



# Module: Public Sector Economics

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# The rationale for government intervention

# Rationale for Government Intervention

- ECONOMICS: Allocation of scarce resources to satisfy wants
- Market – Pareto Efficient
- Market Failure
- Property Rights
- Enforcement of Contracts
- Merit Goods

# The Economic Roles of Government

- The Allocative Role
- The Distributive Role
- The Stabilisation Role
- The Regulatory Role
- These all have the effects of altering incomes and changing incentives

# Allocative Role

- An economy is efficient if it provides the maximum amount of goods, given the resources available to the people who demand them
- The government pursues the efficient allocation of resources in the economy as this maximises economic welfare

# Allocative Role

- Pareto Efficiency/Optimum – a situation where it is no longer possible to make one person better off without making anyone else worse off
- Pareto improvement – a situation where it is possible to make at least one person better off without making anyone else worse off

# Allocative Role

- Pareto Efficiency can be achieved under certain restrictive assumptions through perfectly competitive markets
- The government provides goods and services that would otherwise not be provided by the market system
- How does the government decide how much to provide?

# Distributive Role

- Allocative Efficiency implies nothing about distribution. An efficient allocation implies nothing about whether it is “just”, “right” or “equitable”
- For example, a country’s economy may be efficient but the majority of its people may be living in poverty while a few may be living in luxury

# Distributive Role

- The government tries to achieve a more equitable balance in the economy through taxation, social welfare and public service provision
- The government responds to the electorate's wishes in this role
- However, does redistribution have an efficiency cost?

# Stabilisation Role

- The modern government is held responsible by the electorate for the economy's performance
- It uses fiscal, monetary and other policies to control economic activity
- The role emerged at the time of the great depression

# Regulatory Role

- For private markets to work there needs to be an equitable arbitrator to define property rights and enforce contracts. This role is fulfilled by the government.
- If there were no property rights or contract enforcement there would be no incentive to work, save or invest
- If government is weak, private enforcers emerge e.g. mafia, terrorism

# Market Failure

- Failure of Competition
- Imperfect Information
- Public Goods
- Externalities
- Incomplete Markets
- Macroeconomic Failure

# Public Goods

# Public Goods

- There are some goods that will either not be supplied by the market or if supplied, will be supplied in insufficient quantity e.g. street lighting, national defence, lighthouse,
- These goods have two critical properties
  - They are non-excludable
  - They are non-rival in consumption

# Public Goods

- Non-excludable – A good is non-excludable, if once it is provided for one person it is either logically impossible or extremely expensive to exclude people from consuming the good
- Non-rival – a good is non-rival if the consumption of one person does not affect the quantity available for consumption by others

# Mistakes - Misunderstandings

- A. Public goods are not just any goods provided by the state
- B. Public goods are not only provided by the state – They can be provided by the private sector (see later slide)
- "Government is in the business of making briquettes, growing trees, providing health insurance, selling gas, running buses and trains; running ports and airports; providing electricity; running greyhound races, running a postal service and a broadcasting service"  
Dónal de Butleir Chairman of The Civil Service Performance Verification Group, 2005.

# Non-Excludable

- If you cannot exclude a person from consuming a good, they will have no incentive to pay for it.
- This is called free riding
- If a private firm cannot charge for a good due to free riding then it will not be able to supply the good in an optimal quantity or at all
- The government has the unique ability to coercively extract money from people (taxation). It uses this ability to supply public goods

# Non-Rivalry/Subtractability

- A good is non-rival if all users can consume the same unit, e.g. we all consume the same level of national defence
- The marginal cost of an extra user of the good is zero, i.e.  $MC=0$
- Overcrowding can become a problem. e.g. road congestion. Good no longer non-rival.  $MC>0$

# “Types” of Good

- A “pure” public good has both characteristics of **non-excludability** & **non-rivalry**
- A “pure” private good has neither of these characteristics
- Many goods exhibit some elements of one or both of these characteristics

# “Types” of Good

|            |   |
|------------|---|
| Soft Drink | <b>Private Good</b>   |
| Excludable | Served in a bottle to each consumer   |
| Rival      | Once consumed it is unavailable to others. If shared each consumer only receives a portion of the utility available |

# “Types” of Good

| National Park (U.S. style) | <b>Public Good</b>  |
|----------------------------|---|
| Non-Excludable             | Extremely expensive to keep consumers out   |
| Non-Rival                  | Park so large that each consumer can consume without the presence of others diminishing their enjoyment |

# “Types” of Good

|            |   |
|------------|---|
| Golf Club  | <b>Club/Toll Good</b>   |
| Excludable | Members required to pay fees  |
| Non-Rival  | Non-rival in consumption because membership limited to non-congestion level |

# “Types” of Good

|                                 |   |
|---------------------------------|---|
| Beach (in summer, good weather) | <b>Common Pool Resource</b>                                   |
| Non-Excludable                  | People can just walk onto the beach                           |
| Rival                           | As the beach becomes crowded, it becomes rival in consumption |

# Technology & Excludability

- As technology advances it may become cheaper to exclude consumers
- e.g. Pay per view TV. Automatic toll collection
- Goods that were previously non-excludable now become excludable

# Private Provision of Public Goods

- There are a number of situations where public goods are provided privately
  - A. Community Behaviour
  - In assuming free-riding, we assumed that individuals always act out of narrow self interest. In small communities, individuals can immediately see the benefit of their collective action and the cost of free riding through being shunned by the community for non contribution is also immediately obvious

# Private Provision of Public Goods

- B. Charity
- Charities often fill a gap where a private market did not emerge. A sea rescue service is a public good. It is non-rival in consumption and it is non-excludable (imagine being in a lifeboat, finding two people on a raft in need of rescue. Could you leave behind the person who hadn't paid their subscription)
- Sea rescue has by and large been funded through voluntary subscription

# Private Provision of Public Goods

- C. Club Good
- A club helps overcome the problem of non-excludability. It brings about the optimal allocation of the good. This occurs where the MC (cost of fees and cost of sharing facility with others) equals the MB (using the facility and reducing the cost due to sharing costs with other members)

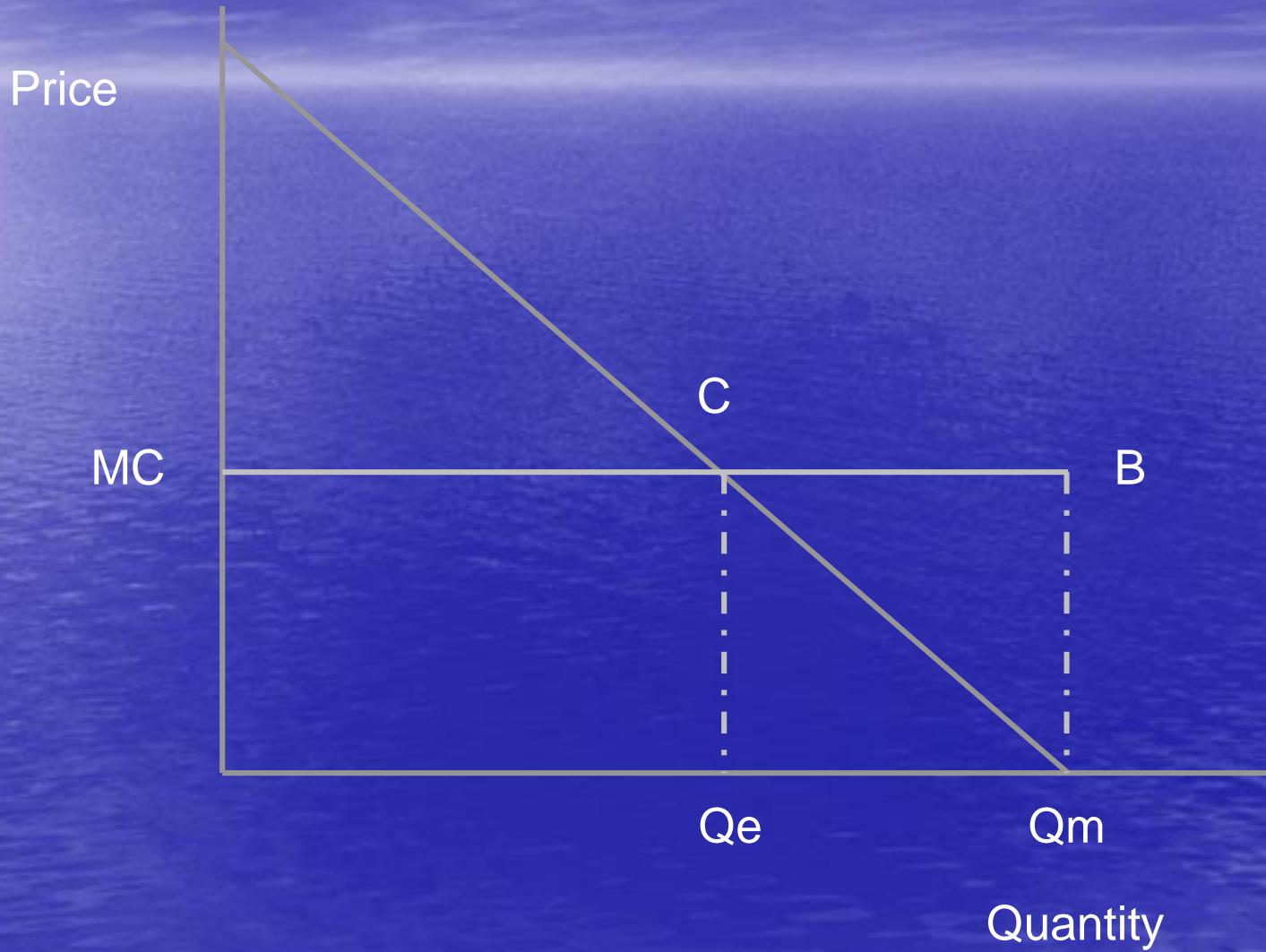
# Private Provision of Public Goods

- D. Complementary Good
- A private firm may be willing to provide a public good when it is sold in conjunction with a private good. The private goods allows the seller to enforce excludability sun loungers on a beach are an example

# Paying for Public Goods

- If exclusion is possible the government may charge a fee
- If consumption is non rival, charges introduce an inefficiency since  $MC=0$  charging above that excludes some people whose  $MB>0$
- If there is a positive MC and no charge is made there is a social loss (equal to CBQm in the following diagram)

# Charging for a public good



# Public Goods – Optimal Provision

- We first examine the private goods market
- It can only function where exclusion is possible
- i.e. where “X’s” consumption of the good is contingent on “X ” paying the price, while “Y” who does not pay is excluded.
- Exchange cannot occur without property rights and property rights require exclusion

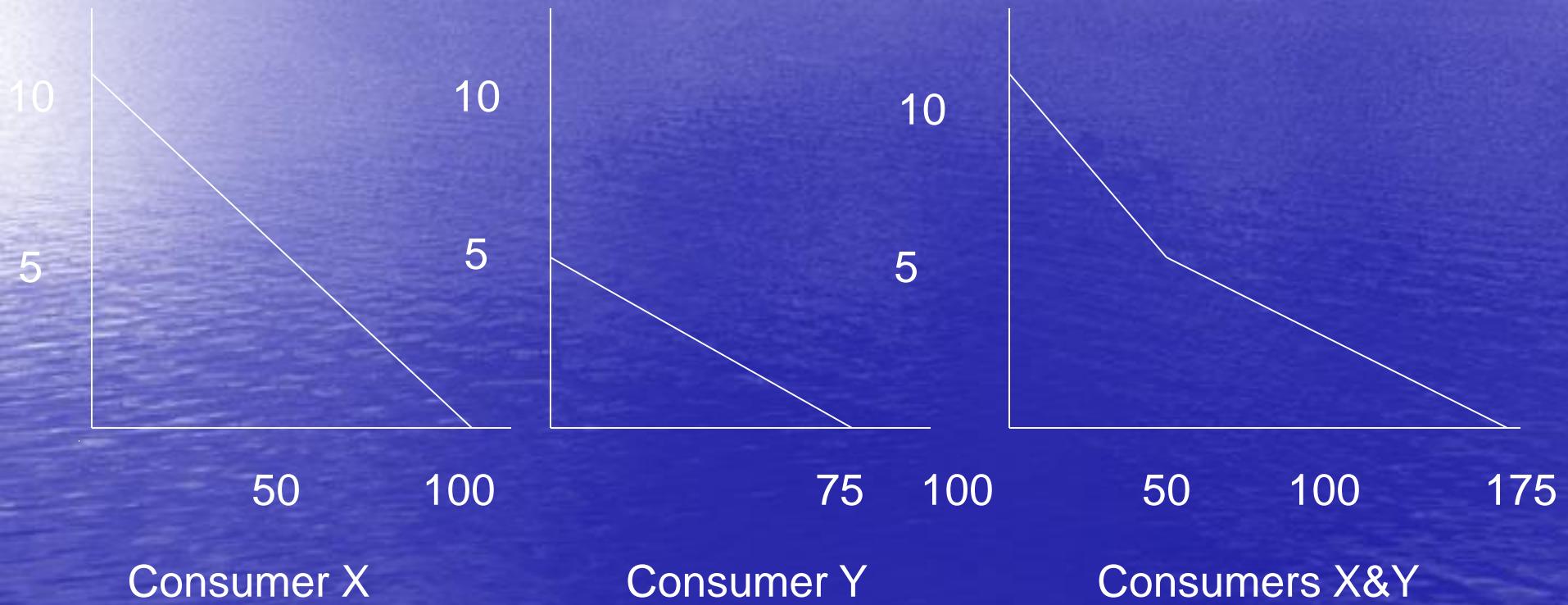
# Public Goods – Optimal Provision

- The consumer must bid for the good, thereby revealing preferences to the producer
- The producer under pressure of competition is guided by these signals to produce what customers want
- This process works because the benefits derived flow to “X” only who pays for the good
- The benefits are internalised and rival in consumption

# Public Goods – Optimal Provision

- To find MB for the private market as a whole, we add the amount that is demanded at each price for every individual in the market
- Horizontal summation of the individual MB curves yields the overall value that consumers place on the good

# The Optimal Provision of Public Goods – A private good



# Public Goods – Optimal Provision

- Public goods are non-rival in consumption
- Once the good is supplied, it is supplied in the same quantity to all consumers
- All consumers benefit (not necessarily equally)
- If consuming is not contingent on payment, people are not forced to reveal their preferences
- In not revealing their preferences consumers may free-ride.
- There may be no effective demand for the good

# Public Goods – Optimal Provision

- To find MB for market as a whole it is necessary to look at each quantity provided, and sum the individual benefit received at that level of output
- We vertically sum each individual level of MB

# The Optimal Provision of Public Goods

