

# Poverty

Lecture 3/1

EE461 – 2/2017

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# Outline

- Poverty: conceptual issues
- Poverty measures
- The lives of the poor: characteristics and behaviors
  - Are they rational?

# Poverty: conceptual issues

- A poverty line: a critical threshold of income, consumption, or access to goods and services below which individuals are declared to be poor.
  - A minimum level of ‘acceptable’ economic participation in a given society at a given point in time.

## Concerns on poverty measurement:

- Overall expenditure or item-by-item consumption?
  - Look at actual, observed consumption basket or expenditure (overall income) falls below the minimum required/threshold?
  - Income elasticities may be high, but nutrient elasticities may not be correspondingly high.
  - Income represents the capacity to consume, not consumption

# Concerns on poverty measurement

- Absolute or relative?
  - Absolute: independent of the contours of the society under consideration
  - Relative: evaluate relative to the prevailing socioeconomic standards
  - Poverty lines should share some common components, but vary from country to country
- Temporary or chronic?
  - 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.

# Concerns on poverty measurement

- Households or individuals?
  - Often income and consumption data are available at household-level
  - Individuals: just do average?, but need adult equivalence scales to convert children's consumption as a fraction of a representative adult
  - What's about allocation of expenditures within the household? >> intra-household allocation
- Why a poverty line, anyway?
  - keep in mind: poverty is not a 'zero-one' concept (poor vs. non-poor)

# Poverty measures

- Poverty line, general definition: an expenditure threshold that is regarded as minimally necessary for 'adequate' participation in economic life. People below this threshold will be said to be poor.
- $y$  – income/expenditure
- subscripts  $i, j$  – individuals
- $p$  – poverty line
- $m$  – mean income of the economy
  
- 'relative incidence': compared to the total population of the country or region under consideration
  
- <http://www.worldbank.org/en/topic/measuringpoverty>

# Poverty measures

- **Head-count ratio**
  - Head-count (HC): the number of individuals  $i$  such that  $y_i < p$
  - Head-count ratio (HCR):  $HCR = HC/n$ 
    - n is the total population
  - Measure incidence of poverty
  - Comments: fail to capture the extent to which individual income falls below the poverty line, 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)

# Poverty measures

- Poverty gap ratio (PGR)

$$\text{PGR} = [\sum_{y_i < p} (p - y_i)] / nm$$

- The ratio of the average of income needed to get all poor people to the poverty line, divided by the mean income of the society
- a measure of resources required to eradicate the poverty
- What if an economy is highly unequal but overall wealthy with a large number of poor people?

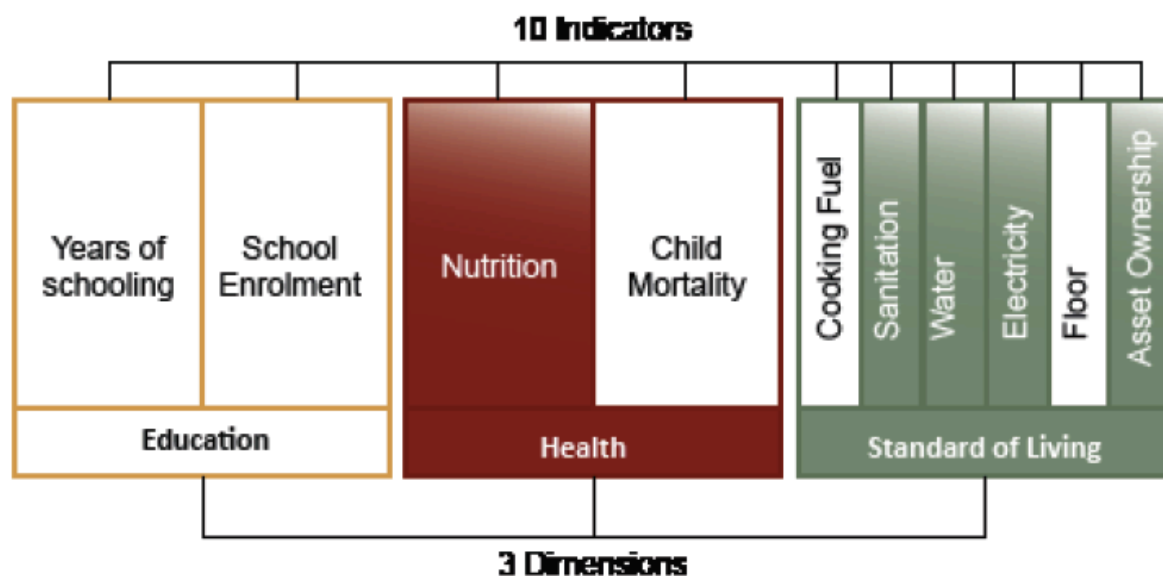
- Income gap ratio (IGR)

$$\text{IGR} = [\sum_{y_i < p} (p - y_i)] / pHC$$

- 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
  - Capture the acuteness of poverty
- PGR & IGR capture 'depth' or 'per capita intensity' of poverty

# Other poverty measures

- **FGT<sub>2</sub> index (Squared poverty gap)**
  - FGT: Forster-Greer-Thorbecke
  - $FGT_2 = [\sum_{y_i < p} (p - y_i) / p]^2 / n$
  - Takes into account inequality among the poor: a weighted sum of poverty gaps, putting more weight on observations that fall far below the poverty line
- **Sen Index, Sen-Shorrocks-Thon Index, Watts Index**
- **Multidimensional Poverty Index (MPI)**



<http://www.ophi.org.uk/multidimensional-poverty-index/mpi-2015/>

**Table 1: The dimensions, indicators, deprivation cutoffs and weights of the global MPI**

<b>Dimensions of poverty</b>	<b>Indicator</b>	<b>Deprived if...</b>	<b>Weight</b>
Education	Years of Schooling	No household member aged 10 years or older has completed five years of schooling.	1/6
	Child School Attendance	Any school-aged child <sup>+</sup> is not attending school up to the age at which he/she would complete class 8.	1/6
Health	Child Mortality	Any child has died in the family in the five-year period preceding the survey	1/6
	Nutrition	Any adult under 70 years of age, or any child for whom there is nutritional information is undernourished in terms of weight for age*.	1/6
Living Standard	Electricity	The household has no electricity.	1/18
	Improved Sanitation	The household's sanitation facility is not improved (according to MDG guidelines), or it is improved but shared with other households**.	1/18
	Improved Drinking Water	The household does not have access to improved drinking water (according to MDG guidelines) or safe drinking water is at least a 30-minute walk from home, roundtrip***.	1/18
	Flooring	The household has a dirt, sand, dung or 'other' (unspecified) type of floor.	1/18
	Cooking Fuel	The household cooks with dung, wood or charcoal.	1/18
	Assets ownership	The household does not own more than one radio, TV, telephone, bicycle, motorbike or refrigerator and does not own a car or truck.	1/18