

Edexcel Economics (A) A-level

Theme 1: Introduction to Markets and Market Failure

1.3 Market Failure

Summary Notes

1.3.1 Types of Market Failure

 Market failure occurs when the free market fails to allocate resources to the best interests of society, so there is an **inefficient allocation of scarce resources**.

 Economic and social welfare is not maximised where there is market failure.

Types of market failure:

- **Externalities**

An externality is the cost or benefit a third party receives from an economic transaction outside of the market mechanism. In other words, it is the spill-over effect of the production or consumption of a good or service.

- **The under-provision of public goods**

Public goods are non-excludable and non-rival, and they are underprovided in a free market because of the free-rider problem.

- **Information gaps**

It is assumed that consumers and producers have perfect information when making economic decisions. However, this is rarely the case, and this imperfect information leads to a misallocation of resources.

1.3.2 Externalities



Externalities

- An externality is the cost or benefit a third party receives from an economic transaction outside of the market mechanism. In other words, it is the spill-over effect of the production or consumption of a good or service.
- Externalities can be **positive** (external benefits) or **negative** (external costs).
- The extent to which the market fails involves a value judgement, so it is hard to determine what the monetary value of an externality is. For example, it is hard to decide what the cost of pollution to society is. Different individuals will put a different value on it, depending on their own experiences with pollution, such as how polluted their home town is. This makes determining government policies difficult, too.



Private costs



Private costs are the costs to economic agents involved directly in an economic transaction.



Producers are concerned with private costs of production. For example, the rent, the cost of machinery and labour, insurance, transport and paying for raw materials are private costs.



This determines how much the producer will supply.



It could refer to the market price which the consumer pays for the good.



Social costs



This is calculated by private costs plus external costs.



It is the cost to society as a whole.

- On a diagram, external costs are shown by the vertical distance between the two curves. In other words, external costs are the difference between private costs and social costs.
- It can be seen that marginal social costs (MSC) and marginal private costs (MPC) diverge from each other. External costs increase disproportionately with increased output.

Private benefit

- Consumers are concerned with the private benefit derived from the consumption of a good. The price the consumer is prepared to pay determines this.
- Private benefits could also be a firm's revenue from selling a good.

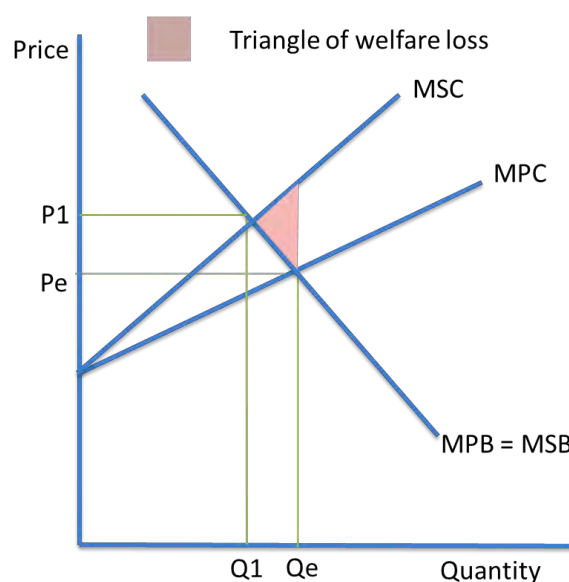
Social benefit

- Social benefits are private benefits plus external benefits.
- On a diagram, external benefits are the difference between private and social benefits.
- Similarly to external costs, external benefits increase disproportionately as output increases.

Social optimum position:

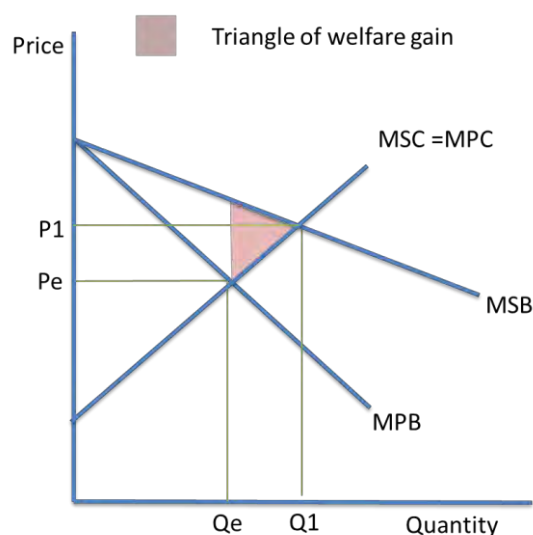
- This is where $MSC = MSB$ and it is the point of maximum welfare.
- The social costs made from producing the last unit of output is equal to the social benefit derived from consuming the unit of output.

External costs of production:



- External costs occur when a good is being produced or consumed, such as pollution.
- They are shown by the vertical distance between MSC and MPC.
- The market equilibrium, where supply = demand at a certain price, ignores these negative externalities. This leads to over-provision and under-pricing.
- With negative externalities, $MSC > MPC$ of supply. At the free market equilibrium, therefore, there are an excess of social costs over benefits at the output between Q_1 and Q_e .
- The output where social costs > private benefits is known as the area of **deadweight welfare loss**, shown by the triangle in the diagram.
- The market fails to account for the negative externalities that occur from the consumption of this good, which would reduce welfare in society if it was left to the free market.

External benefits of consumption:



- An example of an external benefit of consumption of a good or service could be the decline of diseases and the healthier lives of consumers through vaccination programmes.
- Since consumers do not account for them, they are under consumed in the free market, where $MSB > MPB$. This leads to market failure.
- The triangle in the diagram shows the excess of social benefits over costs. It is the area of **welfare gain**.

Government policies for negative externalities:

-  **Indirect taxes:** to reduce the quantity of demerit goods consumed. This increases the price of the good. If the tax is equal to the external cost of each unit, then the supply curve becomes MSC rather than MPC,  the free market equilibrium becomes the socially optimum equilibrium. This **internalises the externality**. In other words, the polluter pays for the damage.
-  **Subsidies:** encourage the consumption of merit goods. This includes the full social benefit in the market price of the good.
-  **Regulation:** to enforce less consumption of a good. For example, the minimum school leaving age. If there was a compulsory recycling scheme, it would be difficult to police and there could be high administrative costs. Bans could be enforced for harmful goods, although they can still be consumed on the black market. Bans are only useful where $MSC > MPB$ (the MSC curve is above MPB).
-  **Provide the good directly:** The government could provide public goods which are underprovided in the free market, such as with education.
-  **Provide information:** so there is no information failure, and consumers and firms can make informed economic decisions.
-  **Property rights:** this encourages innovation because entrepreneurs can create new ideas, which are protected, and earn profit.
-  **Personal carbon allowances:** They could be tradeable, so firms and consumers can pollute up to a certain amount, and trade what they do not use.

1.3.3 Public Goods

Under-provision of public goods

- Public goods are missing from the free market, but they offer benefits to society. For example, street lights and flood control systems are public goods.
- They are **non-excludable** so by consuming the good, someone else is not prevented from consuming the good as well, and they are **non-rival**, so the benefit other people get from the good does not diminish if more people consume the good.
- The non-excludable nature of public goods gives rise to the **free-rider** problem. Therefore, people who do not pay for the good still receive benefits from it, in the same way people who pay for the good do. This is why public goods are underprovided by the private sector: they do not make a profit from providing the good since consumers do not see a reason to pay for the good, if they still receive the benefit without paying.
- Public goods are also underprovided because it is difficult to measure the value consumers get from public goods, so it is hard to put a price on the good. Consumers will undervalue the benefit, so they can pay less, whilst producers will overvalue, so they can charge more.
- Governments provide public goods, and they have to estimate what the social benefit of the public good is when deciding what output of the good to provide. They are funded using tax revenue, but the quantity provided will be less than the socially optimum quantity.
- **Private goods** are rival and excludable. For example, a chocolate bar can only be consumed by one consumer. Moreover, private property rights can be used to prevent others from consuming the good.
- **Quasi (non-pure) public goods** have characteristics of both public and private goods. They are partially provided by the free market. For example, roads are **semi-excludable**, through tolls and they are **semi-non-rival**, because consumers can benefit from the road whilst other consumers are using it (unless it is rush hour).

1.3.4 Information Gaps

- **Symmetric information** means that consumers and producers have perfect market information to make their decision. This leads to an efficient allocation of resources.
- **Asymmetric information** leads to market failure. This is when there is unequal knowledge between consumers and producers. For example, a car dealer might know about a fault with the car that the consumer is unaware of. This could lead to a misallocation of resources. Consumers can also know more information than the producer, such as when purchasing insurance policies.
- There could also be imperfect information, where information is missing, so an informed decision cannot be made.
- This leads to a misallocation of resources. Consumers might pay too much or too little, and firms might produce the incorrect amount. For example, monopolies might exploit the consumer by charging them more than they need to.
- Asymmetric information can be linked with the **principal-agent problem**. This is when the agent makes decisions for the principal, but the agent is inclined to act in their own interests, rather than those of the principal. For example, shareholders and managers have different objectives which might conflict. Managers might choose to make a personal gain, rather than maximise the dividends of the shareholders.
- Information could be made more widely available through advertising or government intervention. For example, the harmful effects of smoking could be made public through adverts and messages on cigarette boxes.
- Asymmetric information can also lead to the problem of moral hazard. This occurs when a party with superior knowledge alters their behaviour in such a way which benefits themselves whilst disadvantaging the party with inferior knowledge. Moral hazard can be seen in insurance markets.