

Topic 6—Market Failure and Externalities

Key Terms	
Market Failure	A situation in which the free market mechanism does not lead to an optimal allocation of resources e.g. where there is a divergence between the marginal social cost and the marginal social benefit
Externality	A cost or a benefit that is external to a market transaction, and is thus not reflected in market prices
Consumption Externality	An externality that affects the consumption side of a market, which may be either positive or negative
Production Externality	An externality that affects the production side of a market, which may be either positive or negative
Private Cost	A cost incurred by an individual (firm or consumer) as part of its production or other economic activities
External Cost	A cost associated with an individual's (a firm or a household) production or other economic activity, which is borne by a third party and is not reflected in the market prices
Social Cost	Private cost plus external cost
Marginal Social Cost	The cost to society of producing an extra unit of a good

Information Failure

All relevant economic agents in a transaction must have good information about market conditions to ensure they make a rational decision however this is sometimes not the case. This can link to a lack of information on the benefits or problems with a particular product or service. E.g. the cost of smoking

Sometimes one agent has different information than another which can cause market failure. E.g. Producers knowing more about the product than the consumers do.

Public Goods

Public goods are defined by their characteristics:

- Non excludability—you cannot stop someone from using the product
- Non rivalry—consumption by one person does not reduce the availability for others

This means that they cannot be provided in the free market as there is no way to make a profit

E.g. street lighting, flood defences or nuclear defence

Specification Link

1.3.1 Types of market failure

1.3.2 Externalities

1.3.3 Public goods

1.3.4 Information gaps

Merit and Demerit Goods

Merit goods are goods the government believe are under consumed in a free market. This is because there is a lack of information about the benefits of the product/service and so there is less demanded than there should be.

In developing countries education can be classed as a merit good because there is no legal requirement to go to school and the benefits are not fully known or understood.

There are also some goods that the government perceives are over consumed in a free market and are called demerit goods e.g. cigarettes.

Consumers tend to misperceive the benefits from consumption and so consume more than is necessary or healthy

Externalities

Externalities occur when the price of the product does not fully represent both the social costs and private costs of making the product. This means the price is not a true reflection and so there is an extra cost not being considered.

Negative production Externality:

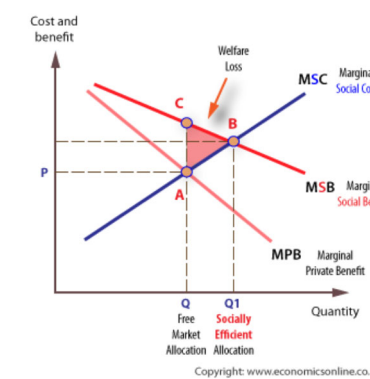
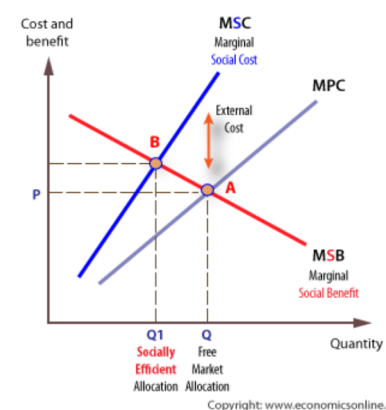
This occurs when a firm creates additional costs that are not directly charged to them and so produces too much of that product, e.g. toxic fumes affecting the health of local households

The government must set a price at the level of the external cost and charge it to firms to reduce the level of production and eliminate the externality. This is difficult however as it is hard to know the full cost of an externality.

Positive Consumption Externality:

This occurs when there are additional benefits to consuming a product that are not realised in the price and so it is set higher and less is demanded.

The government must provide more information or subsidise the product to encourage more consumption and increase the overall wellbeing of the economy.



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Externalities and the Environment

Global Warming:

This is caused by an increase in greenhouse gases, which occur through increases in production. This causes sea levels to rise and climates to change, creating more natural disasters.

Most global warming comes from pollution, however the effects do not stay within the highest polluters, poorer countries are usually the ones most affected by natural disasters.

This is an example of a negative production externality, meaning that the best solution is for governments to tax businesses for the pollution they cause, however due to the large number of countries involved it is much harder. Some steps have been taken, one being the Kyoto Protocol set up in 1997, however the US, the largest emitter of CO₂, did not sign the agreement. This was again discussed in the 2012 Doha climate change talks however it has been difficult to get 200 countries to agree.

Acid Rain:

Scandinavian countries have suffered from acid rain caused by pollution in other European countries, including the UK. Forest fires left to burn in Indonesia have caused air pollution in the neighbouring countries of Singapore and Malaysia

River Water:

Some of the biggest rivers run through multiple countries on their way to the sea, this can be problematic when countries upstream create issues for those closer to the sea.

E.g. Some African countries have attempted to divert parts of the Nile in order to encourage irrigation which has had negative effects on Egypt at the mouth of the Nile.

This is mostly due to the aspect of property rights, the fact that no one owns the Nile means it is difficult to manage and the costs cannot be properly assigned to the right parties.

Biodiversity:

As the world becomes more populated, there is more demand for land and resources, this means that there can be a loss of habitats and biodiversity. Many modern medicines are based on chemicals that occur naturally in the world, by eradicating these species before they are discovered possible scientific advances are lost. This value is not fully taken into consideration when weighing the cost of destroying areas.

Externalities and Transport

Congestion can cause extra pollution, both noise and air, which can have negative effects on businesses and residents in that area. This is not taken into consideration in the free market.

The London authorities have tried to tackle this problem by introducing a congestion charge, this places an additional cost to motorists which encourages them to reduce their consumption and instead use other modes of transport. By reducing the number of cars on the road, this reduces the externality and brings output closer to the marginal social cost.

Other areas have tried different approaches such as building trams or improving other transport links as well as creating car share lanes to reduce the number of motorists on the road.

Externalities and Health

Healthcare is a sector in which there is often public provision, or at least some state intervention in support of health services such as the NHS in the UK. The reason being that there is often a lack of information about the benefits of using and supplying good healthcare to all.

E.g. Vaccinations such as against measles are able to not only ensure the health of the person who is being vaccinated, but it also reduces the likelihood of others contracting the disease. This knock-on effect can help to reduce the spread of diseases and allow a healthier economy as a whole.

Externalities and Education

In the UK some form of education is required until 18, however in other countries this is not the case, this means that students may choose to leave education earlier than they should because they do not fully understand the benefits they may get from education. These benefits include the fact that graduates on average get paid more than non-graduates, better problem solving skills and a better work ethic that can benefit a business as they are now more efficient.

Externalities and Waste Disposal/Recycling

A major problem faced by 21st century society and governments is waste disposal. Landfill is one way to deal with waste, but it has long term negative effects on the environment, creating negative externalities in the future or those living nearby the landfill site.

Recycling can eliminate some of these externalities as it reduces the need for landfill sites and can also increase the number of materials we have for production. In the free market there is less knowledge about the benefits of recycling and so less recycling takes place, therefore losing out on positive externalities.

Externalities and Tourism

As international transport has become easier and cheaper more people are wanting to travel to new destinations. For less developed countries this offers an opportunity to earn some much needed foreign exchange.

There is some criticism about building luxury hotels in the middle of a poverty ridden country, however it is evidenced that an increase in tourism also brings in an increase in infrastructure, leading to better roads and network connections. This can also encourage local businesses to grow and expand to meet the needs of the tourists.

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Private Good	A good that, once consumed by one person, cannot be consumed by someone else; such a good has excludability and is rivalrous
Public Good	A good that is non-exclusive and non-rivalrous in consumption—consumers cannot be excluded from consuming the good, and consumption by one person does not affect the amount of the good available for others to consume.
Free-Rider Problem	When an individual cannot be excluded from consuming a good, and thus has no incentive to pay for its provision
Asymmetric Information	A situation in which some participants in a market have better information about market conditions than others
Adverse Selection	A situation in which a person at risk is more likely to take out insurance
Moral Hazard	A situation in which a person who has taken out insurance is prone to taking more risks
Merit Good	A good that brings unanticipated benefits to consumers, such that society believes it will be under consumed in a free market.

Information Failure in Healthcare

Due to the difference in education requirements for a dentist or a doctor, the seller has more power than the buyer. This means that the doctor or dentist could suggest a costly procedure that may not be required.

Information Failure in Tobacco

It is widely researched with clear evidence that smoking is bad for your health, however this is something that will affect a person in the future, rather than the present. Although consumers are more aware of the issues, they are still unsure of how exactly they will be affected in the future resulting in an over consumption of cigarettes.

The government have attempted to reduce this consumption with large excise duties on tobacco, a ban on advertising and also putting the dangers clearly on the packaging.

Information Failure in the Second Hand Car Market

There are 2 types of second hand cars, good runners that are reliable and 'lemons' that need constant servicing. The lack of information in this market arises because the buyer has much less information than the sellers and so is not sure about whether they are buying a lemon or

Private and Public Goods

Most of the goods that individuals buy are private goods, e.g. a can of Diet Coke. Once you drink it, it is gone and it is not available for someone else to have, this means it has excludability and is rivalrous.

Public goods are the opposite, such as street lighting, a lighthouse or a nuclear deterrent. A key feature of public goods is that they exhibit the free rider problem, which means that someone can use the public good whilst also avoiding paying for it, meaning there is less incentive to a business to produce that good.

Some goods can be either non excludable or non rivalrous but not both e.g. a football match. One person watching the football does not prevent the person sitting next to them from watching it, meaning it is non rivalrous. However if a ticket has not been paid for it can be made excludable.

Tackling the Public Good Problem:

Due to the nature of some public goods and the requirement that they be provided, some are supplied by the government, e.g. nuclear deterrent.

There are also some goods in which the government raises taxes to fund them, which is then given to a private firm in order to provide that good e.g. street lighting

In some cases a change in technology has allowed goods to be moved from the public sector into the private sector e.g. TV broadcasting where originally it all went through the BBC but due to a digital broadcasting there is now more ability to charge for the service.

Information Failure in Education

Education is long term goal in which the end result is getting a successful job that will be enjoyable. This makes choosing subjects to study difficult because there may not be a clear path and students may lack the information necessary to make the right choices for their future.

Teachers and career advisors are one way in which this information failure can be reduced as they are more likely to understand the overall benefits of subjects and so are able to help make a more informed decision.

Information Failure in The Insurance Market

People take out insurance to cover themselves against risk, those that are more at risk (e.g. accident prone people or those that get ill regularly) tend to be the ones to take out insurance. However the insurance companies are unlikely to know this as the buyer has more power.

In addition some individuals tend to become bigger risk takers once they have taken out insurance, this is due to the fact that the insurance company will pay out if they are injured, this is known as moral hazard.

