

Expert Group Meeting on Population and Sustainable Development

Gender and Age Differences in Poverty: Measuring inequality within Households

Isis Gaddis

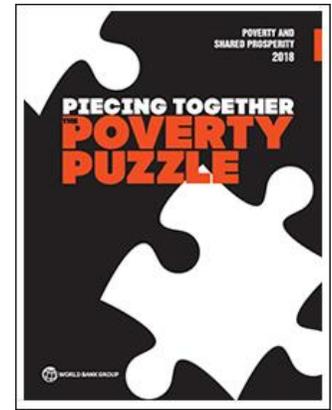
Sr. Economist, World Bank, Gender Group

July 22, 2021

A seemingly simple question ...

- How many men, women and children are poor? This seemingly straightforward question has no straightforward answer ...
- Standard practice in poverty measurement is to use household consumption per capita (or per adult equivalent)
 - “Poor individuals” are identified based on the poverty status of their households – regardless of intra-household differences among men, women and children in consumption
 - Unable to identify differences in poverty within households
 - Key problem is one of missing data: lack of cost-effective survey methods to collect individual-disaggregated consumption data at-scale, as part of household consumption and expenditure surveys
- Major shortcoming in the international poverty monitoring system
 - Concerns with the position of women and children permeate the SDGs, e.g. target 1.2 “By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty [...]” → but no satisfactory way of measuring this
 - In the absence of reliable data, ‘zombie statistics’ take hold (e.g. “70% of the world’s poor are women”) or we rely on flawed comparisons (e.g. female vs. male headed households as a proxy for men vs. women)
 - 2017 Commission on Global Poverty expressed “strong support” for initiatives to measure individual poverty

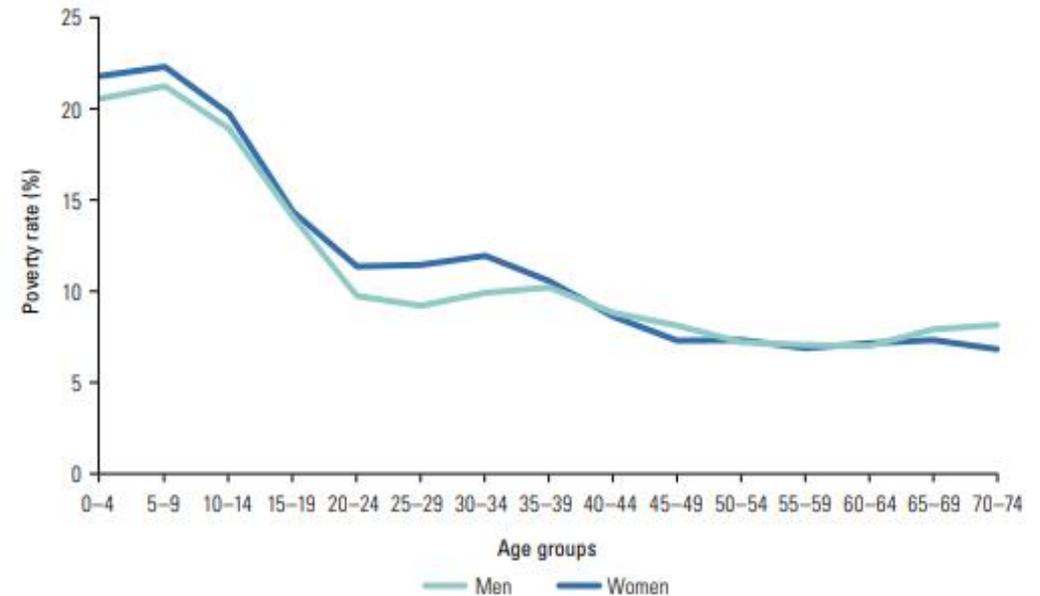
What do we know? (2018 Poverty and Shared Prosperity Report)



1. Slightly more women than men and significantly more children than adults (2x) live in poor households

- Gender differences are most prominent for women and men of peak productive and reproductive age (e.g. early 20s and up to age 34, where) women are 2 percentage points more likely than men to live in poor households)
- Adult-child poverty gap reflects the stylized fact that poor households tend to have more children

FIGURE 5.1 The Share of Women and Men Living in Poor Households, by Age Group



Source: Muñoz Boudet et al. (2018)

What do we know? (cont'd)

(2018 Poverty and Shared Prosperity Report)

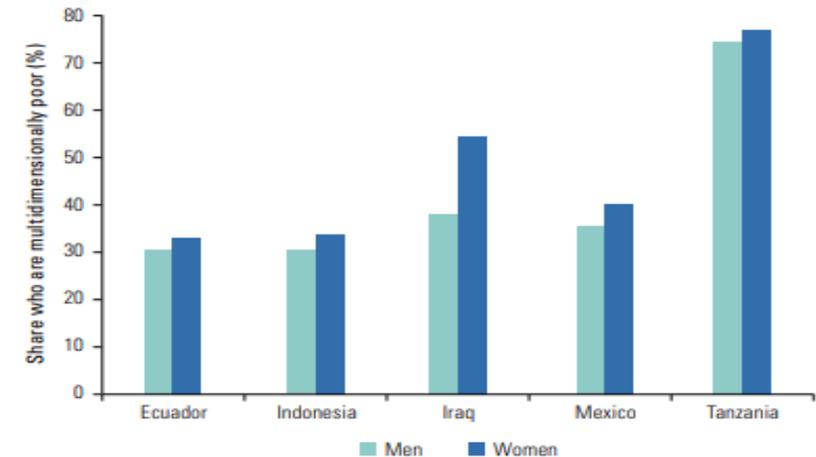
2. Gender gaps are well documented for some non-monetary dimensions of wellbeing (measured at the individual level), e.g.:

- In many developing countries, adult women are less likely to be literate than adult men (though different for younger generations, where girls often do better in school than boys!)
- Women are generally more 'time-poor' than men (due to the double burden of paid and unpaid work) and less likely to own property and other assets

→ Partially (!) individualized multi-dimensional poverty indices (MPIs) tend to show higher levels of poverty among adult women than adult men

→ Driven by gender gaps in educational attainment

FIGURE 5.10 Gender Gaps, Individual Multidimensional Poverty



Source: Klasen and Lahoti (2018)

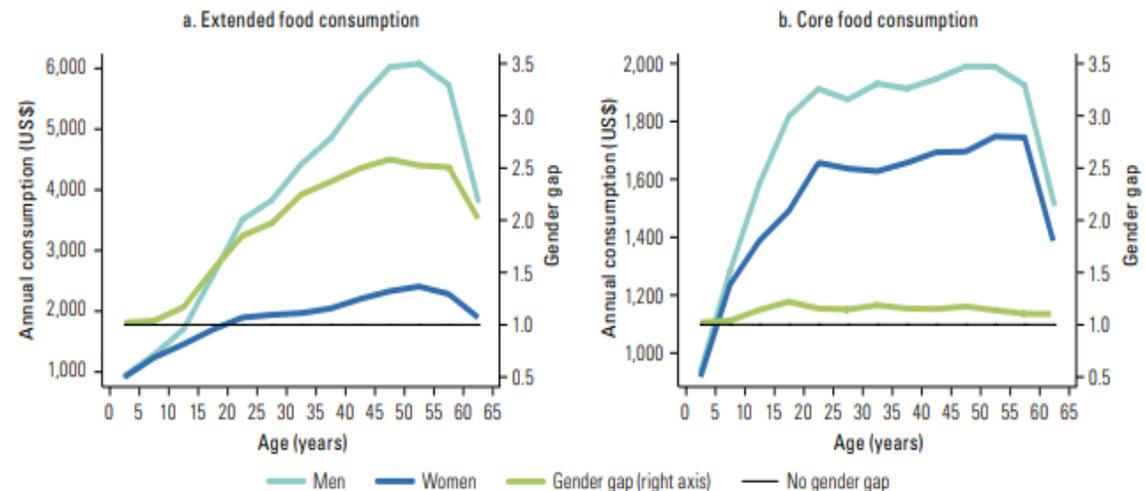
What do we know? (cont'd)

(2018 Poverty and Shared Prosperity Report)

3. Specialized studies measuring (parts of) consumption at the individual level suggest that intrahousehold differences in consumption are large and that women and children tend to be allocated a smaller share of the households' resources than men

- For example, the China Health and Nutrition Survey shows that men consume significantly more 'extended food' (which includes alcohol and tobacco) than women
- Gender gap is largely accounted for by four items—tea, coffee, alcohol, and tobacco
- But difficult to interpret because not all consumption data is collected at the individual level

FIGURE 5.5 The Gender Gap in Food Consumption over the Life Cycle, China



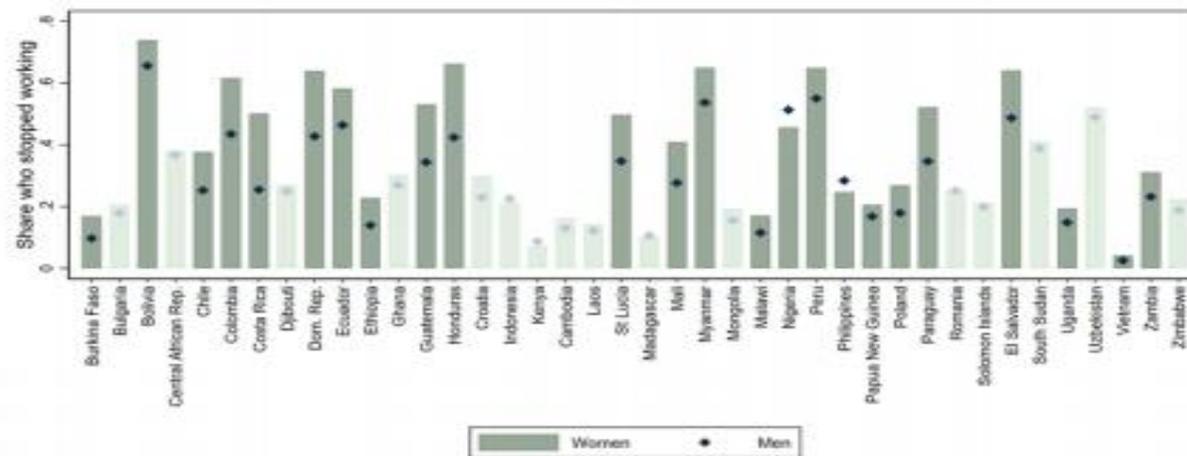
Source: Based on Santaaulàlia-Llopis and Zheng 2017 and their supplementary material.

Note: The gender gap is the ratio of male-to-female consumption, based on a regression with age dummies and time fixed effects (pooling data from 1989, 1991, 1993, 1997, 2000, 2004, 2006, and 2009).

Reasons to believe that gender gaps in poverty may have been exacerbated by the COVID-19 pandemic

While data is very limited, analysis of data from 40 (mostly developing) countries suggests that women were 8 percentage points more likely than men to stop working in the initial phase of the pandemic (between April and August 2020)

Figure A1. Gender gaps in rate of work stoppage by country



Source: Authors' calculations based on HFPS.

Notes: Dark (light) colors indicate that the difference between groups is (not) statistically significant at 5% level or less.

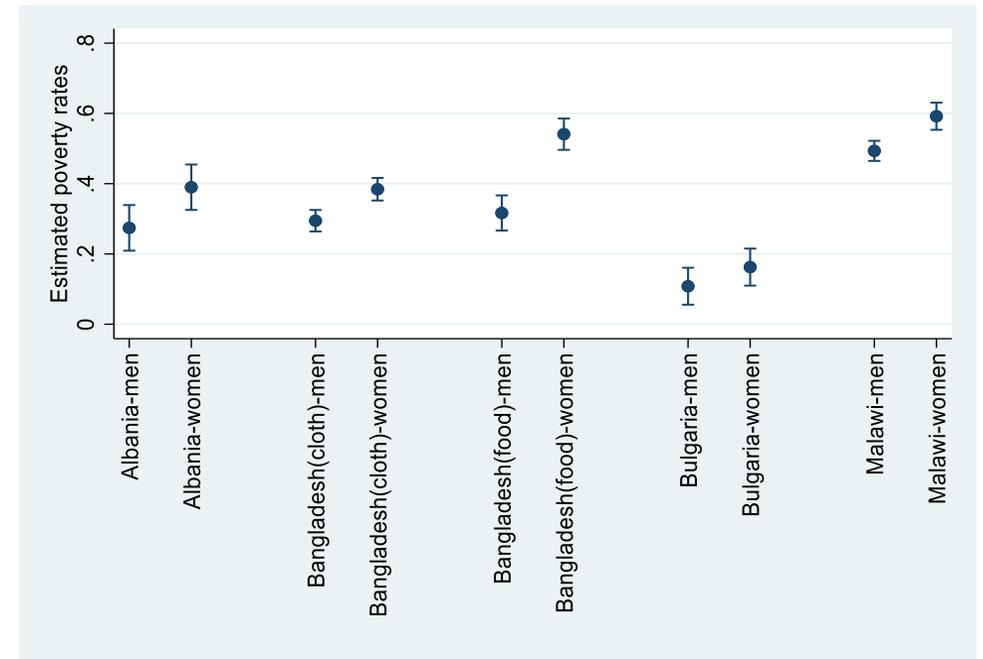
Source: Kugler et al. (2021)

A different approach: Repurposing household level consumption data to measure intrahousehold gaps

- Some good news: surging academic research and development in structural models of decision-making to derive estimated intra-household resource shares and poverty rates
 - Workhouse model by Dunbar, Lewbel and Pendakur (2013), with policy-relevant applications to India (Calvi 2020), Malawi (Penglase 2021), and Bangladesh (Brown, Calvi and Penglase 2021)
 - Modest data requirements: Existing household survey data in which at least some parts of consumption can be “assigned to individuals” (e.g. aggregate clothing expenditures for men, women and children)
- In 2018, the World Bank partnered with the Institute for Fiscal Studies to study whether these methods can be operationalized and adopted for the purpose of routine poverty measurement in developing countries
 - Funded by the Knowledge for Change Program (KCP)
- Achievements
 - Theory-consistent, linearized, easier-to-implement version of Dunbar, Lewbel and Pendakur (2013), denoted as L-DLP (Valerie, Pendakur and Wolf 2020)
 - Comes with a pre-test to verify the suitability of existing survey data for model estimation
 - Fully-documented and paired with syntax files to allow for replication elsewhere

Using the L-DLP method to estimate gender and age differences in poverty

- In a new study (Bose-Duker et al. 2021) we use this model to examine a question that would otherwise be unanswerable - how do poverty rates differ by gender and age?
- Based on data from a range of low-, lower-middle, and upper-middle income countries (Albania, Bangladesh, Bulgaria, and Malawi)
- Results show substantial intra-household inequality
- In all four countries, the standard approach of using household consumption per capita as a proxy for individual consumption underestimates poverty rates, particularly among children.
- Our results suggest further that women are poorer than men, though these gender gaps are not always statistically significant



Using the L-DLP method to estimate gender and age differences in poverty (cont'd)

- Results also support for the notion that children are poorer than adults
 - But the comparison is sensitive to how we adjust for differences in needs between adults and children
- Additional evidence of disproportionate poverty among the elderly
 - Though in Albania and Bulgaria this is driven by higher rates of poverty among elderly women
- But some open questions remain
 - In Bangladesh, we have two different assignable goods at our disposal – food and clothing – and this makes a difference to the estimated individual poverty rates, particularly for children
 - But given the structural model, the resource allocation (and therefore the poverty rates) should be the same regardless of which good is used to identify the resource allocation
- Illustrates the need for further validation – next steps:
 - The World Bank's Development Data and Gender Group are currently fundraising to conduct a randomized survey experiment that would allow comparing 'observed' resource shares (collected using a non-scalable gold standard) to estimated resource shares (using different data collection methods)
 - Objective is to provide interim guidance to minimally revise the questionnaires of LSMS-type surveys to accelerate the application of L-DLP to "standard" household survey data

References

- Bose-Duker, T., I. Gaddis, T. Kilic, V. Lechene, and K. Pendakur (2021). “Diamonds in the rough? Repurposing multi-topic surveys to estimate individual-level consumption poverty”, Policy Research Working Paper 9661, World Bank, Washington DC.
- Brown, C., R. Calvi, and J. Penglase (2021). Sharing the pie: An analysis of undernutrition and individual consumption in Bangladesh. CEPR Discussion Paper 15925, Centre for Economic Policy Research, London.
- Calvi, R. (2020). Why are older women missing in India? The age profile of bargaining power and poverty. *Journal of Political Economy* 128 (7), 2453–2501.
- Dunbar, G. R., A. Lewbel, and K. Pendakur (2013). “Children’s resources in collective households: Identification, estimation, and an application to child poverty in Malawi. *American Economic Review* 103(1), 438-71.
- Klasen, S. and R. Lahoti (2018). “An Individual-based Multi dimensional Poverty Assessment: An Application to Six Developing Countries.” Unpublished draft.
- Kugler, M., M. Viollaz, D. Duque, I. Gaddis, D. Newhouse, A. Palacios-Lopez and Michael Weber (2021), “How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?” Policy Research Working Paper 9703, World Bank, Washington, DC.
- Lechene, V., K. Pendakur and A. Wolf (2021). “OLS estimation of the intra-household distribution of consumption.” IFS Working Paper W21/19, Institute for Fiscal Studies.
- Muñoz Boudet, AM, P. Buitrago, B. Leroy de la Briere, D. Newhouse, E. Rubiano Matulevich, K. Scott, and P. Suarez-Becerra. 2018. “Gender Differences in Poverty and Household Composition through the Life-Cycle: A Global Perspective.” Policy Research Working Paper 8360, World Bank, Washington, DC.
- Penglase, J. (2021). Consumption Inequality Among Children: Evidence from Child Fostering in Malawi. *The Economic Journal* 131(634), 1000-25.
- Santaèulàlia-Llopis, R. and Y. Zheng (2017). “Why is food consumption inequality underestimated? A Story of Vices and Children.” Working paper.
- World Bank (2018). Poverty and Shared Prosperity Report 2018: Piecing Together the Poverty Puzzle, World Bank, Washington, DC.