

## I. WHAT IS PUBLIC ECONOMICS & WHY DO ECONOMISTS CARE ABOUT THE GOVERNMENT?

### Goals:

- 1) Cursor understanding of the issues that are important to economists when studying government behavior.
- 2) Do economists think there is room for government?

### A. Definition:

the application of economic tools to analyze the finance of operation of the government

### B. Two problems of government

1. raise revenue
2. spend revenue

(schematic)

C. Ans: Same reason as with private concerns - Scarcity.  
(PPF graph)



D. The choice of government services implies forgone public services

1. moving from pt. A to pt. B implies given up  $P_0 - P_1$  of private goods for  $G_1 - G_0$  of gov. goods.
2. thus, there exists a choice between public and private goods.
3. Welfare, social security, head start programs, low-income housing.: each of these programs is costly. If congress operates as it has in the past and fails to curb other programs that also have legitimate claims then you and I as tax payers are essentially going to have less P and more G.

E. Tradeoff is not Linear - it is like that increasing amounts of private sector goods and services must be given up to obtain an equal amount of public services

1. moving from A to B: equal sacrifices of private goods yield increasingly small amounts of publicly provided goods

2. why -

- public goods: initial programs that government performs like basic road service and a minimum level of national defense, public parks are “public goods”.

- spillovers and/or no property rights: Some activities affect not only the transacting parties but also affect third parties (externalities). Often times this is a problem because markets are not present to allow third parties to be compensated.

3. Government is uniquely suited to produce some goods

- goods can be provided a low costs & cost-benefit analysis warrants there production

4. However, as the government becomes larger it begins to produce goods and services that:

i. could be produced by the private sector

ii. cost-benefit analysis for provision are not obvious

## 5. Possible example - Social Security?

- some economists are arguing that the pay-as-you go system is fundamentally flawed (1) wrong incentives; (2) depends on age distribution
- argue for a private - vested system
- notion that government "provides for the public welfare" is a 20th century phenomenon (1890 - Bismarck in Germany): not until the great depression were basic services such as: social security, welfare, unemployment insurance, Medicare and Medicaid provide by the public sector in U.S.
- Why provide social security? it is a transfer program.

## II. EXPENDITURES OF GOVERNMENT

### Goals

1. Explain what a public good is and why government is needed for its proper provision
2. Refresh concept of a spillover and explain role government must play for markets to work properly.
3. Discuss the concept of a natural monopoly and the role government must play for market to work properly.

## A. Public Goods

### 1. What makes a public good "public"?

i. non-rival in consumption - more than one person can consume good w/o lowering the consumption of other consumers: there are degrees of non-rivalness

example. national defense - everyone can consume good w/o lowering consumption of others

question: what about an ice cream cone?

ii. non-excludable - too costly to exclude those individuals who refuse to pay; cannot price good like private good because once good is purchased the  $MC=0$  for next person: there are degrees of non-excludability (e.g., national defense if one person is protected - everyone is protected (story of bread maker)

### 2. Example of Pure Public Good

Result: Non-excludability and non-rivalness is that a good produced for any one person is automatically available to all. Thus, (1) social value of the good is the sum of all consumer benefits and (2) no one is free to vary their consumption to the amount they find most desirable

## Public Good: Vertical Sum

## Private Good: Horizontal Sum

3. Free-rider problem: The natural tendency when a good is public is that each individual tries to be a free rider, or to seek benefits and avoid costs. This free rider problem threatens both private and public provision.

Example: Airport Security

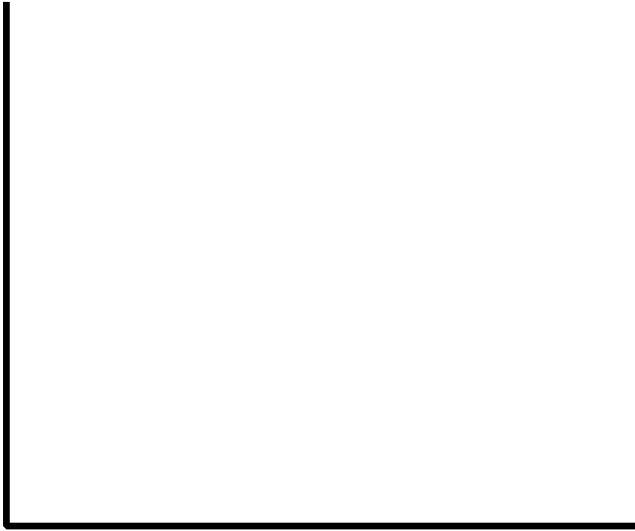
- could just have everyone put \$10 in a box every time they fly. Some passengers might not pay.
- airlines could be charged with security and they could charge passengers. Airlines might not worry as much about safety on other airlines
- tax on "all tickets". Prevents customers and airlines from free-riding.

B. Spillovers:

1. Less extreme case of public good: occurs when social marginal costs and benefits do not equal private costs and benefits

2. Example 1: Positive externalities - education, health care

education reduces unemployment, crime, etc.  
preventative care (e.g., vaccinations) are cheaper to treat than subsequent disease and reduce likelihood of epidemics.



Too little education  
produced:

$$MSB = MPB + MEB$$

### 3. Example 2: Negative externalities - pollution, congestion



Markets produce too much

$$MSC = MPC + MEC$$

4. Spillovers cause markets to fail: The goal is get firms and individuals to internalize the externalities. How?

i. Subsidies and taxes

subsidy=MEB

tax=MEC

ii. public sector ownership

iii. government regulation: insure markets are secure (ENRON).

iv. government creates market by selling property rights (Coase Theorem).

C. Natural or Public Monopoly - telephone or public utility

1. cost structure is such that, for all relevant quantities, the LRAC falls w/ Q. (graph)

2. in this instance it is beneficial for society to have just one firm.
3. gov. must ensure that firm does not use its market power to exploit consumer.
4. regulatory commissions: PUC, FTC, etc.

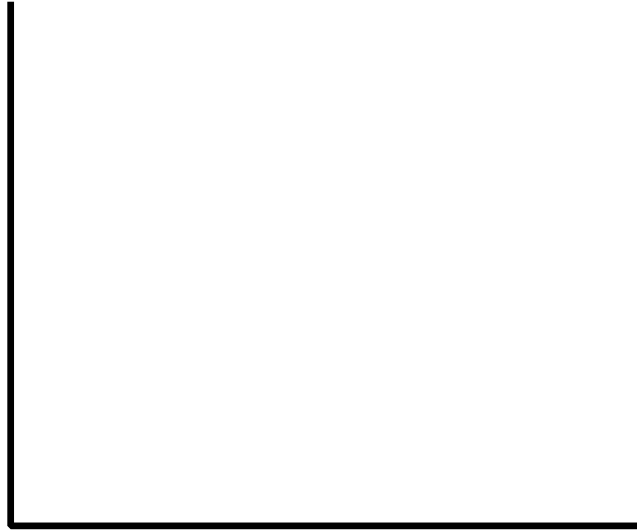
### III. FINANCING THE GOVERNMENT

#### Goals

- (1) Show what taxes do to the price/quantity and explain why this is often inefficient.
- (2) Define and show difference between who writes the check and who pays the burden of tax.

#### A. Death and taxes! The tax wedge.

1. initial equilibrium:  $P_0$  &  $Q_0$
2. place tax of \$0.20 per pack
3. Focus on supply: to supply  $Q_0$  firms require  $P_0 + 20¢$
4. The tax wedge (ABC): yields inefficient provision of good.



B. The Burden of the Tax (see graph above)

1. Who writes the check and who pays the tax are 2 different issues.
2. because demand curve is downward sloping price does not go up by 20¢
3.  $P_t > P_0$  but not by 20¢: so consumers and suppliers share the burden of the tax

supplier's share:  $P_0 - (P_t - 20¢)$

consumer's share:  $P_t - P_0$

### C. What Determines the Burden

1. depends on the relative elasticities of demand (i.e., the relative responsiveness of consumers and firms to price changes)

2. ex. 1: perfectly inelastic demand (extreme case)



consumer  
bears full  
burden of tax:  
i.e., price after  
tax is  $P_0 + 20¢$

3. whoever has the relatively lower elasticity (consumers or firms) bears the relatively larger share of the burden

4. moral of the story it pays to be flexible: people who are inflexible bear the burden of life changes

5. so why do we put on "sin taxes"; because we want people to quit or because we know they won't

## IV. PUBLIC CHOICE: DECIDING WHAT GOODS TO PROVIDE

### A. Three Conflicting Hypotheses About What Motivates Gov.

1. Public interest.
  
2. The median voter (The Hotelling Model)

question: Is the median voter on gun laws the same as the median voter on abortion rights?

3. Self-interests of politicians

## B. What Level of Government Should Provide Public Goods?

1. The level of government that will internalize the externality.

Ex. Kyoto treaty and greenhouse gases

2. Voting with your feet and the shift to local government

people may sort into communities based on their preferences: ex: if I don't like the school funding where I am living I can move where I do.

## C. Application

Consider a three-person city that is considering a fireworks display. Bertha is willing to pay \$100, Marian is willing to pay \$30, and Sam is willing to pay \$20. The fireworks display costs \$120.



Note: The sum of the benefits exceed the cost

1. Will any citizen supply show on own

Ans: NO  $P > MB$

2. If the costs of the display are evenly divided among the citizens will the majority vote in favor.

Ans: NO  $\$40 > MB$  of two of voters

3. Is there a transaction that would benefit all.

Ans: YES e.g., there value  $-\$10$

Bertha	\$90
Marian	\$20
Sam	\$10
<hr/>	
	\$120