ECON 261

Poverty dynamics

Bane and Ellwood (1984, JHR)

- Previous methods: computing the proportion of people who were poor over a fixed period of time.
- Example, how many people were poor ten out of ten years, or five out of ten.
- See handout
- Problem, with a fixed period, complete spells cannot be found.
- Consider the case where all spells last 10 years. Then only those who fell into poverty at the beginning of the study are observed fully.
- You will conclude than only a fraction of the real number of people experienced "persistent poverty".

- Bane and Ellwood: compute spells of poverty. Measure a spell from the time a household's consumption fall below the poverty line until it exits.
- Stevens (1996?, JHR): allow for multiple spells.

Jalan and Ravallion (2000, JDS)

Definitions

- Let $y_{i,d}$ be the welfare metric (consumption) for household $i \in \{1, \ldots, N\}$ in period $d \in \{1, \ldots, D\}$.
- Consumption is measured net of demographic and prices.
- Let $P(y_{i1}, \ldots, y_{iD})$ is the aggregate inter-temporal poverty measure for household i.
- Transient poverty (T_i) is the component of $P(\cdot)$ attributable to the inter-temporal variability in consumption.
- $T_i = P(y_{i1}, \ldots, y_{iD}) - P(\bar{y}_i, \ldots, \bar{y}_i)$
- $\bar{y}_i$ is the expected value of consumption over time("time-mean consumption") for household i.

- Chronic poverty is the the poverty at time mean consumption for all dates: $C_i = P(\bar{y}_i, \ldots, \bar{y}_i)$
- Hence, total poverty is decomposed into transient and non-transient (chronic) components.
- If at time=d, a household is poor it can belong to 3 mutually exclusive groups:
  - Persistently poor: poor at all dates. Poor due to chronic reasons or die to consumption variability.
  - Chronically poor, but not poor all the time.
  - Only transient poor.

Results

Jalan & Ravallion (2000, JDS)

TABLE 1

DECOMPOSITION OF OBSERVED POVERTY INTO TRANSIENT AND CHRONIC COMPONENTS

Province	Observed poverty	Chronic poverty component	Transient poverty component	% of total poverty which is transient
Guangdong	0.14194	0.02241	0.11953	84.21
Guangxi	1.78789	0.77543	1.01246	56.63
Guizhou	2.85365	1.63217	1.22148	42.80
Yunnan	1.15714	0.59045	0.56669	48.97
Total	1.42790	0.72272	0.70518	49.39

Notes: The poverty measures are the squared poverty gap measures for the province specific upper poverty line as described in Chen and Ravallion [*1996*].

TABLE 2

COUNTING THE NUMBERS OF CHRONICALLY AND TRANSIENTLY POOR
(PERCENTAGES OF SAMPLE)

	Chronically poor, of which:				
	Persistently poor (poor at all dates)	Not persistently poor (mean consumption below the poverty line, but not poor at all dates)	Transiently poor only (mean consumption above the poverty line, but sometimes poor)	Never-poor	Total
Full sample	6.21	14.38	3.38	46.03	100.00
Guangdong	0.40	1.04	18.31	80.25	100.00
Guangxi	7.12	16.07	37.38	39.43	100.00
Guizhou	11.90	21.20	40.17	26.73	100.00
Yunnan	4.88	18.04	35.55	41.53	100.00
		50% higher poverty line			
Full sample	39.56	30.46	20.15	9.84	100.00
Guangdong	8.75	25.56	34.23	31.46	100.00
Guangxi	50.49	30.38	15.52	3.61	100.00
Guizhou	53.44	32.29	12.54	1.64	100.00
Yunnan	40.24	33.34	20.58	5.84	100.00

Note: The table gives the percentages of people in each category.

Jalan & Ravallion (2000, JDS)

Econometric methods

- Do households/region characteristics the same for both poverty components?
- Let $T_i = T_i^*$ if $T_i^* = \beta' x_i + u_i > 0$ and $T_i = 0$ otherwise.
- where T_i is transient poverty and x is a vector of household/region characteristics.
- An analogous model ca be created for chronic poverty C_i.
- Results (see handout.)

Carter and Barret (2006, JDS)

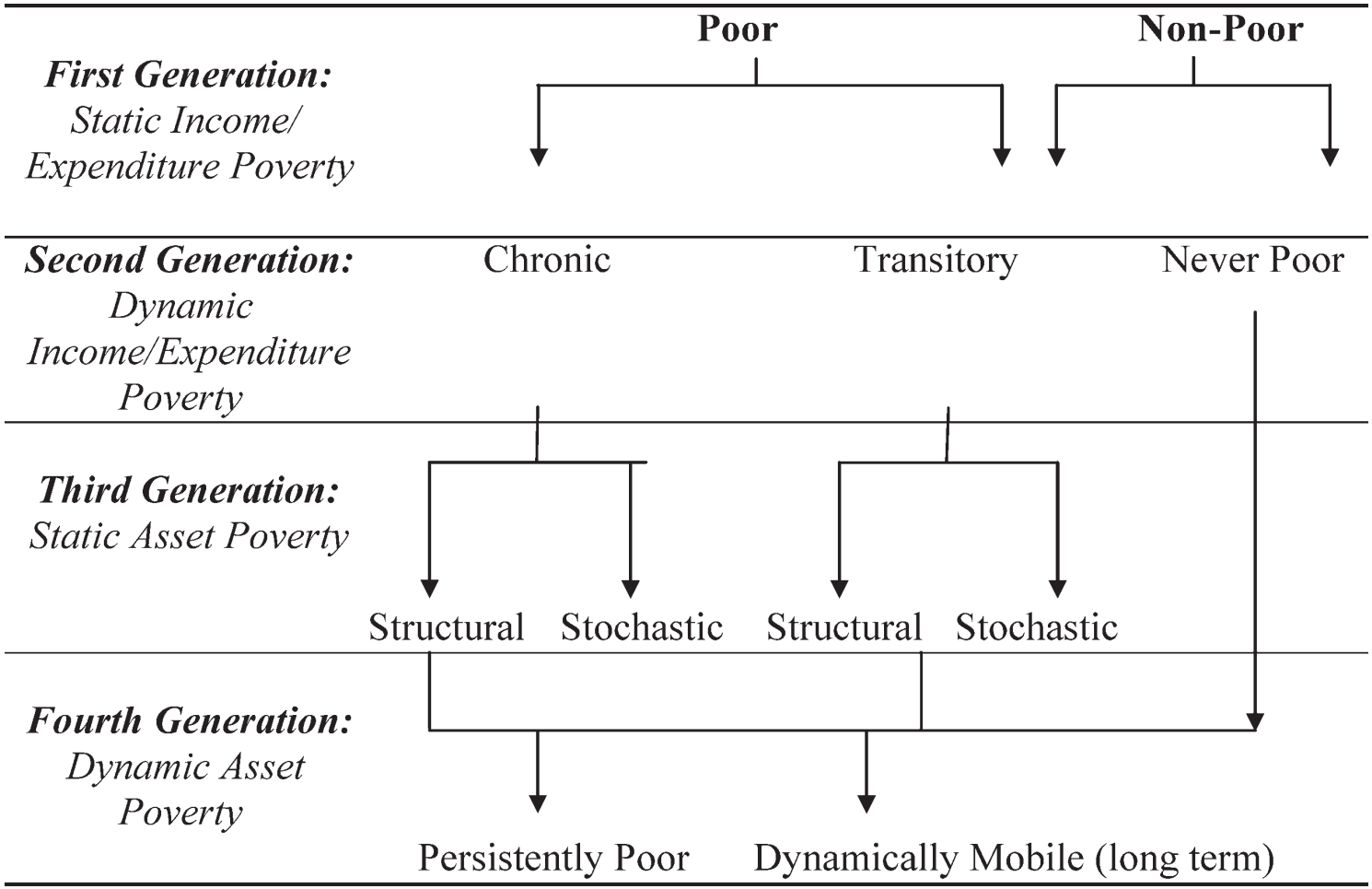

Figure 1. Alternative approaches to poverty measurement

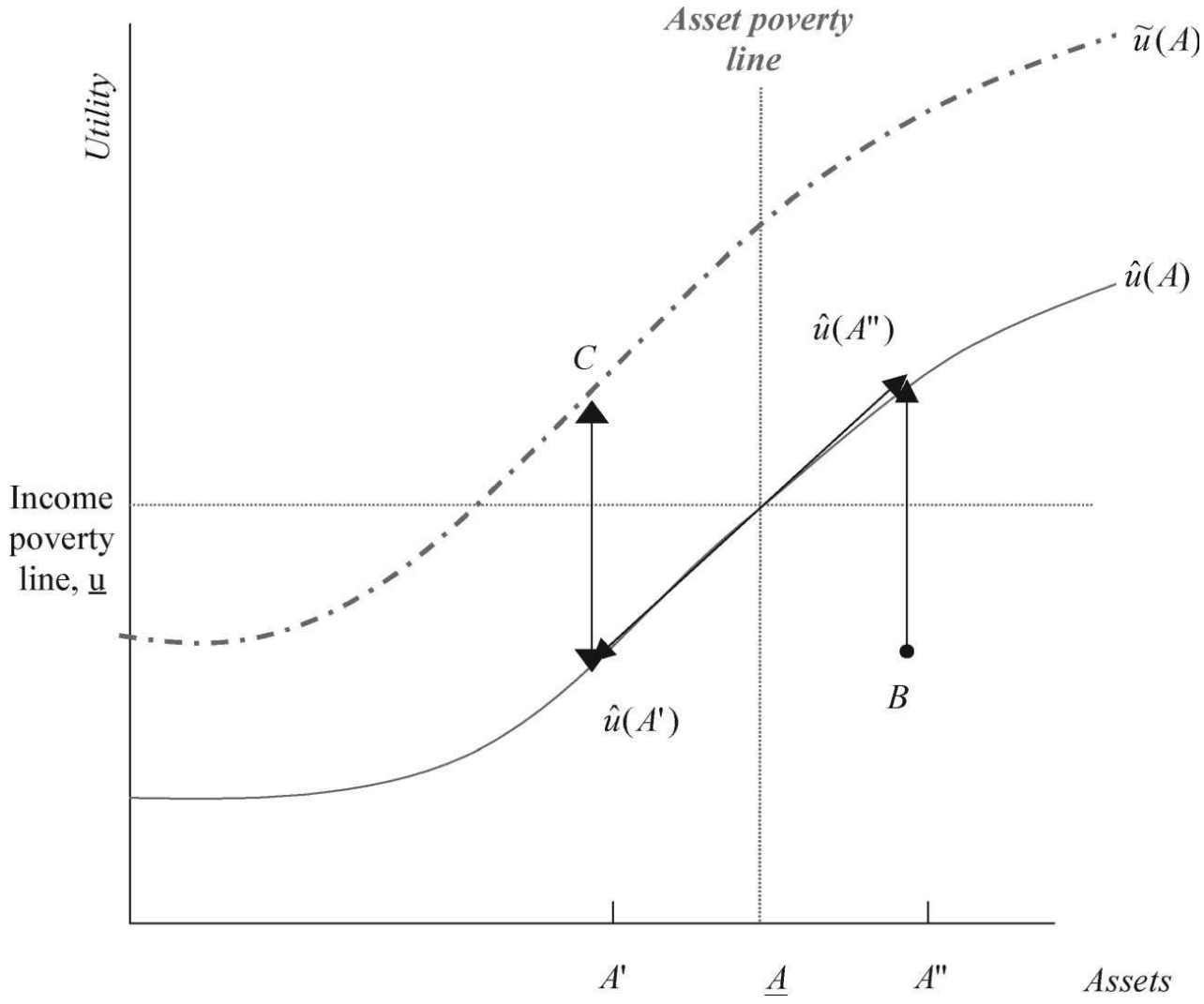

Figure 2. Single period income and asset poverty lines