EE441 Economics of Public Expenditure

12. Income Redistribution: Conceptual Issues

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Topic 12 Outline

- Distribution of Income
  - Interpreting the distributional data
- Rationale for Income Redistribution
  - Simple Utilitarianism
  - The Maximin Criterion
  - Pareto Efficient Income Redistribution
  - Nonindividualistic Views
  - Other Considerations
- Expenditure Incidence
  - Relative Price Effects
  - Public Goods
  - Valuing In-Kind Transfers
  - Reasons for In-Kind Transfers
- Conclusion

The Distribution of Money Income Among Households

Percentage Share						
Year	Lowest Fifth	Second Fifth	Middle Fifth	Fourth Fifth	Highest Fifth	Top5 Percent
1967	4.0	10.8	17.3	24.2	43.6	17.2
1977	4.2	10.2	16.9	24.7	44.0	16.8
1982	4.0	10.0	16.5	24.5	45.0	17.0
1987	3.8	9.6	16.1	24.3	46.2	18.2
1992	3.8	9.4	15.8	24.2	46.9	18.6
1997	3.6	8.9	15.0	23.3	49.4	21.7
2002	3.5	8.8	14.8	23.3	49.7	21.7
2007	3.4	8.7	14.8	23.4	49.7	21.2
2010	3.3	8.6	14.6	23.4	50.2	23.1

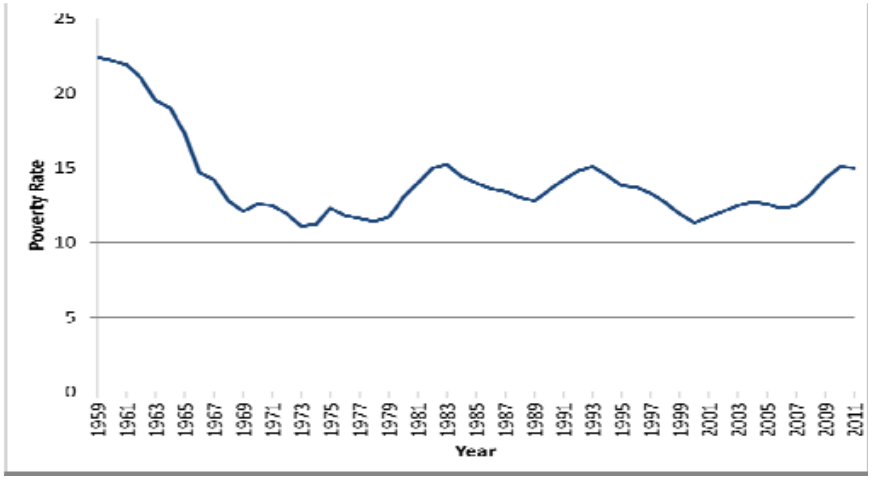
Source: US Bureau of the Census [2011a]
Note: These figures do not include the value of in-kind transfers.

Who is Poor?

Who is Poor?	
Group	Poverty Rate
All persons	15.0 %
White	9.8
Black	27.6
Hispanic origin	25.3
Under 18 years	21.9
65 years & older	8.7
Female households	31.2
no husband present	

Source: US Bureau of the Census, [2012a]

U.S. Poverty Rate



Source: US Bureau of the Census [2012a]

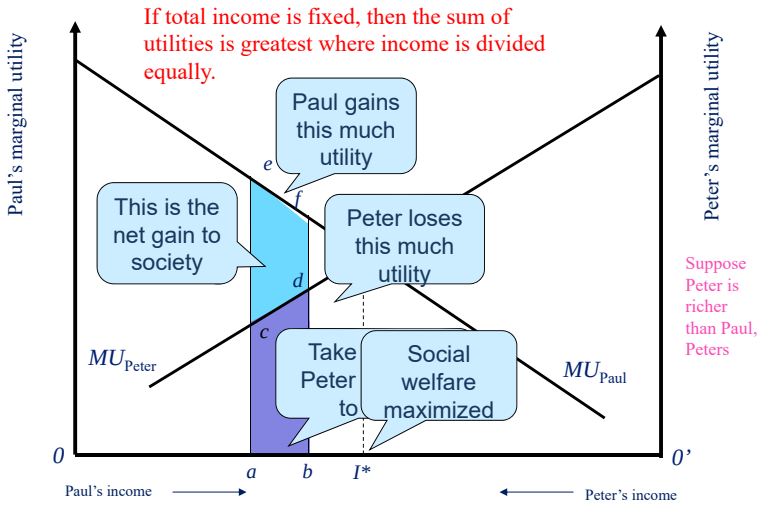
Interpreting the Distributional Data Issues

- ***Poverty Line****: fixed level of real income considered enough to provide a minimally adequate well-being*
- *Census income on which poverty level is based consists* only of family's cash receipts
  - In-kind transfers- payments from the government to individuals in the form of commodities or services rather than cash
- Interpreting the Distributional Data in Census Income: Criticisms:
  - Official figures ignore taxes
  - Income measured annually- suggest more inequality than those constructed on the more appropriate lifetime basis.
  - Consumption data may provide better assessment of well-being
  - Problems defining unit of observation- measured as individuals or households?

Rationale for Income Distribution
Simple Utilitarianism

- Utilitarian Social Welfare Function:
  - An equation stating that social welfare depends on individuals' utilities.
    W = F(U1, U2, …, Un)
- "Promote Greatest Good for Greatest Number"
- A change that makes someone better off without making anyone worse off increases social welfare.
- Additive Social Welfare Function
  $\mathbf{W = U_1 + U_2 + \ldots + U_n}$
- Assumptions
  1. Individuals have identical utility functions that depend only on their incomes
  2. Utility functions exhibit diminishing marginal utility of income
  3. Total amount of income is fixed
  - With these assumptions and an additive social welfare function, the government should redistribute income so as to obtain *complete equality*.

Implications for Income Inequality
Equalizing income will increase W



Examining the Assumptions

- Assumption 1: Individuals have identical utility functions.
  - The government act as if all people have the same utility functions, whether they are or not. Statement remains troublesome.
- Assumption 2: Decreasing marginal utility of income.
  - Suppose the marginal utility of income is constant at all levels of income, then whenever a dollar is taken from Peter, the loss in his utility is exactly equal to Paul's gain.
- Assumption 3: Total amount of income in the society, distance OO' is fixed.
  - Suppose that individuals' utilities depend not only on income but also on leisure, then the assumption may face a dilemma. For example, Cushing and McGarvey (2003) analyzed a hypothetical program of cash transfers from high-to-low income individuals, and estimated that the welfare losses from those who lose from the policy are from 1.11 to 10.97 times greater than the gains to the beneficiaries.

The Maximin Criterion

- Social Welfare Function
  $W = \text{Minimum}(U_1, U_2, \ldots, U_n)$
- Maximin criterion - No inequality acceptable unless it works to the advantage of the *least well off*
- Original position- an imaginary situation in which people have no knowledge of what their economic status in society will be.
  - "behind the veil of ignorance"
- Critique of Rawls

Pareto Efficient Income Redistribution

- Will redistribution always make someone worse off?
- Redistribution if gain in utility from charity exceeds loss from reduced consumption
- Government reduces cost of redistribution
- Income distribution as a Public Good
- Social safety net
- Social stability
- Assumption that utility depends on your income only implies that all redistribution must hurt at least one person so redistribution can never be a Pareto improvement. If we assume that utilities depend not only on their own income, but those of others, then redistribution can be a Pareto improvement.

Non-individualistic Views

- Fundamental principles specifying income distribution derived independent of tastes
  - Incomes distributed equally as matter of principle
  - Plato's 4:1 ratio of highest to lowest income
- *Commodity Egalitarianism: only special commodities need be distributed equally such as right to vote or food during war*
  - Education?
  - Healthcare?

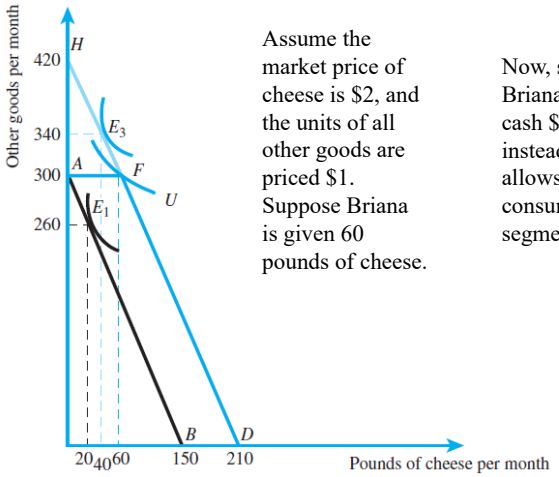
Other Considerations

- Processes versus Outcomes
  - Fairness of distribution of income judged by fairness of process that generated it
  - Robert Nozick
    - Society cannot redistribute income because society has no income to redistribute
    - Nozic's approach shifts emphasis from the search for a "good" social welfare function to a "good" set of rules to government society's operation.
- With sufficient social mobility, distribution of income is of no particular ethical interest
- Corruption stemming from extreme inequality is an argument for income redistribution

Expenditure Incidence

- *Expenditure incidence: impact of expenditure policy on distribution of real income*
- Difficult to determine
  - Relative price effects
  - Public goods
  - Valuing in-kind transfers

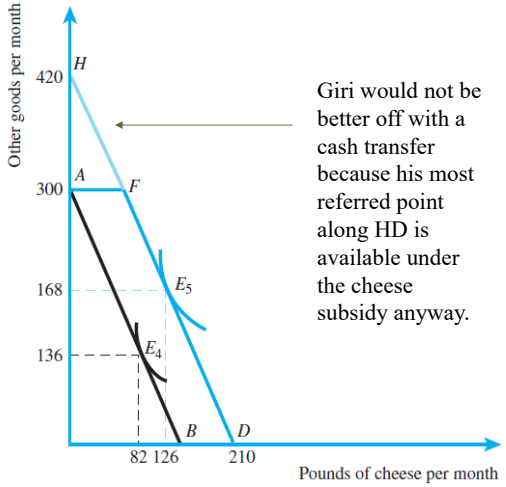
In-Kind Transfers



Assume the market price of cheese is $2, and the units of all other goods are priced $1. Suppose Briana is given 60 pounds of cheese.

Now, suppose Briana is given cash $120 instead. It allows Briana to consume the segment HF.

In-Kind Transfers



Giri would not be better off with a cash transfer because his most referred point along HD is available under the cheese subsidy anyway.

Reasons for In-Kind Transfers

- Paternalism
- Commodity egalitarianism
- Reduce welfare fraud
- Political factors

Topic 12 Summary

- Poverty rates in the U.S. and elsewhere vary greatly by age, race, ethnicity, and gender
- Measuring the extent of poverty is difficult for various reasons
- The rationale for redistributing income stems from attempts to maximize a social welfare function
- Determining the impact of income redistribution on real incomes is difficult primarily due to changes in relative prices resulting from the redistribution