18 PUBLIC GOODS

18.1 Private and Public Goods

18.1.1 Private Goods and Services

A private good or service has three main characteristics:

- **Excludability:** Consumers of private goods can be excluded from consuming the product if they are not willing or able to pay for it (for example - a ticket to the theatre or a sports event or a meal in a restaurant)
- **Rivalry:** With a private good, one person's consumption of a product reduces the amount left for others to consume - because scarce resources are used up in producing and supplying the good or service. If you order and then enjoy a pizza from Pizza Hut, that pizza is no longer available to someone else. Likewise driving your car on a road uses up road space that is no longer available at that time to another motorist
- **Rejectable Goods**: Private goods and services can be rejected - if you don't like the soup on the college menu, you can use your money to buy something else. You can choose not to travel on Virgin Rail on a journey to the north west

18.1.2 Characteristics of Public Goods

The characteristics of pure public goods are the opposite of private goods:

- **Non-excludability**: The benefits of public goods cannot be confined to only those who have paid for it. In this sense, non-payers can enjoy the benefits of consumption for no financial cost
- **Non-rivalry in consumption**: Consumption of a public good by one person does not reduce the availability of a good to others – we all consume the same amount of public goods even though our tastes for these goods (and therefore our valuation of the benefit we derive from them) might differ

18.1.3 Examples of Public Goods

Examples of public goods include flood control systems, pure public water supplies, street lighting for roads and motorways and also national defence services.

Policing – a public good?

Some (but not all) aspects of policing might also qualify as public goods. The general protection that the police services provide in deterring crime and investigating criminal acts serves as a type of public good. But resources used up in providing specific police services mean that fewer resources are available elsewhere. For example the use of police at sporting events or demonstrations and protests means that police resources have to be diverted from other policing duties.

Private protection services (including private security guards and detectives) are clearly private goods – the service is excludable, rejectable and rival in consumption and people and businesses are often prepared to pay a high price for such exclusive services.

Public goods are not normally provided by the private sector because they would be unlikely to be able to supply them for a profit (mainly through non-excludability). It is up to the Government to *decide* what output of public goods is appropriate for society. To do this, it must estimate the **social benefit** from the consumption of public goods. Putting a monetary value on the benefit derived from street lighting and defence systems is problematic.

The air waves – a public good?

The airwaves are essentially owned by the government of a particular country. Do they count as a pure public good? Normally the answer would be yes. One person's use of the airwaves rarely reduces the extent to which other people can benefit from using them. But when demand for mobile phone services is very high at peak times, the airwaves become crowded and access to the networks provided by the main mobile phone companies can become slow. In this sense the airwaves can be treated a crowded non-pure public good.

The government controls the issue of licences needed to operate mobile phone services using the airwaves in the UK. In 2000, they auctioned off five licences for 3rd generation mobile phone services and raised £22 billion in doing so. The government was using the auction process to ration the airwaves

through a licence system. Although the government has monopoly control in the sense that it controls the issue of licences, it did not set the market price. This was determined by the auction process, and the fact that at the end of a bidding war, the major mobile phone companies were prepared to pay such a high price for a licence to allow them to operate in the market, is evidence of the private benefit (anticipated future profit) that the companies expected to make from selling 3rd generation contracts to customers.

The electoral system provides an opportunity to see the **public choices of voters** but elections are rarely won and lost purely on the grounds of government spending plans.

18.1.4 The Free Rider Problem

Public goods are non-excludable. Once the product is provided, other consumers cannot be excluded from benefiting from the good. This means some consumers may avoid payment and become **free riders** i.e. benefit without contributing to the cost of provision.

If sufficient consumers decide to take a free-ride then the product will not be provided through the market. Consider the case of the provision of an army of traffic wardens and safety signs on roads. One person's benefit from these services is not unique - other motorists benefit from the service as well - but they cannot be stopped and asked to pay for the benefits they derive.

18.1.5 Public Goods and Market Failure

Why is there market failure with public goods?

The main reason is that private sector producers will not supply public goods because they cannot be sure of making an **economic profit**. Consumers can take a free ride without having to pay directly. The obvious solution is that these goods are **provided collectively** by the government, and **financed through taxation** of individual households and businesses. A cost-benefit analysis helps the government to establish the extent to which public goods should be provided.

18.1.6 Quasi-Public Goods

A quasi-public good is a near-public good i.e. it has many but not all the characteristics of a public good. Quasi public goods are:

- **Semi-non-rival:** up to a point extra consumers using a park, beach or road do not reduce the amount of the product available to other consumers. Eventually additional consumers reduce the benefits to other users.
- **Semi-non-excludable:** it is possible but often difficult or expensive to exclude non-paying consumers. E.g. fencing a park or beach and charging an entrance fee; building toll booths to charge for road usage on congested routes