

# POVERTY

EE 461 Sem 2/2019



# Content

- Measurement of poverty
  - Conceptual issues
  - Poverty measures
- The economics lives of the poor
  - What are characteristics of the poor?
  - Understanding the poor from the lens of behavioral economics
- Some mechanisms causing poverty
  - Credit, Insurance, etc.
  - Poverty trap

# Measurement of poverty

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Conceptual issues  
Poverty measures

“By measuring poverty, we learn which poverty reduction strategies work, and which ones do not. Poverty measurement also helps developing countries gauge program effectiveness and guide their development strategy in a rapidly changing economic environment.” World Bank

# Conceptual issues: What is a poverty line?

A poverty line is **a critical threshold** of income, consumption, or access to goods and services below which individuals are declared to be poor.

A poverty line represents a minimum level of **'acceptable'** economic participation in a given society at a given point in time.

A poverty line is an approximation to a threshold that is, in fact, a deeper and less quantifiable concept.

# Conceptual issues: Absolute or relative?

- Absolute: independent of the contours of the society under consideration
  - People need **adequate** levels of food, clothing, and shelter.
- Relative: evaluate relative to the prevailing socioeconomic standards
  - What might be considered '**adequate**' or '**acceptable levels**' ?
- Poverty lines should share some common components, but vary from country to country.
- Basic needs incorporate both relative and absolute notions.

# Conceptual issues: The length of poverty

## Temporary or chronic? (or persistent ?)

- People in a state of poverty often experience significant fluctuations in their income and consumption.
- 'Temporary poverty' occurs when people temporarily enter a poverty state because of bad economic shocks.
- 'Chronic poverty' is when they constantly stay in a poverty state for a long time.
- Policies to deal with problems are also different.
  - e.g. safety net or occupation change

# Conceptual issues: Households or individuals?

- Often income and consumption data are available at household-level
- What about individual poverty?
  - just do the average?
  - We need adult equivalence scales to convert children's consumption as a fraction of a representative adult.
  - Intrahousehold allocation: The allocation of expenditures within household are often skewed.

# Poverty measure: HC and HCR

- Individual  $i$  has income or expenditure  $y_i$ .
- **Let  $p$  be the poverty line**, and  $m$  be the mean income of the economy.

## The Headcount (HC)

$HC = \sum I_{[y_i < p]}$  , i.e. the number of individuals  $i$  such that  $y_i < p$

## The Headcount ratio (HCR)

$HCR = \frac{\sum I_{[y_i < p]}}{n}$  , i.e. Headcount as a fraction of population

# HC and HCR drawbacks

- fail to capture the extent to which individual income falls below the poverty line, i.e. fail to capture the extent of poverty
- lead to biased policy decisions toward individuals who are very close to the poverty line
- Ignore 'relative deprivation' among the poor (inequality among the poor), i.e. Some poor people are poorer than other poor people whose incomes are closer to the poverty line.

# Poverty measure: PGR and IGR

Capturing the intensity of poverty

## Poverty Gap Ratio (PGR)

- $PGR = \frac{\sum_{y_i < p} (p - y_i)}{nm}$ , i.e. the ratio of income needed to get all poor people to the poverty line, divided by the total income of the society

## Income Gap Ratio (IGR)

- $IGR = \frac{\sum_{y_i < p} (p - y_i)}{pHC}$ , i.e. total shortfall of the poor from the poverty line, but also divide the shortfall by the total income required to bring all the poor people to the poverty line if they earn no income

# PGR and IGR drawbacks

- Cannot capture relative deprivation among the poor
- Does not satisfy weak transfer principle
- Weak transfers principle: A transfer of income from any person below the poverty line to anyone less poor, while keeping the set of the poor unchanged, must raise poverty.

# Poverty measure: Foster-Greer-Thorbecke (FGT)

$$\bullet P_{\alpha} = \frac{1}{n} \sum_{y_i < p} \left( \frac{p - y_i}{p} \right)^{\alpha}$$

- $P_0$  is Head Count Ratio

- $P_1 = \frac{1}{n} \sum_{y_i < p} \left( \frac{p - y_i}{p} \right)$  , A version of poverty gap

- $P_2 = \frac{1}{n} \sum_{y_i < p} \left( \frac{p - y_i}{p} \right)^2$  , Larger poverty gap receives greater weight

# Poverty lines in practice

- World Bank's extreme poverty line is cited as "**the International Poverty Line (IPL)**", and expressed in each country in terms of its local currency. The IPL is at \$1.90 a day in 2011 PPPs.
- **LMICs line** is US\$3.20 per person per day expressed in 2011 PPP U.S. dollars, **UMICs line** is at. US\$5.50.

**TABLE 3.1 National Poverty Lines, circa 2011**

Economy, Income classification	Median	Mean
Low income	1.90	2.20
Lower-middle income	3.20	3.90
Upper-middle income	5.50	5.60
High income	21.70	21.20

Source: Jolliffe and Prydz 2016.

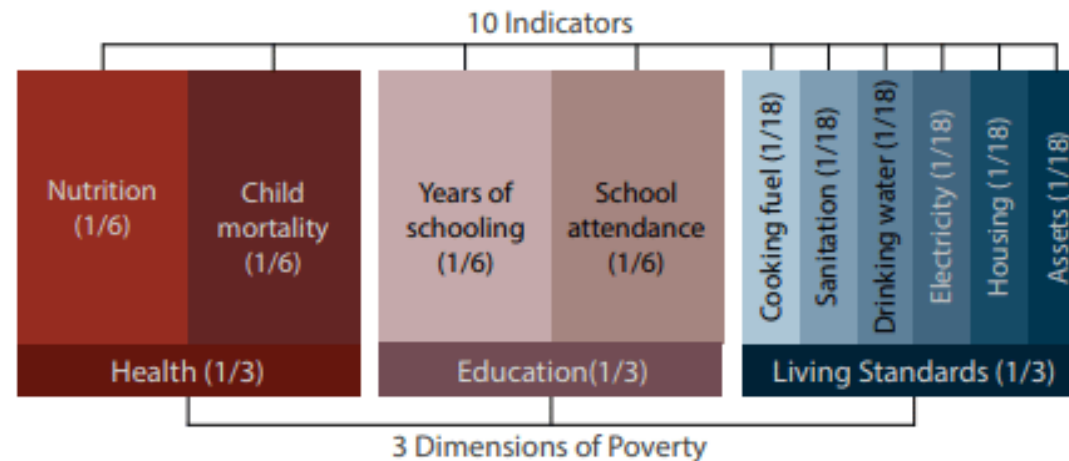
Note: Values are rounded to nearest 0.10. Economies are classified on the basis of official World Bank income classifications, which rely on measures of per capita gross national income. Estimates are based on national poverty lines in 126 economies. The selected poverty line for each economy is the one that is closest in time to 2011.

# Poverty lines in practice

- For many countries, the social relevance of the IPL has lessened over time as their economies have grown.
- World Bank's **Societal poverty line** is based on a poverty line that is adjusted for the median level of wellbeing in each country.
- The new measure considers that individuals are suffering from societal poverty if they are living on less than US\$1.00 a day plus half of the value of median consumption (or income) per day in that country. If US\$1.00 plus half the median consumption is less than the IPL, then the SPL is equal to the IPL. In many countries, this value is greater than US\$1.90, and this greater value then becomes the SPL.

# Poverty lines in practice

- UNDP and the Oxford Poverty and Human Development Initiative (OPHI)'s **Global Multidimensional Poverty Index(MPI)**



DIMENSIONS OF POVERTY	INDICATOR	DEPRIVED IF LIVING IN THE HOUSEHOLD WHERE...	WEIGHT
<b>Health</b>	Nutrition	An adult under 70 years of age or a child is undernourished.	1/6
	Child mortality	Any child under the age of 18 years has died in the five years preceding the survey.	1/6
<b>Education</b>	Years of schooling	No household member aged 10 years or older has completed six years of schooling.	1/6
	School attendance	Any school-aged child is not attending school up to the age at which he/she would complete class 8.	1/6
<b>Standard of living</b>	Cooking fuel	The household cooks with dung, wood, charcoal or coal.	1/18
	Sanitation	The household's sanitation facility is not improved (according to SDG guidelines) or it is improved but shared with other households.	1/18
	Drinking water	The household does not have access to improved drinking water (according to SDG guidelines) or safe drinking water is at least a 30-minute walk from home, round trip.	1/18
	Electricity	The household has no electricity.	1/18
	Housing	Housing materials for at least one of roof, walls and floor are inadequate: the floor is of natural materials and/or the roof and/or walls are of natural or rudimentary materials.	1/18
	Assets	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck.	1/18

# To further explore the topics:

- <https://www.worldbank.org/en/news/video/2018/10/17/new-ways-of-looking-at-poverty>
- <https://www.worldbank.org/en/topic/measuringpoverty>
- <http://povertydata.worldbank.org/>
- <http://iresearch.worldbank.org/PovcalNet/home.aspx>
- <https://ophi.org.uk/multidimensional-poverty-index/>
- <https://ophi.org.uk/multidimensional-poverty-index/mpicountry-briefings/>

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