Public Economics Lectures
Part 1: Introduction

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What is Public Economics?

- Public economics focuses on answering two types of questions:
  1. How do government policies affect the economy?
  2. How should policies be designed to maximize welfare?

- Three motivations for studying these questions:
  1. Practical Relevance
  2. Academic Interest
  3. Methodology
Motivation 1: Practical Relevance

- Interest in improving economic welfare → interest in public economics

- Almost every economic intervention occurs through government policy (i.e. involves public economics) via two channels:
  - Price intervention: taxes, the safety net, social insurance, public goods
  - Regulation: minimum wages, FDA regulations (25% of products consumed), zoning laws, labor laws, compulsory education laws, environment, legal code

- Government directly employs one sixth of the U.S. workforce
Motivation 1: Practical Relevance

- Stakes are extremely large because of broad scope of policies
  - Ex. Tax reforms immediately affect millions
- Contentious debate on the appropriate role of government in society
  - Controversial: liberals vs. conservatives
  - Conservative (William F. Buckley): “I’d rather entrust the government of the United States to the first 400 people listed in the Boston telephone directory than to the faculty of Harvard University”
  - MacArthur Foundation: “Societies are at their best when individuals are well-educated, trained, and supported by government in its role of providing incentives to individuals, moderating excessive inequality, and helping those in need. Investments in individuals in trouble or in need can yield large returns to society.”
- Which view is right? Injecting science into these debates has practical value
Motivation 2: Academic Interest

- Public economics is typically the end point for many other subfields of economics.

- Macro, development, labor, and corporate finance questions often ultimately motivated by a public economics issue.
  
  - Ex 1: Macro studies on costs of business cycles and intertemporal models of household behavior.
  
  - Ex 2: Labor studies on employment effects of the minimum wage.

- Natural to combine public finance with another field.

- Understanding public finance can help sharpen your research focus and ensures you are working on relevant issues.
Motivation 3: Methodology

- Much of modern public economics integrates theory with empirical evidence to derive quantitative predictions about policy.
  
    - For example, what is the optimal unemployment benefit level and how do benefits affect behavior?

- Combining applied theory and evidence is a useful skill set that is at the frontier of many fields of economics.
Government expenditures = 1/3 GDP in the U.S.

It is more than 50% of GDP in some European countries

Decentralization is a key feature of U.S. govt

- One third of spending (10% of GDP) is done at state-local level (e.g. schools)
- Two thirds (20% of GDP) is federal
Federal Government Revenue and Expenditure 1930-2009

Revenue and spending (% of GDP)

Year

Revenue Expenditure

Federal Government Revenue and Expenditure 1930-2009

Source: Office of Management and Budget, Historical Tables, FY 2011
Figure 4. Government Total Spending and Spendings on Selective Categories as a Percentage of GDP, 1954-2010

Data Source: Data of spending are from the Office of Management and Budget of the White House; GDP data are from the Bureau of Economic Analysis.
Figure 2: Annual Expenditure Per Capita, 1970-2008
(Constant 2007 Dollars)

Sources: Available from authors

Source: OECD Economic Outlook (2009)
Federal Revenues (% of total revenue)

1960
- Excise: 2.7%
- Other: 4.2%
- Income: 44%
- Corporate: 23.2%
- Payroll: 15.9%

2008
- Excise: 12.6%
- Other: 4.2%
- Income: 45.4%
- Corporate: 12.1%
- Payroll: 37.5%

Source: Office of Management and Budget, historical tables, government receipts by source
Figure 5. Tax Revenue as a Percentage of GDP, 1954-2010

Source: Data of tax receipts are from the Office of Management and Budget of the White House; GDP data are from the Bureau of Economic Analysis.
Figure 7. TPC Tax Rates by Quintile, 1979-2007

Source: The Urban Institute-Brookings Institution Tax Policy Center
Figure 8: Are Your Taxes Too High, Too Low, or About Right?
State/Local Revenues (% of total revenue)

1960
- Property Tax: 38.2%
- Sales Tax: 28.8%
- Other: 17.7%
- Federal Grants: 9.4%
- Income Tax: 5.9%

2007
- Property Tax: 15.7%
- Sales Tax: 17.9%
- Other: 33%
- Federal Grants: 19.1%
- Income Tax: 14.3%

Source: U.S. Census Bureau, 2007 Summary of State & Local Government
Federal Spending (% of total spending)

1960

- Social Security: 13.5%
- UI and Disability: 8.9%
- Net Interest: 8.3%
- Health: 2.9%
- Education, welfare, housing: 4%
- Other: 12.4%

2001

- Health: 23.1%
- Social Security: 19.5%
- Net Interest: 12.3%
- UI and Disability: 6.3%
- Education, welfare, housing: 9.7%
- Other: 11.2%

Source: Office of Management and Budget, historical tables, government outlays by function.
International Tax Revenue by Type of Tax (2001, % of Total)

Mexico
- Payroll: 24.3%
- Consumption: 73.5%
- Wealth: 2.2%

Norway
- Payroll: 20.5%
- Consumption: 31.3%
- Corporate Income: 21.7%
- Individual Income: 24.2%
- Wealth: 5.5%

OECD Average
- Payroll: 26.7%
- Consumption: 32.6%
- Corporate Income: 9.3%
- Individual Income: 26%
- Wealth: 5.5%

Source: OECD 2002
Government Intervention in the Economy

- Organizing framework: “When is government intervention necessary in a market economy?”

  - Market first, govt. second approach

  - Why? Private market outcome is efficient under broad set of conditions (1st Welfare Thm)

- Course can be split into two parts:

  1. How can govt. improve efficiency when private market is inefficient?

  2. What can govt. do if private market outcome is undesirable due to redistributional concerns?
Efficient Private Market Allocation of Goods

Amy’s Consumption

Bob’s Consumption

Graph showing the relationship between Amy’s and Bob’s consumption.
First Role for Government: Improve Efficiency

- Amy's Consumption
- Bob's Consumption

Diagram showing the relationship between Amy's and Bob's consumption with a downward sloping line indicating potential efficiency improvements.
Second Role for Government: Improve Distribution

Amy’s Consumption vs. Bob’s Consumption

Diagram showing the relationship between Amy's and Bob's consumption.
First Welfare Theorem

- Private market provides a Pareto efficient outcome under three conditions
  1. No externalities
  2. Perfect information
  3. Perfect competition

- Theorem tells us when the government should intervene
Failure 1: Externalities

- Markets may be incomplete due to lack of prices (e.g. pollution)
  - Achieving efficient Coasian solution requires an organization to coordinate individuals – that is, a government
- This is why govt. funds public goods (highways, education, defense)
- Questions: What public goods to provide and how to correct externalities?
Failure 2: Asymmetric Information and Incomplete Markets

- When some agents have more information than others, markets fail

- Ex. 1: Adverse selection in health insurance
  - Healthy people drop out of private market → unraveling
  - Mandated coverage could make everyone better off

- Ex. 2: capital markets (credit constraints) and subsidies for education

- Ex. 3: Markets for intergenerational goods
  - Future generations’ interests may not be fully reflected in market outcomes
Failure 3: Imperfect Competition

- When markets are not competitive, there is role for govt. regulation
  - Ex: natural monopolies such as electricity and telephones

- This topic is traditionally left to courses on industrial organization and is not covered in this course

- But taking the methodological approach of public economics to problems traditionally analyzed in IO is a very promising area
Individual Failures

- Recent addition to the list of potential failures that motivate government intervention: perhaps people are not fully rational?

- Government intervention (e.g. by forcing saving via social security) may be desirable

- This is an “individual” failure rather than a traditional market failure

- Conceptual challenge: how to avoid paternalism critique

  - Why does govt. know better what’s desirable for you (e.g. wearing a seatbelt, not smoking, saving more)

- Difficult but central issues to policy design
Redistributional Concerns

- Even when the private market outcome is efficient, may not have good distributional properties
- Efficient markets generally seem to deliver very large rewards to small set of people (top incomes)
- Government can intervene to redistribute income through tax and transfer system
One solution to these issues would be for the government to oversee all production and allocation in the economy (socialism).

Serious problems with this solution

1. Information: how does government aggregate preferences and technology to choose optimal production and allocation?
2. Government policies inherently distort incentives (behavioral responses in private sector)
3. Politicians not necessarily a benevolent planner in reality; face incentive constraints themselves

Creates sharp tradeoffs between costs and benefits of government intervention

- Providing more public goods requires higher taxes and distorts consumption decisions
- Redistribution distorts incentives to work
Equity-Efficiency Tradeoff

Amy’s Consumption

Bob’s Consumption

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Three Types of Questions in Public Economics

1. Positive analysis: What are the observed effects of government programs and interventions?

2. Normative analysis: What should the government do if we can choose optimal policy?

3. Public choice/Political Economy
   - Develops theories to explain why the government behaves the way it does and identify optimal policy given political economy concerns
   - Criticism of normative analysis: fails to take political constraints into account
Course Outline

1. Tax and Expenditure Incidence (with once over lightly on efficiency and optimal taxation)
2. Taxes and Behavior: Tax Rates and Taxable Income
3. Taxes and Behavior: Taxation and Saving
4. Fundamental Factors Affecting Wealth Accumulation
5. The Corporate Income Tax and Firm Financial Behavior (briefly)
6. Income Transfer Programs and the EITC
7. Credit Constraints for Higher Education
8. Social Insurance
9. Possibly a Few Dogs and Cats