Market Failure Q&A

Questions and Answers

First Edition - Summer 2002

This Tutor2u Q&A Guide is written to meet the specific needs of students revising for the OCR Market Failure & Government Intervention 2882 Syllabus but will be suitable to support any introductory course on economics.

Richard Young
Wood Green School

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Introduction

About This Guide

This Tutor2u Q&A Guide is written to meet the specific needs of students revising for the OCR Market Failure & Government Intervention 2882 Syllabus but will be suitable to support any introductory course on economics. It is designed as a complement to your studies and should not be regarded as a substitute for notes from lessons. The question and answer format is loosely based around the board's statement of content of what students need to know.

Remember every long journey starts with one small step. Many students find it useful to:

- **Understand the whole**: Quickly read through these pages
- **Understand the parts**: Read through one section quickly
- **Reread that section** using a highlighter pen to emphasise key points.
- Add their own comments in the right hand margin or the **Add your Own Notes** at the end of each section

Remember, **active revision is far more effective than passive reading**. Suggested active revision strategies include:

Using a sheet of A4 to cover up all text on the *Q&A Notes* except the questions themselves. Test yourself. Read the question, answer in your mind and then move the paper down to read the summarising notes.

Draw a spider diagram to summarise a section

If there is a point you do not understand take the issue up with your teacher or a friend.

Impress your friends: ask a question in class.

As you read these notes ask yourself how you might apply knowledge and critical understanding to problems and issues arising from both familiar and unfamiliar situations; how to analyse economic problems and issues; and to evaluate market failure arguments and evidence, making informed judgments

Key Aspects of the Market Failure

Tackling the entire syllabus can appear daunting. Why not break up the syllabus into these discrete chunks. Establish clearly in your own mind:

1. The meaning of economic efficiency and free markets
2. The difference between, and conditions for, allocative and productive efficiency
3. How does competition lead to efficiency?
4. Why economists say 'markets work' and 'markets fail' – in the same sentence
5. Can money always be used as a unit of account to value costs and benefits?
6. Definitions of public goods, quasi-public goods and private goods using the concepts of excludable and rival products
7. Market failure in a given industry may have several causes

8. The strengths and weaknesses of Cost Benefit Analysis
9. Several coordinated polices may be needed to correct market failure in a given industry
10. Government intervention can decrease economic efficiency leading to government failure
11. Government intervention can create 'winners' & 'losers'.
12. What is an 'acceptable' distribution of income?

Analysis & Evaluation

It is important to remember that knowledge and understanding found in these notes are just the foundations of a good grade. Learning facts alone will barely earn a Grade E.

Economists have a particular way of looking at the world. They draw on a toolkit of concepts and techniques to help to analyse and evaluate problems and potential policy solutions. They use real world examples and case studies to back up points of analysis and evaluation

Economics is an attitude of mind, a technique of thinking which helps its possessor to draw the right conclusions John Maynard Keynes

The highest marks in economics exam are reserved for students who think like an economist i.e. who select the appropriate tool from the toolkit to analyse and evaluate. A2 papers like 2886 Economics of Development expect students to display high order skills of analysis and evaluation.

Any essay question demands analysis and evaluation. Students at Wood Green have found the following checklist is real help in planning essay answers. What are the implications of a given essay title for:

- Is the product non rival and excludable i.e. a public good
- Does consumption or production cause negative or positive externalities?
- Can a value be easily placed on any externalities involved?
- Is there complete or imperfect information about the product?
- Is the market competitive or monopolistic?
- What are the equity issues involved?

About the Author

Richard Young has worked in economics education for over 25 years. Richard is a former Development Officer for the Economics & Business Association, and Director of the Centre for Learning Technology in Business and Economics at the University of Bristol, where he was instrumental is setting up the Biz/ed portal.

In 1999 Richard returned to the classroom and is currently an Advanced Skills Teacher of Business Studies, Economics and ICT at Wood Green School Witney. He is co-author of the Work Out Economics series for Macmillan Press. He co-ordinates a national discussion list on the Internet for teachers of economics and business studies.

The author can be contacted at richard.young@ntlworld.com and is happy to correspond on any issue raised by these notes.

About Tutor2u

Tutor2u is an online study portal for students and teachers of the economic and political sciences. Originally the website for the Economics department of Newcastle Royal Grammar School, Tutor2u has grown rapidly to become a leading educational resource for students around the world. We focus on a narrow, but complementary subject range. Our objective is to build a comprehensive, user friendly study portal, and to contribute to the study and examination success of all our users.

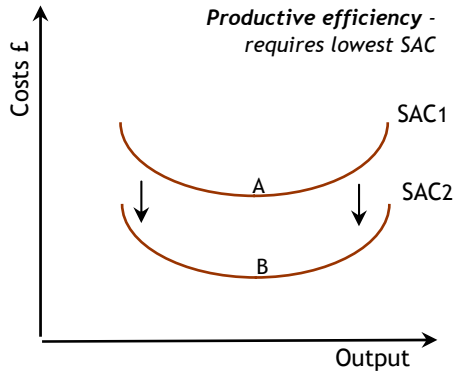
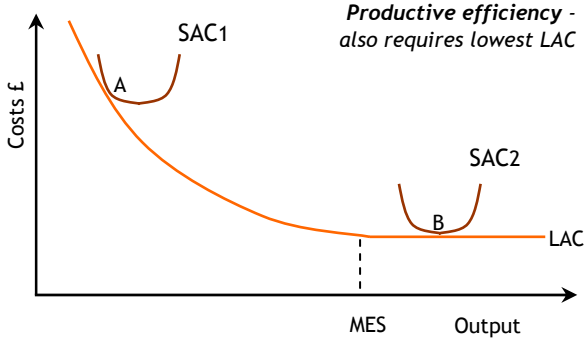
At the heart of Tutor2u lies the Discussion Forums. A wide range of bulletin-board style discussion groups provide users with a unique opportunity to interact with each other. The Discussion Forums are moderated by an experienced team of teachers and examiners. Interestingly, almost every post to a Forum board generates a reply - indicating the popularity of the boards and the supportive atmosphere they promote.

Tutor2u also includes a comprehensive range of study materials. Our most comprehensive collection of revision notes covers all the key areas of economics, business studies and politics. We maintain one of the Web's most comprehensive collections of reviewed study links, carefully categorised and described to help users find the data and support they need. There are over 75 detailed PowerPoint presentations on the website available for free viewing providing even more, up-to-date information on the core topics.

Tutor2u was co-founded in 1999 by Geoff and Jim Riley. Geoff Riley is currently Head of Economics and Politics at Eton College. He is an experienced teacher and examiner and a prolific author. Jim Riley is Managing Director of Candeo – a strategy and corporate finance consultancy. He has over 12 years of corporate finance and business experience from his time as a Director at PricewaterhouseCoopers and Thomson Travel Group PLC.

1 Economic Efficiency		
Efficiency in economics		
What does efficiency mean?	Efficiency means the best or optimal	
What is efficiency in economics?	Efficiency is about making the best or optimal use of resources. The economic problem tells us that societies have limited resources that cannot produce sufficient goods and services to meet unlimited wants and needs. Economic systems have to choose between alternative allocations (uses) of land, labour and capital **Economic efficiency** occurs when society is using its scare resources to produce the highest possible amount of goods and services that consumers most want to buy. All economists agree that economic efficiency is desirable	In economics, optimal, best and efficient have the same meaning
What is an efficient allocation of resource allocation?	Resource allocation refers to a given use of land, labour, capital and entrepreneurs those results in particular amounts of goods and services being produced. A reallocation of resources means some factors of production are switched into different industries and occupations resulting in a different amounts of goods and services, produced. An **efficient** or optimal **allocation of resources** occurs when society is using its scare resources efficiently i.e. to produce the highest possible amount of goods and services that consumers most want to buy.	An optimal allocation of resources results in economic efficiency
How is economic efficiency achieved?	Economic efficiency involves making best use of scare resources to produce those goods and services most valued by consumers and requires: **Productive efficiency** where firms deliver the highest possible output from given inputs and so produce at lowest unit cost **Allocative efficiency** resources are being allocated to the production of the goods and services most valued by society.	A particular resource allocation in a given market is assessed using productive & allocative efficiency criteria (rules)
Productive Efficiency		
What is productive efficiency	**Productive efficiency** can be defined as: Using the least amount of resources to produce a given good or service or Output is being produced at the lowest possible unit cost	

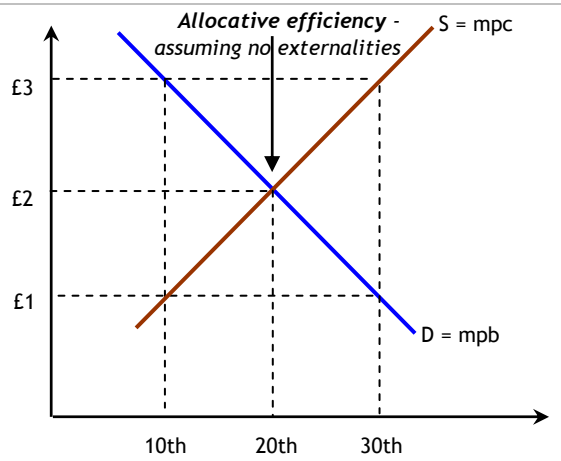
Section One: Economic Efficiency

What are the conditions for productive efficiency - lowest short run unit cost?	Productive efficiency occurs when unit costs of production are minimised and firms are producing on the lowest point of the lowest short run average cost (SAC) curve. In the diagram opposite, B is productively efficient; A is not. However B is only productively efficient if SAC2 lies on the lowest point of the long run average cost (LAC) curve. See the next Q&A.		
What are the conditions for productive efficiency – exploiting economies of scale?	**Internal Economies of Scale** are lower unit costs resulting from an increase in the amount of capital used in production. A firm can be technically efficient - i.e. at the lowest point of its SAC curve - and still fails to exploit all potential economies of scale. In the diagram opposite, economies of scale mean the long run average cost curve (LAC) curve slopes downwards until the **Minimum Efficient Scale** of output is reached and all potential economies of scale are exhausted. In the long run a firm can move from SAC1 to SAC2 by increasing the amount of capital used. In the diagram opposite, B is productively efficient; A is not.		Reasons for Internal Economies of scale include: **Technical economies** made in the actual production of the good. **Managerial economies** made in the administration of a large firm. **Financial economies** made by borrowing money at lower rates of interest than smaller firms.
What the implications of productive efficiency	Productive efficiency implies firms are using The least costly labour capital and land inputs The best available technology The best production processes Exploiting all potential economies of scale and Minimise the wastage of resources in their production processes		
Is productive efficiency sufficient to guarantee economic efficiency?	There is little point in producing goods and services at lowest cost if they are not the products most valued by consumers. Productive efficiency is a necessary but insufficient condition for an optimal allocation of resources. Allocative efficiency is also required.		

Section One: Economic Efficiency

What is technical efficiency?	**Technical efficiency** occurs when firms are producing on the lowest point of an average cost curve i.e. a lowest unit cost.	
What is X-inefficiency	**X-inefficiency** occurs when a firm uses more inputs than are necessary for a given level of output. E.g. firms may employ 3 managers when only two are needed.	
Allocative Efficiency		
Define allocative efficiency	Economic systems have to choose between alternative allocations (uses) of land, labour and capital. **Allocative efficiency** occurs when firms produce those goods and services most valued by society. This means scarce resources are used to make the goods and services most wanted by consumers so that their wants and needs are met in the best way possible.	
How can we say a given level of output is allocatively efficient?	Allocative efficiency in a given market involves comparing the cost of producing an extra unit – marginal cost - with the benefit gained from its consumption – marginal benefit. If marginal cost of an extra unit is less than the marginal benefit derived from its consumption, then it makes sense to increase production. If marginal cost is more than the marginal satisfaction gained from consumption then it makes sense to reduce production and release resources for alternative, 'better' uses.	See what are the conditions for allocative efficiency?
How do economists measure value and consumer benefits from consumption?	In economics, money is used as a **unit of account** to measure value. The value of a good or service to a consumer is given by the price the buyer is willing to pay **Willingness to pay** (WTP) is the maximum price a consumer is prepared pay to obtain a product rather than forego consumption and shown by the demand curve. WTP is used as a measure of a consumer's **marginal private benefit** (MPB) i.e. **D=WTP**	To the question 'what is the value of a can of coke', one answer is to say 'the price paid in the shop e.g. 50p'.
What is marginal private benefit?	**Marginal Private Benefit** (MPB) is the value consumers place on the consumption of the extra unit of a good. Money is used as a unit of account to measure consumer satisfaction. MPB is given by the demand curve i.e. **D=WTP=MPB**.	
What information is given by a demand curve?	The demand curve shows: The amount of a good consumers are willing and able to buy at different prices Consumers' willingness to pay (WTP) for a good expressed in terms of money, therefore The value or benefit, in money terms, from the consumption of an extra unit i.e. **private marginal benefit** (MPB)	Use the demand curve to measure consumers' private benefits
What information is given by a supply curve?	The supply curve shows The amount of a good producers are willing and able to sell at different prices The cost in money terms of the resources needed to produce an extra unit i.e. private marginal cost (MPC)	Use the supply curve to measure firms' private costs

Section One: Economic Efficiency

How can allocative efficiency be illustrated?	Identifying allocative efficiency involves comparing the cost of producing an extra unit with the benefit gained from its consumption. Compare three possible levels of output In the diagram opposite: 10 units: **under allocation**. The value placed by consumers (MPB) on the 10th unit, alone, is £3. The cost of making that unit (MPC) is just £1. Increasing the amount of resources used up to the 20th unit is an improvement on resource allocation because for each extra unit MPB>MPC 30 units: **over allocation**. MPB for 30th unit is £1 while the MPC is £3. Reducing the amount of resources until MPB>MPC, i.e. to 20 units, is an improvement on resource allocation. 20 units: **optimal allocation of resources** occurs when 20 units are bought and sold because the value consumers place on the consumption of the extra 20th unit exactly equals the marginal cost to the firm of producing that good. MPB = MPC = £2		The interaction of supply and demand result in an equilibrium price and output that is allocatively efficient. The value consumers place on output equals the firms' costs of production
What are the conditions for allocative efficiency?	**Assuming no externalities,** allocative efficiency occurs when for a given level of output: **Private Marginal Benefit** (PMB), the value consumers place on a good, equals **Private Marginal Cost** (PMC), the cost of resources used up in producing that good		Given externalities allocative efficiency no longer occurs where PMB = PMC because private and social costs or benefits now diverge

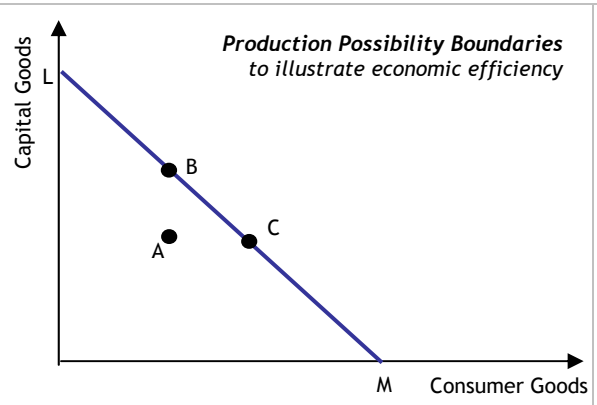
Pareto Efficiency

What is meant by Pareto efficiency;

For Vilfredo Pareto efficiency occurs when resources cannot be reallocated to make one consumer better off without making someone worse off.

Pareto efficiency can be illustrated using a **production possibility boundary** curve or frontier (PPB)

- Any point within the PPB – e.g. A - is inefficient. Using idle resources to increase output means some consumers gain while no consumers lose.
- All points on the PPB - e.g. B & C - are allocatively efficient because the economy cannot produce more of one product without affecting the amount of all other products available.



The production possibility curve (PPC) LM shows the combination of two goods a country can make in a given time period with resource fully employed.

A PPC is drawn assuming a country has a fixed amount of resources and a constant state of technology.

Competition, the price mechanism, and the efficient allocation of resources

What is a free market

A **free market** is an economic system where the forces of supply and demand to set prices and allocate resources:

- *Free* because there is no government intervention e.g. price controls, regulations, or laws which limit the behaviour of consumers or producers – except laws to ensure competition
- A *market* because the forces of supply and demand set the price of goods in different markets

The Market failure syllabus assumes an understanding of how supply and demand allocate resources

How are resources allocated in a market system?

Economic systems have to choose between alternative allocations (uses) of land, labour and capital.

In a free market economy

- **Households** own resources and markets allocate resources through the price mechanism. An increase in demand raises price and encourages firms to switch additional resources into the production of that product. The amount of goods and services consumed by households depends on their income. Household income depends on the market value of an individual's work.
- **Firms** make decisions about the amount of capital and labour to use in production. The interaction of consumers and producers in markets determines the equilibrium price and equilibrium quantity bought and sold, hence the amount of resources used.
- **Governments** take the view that markets work, assume a laissez faire (let alone) approach, step back, and allow the forces of supply and demand to set prices and allocate resources. Government intervention is required to ensure markets are 'free' and to prevent or correct market failure through anti monopoly legislation, enforcing property rights, redistributing income through the tax and benefit system etc

Equilibrium is a state of balance - i.e. a situation where there is no tendency for change

How does the price mechanism reallocate resources

The economic environment is constantly changing e.g.:

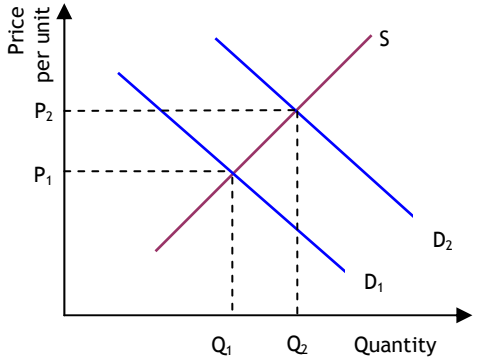
- Consumer tastes evolve – goods become 'fashionable'
- New products, processes and technologies emerge

Market economies use the price mechanism to reallocate resources from one use to another.

E.g.: in the diagram opposite, a movement in consumer taste towards the good shifts the demand curve to the right. The resultant increase in price acts as a signal to producers to use more resources to increase output from Q1 to Q2

Changes in a condition of supply or demand send the market price of a good up or down. The change in price acts as a signal to consumers or producers to change quantity bought and sold, hence resource allocation. This is the price mechanism or system.

An Increase in demand reallocates resources



Section One: Economic Efficiency

How can competition lead to an efficient allocation of resources?	A perfectly competitive market results in an optimal allocation of resources because it ensures **Productive efficiency**. Firms to produce at lowest unit cost (productive efficiency) for two reasons: Cet par lower unit costs mean higher profits. Profit maximising firms have an incentive to minimise costs. Firms who fail to produce at lowest cost cannot match competitors prices make less than normal profits/losses and bankruptcy forces closure **Allocative efficiency**. The profit motive encourages firms to: Produce those goods and services most valued by consumers Enter industries currently enjoying abnormal profit. The increase in supply lowers price (i.e. marginal benefit) so that it equals marginal cost Leave an industry where abnormal losses are being made. The decrease in supply raises price (i.e. marginal benefit) so that it equals marginal cost	*Assumptions* No externalities and perfect competition i.e. a large number of firms produce identical product; perfect information; no barriers to entry. Perfect competition offers a useful benchmark against which to evaluate real world markets.
Make Your Notes here		

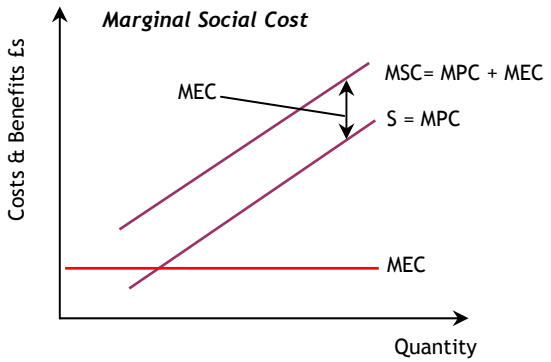
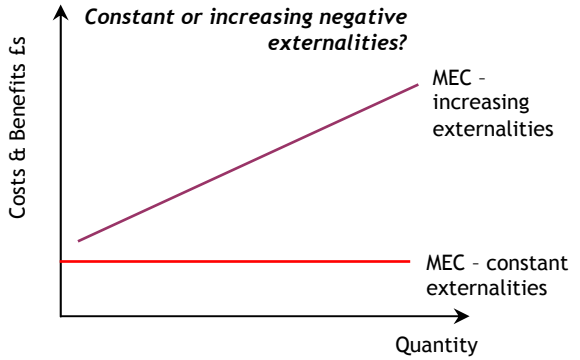
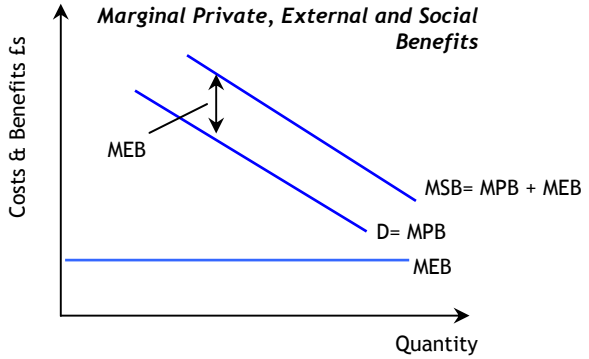
2 Market Failure		
What is market failure?	Market failure occurs when free markets, operating without any government intervention, fail to deliver an efficient allocation of resources.	
Why is market failure a problem?	Market failure results in **Productive inefficiency.** Firms are not maximising output from given factor inputs and is a problem because the lost output from inefficient production could have been used to satisfy more wants and needs **Allocative inefficiency.** Resources are misallocated and producing goods and services not wanted by consumers. This is a problem because resources can be put to a better use making products consumers value more highly so that a higher level of wants and needs can be satisfied.	
Why can market failure occur?	Markets can fail because of The existence of externalities - e.g. pollution (negative) or training (positive) causes private and social costs and/or benefits to diverge Imperfect information means merit goods are under produced while demerit goods over produced Markets cannot make a profit from producing public goods and quasi-public goods The concentration of power in markets results in market dominance and abuse of monopoly power Factor immobility such as the geographical & occupational immobility of labour causes unemployment hence productive inefficiency Equity (fairness) issues. Markets can generate an 'unacceptable' distribution of income and social exclusion where people on low income – the relatively poor - are denied access to essential goods and opportunities considered 'normal' by a society e.g. food, clothing, housing, and education	The causes of market failure are explained in detail in the next section of Q&As
Is there just one cause of market failure for a given product?	Market failure in a given industry may occur form several reasons e.g. education involves externalities, imperfect information local market dominance and equity issues	

Market failure through Externalities

What is an externality	**Externalities** are the unintended spill over effects on third parties of economic activity.	Externalities are generated by first parties (producers and consumers) and affect third parties (someone not directly involved)
Why do externalities occur?	The economic actions of consumers and producers can often affect third parties (other people). Generally producers and consumers only take into account the private costs and benefits of production or consumption – how they themselves are affected – and ignore any unintended spill over effects on third parties (someone not directly involved) of their decisions. For example Victorian factory owners paid little attention to the side effects of manufacture: smoke noise and pollution.	
What are the types of externality?	There are two types of externality: **Negative externalities** occur when production or consumption inadvertently impose costs on third parties e.g.: smokers ignore the unintended but harmful impact of 'passive smoking' on non-smokers. acid rain from power stations in the UK can damage the forests of Norway **Positive externalities** exist when third parties benefit from the spill over effects of production or consumption e.g. friends benefit when a consumer connects a home computer to the internet – they can now send email messages a well kept garden gives pleasure to passers-by and increases the value of a neighbour's house	
What are external costs?	Negative externalities occur when production or consumption inadvertently impose costs on third parties. The result can damage to the environment, noise, congestion and pollution etc. In economics money is used as a unit of account to measure costs and benefits including the impact of negative externalities. So **external costs** are the costs of negative externalities expressed in terms of money. E.g. the Adam Smith Institute estimate annual external cost of road congestion in the UK is £18Bn.	Can the effects of externalities always be expressed in terms of money? E.g. how can economists value the loss of a species of wild flower caused by acid rain?
What are external benefits?	**External benefits** are the benefits of positive externalities expressed in terms of money.	
How are external costs and benefits estimated?	Valuing external costs and benefits is difficult and controversial. There are two methods: **Ex-ante** (before the fact) valuations estimate the amount of money consumers are prepared to pay to avoid an externality **Ex-post** (after the fact) valuations estimate the cost of putting right the externality	The techniques for estimating externalities are part of the cost benefit analysis
Can all externalities be measured using money as a unit of account?	Economists seek to place a monetary value on the spill over effect. In practice estimating time savings, loss of life or limb; environmental damage, lost countryside of loss a species is highly problematic. How would you estimate harmful impact of 'passive smoking' on non-smokers?	
What are social costs?	**Social costs** refer to the total cost to society of a product i.e. the cost to first parties and costs inadvertently imposed on third parties Social costs are found by adding together the private and external costs of a given economic activity:	It is important to understand that external costs and benefits are estimates and are often difficult to value.

Private Costs	+	External cost	=	Social Costs

	Cost to individual consumers or firms of their economic activity		Cost to others of individual consumers or firms economic activity		Total cost to society of a given economic activity	
	Cost to first parties - individuals		**Cost to third parties - others**		**Total Cost to society - everyone**	
The equation for calculating social cost	Social costs are calculated by adding together private and external costs i.e. social costs = private costs + external costs					SC = PC + EC
What is the link between social cost and opportunity cost?	Opportunity cost measures the cost of any economic choice in terms of the next best alternative foregone. Ignoring external costs and using only private costs is an incomplete measure of opportunity cost. Establishing both private and external costs means social cost is an accurate and complete measure of the full cost to society of an economic choice.					
What are social benefits?	**Social benefits** refer to the total benefit to society from a good i.e. the benefit to individuals and any beneficial unintended spill over effects on third parties. Social benefits are found by adding together the private and external benefits of a given economic activity.					
	Private Benefits	**+**	**External benefits**	**=**	**Social Benefits**	
	Benefits to individual consumers or firms of their economic activity		Benefits to others of individual consumers or firms economic activity		Total benefits to society of a given economic activity	
	Benefits to first parties - individuals		**Benefits to third parties - others**		**Total benefits to society - everyone**	
Give the equation for calculating social benefits	Social benefit = private benefit + external benefit					SB = PB + EB
Why is important to distinguish between total and marginal costs and benefits?	Economists are interested in decisions taken by consumers and firms, 'at the margin'. E.g. 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 cost - with the full benefit gained from its consumption – marginal benefit. If the marginal social cost of an extra unit is less than the marginal social benefit derived from its consumption, then it makes sense to increase production up to the point where SMB=SMC.					Marginal means the extra unit.

How is marginal social cost (SMC) curve drawn?	**Marginal social cost** (MSC) is the cost to society of producing *one extra unit* of a product and can be illustrated graphically. In the diagram opposite: The **marginal private cost curve** (MPC) shows the cost of an economic activity to the decision maker e.g. a firm. MPC is given by the firm's supply curve. The **marginal external cost curve** (MEC) shows the estimated cost of an economic activity imposed on third parties The **marginal social cost curve** (MSC) is the total cost to society of producing an extra unit of a good i.e. MSC = MPC + MEC		
Why does the MEC curve sometimes slope upwards?	A horizontal MEC curve assumes that the value of negative externalities stays constant as output rises. An upward sloping MEC curve assumes that the value of negative externalities increase with output. Increasing negative externalities with output arise in traffic congestion where as extra drivers join a crowded road then external costs such as time lost through jams, rise for all motorists.		Using constant or increasing marginal costs is equally valid in your answers. It depends on the assumptions you have made: do the external costs stay constant or increase with output?
How is the marginal social benefit (SMB) curve drawn?	**Marginal social benefit** (MSC) is the benefit to society of consuming *one extra unit* of a product and can be illustrated graphically. In the diagram opposite: The **marginal private benefit curve** (MPB) shows the benefit of an economic activity to the decision maker e.g. a consumer. MPB is given by the market demand curve. The **marginal external benefit curve** (MEB) shows the estimated benefit of an economic activity enjoyed by third parties The **marginal social benefit curve** (MSB) is the total benefit to society of using an extra unit of a good i.e. MSB = MSB + EMB		

Why can negative externalities result in market failure?

The efficient allocation of resources requires output to be increased up to the point where social marginal benefit equals social marginal cost. In a free market firms only take into account the private costs of their production. Given negative externalities - such as pollution - private and social costs to diverge. An unregulated (free) market consequentially overproduces the good.

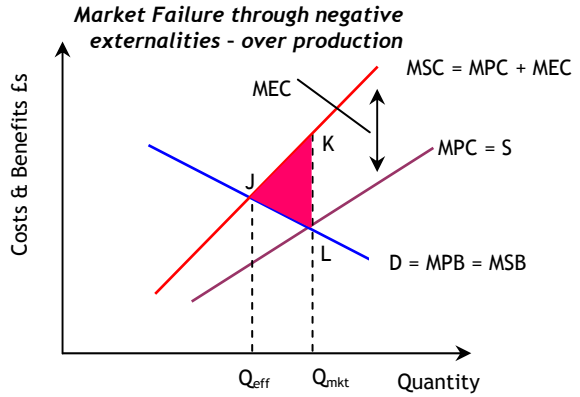
In the diagram opposite, the supply curve S shows the firm's marginal private cost of production (MPC) but ignores any spill over effects on third parties. S= MPC.

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

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

The equilibrium level of output delivered by a free market, QMkt, is allocatively inefficient. SMB = SMC at Qeff. The market has overproduced by (QMkt – Qeff).

The **welfare loss triangle** JKL gives the amount of welfare loss from overproduction



The condition for allocative efficiency level of output is MSC = MSB

D = MPB = MSB because no positive externalities are assumed

What is a welfare loss triangle?

A **welfare loss triangle** measures the loss to society when markets are allocatively inefficient. They are a quantitative measure of inefficiency

Welfare loss triangles are not required in AS answers

Why can positive externalities result in market failure?

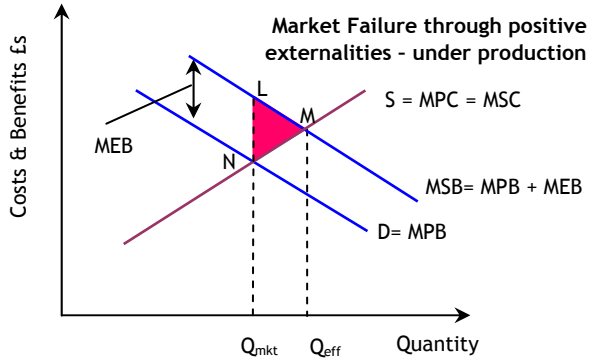
Market failure also occurs when firms ignore the positive external effects of their production.

In the diagram opposite, the supply curve S shows SMC because there are no negative externalities. S = MPC = MSC.

The demand curve is a measure of private marginal benefit. Adding marginal positive externalities to D gives social marginal benefit. MSB = MPB + MEB.

The equilibrium level of output delivered by a free market, QMkt, is allocatively inefficient. SMB = SMC at Qeff. The market has under produced by (Qeff – QMkt).

The welfare loss triangle LMN quantifies the amount of welfare loss resulting from underproduction



S = MPC = MSC because no negative externalities are assumed

What problems are created by externalities	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 and markets fail. Negative externalities mean social costs exceed private costs resulting in overproduction Positive externalities cause mean social benefits exceed private costs resulting in underproduction	
How can lack of clear property rights cause externalities?	Property rights refer to legal ownership of an asset. Some assets have no owners e.g. air. Owners protect their assets. If an asset is un-owned no one has an economic incentive to protect it from abuse.	Property rights must be clearly defined and protected by the government

Market failure through Imperfect Information

What do economists mean by the term information failure?

Consumers and producers require complete information if they are to make efficient choices. Imperfect information means consumer or producers (economic agents) cannot accurately value the 'true' cost and/or benefit of a good or service. Information failure occurs when economic agents have inaccurate, incomplete, uncertain or misunderstood data and so make potentially 'wrong' choices.

How can information failure cause market failure?

Consumers and producers make economic decisions based on available information. Perfect information allows them to make informed choices. Imperfect or misunderstood information can result in 'wrong' choices. Private and social costs and benefits diverge so that the equilibrium and allocatively efficient level of output are different and markets fail.

Imperfect information can be caused by

- **Misunderstanding** over the true costs or benefits of a product. E.g. drugs and higher education
- **Uncertainty** about costs and benefits e.g. should young workers buying into pension schemes when we can only guess at economic conditions in 40 years time?
- **Complex information** e.g. choosing between makes of computers requires specialist knowledge of hardware. Do I buy an Apple or PC computer?
- **Inaccurate or misleading** information e.g. some advertising may 'oversell' the benefits of a product
- **Addiction** e.g. drug addicts may be unable to stop consumption of harmful substances

Information failure is associated with merit and demerit goods

Market failure through under consumption of Merit Goods

What is a merit good?

A **merit good** is a product, such as education, that the government believes consumers undervalue because of imperfect information.

A merit good is 'socially desirable' and 'better' for a consumer than the consumer realises e.g. measles inoculation

Why can merit goods be undervalued?

Willingness to pay (WTP), as revealed by the demand curve, is the consumer's own measure of private benefit. However for goods such as education, buyers may have inaccurate, incomplete, uncertain or misunderstood information and fail to take account of the full benefits of a course of study. WTP undervalue a product.

For example potential students may fail to value accurately the increased earning power of graduates. Current MPB is an inaccurate valuation because of information failure. If potential students took full account of future benefits, WTP and demand would be higher.

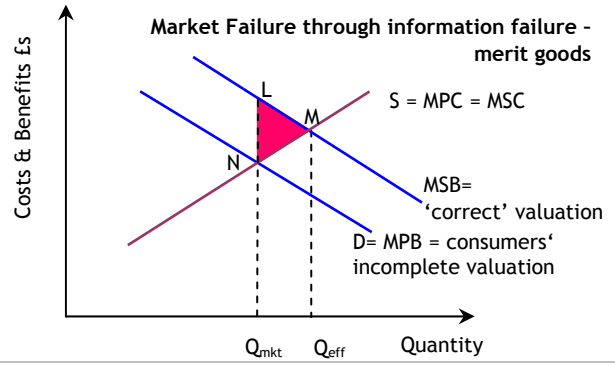
How can merit goods cause market failure?

In the diagram, opposite, the demand curve for higher education is a measure of private marginal benefit. Consumers do not take account of the full value of learning when calculating their willingness to pay.

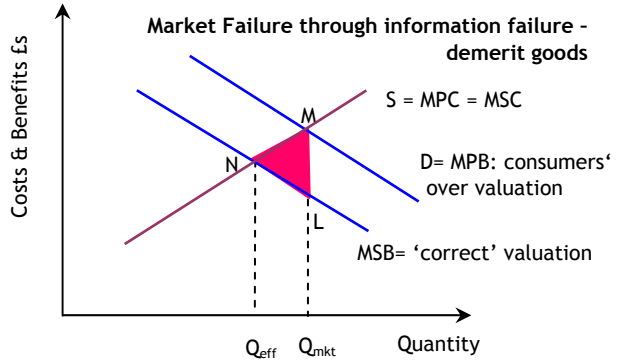
Adding the 'true value of benefits' to D gives social marginal benefit.

The equilibrium level of output delivered by a free market, QMkt, is allocatively inefficient. SMB = SMC at Qeff. The market has under consumed by (Qeff – QMkt).

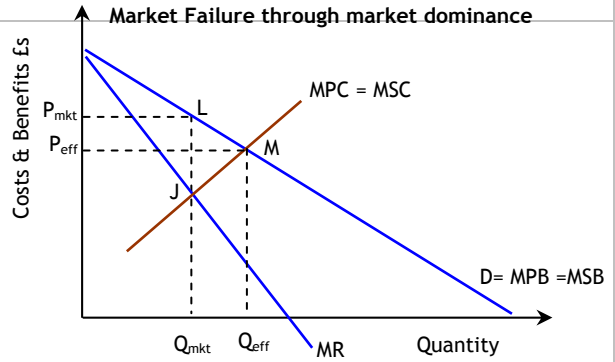
The welfare loss triangle LMN quantifies the amount of welfare loss resulting from under consumption

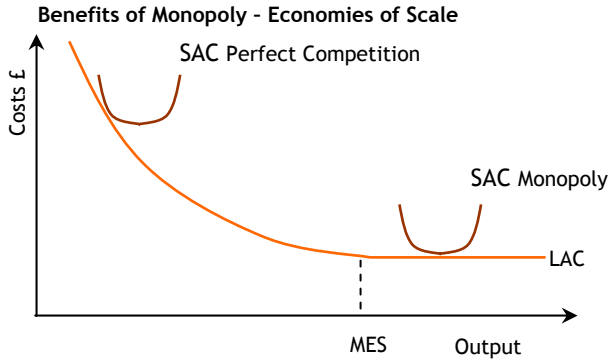


How can a monetary value be placed on the additional value of education overlooked by consumers suffering from information failure? Is it simply the present value of higher income? How can the value to society of a well educated and more skilled and productive work force be estimated?

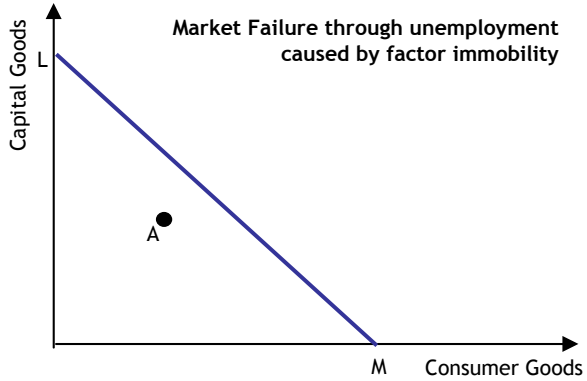
Are value judgements involved in defining a merit good?	The decision as to what constitutes a merit good is highly controversial. Who is to say that consumers undervalue products because of 'information failure'? Governments? Free market economists argue views are on what is 'good' or 'bad' for consumers and producers involves value judgements and state paternalism. Others argue that only the government has sufficient information to place an accurate and complete value on socially desirable goods such as health and education.	Merit goods are 'socially desirable' products with positive externalities that governments argue are 'better' for the consumer than the consumer realises.
Market failure through over consumption of Demerit Goods		
What is a demerit good?	A **demerit good** is a product, such as tobacco, that the government believes consumers overvalue because of imperfect information. A demerit good is 'socially undesirable' and 'worse' for a consumer than the consumer realises e.g. alcohol	
How can demerit goods cause market failure?	In the diagram for cigarettes opposite, the demand curve is a measure of private marginal benefit. Consumers do not take account of the true value of learning when calculating their willingness to pay. Adding the 'true value of benefits' to D gives social marginal benefit. The equilibrium level of output delivered by a free market, QMkt, is allocatively inefficient. SMB = SMC at Qeff. The market has under consumed by (Qeff – QMkt). The welfare loss triangle LMN quantifies the amount of welfare loss resulting from over consumption	
What is Government paternalism?	Some economists argue that the "nanny state" is when the government imposes its own preferences on consumers. For example, when the government subsidies university tuition fees and taxes cigarettes it is saying 'we know better than you what is good for you'.	
Market failure through non-production of public goods		
What is a public good?	A **private good** is both rival and excludable. A good which is both non-rival and non-excludable is called a **public good**: **Non-rival** means an individual's consumption of the good does not reduce the amount of the product available to other consumers **Non-excludable means** once the good is provided, others cannot be excluded (stopped) from benefiting from the product.	Examples of public goods include lighthouses, policing, national defence, terrestrial television, R&D, and flood defence systems.
What is the free rider problem?	Public goods are non-excludable. Once the product is provided, other consumers cannot be excluded (stopped) from benefiting from the good e.g. a lighthouse. This means some consumers may avoid payment and become **free riders** i.e. benefit without contributing to the cost of provision.	
Why do public goods cause market failure?	Because public goods are non-excludable, profit-seeking firms will not provide them. The non-excludability of a public good encourages some consumers to avoid payment and become free riders. Firms cannot collect all the revenue needed to supply the public good and make a normal profit. Markets cannot provide the incentives needed to supply essential services such as policing and national defence and so there is allocative inefficiency.	Does society want a profit maximising army and police force provided by the private sector?

What are 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. E.g. **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.	Quasi means near, close, almost.
Why can quasi-public goods cause market failure?	The difficulty and expense of seeking to exclude free riders deters firms from supplying allocatively efficient amounts of quasi-public goods and so there is market failure.	
What is a public bad?	Environmental damage and global warming affects everyone – no one is excluded from the dis-benefits of others' polluting economic activity	
Market failure through market dominance		
What is market dominance?	**Market dominance** occurs when a firm acquire monopoly power. In the UK monopolies are defined as occurring when firms have 25% or more of the market. Monopoly power can result in: Productive inefficiency - firms do not minimise costs Allocative inefficiency – the market under produces	
Why can market dominance lead to inefficiency?	Unregulated dominant firms can be inefficient because the **lack of competition** and their **monopoly power** allows them to: Produce goods at a quality and price largely determined by the firm. Consumers face restricted choice and have no alternative supplier e.g. RailTrack Have less incentive to maximise outputs from given inputs or minimise unit costs. The result is market failure through productive inefficiency. Set price above marginal (private) cost. Profit maximising monopolists set Q where MR=MC. The resultant price (SMB) does not equal SMC. The result is market failure through allocative inefficiency. This is illustrated in the next Q&A.	Unregulated means the government takes no action to limit the use of monopoly power
Why do profit maximising monopolists under produce?	Consider the diagram opposite: Profit maximising firms set output where MC = MR. The monopolist offers Qmkt for sale at PMkt. However the socially efficient level of output occurs where MSC = MSB i.e. Qeff. Market failure occurs because of under production. The loss to society from under production is given by the welfare loss triangle JLM	The AS syllabus does not require candidates to use the *Market Failure through market dominance* diagram. Candidates aiming for the highest grade may find a graphical approach useful to quantify the amount of welfare loss arising from monopoly power abuse.
	A2 Extension Point: In perfect competition MPC gives the supply curve S. Perfectly competitive industries result in a lower Peff – where S=D – and an allocatively efficient level of output Qeff, than monopoly. This assumes unit costs are the same in perfect and imperfect competition. Monopolists may enjoy economies of scale	



What are the benefits created by monopolies?	Regulated monopoly may be the best market structure because: In industries with **significant economies of scale**, one large firm can produce at lower unit cost than many small firms because of: **Capital intensive manufacturing** where mass production can be automated A **natural monopoly** like the railway network where the MES level of output is so high a proportion of total market demand that only one firm to fully exploit the potential economies of scale available in the industry. Regulated monopoly is the best solution. Only monopolies can generate sufficient profits to enable large-scale high cost **Research & Development** (R&D). The resultant faster innovations are positive externalities Domestic monopolies can **compete internationally** more easily than small firms.		**Minimum efficient scale** (MES) is the level of output needed to produce at lowest unit cost. Public utilities e.g. electricity, water, & gas) are natural monopolies. To avoid abuse of monopoly power government appoints regulators who impose strict price controls.

Market failure through Factor Immobility

What is factor immobility?	Factors refers to **factors of production** i.e. land labour and capital resources. **Factor immobility** occurs when a factor is unable to switch easily between different sectors of the economy	Market economies use the price mechanism to reallocate resources from one use to another
Why do factors need to be mobile?	Evolving consumer tastes, new products, processes and labour saving technologies mean factors of production currently producing, say, videos need to switch to alternative uses, say, DVDs. Immobile resources means the economic system cannot meet changing needs or adapt to changing process of production brought about R&D and innovation.	
What causes factor immobility?	Particular attention is paid to labour immobility caused by **Occupational immobility**: workers cannot switch easily between jobs requiring different skills. Without retraining labour remains **structurally unemployed**, resulting in productive inefficiency. **Geographical mobility** workers cannot move between regions because of family ties, the high cost of moving, unaffordable housing or higher costs of living. Large regional house prices differences are a major source of geographical immobility. Labour remains **regionally unemployed**	Factor immobility causes *structural* and *regional* unemployment
How does factor immobility cause market failure?	Economic systems have to respond to a rapidly changing economic environment by reallocating resources. Immobile resources cannot switch to producing those new goods and services most valued by society, in the quantity required, resulting in allocative inefficiency Unemployed immobile resources mean economies operating inside the production possibility boundary e.g. point A in the diagram opposite, resulting in productive inefficiency	**Market Failure through unemployment caused by factor immobility** 

Market failure through an unacceptably unequal distribution of income		
What is the difference between wealth and income?	**Wealth** is the current value of assets (e.g. bank balances, shares and property) and is a stock value i.e. an amount at a given moment of time e.g. £500,000 **Income** refers to earnings per period of time (e.g. weekly wage or annual salary) and is a flow value i.e. an amount at a period of time e.g. £30,000 per year	
How do people earn income?	In a free market economy, households own resources that they sell to firms in return for an income. The main sources of household income are: **Salaries or wages** from working – dependent on the market value of an individual's work. **Benefits** for those who are sick or unemployed **Assets**. Consumers with savings or who own assets such as houses or shares receive interest rent and dividend payments. **Profits** Entrepreneurs hire labour, rent land and employ capital to organise production. Profit is the reward for risk taking. Loss or bankruptcy is the penalty of failure.	The amount of goods and services consumed by households depends on income.
What is the distribution of Income & Wealth?	**Income distribution** refers to the way in which total income is shared out between households. Different households receive the different incomes because of wage/salary differences between occupations and the uneven ownership of wealth such as shares. **Wealth Distribution** means the way the ownership of assets is shared out between households.	
How is the distribution of income measured	The **Gini coefficient** is a statistical measure of income distribution. A Gini coefficient of 0 means perfect equality; 1 total inequality.	Gini coefficients: Brazil 63%; Russia 50%; Sweden 25%
What is poverty?	**Income poverty** refers to low standard of living measured by income or consumption: **Absolute poverty** is defined by the UN as an income of $1 per day or less. The UK has no absolute poverty Households receiving less that 50% of average incomes experience **relative poverty**. UK families receiving less than £12,000 pa are relatively poor.	Poverty is a complex concept. A2 candidate should be aware of the distinction between income and human poverty
Why is absolute poverty a problem?	The relatively poor do not have access to the range of goods and service consumed by 'average' citizens resulting in social exclusion	
What is an 'unacceptable' distribution of income?	Ultimately, what constitutes an 'unacceptable' distribution of income is a value judgement (opinion) and as such a political issue beyond the remit of economics	
Is an unequal distribution of income and wealth a problem?	Inequality is an issue which divides opinion: *No*: high salaries and profits are needed to compensate for overtime, managers accepting responsibility and entrepreneurial risk taking. *Yes* those on very low incomes cannot afford essential goods and services are excluded from enjoying an appropriate standard of living. E.g. they cannot afford essentials such as housing, healthy food, heating clothing education	NB High incomes are often the reward for risk taking (entrepreneurs) or for investing in education/skills e.g. IT

	and health care. High inequality creates social exclusion and may generate alienation, encourage crime etc	consultant
How can an unequal distribution of income or wealth cause market failure?	Households earn an income from owning assets or selling their labour in markets. If labour markets fail to deliver a level of income to all groups in society which allows everyone to at least buy the essentials of life, then market failure can be said to have occurred. The uneven distribution (spread) of income and wealth means the poor and unemployed do not have access to the same range of goods and services as high earners. If the disadvantaged cannot buy appropriate health care and education then markets can be said to have failed.	
	Insert Your notes here	

Making choices and the impact of government intervention on market outcomes and efficiency

Cost Benefit Analysis

What is Cost Benefit Analysis (CBA)?	Governments face choices: do we build new hospitals or new or new schools, etc. Given limited resources how can government decide which projects to prioritise and build and which to reject? **Cost Benefit Analysis** (CBA) offers a systematic framework for measuring and evaluating the likely impact of public sector project, takes into account both private *and* external costs and benefits.	CBA seeks to measure the value to society as a whole of the resources used by, and the benefits created by, a project
Do private sector firms use CBA?	A private sector firm assessing an investment project only takes account of its own private costs and benefits (revenue). Firms ignore externalities. Government uses CBA because it offers a more comprehensive approach that takes account of both private (first party) and external 'spill over' (third party) costs and benefits.	
How is information collected in a cost benefit study?	**Worked Example:** Consider a project to build a toll bridge over a river: **Step 1 identify all costs and benefits - both private and external** *Private Costs* borne by the supplier e.g. construction costs, operating costs and maintenance costs *External Costs* incurred by non users e.g. pollution, noise, loss of countryside, *Private benefits* to consumers *direct* i.e. the amount consumers are prepared to pay e.g. the tolls paid as shown by the demand curve *indirect* i.e. consumer surplus – the difference between the toll and the maximum consumers are prepared to pay for a crossing *External benefits* i.e. benefits to non users e.g. time savings for all travellers and fewer accidents	
	Step 2: Place a monetary value of costs and benefits Height is measured in feet or metres. Economists measure benefits and costs using money as a unit of account. *Private costs* e.g. Construction costs: £5,000, 000 to build the bridge Operating costs: say £200,000 a year Maintenance costs: Repair and maintenance say £5,000 a year *External Costs* are more difficulty to measure. How do we value the effects of negative externalities such as congestion, accidents, noise, loss of countryside and air pollution? *Private Benefits* e.g. *Direct* 1,000,000 journeys each paying £1 toll = £1,000,000 a year *Indirect* consumer surplus e.g. £500,000 *External Benefits* e.g. Time savings. What value do we place on work time saved or leisure time saved? Is the time saved worth the same to everyone? If 100,000 hours are saved and valued at £4 per hour, benefit = £400,000 Fewer accidents. Economists value human life using money! One life = £750,000. One limb = £80,000. If the bridge reduces accidents and saves on life a year, annual benefit is £750,000	

	Step 3: Estimate Future Costs and Benefits The major costs of the project occur straight away e.g. £20m in Year 1 The benefits occur over the life of the project e.g. If the expected life of the bridge is 25 years consumers benefit by £1m a year now and for the next quarter of a century. However, how do we value now £1m of benefit in 25 years time? Economists use a technique called discounting to establish the present value of future benefits. The net present value of a future amount of money is the maximum amount you would be willing to pay today for the right to receive that amount of money in the future. E.g. you may pay £100 today for the right to receive £1,000 in 10 years time.	
	Step 4: Is a Project worth Undertaking? A project is worth undertaking if benefits exceed costs Social benefit = private benefits plus external benefits. Social cost = private costs plus external costs. If the government has to choose between competing projects then the ones with the highest positive net present value should be undertaken.	
What are the limitations of a cost-benefit approach?	CBA requires economists to exercise judgment in estimating costs and benefits. E.g.: Have all relevant costs and benefits been included. Many external costs and benefits are hard or controversial to measure using money. What is the value in money terms of loss of a species of butterfly or human life? Are all affected parties agreed on the methods used to estimate external costs and benefits Future costs and benefits are notoriously difficult to predict. How reliable are the forecasted costs and benefits. Is there a significant margin of error or risk? A CBA evaluation may show a net benefit that disguises the fact that a project that creates 'winners and losers'. Society may have gained overall but some sectors of the population bear the costs. E.g. CBA overlooks any income redistribution effects- even if a project redistributes income from the poor to the rich. CBA ignores the effect on distribution effects of a project between regions. E.g. A new motorway brings significant positive externalities to a region and a multiplier effect.	1.

Methods of Government Intervention to 'Correct' Market Failure		
What is the role of government in market economy	In a **free market economic system**, governments take the view that **markets work,** assume a laissez faire (let alone) approach, step back, and allow the forces of supply and demand to set prices and allocate resources.	
Why do governments intervene in markets?	There are circumstances where, in given industries, markets do not succeed in allocating resources efficiently. Markets can fail because of: externalities (e.g. pollution & training) cause private and social costs and/or benefits to diverge Imperfect information means merit goods are under produced while demerit goods over produced Markets cannot supply public goods and quasi-public goods market dominance by monopolies leads to under production and over charging Factor immobility causes unemployment hence productive inefficiency Equity (fairness) issues. Markets can generate an 'unacceptable' distribution of income and consequent social exclusion	The economic case for government intervention is to correct market failure
How do governments intervene in markets?	The government can use the following policies and methods to intervene in market to attempt to correct market failure: **Legislation** e.g. laws that prohibit (ban) sale of cigarettes to children, price fixing cartels or require school attendance, protecting workers by defining maximum working hours and minimum wages **Regulation** e.g. government appointed utility regulators who impose strict price controls on privatised monopolists e.g. electricity supply and telecommunications **State provision** either through **State production** e.g. nationalised industries such as Consignia or **State funding** e.g. the government pays private sector health firms to carry out operations for NHS patients to reduce waiting lists **Fiscal measures** (financial intervention) that use the tax and benefit system to alter market prices or affect income distribution: **Indirect taxes** to raise the price of demerit goods and products with negative externalities or **subsides** to lower the price of merit goods and products with positive externalities **Direct taxes** on the rich and **benefits** in cash or kind for the poor to improve the distribution of income	

Government Policies to Correct Market Failure

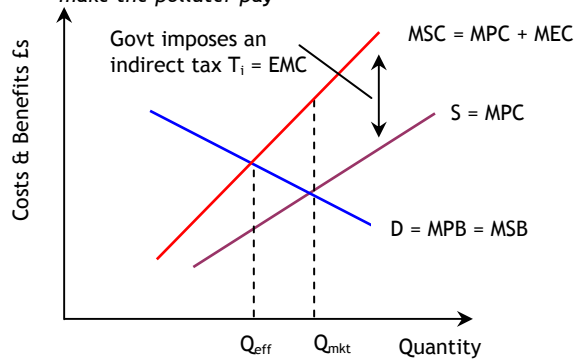
How can taxes correct market failure?

Taxes can be used to tackle market failure caused by:

1) Negative externalities. In the diagram opposite, the interaction of supply (S) and demand (D) results in an output level of QMkt that is allocatively inefficient. SMB = SMC at Qeff. The market has overproduced by (QMkt – Qeff).

By setting an **indirect tax** (Ti) equal to the marginal external cost (EMC) the government is forcing producers and consumers internalise the externalities – the **polluter pays principle**

Using indirect tax to internalise externalities - make the polluter pay



2) Unacceptable distribution of income

Government can intervene to reduce poverty through progressive **direct taxation** on incomes to fund benefit payments and provide public and merit goods and services free/below cost to all. The net effect is a redistribution of income and greater equity.

A **progressive tax** takes a higher percentage of the income as income rises e.g. 10% tax on earnings up to £15,000 40% tax on earnings above £50,000.

What are the difficulties in using indirect taxes to correct market failure?

The aim of an **indirect tax** is to make the polluter pay. However it may be:

- Difficult to place a monetary value on the externality
- Expensive to collect the tax e.g. the government argues the technology to implement nationwide road charging is 10 years off
- The demand for the product may be price inelastic so that a large tax is need to reduced quantity demanded to an efficient level.

What are the difficulties in using direct taxes to correct market failure?

High marginal rates of tax are a disincentive for overtime, managers accepting responsibility and entrepreneurial risk taking. The effect is to reduce hours worked, hence output. The result is productive inefficiency.

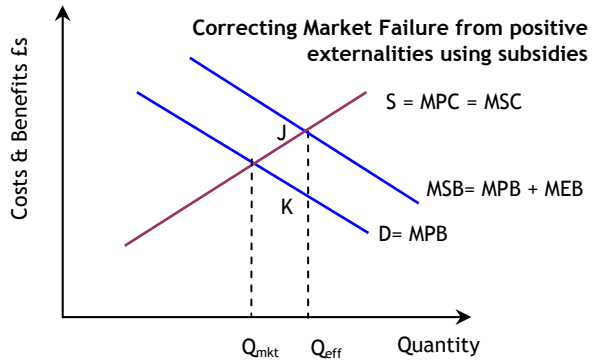
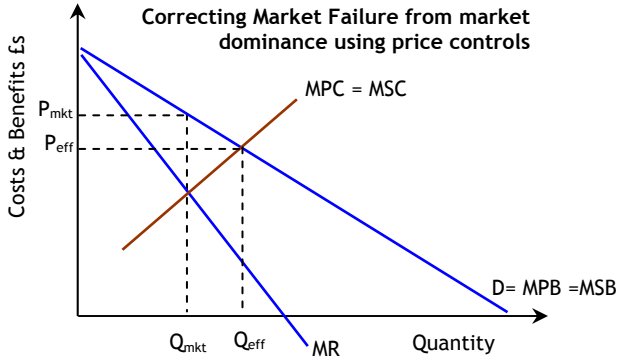
How can benefits correct market failure?

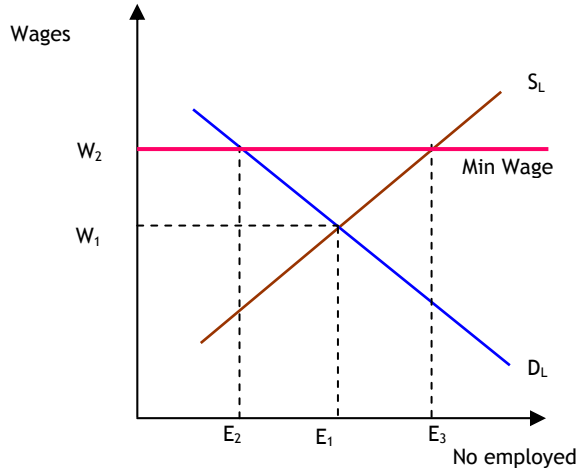
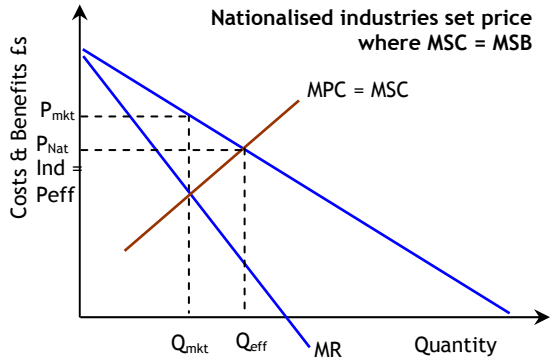
Markets fail if they deliver an 'unacceptable' distribution of income. Progressive taxatn collected form the rich can be used tto pay for benefits for the poor. Eg:

- **Means tested benefits** ie money payments to those who can prove they are in need
- **Benefits in kind** where products are provided free of charge to low income groups eg free dental care
- **Subsidising essentials** consumed only by low income gorpus eg council houusing and bus transport

Means tested benefits are bureaucratic, expensive to administer and form filling discourages take up.

Section Three: Making Choices and the Impact of Government Intervention

How can subsidies correct market failure?	Subsidies can be used to tackle market failure caused by **positive externalities**. In the diagram opposite, the interaction of supply (S) and demand (D) results in an output level of QMkt that is allocatively inefficient. SMB = SMC at Qeff. The market has under produced by (QMkt – Qeff). In offering producers a subsidy equal to the Marginal External Benefit (J-K): Producers receive J and supply Qeff, Consumers pay K and demand Qeff The socially optimal level of output Qeff is reached as a result of government intervention through subsidies The total cost of the subsidy is [J-K] x QEff		
How can price controls correct market failure?	Dominant firms are monopolists with 25% or higher market share. They are able to use their size to set a higher price and lower output than in competitive market conditions The government can use legislation to appoint an industry regulator to Introduce price capping e.g. insist monopolists use marginal cost pricing and charge Pef rather than the profit maximising price PMkt Introduce competition into the markets Monitor the quality of service		

How can minimum wages correct market failure?	Households with no assets earn an income selling their labour in markets. Workers whose skills are valued least by markets earn low wages. If a given labour markets fails to deliver a 'living wage' which allows workers to buy essentials, then market failure has occurred. The UK Government argues a minimum wage guarantees a minimum income. In the diagram opposite the unregulated market wage is W1. If the government believes this wage rate is too low to allow a living wage it can set a minimum wage of W2. Note that, in theory, the minimum wage results in some workers being 'priced out of a job' and the number employed falls from E1 to E2 Those in employment are 'winners' – their income has risen t an 'acceptable' level (E1 – E2) workers are losers – they have lost their job Empirical evidence suggests that the minimum wage has not , in fact, increased unemployment		The impact of a minimum wage on employment depends on 1) the wage elasticity of demand and supply for labour 2) the difference between the market and minimum wage. The larger the difference, the greater the fall in employment
How can state provision of products correct market failure?	State provision refers to the government acting as a producer e.g. **State Provision of Public Goods.** Because public goods such as lighthouses, policing, and national defence, are non-excludable, profit-seeking firms will not provide them. Therefore the government must finance public goods, although the state does not necessarily have to provide the product. **State provision of Merit Goods.** The UK government funds and provides the National Health Service. An alternative is to pay private hospitals to perform 'free' operations financed form taxations **Nationalised Industries.** The state can take private monopolies into public ownership (nationalisation) and set price where MSC = MSB. Most economists argue that any allocative efficiency gains are more than lost by productive inefficiency inherent in state run companies.		The government uses taxes to fund provision of public or merit goods To minimise equity impacts, government generally prefer to use progressive taxes to raise revenue.

Section Three: Making Choices and the Impact of Government Intervention

Why do governments regulate monopolies?	Monopolies can use their market power to set high prices and restrict output resulting in allocative inefficiency	All regulators have web sites e.g.: Office of Gas & Electricity Mkts Office of Telecommunications Office of the Rail Regulator Office of Water Services Postal Services Commission PostComm
How do governments regulate monopolies?	One method of preventing market failure from market domination is for the government to appoint an industry regulator. A regulator acts as an arbitrator (negotiator) to balance the needs of producers (normal profits) and consumers (low prices and high quality service). The regulator can Introduce price capping e.g. insist monopolists use marginal cost pricing Introduce competition into the markets Monitor the quality of service	
Can regulation fail?	Government intervention through regulation can lead to government failure if: The costs of regulation are high or Imperfect information is used in setting price controls	
Why do governments set standards?	The government uses legislation to set minimum standards to: Reduce the consumption of products generating external costs e.g. car MOT exhaust standards reduce carbon monoxide (CO2) emissions Increase the consumption of products generating external benefits e.g. education is compulsory for 5-16 year olds because a well educated citizens are a pre condition of a developed economy	
How can information provision reduce possible market failures?	Imperfect or misunderstood information can result in 'wrong' choices. Private and social costs and benefits diverge so that the equilibrium and allocatively efficient level of output are different and markets fail. Government action to improve information through leaflets, television advertising & information centres, etc helps consumer and producers accurately value the 'true' cost and/or benefit of a good or service. E.g.: Label cigarette packages with health warnings to reduce smoking Anti speeding television advertising to reduce road accidents Advertising health screening Tourist Information Centres	

Section Three: Making Choices and the Impact of Government Intervention

What is the role of competition policy in tackling the problems of market power?	Competition policy refers to government action to open up UK industries to greater competition by: **Prevention**. Competition can be maintained by blocking the creation of monopolies threatened by a proposed mergers or takeover. In the UK the Competition Commission assesses proposed takeovers and mergers to ensure they are in the public interest. **Regulation of Monopolies** Appointing an industry regulator to introduce competition e.g. the consumer gas and electricity markets and unbundling local exchanges to allow competition for fast Internet links. **Anti cartel.** Banning price fixing ensures competition is sustained. This is the responsibility of the Competition Commission **Deregulation** introduces competition. E.g. Bus deregulation opened up bus routes to competition. In theory, any route generating abnormal profits attracts new entrants until profits become normal. **Introducing contestable markets** the mere threat of new firms entering a market means existing firms act competitively. Low costs, prices and profits result. Short-term franchises introduce contestability into transport markets but deter long-term investment that is lost if a franchise is lost. The latest franchise agreements are for longer periods e.g. 15 years. **Remove restrictive practices** e.g. end the legal requirement that solicitors and barristers must be employed in a legal case by allowing the public direct access to barristers or allowing solicitors to argue cases in court	
What is deregulation	**Deregulation** means opening up of markets to competition is the removal of controls imposed by governments on the operation of markets, particularly taking away barriers to entry.	
How is competition policy enforced in the UK?	The Competition Commission assesses proposed takeovers and mergers to ensure they are not anti competitive. The Office of Fair Trading (OFT) is responsible for enforcing UK competition policy Regulators seek to ensure competition in natural monopoly utilities Some industries are deregulated to remove barriers to entry and enable competition	
What is the impact of competition policy in the tackling problems of market power;	To assess the impact of competition policy requires indicators. Successful competition policy results in lower prices and/or better quality products. Successful competition policies and measures include: OFT investigation into the car market has reduced price differentials between the UK and the rest of the European Union Introducing competition into gas & electricity has reduced annual electricity bills by £750m gas bills by a £1bn. (Audit Office) The impact of competition can be negative. Postcomm is proposing full liberalisation of the letter post, by 2006. Consignia (The Post Office) argues that new entrants will be able to cherry pick profitable areas of the market. One price for national mailings will cease. The price of country deliveries may rise, while city charges fall, creating suburban 'winners' and rural losers.	

Section Three: Making Choices and the Impact of Government Intervention

What is government failure?	**Government failure** occurs when government intervention such as tax or regulation results in a worse misallocation of resources than if markets were unregulated. Governments may make 'wrong' decisions because of: **Prioritising fiscal policy objectives**. Where governments cut public sector building project to ensure balanced budgets, inadequate resources rare directed at services valued by consumers. E.g. chronic under investment in hospital building and the underground is the result of macroeconomic objectives overriding microeconomic resource issues. **Winning elections** Governments have been known to take decisions more calculated to win votes than achieve an optimal allocation of resources – especially near elections in marginal seats where they may lose. **Short termism.** Governments tend to prioritise short term rather than long term considerations as the short run influences opinion polls and elections -the aim is to get re-elected; not maximise efficiency **Regulatory capture** where the regulator is so influenced by monopolies that the interests of firms is placed before consumers'	
Can one policy correct a given market failure?	It is unlikely that one policy alone can bring about an optimal allocation of resources in a given industry. Policies and measures need to be coordinated. Consider the case of a demerit good – cigarettes – where the following can reduce consumption to allocatively efficient levels: **Fiscal**: Tax cigarettes, **Information Failure**: label cigarette packages with health warnings **Legislation**: ban shops from selling tobacco to children	

Your Notes here

Cause of market failure	Government Intervention options
Negative externalities or Demerit Goods	**Indirect tax** on perpetrators so that externalities are internalised – polluters are made to pay **Legislation** or **regulation** to prohibit activities leading to external costs **Standards** to limit permitted pollution levels e.g. MOT exhaust fume levels
Positive externalities or Merit Goods	**Subsides** to suppliers to increase output **Legislation** to make school attendance compulsory until 16
Information failure	**Provide information** through leaflets, television advertising & information centres **Legislation** to ban misleading advertising ban harmful consumption e.g. illegal drugs enforce beneficial consumption e.g. school attendance compulsory until 16
Public & Quasi-Public goods	**State provision** either free or heavily subsidises and funded by taxation –ideally progressive
Market dominance	Legislation e.g. **Prevention** by blocking merges and takeovers that threaten competition by creating monopolies. **Regulation of Monopolies** by an industry regulator including price capping and fostering competition. **Anti cartel.** Banning price fixing ensures competition is sustained. **Deregulation** to remove barriers to entry in a market introduces **contestable markets**
'Unacceptable' income distribution - equity issue	**Redistributive tax** i.e. progressive taxation Means tested **Redistributive benefits** **Subsides** of essential product mainly consumed by the poor e.g. bus transport

Recommended Internet Links for Market Failure		
Achieving a Better Quality of Life	www.sustainable-development.gov.uk/	This website reports on progress by the United Kingdom as a whole towards sustainable economic development
Action on Smoking and Health	www.ash.org.uk	Anti smoking pressure group
Age Concern	www.ace.org.uk	The Age Concern web site has a special section of the causes and problems of relative poverty among pensioners
Centre for the Economics of Education	http://cee.lse.ac.uk/	The Centre for the Economics of Education is dedicated to combining the fields of economics education, and statistics
Child Poverty Action Group (CPAG)	www.cpag.org.uk	CPAG promotes action for the relief, directly or indirectly, of poverty among children and families with children
Competition Commission	www.competition-commission.org.uk	The Commission replaced the Monopolies and Mergers Commission ("MMC") on 1 April 1999. Their web site is extensively updated and carries full copies of their reports
Department for Environment, Food & Rural Affairs (DEFRA)	www.defra.gov.uk/environment/index.htm	Environmental policies from the new Departmental for Environment, Food and Rural Affairs. Includes policy statements on noise and air pollution and other issues related to externalities
Department of Trade and Industry	www.dti.gov.uk/cp/index.htm	The DTI's mission is to deliver a competitive framework for growth of successful businesses and fair deal for consumers
DTI Innovation Unit	www.innovation.gov.uk	The DTI Innovation Unit provides an annual scorecard of spending on research and development by the UK's leading businesses - useful when considering the potential advantages of monopoly
Economic Review - Articles on Market Failure	www.soton.ac.uk/~peters/er/mfail.htm	Catalogue of recent articles on market failure from the Economic Review
Environmental Economics Lectures	www.bschool.ukans.edu/home/dpopp/econ610/610lect.html	A useful series of lectures on environmental and resource economics - more accessible for students at the end of their A2 course in market failure
European Union Competition Commission	http://europa.eu.int/comm/commissioners/monti/index_en.htm	Home page of Mario Monti - the European Union Competition Commissioner and a key figure in delivering a tougher competition policy regime throughout the European Single Market
FOREST	www.forest-on-smoking.org.uk	Pro-smoking lobby group
Friends of the Earth	www.foe.org.uk	Billed as one of the most effective pressure groups on environmental issues
Greenpeace	www.greenpeace.org	Leading UK and International environmental pressure group - carries news of domestic and overseas campaigns
Health Economics (Institute of Fiscal Studies)	www.ifs.org.uk/healthindex.shtml	Excellent background articles on pressures on health care in the UK and the causes and consequences of health inequality
Institute for Fiscal Studies (IFS)	www.ifs.org.uk/inequalityindex.shtml	The IFS is a highly regarded source of analysis on the causes of poverty and inequality in the UK economy

Section Four: Best of the Web for Market Failure

Low Pay Commission	www.lowpay.gov.uk/	The Low Pay Commission is asked to monitor and evaluate the impact of the National Minimum Wage and provide detailed recommendations about possible changes to the hourly rates for the minimum wage
Monopoly (Macrosoft Simulation)	www.eco.utexas.edu/Homepages/Faculty/Wilcoxen/games/macsoft/index.htm	MacroSoft is a simulation exploring monopoly behavior
Office of Fair Trading	www.oft.gov.uk/default.htm	The OFT's main role is to protect consumers and explain their rights to ensure that businesses compete and operate fairly. Their web site carries an extensive database of recent reports and investigations
Oxfam (Poverty in the UK Campaign)	www.oxfam.org.uk/atwork/ukpoverty/poverty.htm	Oxfam believes that poverty is more than just a lack of the resources needed for basic survival. It is also a state of powerlessness
Public Goods and Merit Goods	www.bized.ac.uk/virtual/economy/policy/tools/government/gexpth2.htm	Revision notes on public and merit goods from the Biz Ed web site
Public Goods and the Free Rider Problem	http://ingrimayne.saintjoe.edu/econ/RiskExclusion/FreeRiders.html	Detailed notes on the free rider problem and the tragedy of the commons
Smoking Kills (Government White Paper)	www.doh.gov.uk/smoke.htm	White Paper on the social costs of smoking from the Department of Health
The Economics of Health Care	www.oheschools.org/index.html	An e-book on how economists use theory to assess the issues raised by health care including market failure
The National Minimum Wage (DTI)	www.dti.gov.uk/er/nmw/	Special section on the UK national minimum wage from the Department for Trade and Industry.
The Sea Empress Oil Spill	www.swan.ac.uk/biosci/empress/	Excellent case study on the short and long term environmental effects of the Sea Empress Oil disaster off the coast of Wales in February 1996
Times 100 Case Studies	www.thetimes100.co.uk/home.asp	Business case studies from the Times 100 series – many of which are relevant to the issue of Business and the Environment
Tutor2u PowerPoint Presentations	www.tutor2u.net/default2.asp?tree=2741	A series of PowerPoint presentations on market failure (including Cost-Benefit Analysis, Environmental Policy and Government Failure)
Tutor2u Revision Notes on Market Failure	www.tutor2u.net/default2.asp?tree=2494	Directory of revision notes on various aspects of market failure from the Tutor2u web site
Principles of Cost Benefit Analysis	www.users.globalnet.co.uk/~ashes/future.htm	Article on the value of Cost Benefit Analysis from "The Growth Illusion"
Economic Efficiency (Biz Ed Virtual Country)	www.bized.ac.uk/virtual/dc/copper/theory/th4.htm	Useful revision notes on economic efficiency related to the economics of a developing country
Wood Green Economics	www.woodgreen.oxon.sch.uk/economics/default.htm	Richard Young's Wood Green School awarding -winning web site for Economics