

## Chapter Four: Public Goods (pg 54 - 71)

### Public Goods Defined (54)

**Non-Rival**

**Non-Excludable**

Pure Public Good (National Defense)

Pure Private Good (Pizza)

**Though everybody consumes the same amount of a public good**

They don't have to all value it the same (good?)

They don't all pay the same amount for it

Example: Punishing (detering) Syrian WMD attacks

**Classification of a Public Good is NOT absolute**

Market conditions and technology change public goods

Lighthouses, "smart road pricing"

Impure Public Goods

Some degree of rivalness of excludability

**Some goods satisfy only one of the two conditions**

Example of Roads and seashores

Roads can be rival (congestible public good)

Seashores are not, but they are excludable (access roads)

**Some things that we don't consider to be commodities are public goods**

Honesty, or "trust"

Information postings (LA restaurant hygiene ratings)

The power of thick markets

**Private Goods are not always provided privately**

Health care in many places is publicly provided

"Publicly provided private goods"

**Public Provision of a good doesn't always mean it is publicly produced**

Contracting out garbage collection

School vouchers in the U.S.

Sweden as "voucher socialism"

**Public Goods and Publicly Provided Private Goods**

*What an Economist means by "Public Goods"*

*What EVERYBODY else means by "Public Goods"*

### The Efficient Provision of Public Goods (56)

Graph the provision of BEER, a PRIVATE GOOD

Horizontal summation of two demand curves

Gives us Market demand

Now superimpose the supply curve

And we get market price and market quantity supplied (demanded)

Which is Pareto efficient:

Proof: Assume two goods, beer and pizza. Since we are interested in the relative price ratio – set price of pizza = 1. Now price of beer is how much pizza we will give up for one more beer. Anywhere on our demand curve, the MRS = that price.

So looking at demand, our equilibrium is where supply and demand meet, which is the point where MRS of beer for pizza equals  $P_B$  (actually,  $P_B/P_P$  – but  $P_P = 1$ )

Our supply curve shows the  $MRT_{B,P}$ , where again pareto optimality holds. At any point on our supply curve, we see how much Beer (in terms of pizza) is being supplied.

At the equilibrium

$$\text{Crusoe's } MRS_{B,P} = \text{Friday's } MRS_{B,P} = MRT_{B,P}$$

### **What about the public good? (in our example – a well to draw fresh water)**

Since it is non-rival and non-excludable, the above does not hold

The benefit of one more unit of the good will apply to both

But the costs will be shared by them....

### **Graphing a public good**

Graph the demand for a public good

First Friday

Then Crusoe

Now, a VERTICAL summation

(Intuition – they BOTH get enjoyment from an additional unit)

Society should provide at the point where the MC of one more unit equals the sum of MBs to everybody in society. Our supply curve is the same as before...

$$\text{Crusoe's } MRS_{B,P} + \text{Friday's } MRS_{B,P} = MRT_{B,P}$$

Note we are dealing with the TOTAL valuation of the good,

Crusoe's  $MRS_{B,P} \geq$  Friday's  $MRS_{B,P}$

**And indeed it would be surprising if the two were really equal.**

*NOTE: if we assume public goods are normal, demand increases with income  
A lump sum tax would transfer utility to the wealthy....*

### **Problems in Achieving Efficiency (61)**

#### **The Free Rider Problem (63)**

The above assumes we know what the relevant MRSs are

In a thick market, no reason to hide preferences

(thick markets are a public good in some respects)

But when talking about public goods

there are strong incentives to hide preferences

The “Free Rider” problem

As the number of people goes up, the decline in MB for not paying approaches 0

So the incentive to “not care” increases

Likewise the cost of monitoring goes up in large groups

Even if the good is excludable, we are in the non Pareto-Optimal set

Since the cost of another person enjoying the good is 0

A private provider should price the Public good at 0

This problem goes away if the entrepreneur can price discriminate  
But he would have to do so perfectly  
i.e. know everybody's demand curve

### **Empirical evidence about Free rider problems**

Even lighthouses have been privately funded (Coase 1974)  
In small groups, free rider problems can be dealt with  
Repeated iterations (Gebbiner)

### Experimental Results

Group token donations....

Results

## **The Privatization Debate**

### **Public vs. Private Provision of Public Goods**

Private guards, security, courts....

Private garbage collection

Private fire protection (Denmark)

U.S. VFD

*Until mid 1970s, the trend was unambiguously towards MORE public provision*

*Since then, the trend is less clear*

### **Issues to consider**

Relative wage and material costs

The costs of government employees and private workers

Administrative costs

The fixed costs of bureaucracy (economies of scale)

The problem of management – the problem of profit

Developed and less developed countries

Diversity of Tastes

Markets cater to individual tastes

School vouchers and different schools

Distributional Issues

Commodity egalitarianism – everybody should get it

free medical care (to consumer at the point of provision)

## **Public Goods and Public Choice (68)**

### **Summary**

### **Problems**