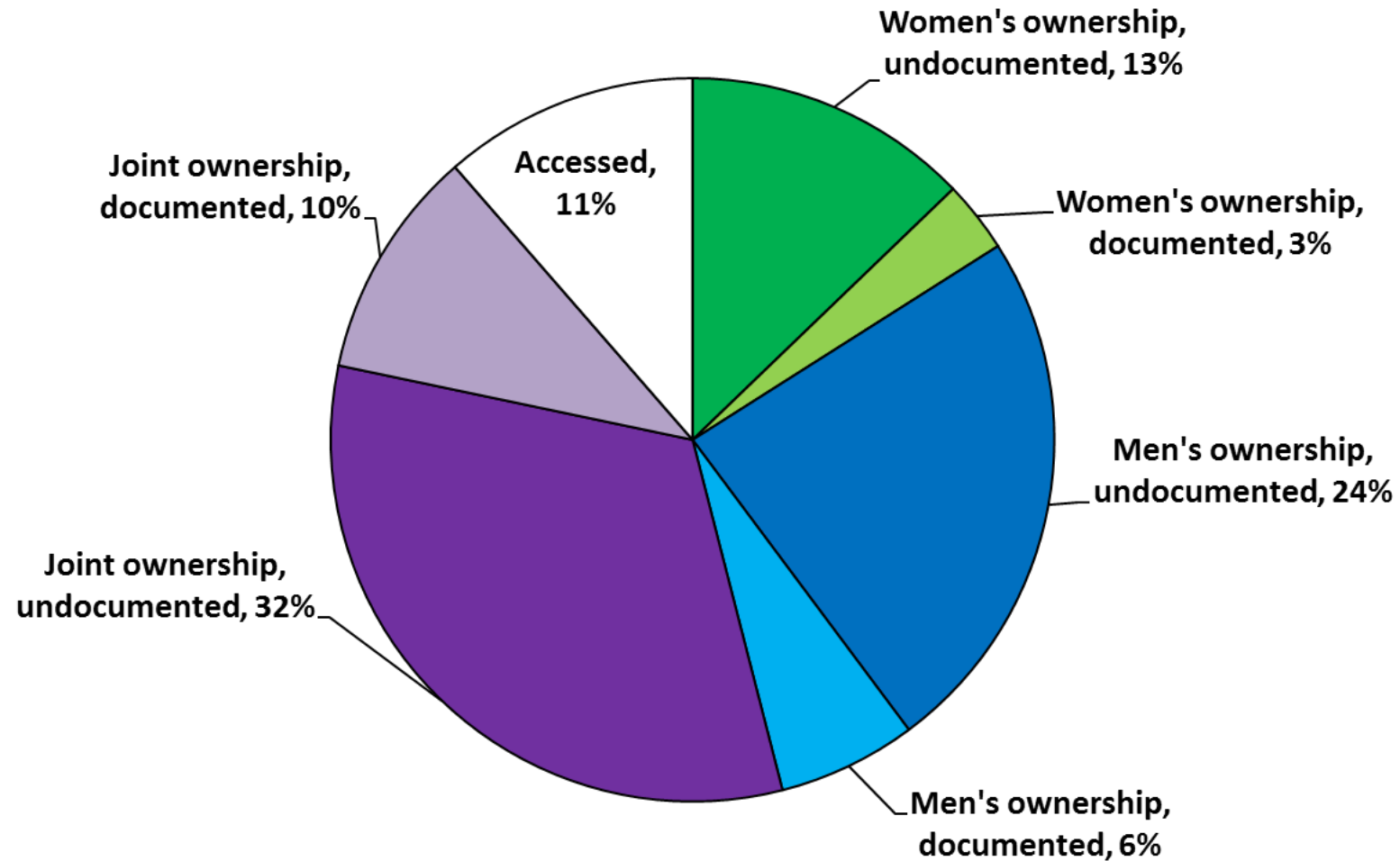
$$\frac{\# \text{ of assets owned by "other"}}{\# \text{ of assets owned}}$$

- Asset is the unit of analyses – we are looking at how the assets are owned.
- Can replace # of assets with other ways of aggregating – value, area of land, etc.
- Provides a framework for thinking about joint ownership

Distribution by Form of Ownership, Residence



LSMS-ISA Uganda: Distribution of Household Land by gender and ownership type



Take-away messages:

- It is important to consider which measure you want to use for the research question you are asking.
- Need to consider both men and women
- Be clear on what the unit of analysis is – individual or the asset/land
- For asset ownership (and for many other indicators, such as decision-making), it may be important to include a “joint” category

Sexual harassment/gender based violence

- Sexual harassment – no good standard measures across countries
 - Some data on experiences within workplace
 - Some data on experiences in public spaces
- Gender based violence (GBV): data availability
 - Intimate partner violence (IPV) – some DHS surveys have this
 - Less consistent data on more general GBV
- Experience data:
 - Reports on whether the respondent has experienced GBV or sexual harassment
 - Many ethical concerns with the collection of this data
 - Concerns about the level of accuracy of this data

Sexual harassment/gender based violence (2)

- Data on attitudes:
 - DHS has questions on whether it is acceptable for a man to beat his wife under different scenarios
 - The World Values Survey has a few different questions on attitudes
- Prevalence measures:
 - Reports of the prevalence of GBV in different contexts
 - Use of reports to police provide a very low lower bound (much is not reported)
 - List methodology is often used to estimate prevalence
 - Divide sample in half. Give group 1 a list of 4 items and ask how many they have experienced. Group 2 gets the same 4, plus GBV. The difference between the number reported in the two groups gives a measure of prevalence.

Decision-Making

- Data on women's involvement in household decision-making is often used as a proxy for women's empowerment.
- There are a number of ways that these questions are asked:
 - Who makes the decision?
 - How much input do you have?
 - Who has the final say?
- Can use response to a single question or aggregate across decisions. How to aggregate up across decisions? Weight them equally?
- What is a "good" level of decision-making? Deciding alone? Jointly? Need to consider how the answers should be used.

Women's empowerment

- There is starting to be data available that was collected specifically to measure women's empowerment and agency.
- Draws on theories from Kabeer, with data on resources, agency, and achievements.
- Or from Rowlands, who identifies four types of agency: the ability to enact personal goals (“power to”); the capacity to work together with others to achieve shared interests and goals (“power with”); the ability to internalize self-respect, self-efficacy, and to become aware of one's rights (“power within”); and controlling power (“power over”). Power over is not typically considered part of women's empowerment.

Measures of women's empowerment

- There are few consistent measures across countries and relatively little data that is nationally representative.
- Much of this data is project based and collected for use in impact evaluations.
- A new measure, the Women's Empowerment Metric for National Statistical Services ([WEMNS](#)) has been launched and national level data on it should begin to be available soon.

Women's empowerment in agriculture (WEAI)

- A family of indices that are now widely used in analyses of agricultural development.
- Initial measure, designed for population-based surveys, has been included in numerous surveys in low- and middle-income countries.
- Includes five dimensions:
 - Production: Sole or joint decision-making over food and cash-crop farming, livestock, and fisheries as well as autonomy in agricultural production
 - Resources: Ownership, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit
 - Income: Sole or joint control over income and expenditures
 - Leadership: Membership in economic or social groups and comfort in speaking in public
 - Time: Allocation of time to productive and domestic tasks and satisfaction with the available time for leisure activities

Conclusions

- There is lots of sex-disaggregated data available.
 - Some sources have panel data over time for specific countries
 - Other sources provide comparable information across countries.
- Microeconomists use this data and have written extensively
 - the strengths and weaknesses of various measures and
 - linking the data to theoretical constructs.
- Take advantage of this previous research when choosing appropriate gender variables for your analysis.

References

- Kabeer, Naila. 1999. “Resources, Agency, Achievements: Reflections on the Measurement of Women’s Empowerment.” *Development and Change* 30 (3): 435–64. <https://doi.org/10.1111/1467-7660.00125>.
- Rowlands, Jo. 1995. “Empowerment Examined (‘Empowerment’ à l’examen / Exame Do Controle Do Poder / Examinando El Apoderamiento (Empowerment)).” *Development in Practice* 5 (2): 101–7.
- Each of the data sources links to a website describing the data in more detail.
- For a discussion of the earlier literature on measuring women’s bargaining power, see:
- Doss, Cheryl. 2013. “Intrahousehold Bargaining and Resource Allocation in Developing Countries.” *The World Bank Research Observer* 28 (1): 52–78.
- Also, see the symposium in *Feminist Economics* on Measurement for Advancing Gender Equality, 2020:
- Donald, Aletheia, Gayatri Koolwal, Jeannie Annan, Kathryn Falb, and Markus Goldstein. 2020. “Measuring Women’s Agency.” *Feminist Economics* 26 (3): 200–226. <https://doi.org/10.1080/13545701.2019.1683757>.
- Doss, Cheryl, Caitlin Kieran, and Talip Kilic. 2020. “Measuring Ownership, Control, and Use of Assets.” *Feminist Economics* 26 (3): 144–68. <https://doi.org/10.1080/13545701.2019.1681591>.
- Seymour, Greg, Hazel Malapit, and Agnes Quisumbing. 2020. “Measuring Time Use in Developing Country Agriculture: Evidence from Bangladesh and Uganda.” *Feminist Economics* 26 (3): 169–99. <https://doi.org/10.1080/13545701.2020.1749867>.