Market Failure

What is market failure?

What is economic efficiency? Economic efficiency is making best use of scarce resources.

List the main types of efficiency used in economics.

- **Productive efficiency**: firms deliver the highest possible output using the least amount of scarce resources. This means firms produce output at lowest possible unit cost.
- **Allocative efficiency**: scarce resources are used in a way that maximises consumer satisfaction i.e. resources are used to make items most valued by society, given their costs.

How is economic efficiency achieved? Economic efficiency occurs in a market when both allocative and productive efficiency are achieved.

What is market failure? Market failure occurs when free markets make an inefficient use of scarce resources by failing to deliver allocative or productive efficiency.

Why is market failure a problem? Productive inefficiency means firms are not maximising output from given inputs. There is lost potential output. Allocative inefficiency means scarce resources are not being used in a way that maximises consumer satisfaction.

List the main causes of market failure. Free markets can fail because of:

- the impact of externalities on others is usually ignored by producers and consumers.
- Information failure leads to choices that do not maximise satisfaction. Eg markets can fail to provide appropriate amounts of merit goods and demerit goods.
- There is no financial incentive for private sector firms to supply pure public goods. The high cost of excluding free riders deters firms from supplying quasi-public goods.
- The immobility of labour can cause unemployment hence productivity inefficiency.
- Price volatility can result in unstable commodity markets.

Externalities

What is an externality? Externalities are the spillover effects of economic activity on others not directly involved in production or consumption of the product.

Why do externalities cause market failure? Economic activity often affects third parties (others). Generally producers and consumers only take into account their own private interest when making economic decisions - the potential impact of any spillover effects is ignored. This means the private and social costs and benefits diverge. To identify the true cost to society of an economic decision, both private and external costs and benefits must be considered.

Define negative externalities. Negative externalities occur when production or consumption imposes costs on third parties who receive no compensation.

Give examples of negative externalities. A car journey generates spillover effects such as increased noise and pollution; Smokers ignore the harmful impact of ‘passive smoking’ on non-smokers; acid rain created by UK power stations can damage the forests of Norway.

Define positive externalities. Positive externalities exist when third parties receive benefits from the spillover effects of production or consumption for which they do not pay.

Give examples of positive externalities. Firms benefit when workers are educated or trained at the taxpayers’ expense; Preventative health provision such inoculations reduce absenteeism; The Arts and museums help create a sense of national identity and shared culture; Sports participation leads to improved health and team working skills.
Costs and benefits

What are private costs and benefits? Private costs and benefits are experienced by those individuals or firms directly involved in economic activity i.e. consumption or production.

Define private costs. Private costs are the costs to individuals or firms of consuming or producing a good or a service. Eg the cost of a car journey is, say 50p per mile travelled.

How are private costs measured? Supply curves reveal the private cost of the resources used up in production e.g. wages and rent.

Define private benefits. Private benefits are the gain to individuals or firms of consumption or production. Consumers gain satisfaction from using items while firms earn revenue from sales.

Define external costs. An external cost is the cost a consumer or producer’s economic decision imposes on others and for which no compensation is made.

Define external benefits. An external benefit is the gain a consumer or producer’s economic activity creates for others, and for which no payment is made.

Give an example of external benefits. A new leisure facility creates benefits to third parties for which no payment is made by generating local employment, and extra trade for local shops.

How is the impact of externalities valued? Money can be used as a unit of account to measure costs and benefits. Money can be used to value the impact of spillover effects.

What are the issues in estimating externalities? Using money to place a value on external costs and benefits is difficult and controversial. Can the cost of noise from planes, or lost life or limbs from an accident, be expressed in £s?

State the methods used to estimate external costs and benefits. There are two methods: Ex-ante (before the fact): estimate the amount of money consumers are prepared to pay to avoid an externality. Ex-post (after the fact): estimate the cost of putting right the externality.

What is a missing market? A non-existent market e.g. there is no market for externalities generated by economic activity.

Explain shadow prices. Money is used to measure the impact of externalities. However, some externalities have a missing market and so no market price. Instead economists estimate the value of externalities and create a shadow price.

What are social costs? Social costs are the total cost to society of a given economic activity i.e. the cost to both the consumers and firms involved (first parties) and any costs imposed on others (third parties). Social costs are found by adding together both private and external costs.

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<th>Private Costs</th>
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<td>Cost to third parties: others</td>
<td>Total cost to society of a given economic activity</td>
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What are social benefits? Social benefits are the total gain to society from a given economic activity i.e. the benefit to both first parties and any beneficial spillover effects on third parties. Social benefits are found by adding together both private and external benefits.

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**How is the concept of the margin use in assessing efficiency?** Economists are interested in decisions taken by consumers and firms, ‘at the margin’. *Marginal* means the extra unit. Does society gain if an extra unit of a good is produced and consumed? Allocative efficiency in a given market involves comparing the full social cost of producing an extra unit (*marginal social cost MSC*) with the full benefit gained from its consumption (*marginal social benefit MSB*)

**Define socially optimum output.** The socially optimum level of output occurs when scarce resources are used in a way that maximises consumer satisfaction.

**How are social costs and benefits used to define the socially optimum level of output?** Allocative efficiency means providing consumers with the products they most value, given their cost of production, and is achieved if price equals marginal cost. However price and marginal cost only reveal *private* benefits and costs. Account must be taken of spillover effects on third parties ie externalities. The socially optimum allocation of resources requires output to be increased to the point where *marginal social benefit equals marginal social cost* ie MSB = MSC

**Why do externalities cause market failure?** In free unregulated markets, externalities cause private and social costs or benefits to diverge so that the equilibrium and allocatively efficient level of output are different. Markets fail from over or under production.

**Use a graph to show negative externalities**

The supply curve S1 reveals the marginal private cost (MPC) of economic activity to the decision maker eg a firm. S1 = MPC.

The marginal external cost curve (MEC) shows the estimated negative impact of this economic activity imposed on third parties without compensation

Adding MEC to MPC gives marginal social cost curve (MSC). S2 shows the full cost to society

**Use a graph to show positive externalities**

The demand curve D1 reveals the marginal private benefit (MPB) of economic activity to the consumer. D1 = MPB

The marginal external benefit curve (MEB) shows the estimated positive impact of an economic activity enjoyed by third parties without payment

Adding MEB to MPB gives marginal social benefit curve (MSB). D2 shows the full benefit to society
Use a graph to show market failure from negative externalities: over production

The supply curve $S$ shows the firm's marginal private cost of production (MPC) $S = MPC$.

Given negative externalities such as pollution, marginal external costs (MEC) are added to the MPC curve to give the marginal social cost (MSC) curve. $MSC = MPC + MEC$.

The demand curve is a measure of private marginal benefit. If no positive externalities $D$ shows social marginal benefit $D = PMB = MSB$.

The equilibrium level of output delivered by a free market, $Q_1$, is allocatively inefficient. $SMB = SMC$ at $Q_2$. The market has overproduced by $(Q_2 - Q_1)$. The welfare loss triangle $JKL$ gives the amount of welfare loss from over production.

**Define deadweight loss.** The welfare loss to society that occurs when firms produce where market price does not equal marginal cost.

Use a graph to show market failure through positive externalities: under production

The demand curve $D_1$ reveals marginal private benefit but ignores potential positive spill over effects on third parties.

Assume the monetary impact of positive externalities are estimated to $= MEB$. The full gain to society is shown by the marginal social benefit curve (MSB). $MSB = MPB + MEB$.

Assume no negative externalities. The supply curve $S_1$ also shows MSC. $S_1 = MSC$.

The equilibrium level of output delivered by a free market, $Q_1$, is allocatively inefficient. $SMB = SMC$ at $Q_2$. The market has under produced by $(Q_2 - Q_1)$. The welfare loss triangle $JKL$ gives the amount of welfare loss from under production.

**Property Rights and externalities**

**What are property rights?** Property rights state the legally enforceable rules for owning, using and selling a resource eg land. Eg a landlord can ask the police to prosecute fly tippers.

**How can lack of clear property rights cause externalities?** Owners protect their assets. If assets such as sea and air have no owners, then anyone can use that resource regardless of any externalities imposed. Eg decades of over fishing in the North Sea threaten the survival of the cod. For markets to work, property rights must be clearly defined and enforced.

**Explain tragedy of the commons.** The tragedy of the commons describes how an unowned asset can be over used by agents with no regard to spillover effects on others eg over fishing leads to long term permanent damage to the stock of natural resources. Fish stocks dwindle.

**What is Coase’s theory?** Creating property rights for ownerless assets reduces externalities. Owners use the law to protect their land from polluters – if they can afford legal fees.

**Are property rights restricted?** UK laws restrict the use of some assets eg planning permission is required before new houses in rural areas.