

Development Economics

Development Microeconomics

(by) Bardhan and Udry

Chapters 10 & 11

Human capital

- Dimensions
 - Nutrition and health
 - Formal education
 - On-the-job training
- Issues
 - Positive externality
 - Two-way causality of income and human capital
- Policy implications
 - Poverty trap
 - Income distribution

Income and human capital [1]

- Nutrition
 - Evidence
 - » Income elasticity of demand for calories is high (but less than 1) for poorer household, and almost zero for rich households
 - Problems
 - » Two-way causality
 - » Impact of income changes on quality, as opposed to quantity
 - » Self-consumption, especially by poor households
 - » Unobserved private transfers

- Education
 - Higher returns on education in developing countries than in developed countries

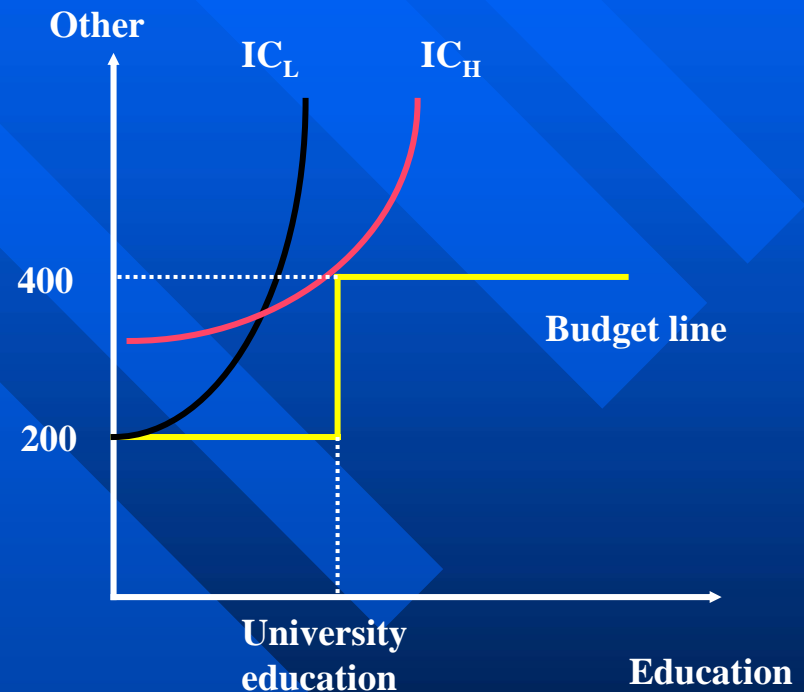
Income and human capital [2]

- Human capital

- Persistence in distribution of income and wealth over time, both within and across countries
 - » Impact of capital market imperfections
- Increasing returns on human capital
 - » Implications for convergence of human capital
 - » Testable hypothesis and the Mincer equation

Investment in human capital

- Information asymmetry in job market
 - $P(\text{good}) = 0.50$; $P(\text{bad}) = 0.50$
 - Salary of good = £400; Salary of bad = £200
 - Pooling equilibrium
 - Result: Low investment in education
- Signalling through education
 - Separating equilibrium



Income inequality [1]

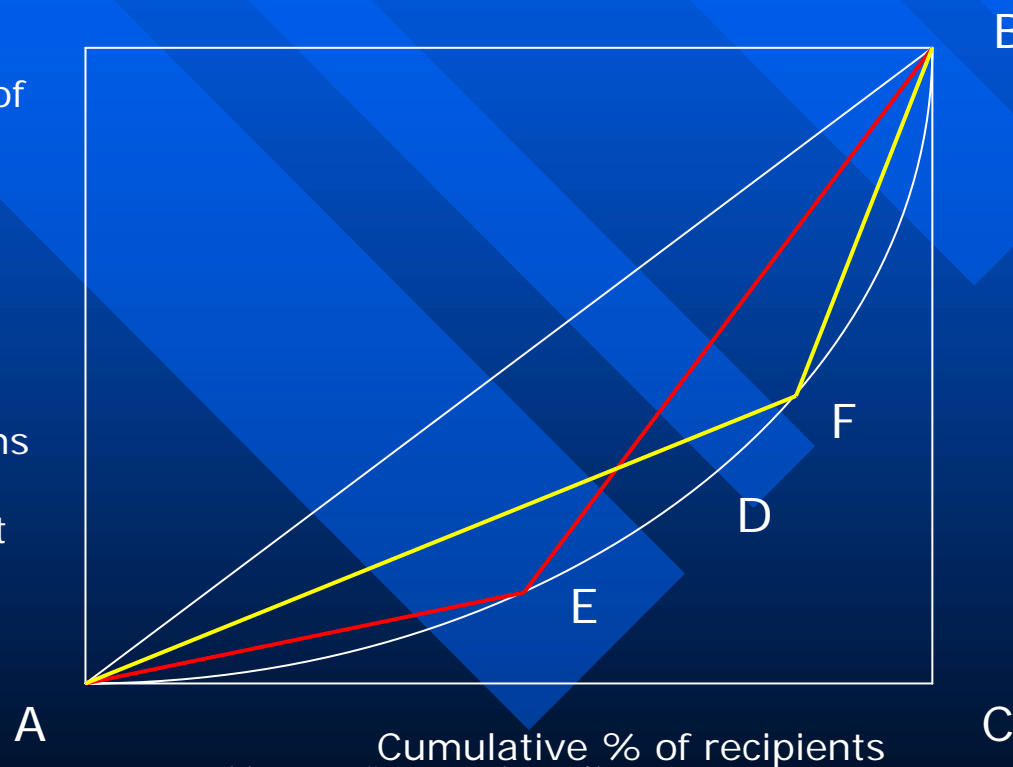
- Lorenz curve
- Gini coefficient

Cumulative % of
income

$$\text{Gini} = \text{ABD}/\text{ABC}$$

Lorenz crossing:

Two income distributions
with same Gini may
represent very different
distributions.



Income inequality [2]

■ Alternative measures

– Range

$$\gg R = (1/\mu)(y_{\max} - y_{\min})$$

– Kuznet's ratio

» Ratio of income/wealth of bottom $x\%$ of the population to that of the top $x\%$ of the population.

– Mean absolute deviation

$$\gg M = \frac{1}{\mu n} \sum_{i=j}^m n_j |y_j - \mu|$$

– Coefficient of variation

Poverty measurement [1]

- Absolute or relative poverty?
- Poverty line
 - Based on calorie requirements per capita per day
- Problems
 - Redistribution among the poor
 - » Poverty gap ratio
 - » Income gap ratio
 - Mortality among the poor

Poverty measurement [2]

- Poverty gap measurement
 - Ratio of average income needed to take all poor people to the poverty line to the mean income of the society
 - » Measure of resources needed to eradicate poverty
- Income gap measurement
 - Ratio of average income needed to take all poor people to the poverty line to the total income required to bring every poor person to the poverty line
 - » Measure of acuteness of poverty

Poverty measurement [3]

- Anonymity
 - Extent of poverty does not depend on the identity of the poor person
- Population independence
 - Extent of poverty does not depend on the size of the population
- Monotonicity
 - If income is added to one person below the poverty line, *ceteris paribus*, poverty should be no greater than before
- Distributional sensitivity
 - If income is transferred from a poorer person to a richer person, the economy will be deemed strictly poorer

Poverty measurement [4]

■ Foster-Greer-Thorbecke measure

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^H \left(\frac{Y_p - Y_i}{Y_p} \right)^{\alpha}$$

- $\alpha = 0 \Rightarrow P_{\alpha} = \text{Head count ratio}$
- $\alpha = 1 \Rightarrow P_{\alpha} = \text{Normalised poverty gap ratio}$
- $\alpha = 2 \Rightarrow P_{\alpha} = \text{Measure used by World Bank}$

Poverty alleviation [1]

- Stylised policy
 - Tax-transfer policies with significant leakages
 - Affirmative action in employment
 - Trickle down

- Modern approach
 - Sustainable earnings capability
 - » Education and training
 - » Access to credit
 - » Tenancy reforms
 - » Elimination of price controls in factor markets
 - » Elimination of barriers to international trade

Poverty alleviation [2]

■ Problems

- Transactions costs of policy implementation
- Migration and its impact on policy targeting
- Appropriation of subsidies etc by better off sections of the targeted groups
- Disincentives for skill acquisitions
 - » Reinforcement of stereotypes about low productivity of targeted groups

■ Political coalitions

Targeting poverty [1]

■ Individuals

- Number: n
- Type: high (H) and low (L)
- Distribution: γ of high type and $(1 - \gamma)$ of low type
- Income generating ability: a_H and a_L , $a_H > a_L$
- Wages: a_H and a_L
- Utility: $y - d(e)$
 - » $e \equiv$ effort, $d(e)$ increasing and strictly convex

■ Government

- Programme: benefit package $\{b_i, c_i\}$
 - » $b_i \equiv$ benefit for type i , $c_i \equiv$ cost of delivering benefits
- Objective: $\text{Min } n[\gamma b_H + (1 - \gamma)b_L]$
 - » Constraint: each individual receives at least z .

Targeting poverty [2]

■ Problem

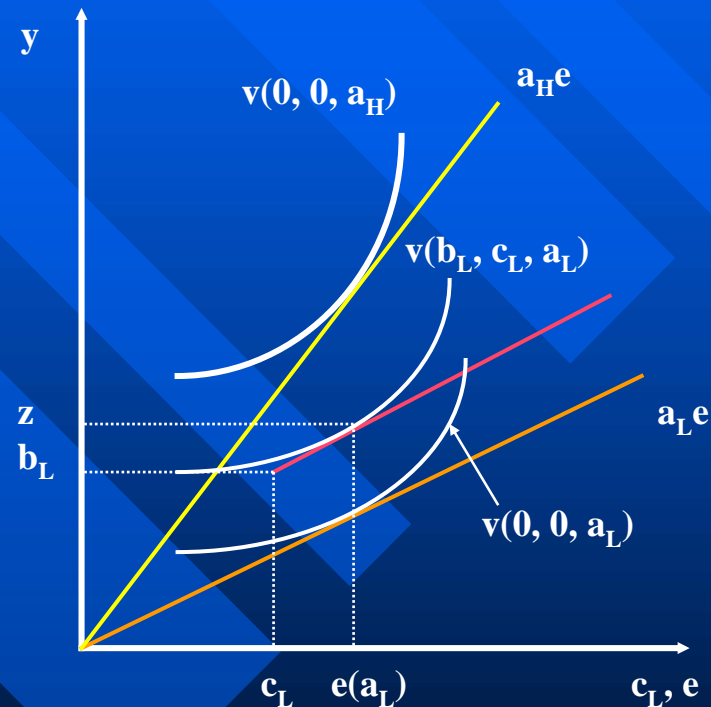
- High type individuals may masquerade as low type to get access to the benefits

■ Solution

- Mandate working in a public sector project to have access to the benefits

■ Trade off

- Less private sector participation by low type people



Targeting poverty [3]

- Other applications
 - Distribution of coarse food grains
 - » Food stamps preferable to collection and distribution of such grains by the government
 - Basic health care and primary education

- Devolution of political power
 - Better targeting and monitoring
 - Greater possibility of collusion among corrupt politicians and bureaucrats