IGCSE Economics

Study guide

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Updated for the 2017-19 syllabus

Published 2014 by i-study.co.uk

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First edition published March 2014

e-printed from the UK

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Unit 1 - The Basic Economic Problem

The Basic Economic Problem

The basic economic problem is often summed up as 'unlimited wants yet limited resources to satisfy these wants.'

- **Needs:** these are things that are essential for us to thrive in life. These include: Food, water, shelter, clothing.

- **Wants:** these are things that we can manage without, but would like to have. They make life easier, more enjoyable or more exciting.

In life people generally aspire to have more experiences and more possessions. Advertising makes us aware of exotic and or exciting destinations that we would like to visit. New inventions and technological progress ensure that there are always new items that we desire for leisure (i-pads), to make our lives easier (dishwasher) or maybe we just want a newer version of what we already have (new cars).

There is also the problem that over time items break or wear out and will need replacing. This has been taken a step further with the concept of planned obsolescence (products are designed to have a certain life span and then need replacing).

These factors all lead to humans having unlimited wants and desires. When we satisfy one, we move onto desiring something else or a newer version. All this stuff requires resources to produce it and all the travelling needs fuel to move us. These resources (coal, oil, gas, minerals and metals) are ***finite*** (limited). We call this concept ***scarcity***. This means that we can't all have everything that we want. We have to make choices about what is the most important to us. Firms respond to these choices by producing the things that we want. This is the **basic economic problem**.

Grab a Pen!

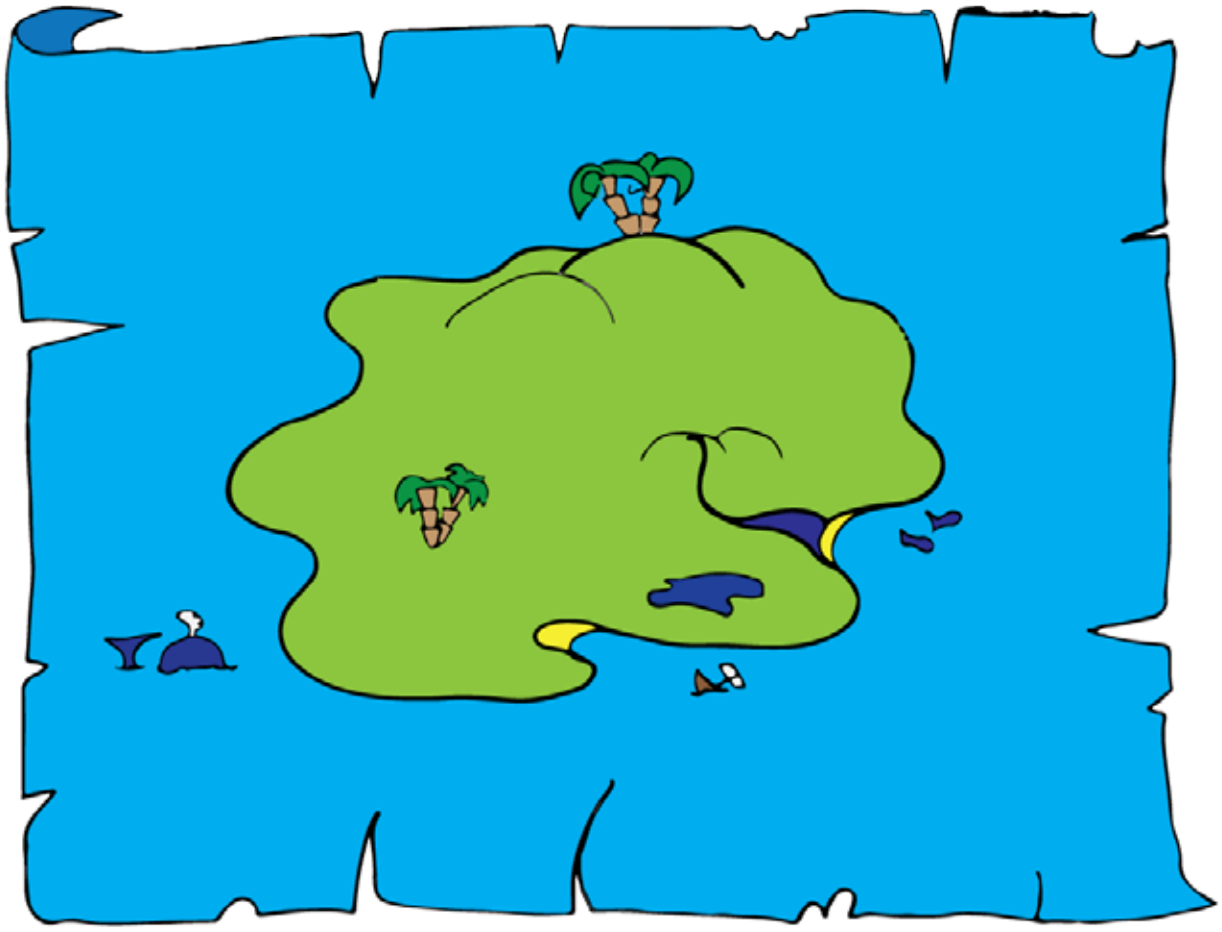
Island Survival

You and a friend have been stranded on a desert island. Below is a map of the island you have been left on. You discover your ship just offshore, but it is sinking. You can only save 10 of the 20 items on it:

In pairs, outline which items you chose, why, and how you plan to survive.

After you have finished, think how this relates to the basic economic problem, and discuss with your teacher what further economic implications this scenario has.

Items on Boat: Two barrels of drinking water; four rabbits; a shovel; a watch; four stacks of hay; a lighter; a mirror; two handguns; curry powder; toilet paper; two planks of wood; an ice skate; a wind sock; an empty flare gun; a winning lottery ticket; spare clothes; some chains; a bowl; a hair dryer; unknown seeds; a saw.



1.1

The Factors of Production

When we decide how to use the resources available to us, there are four factors that need to be brought together to produce a good or service. The quantity and importance of these factors will vary depending on the industry. We cannot make anything without these **factors of production.**

1. Land

This represents the land we build on but also the resources that we extract from it. Fossil fuel reserves, forests, fish stocks in lakes and oceans all fall under the title of land.

Land is generally considered as fixed in its supply since there is a certain amount of it. On a more local scale the supply of land may vary though as some of it is removed through erosion, or in certain cases new land is created by through land reclamation (Kansai International Airport, Japan).

The resources the land contains may change considerably. Humans have permanently reduced the supply of coal, oil, natural gas as well as minerals and metals found in the land. Modern forestry and fishing techniques have depleted the fish and wood stocks.

2. Labour

This represents the physical and mental effort used by people to produce something.

Labour is variable in its supply in both the short and long term.

Short term changes in supply could be achieved by:

- Changing school leaving age: Raising the school leaving age would keep more pupils in education and reduce the labour supply.
- Changing retirement age: Increasing the age which people can retire would keep them working for more years and increase the labour supply.
- Changing working hours: Generally labour is expected to work for around 40 hours per week.
- Changing holiday entitlement: European countries generally receive 20 working days of paid holiday a year as standard. In the US the standard is only 10 days; this essentially represents a greater supply of labour.
- Attracting or discouraging immigration of workers: Relaxing the immigration regulations is a quick way to increase the supply of labour in a country. Governments can target specifically skilled immigrants to meet shortages of labour in certain industries.

Long term change could be achieved by affecting the birth or death rates which would alter the population size in the economy (see unit 7).

Capital

Capital refers to any man-made item that is used to produce another good rather than being a product in itself. A hammer used by a carpenter to make chairs is considered capital. An accounting office investing in computers used in an accounting office to store records on would be classed as capital.

Working capital refers to the capital that is used up in the production process such as raw materials. For example, a mining company extracting coal sells it as a product in itself (land) but the company that uses it for power uses working capital.

Fixed capital refers to the capital that does not need replacing in the short-run such as machines, buildings and tools.

Wear and tear, breakage and machines becoming outdated means that capital has to be replaced. This is known as investment. The value of capital depreciates over time due to the above factors and this has to be accounted for in a company's financial accounts.

Did you know in 2012, around 25% of the world's construction cranes were in Dubai? In 2013 the world's largest crane was called Taisun and can lift 20 000 metric tons!

4. Enterprise

To produce an item and establish a firm the other factors of production need to be managed. Decisions need to be made about how much labour is needed, the quantity and type of capital that is the most appropriate and how much land should be bought or rented.

There is also the need to take risk. Money needs to be invested in the other factors of production before any profit is made. This may be funded by an individual setting up a business, or through the wider population in the form of company shares. Enterprise refers to the two aspects mentioned above: the decision making and risk taking.

The person who makes these decisions and establishes a business is called an entrepreneur.

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1. Construct a table like the one below and fill it in using the above information [4]

Factor of Production	Description	Example	Cost to a firm

2. Are there any factors of production you can think of that are becoming less valuable in the modern world? Explain why you may think so. [3]

Opportunity Cost

This is an important concept which will come up time and time again in this course. This is the idea that for every decision that we make there was another option that we had to forgo (or give up). This can be applied to the decisions individuals, firms and governments make. We therefore define opportunity cost as the cost of the next best alternative given up. It is important to remember that it relates to the next best choice.

For example, In our personal life we often have multiple options for our time and money. When we decide to use our time playing sport we have given up the option of using it in another way, maybe going to the cinema. When we spend our money on a new laptop we have given up the other possible uses of that money.

In our working lives we also make important decisions. When we accept one job, we have given up the opportunity to do another job. In making our decision about which job to choose we often take various factors into consideration such as: Pay, holiday entitlement and job satisfaction. We choose the one that best satisfies our wants. If the conditions change, we may decide that this is no longer the best option and move to the better job.

Opportunity cost is an important consideration for firms. The choices they make about what tasks their employees perform, which capital they invest in and which location to open a factory in can all seriously affect their profits.

On a much larger scale governments must carefully choose how to spend their revenue. Increased spending on healthcare may mean that less is available for education.

Grab a Pen!

Smoking: The Costs

ISTUDY - After assessing the state of their national healthcare system, one country calculated that smoking was costing their society around $1 billion. This came mainly through the problems caused by second-hand smoking, such as lung cancer and respiratory problems. However other costs were also counted, including the damage smoking does to indoor buildings, as well as the cost of cleaning cigarette stubs and discarded packets. Despite high taxation, the loss calculated still stood at close to $1billion.

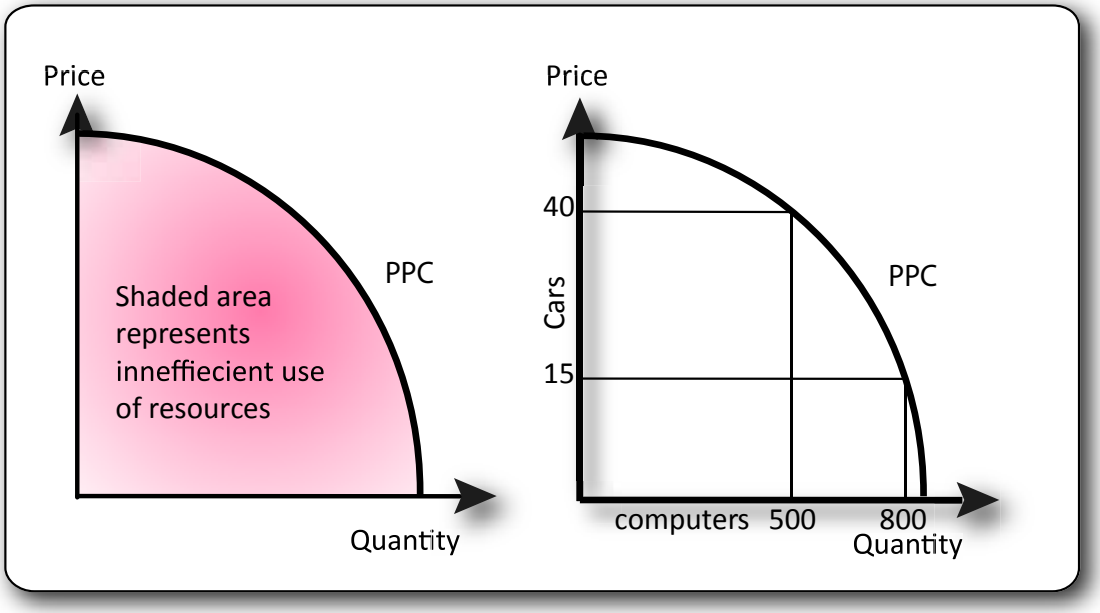
1) Explain how the article above demonstrates the concept of opportunity cost. [3]

2) 'All economies face the basic economic problem.' Using the extract to back up your answer, explain what is meant by this statement [3]

The Production Possibility Curve (PPC)

The production possibility curve represents the potential output of an economy if all factors of production are used efficiently. Any point to the left of the curve indicates that the factors of production could be used more effectively (unemployment of resources) and that the economy is not reaching its potential. To move the curve further to the right there would need to be an increase in factors of production(new discovery of a raw material, population growth), an increase in the quality of factors of production, or advances in technology that increased efficiency.

The PPC can also be used to illustrate opportunity cost, as explained below.



In the diagram a simplified version of an economy is producing cars and computers. If the country wishes to increase the production of cars from 15 to 40, then the opportunity cost of this will be 300 computers.

Grab a Pen!

A government agrees to the building of a new shopping mall on farmland. It will hopefully generate jobs and stimulate the local economy.

1) Define opportunity cost and explain how the above example might be used to illustrate opportunity cost. [4]

2) Describe the role of an entrepreneur and explain why they can be considered a risk taker. [4]

1.4

Chapter Review

1.5

The Easter Island Story

Deep in the Pacific Ocean lies a tiny island known today as Easter Island. Standing tall on the island are several enormous statues that face outward to the ocean. When Europeans first arrived in 1722 they were amazed by the statues.

The local population on Easter Island told the Europeans many stories about their arrival and origins. They claimed that the island was originally home to many species of large trees but that owing to a lack of resources, the islanders used all of the trees in their daily lives. Consequently the land became infertile and a large number of the locals died as a result of this mass deforestation. The damage was so bad that the locals took to cannibalism in order to meet their food needs. The population of the island collapsed and the lack of trees meant that escaping the island was not a possibility either. The Easter Islanders never truly recovered.

Comprehension Questions

1. Using the example above use the following key words to describe the situation Easter Island faced.

Scarcity - Choice - Opportunity Cost - Wants - Needs - Resources - Factors of Production - Production Possibility Curve - finite - basic economic problem

2. A fisherman goes out to catch fish every morning at 6am. He makes two catches with his nets before returning to shore.
   a. Which factors of production are mentioned?
   b. What are the costs to the mentioned factors?
   c. Which factors are most necessary to his business?

3. A factory worker's hours are from 9am-5pm. However, this particular factory worker comes home at 3pm every day. Using a PPC diagram illustrate:
   a. Where a firm that uses the factory to produce cars and helicopter parts is producing at.
   b. What happens if the firm decides to produce more cars
   c. What happens when the firm hires more workers.

Unit 2 - The Allocation of Resources

Merit, Demerit and Public Goods

When thinking about the different economic systems for running an economy and the level of government involvement these three terms play an important role:

Merit goods

Merit goods are ones that the government deems to have a positive effect or influence on people or society. Education and vaccinations are examples of merit goods in the sense they benefit individuals but also the wider society. The benefits of consuming merit goods are often greater than individuals perceive them to be and they are often under-consumed and subsequently under-produced if left to market forces.

The consumption of certain goods can often be harmful to society in general. Did you know that alcohol has been around for thousands of years but was banned in 2070BC-1600BC by Yu the Great in China and from 1920-1933 in the USA?

Demerit goods

These are goods that have harmful or negative effects on people or society. Tobacco is an example as it is harmful to individuals but also has negative external effects such as smoke related diseases in non-smokers (passive smokers) and the extra medical costs that the wider society pays due to smoking related diseases. The negative impacts of consuming demerit goods (alcohol, tobacco) are often greater than individuals perceive them to be demerit goods are usually over-consumed and over-produced if left to market forces.

Public Goods

Unlike merit goods, public goods available to everybody. It is not possible to exclude those who don't pay for the product or service from consuming it. Examples are fresh air, street lighting, the oceans and radio broadcasting. Because it is not possible to stop non-payers consuming these products the private sector is much less likely to provide them.

Economic Systems

Economic systems seek to explain how resources are distributed throughout our economy as the system we operate under helps us understand what to produce, how to produce it and who to produce it for. When these three concepts are dealt with, we say that we have allocated our resources. There are three main types of economic systems:

1. The Free Market System

No true free market systems exist, though the USA is as close as it comes.

In its true sense the pure market system allocates resources according to supply and demand forces. This makes very efficient use of resources as they are used to produce the items that people demand. If demand changes, producers will switch from supplying the products with falling demand to the ones that have increasing demand.

In the market system, land, labour and capital are all privately owned and profit maximization is the main aim. The government has no involvement in the allocation of resources or the running of the economy.

Criticisms: The absence of any government involvement means that market failures are unlikely to be corrected. The lack of regulation, taxation and fines means that the cost of externalities cannot be recouped.

Consumption of merit and demerit goods cannot be influenced and public goods are unlikely to be provided due to the lack of profit to be made. Big disparities in wealth can occur as successful companies can become monopolies and dominate the market.

Did you know?

In its early years, centralized government did not exert much control over certain parts of the USA. This meant however, that certain decisions had very bad consequences as there was no overall command.

Take, for example the Passenger Pigeon. Once, these were the most populous birds in North America. There were billions of them. However, slave owners found that they were cheap meat to provide slaves with. With no one to tell them otherwise, these slave owners killed more and more Passenger Pigeons

In 50 years, the birds had become extinct.

Today the issue over whether the Federal government should play a larger or smaller role in everyday life still dominates US politics.

Economic Systems continued

2. Planned Economies

These are government controlled economies; examples include the former USSR and North Korea. In such a system, land, labour and capital are owned and controlled by the government. The government decides how to allocate resources through which products it wishes to produce and in what quantity. It also sets the prices at which products will be sold.

Complete state regulation eliminates the profit motive and should reduce disparities in wealth.

Planned economies allow resources to be channelled into certain industries that the state wishes to develop. This can allow industries to be established more rapidly than private companies could achieve.

Criticisms: Due to the state deciding the allocation of resources, a mismatch between production and demand for products can occur. Shortages of some products and surpluses of others are symptoms of this.

Without profit maximization as an incentive firms may be less efficient and workers less productive since they are unlikely to reap financial rewards for increased output. Furthermore black market (illegal) trading may occur for products that are in short supply or not produced.

Did you know?

The USSR was perhaps the most controlled economy in the world. Initially led by Lenin, the USSR became very powerful under Joseph Stalin, who introduced industrial targets that had to be met.

These targets became known as '5 Year Plans' and though they had some initial successes, they also led to some disastrous results. The USSR found that workers soon became very dissatisfied and disillusioned and - lacking profit as a motive - production dwindled.

Despite radical attempts, such as lavishly awarding workers like Aleksey Stakhanov for mining 102 tonnes of coal in 6 hours, the Soviet Economy soon fell behind that of the USA: one of the main reasons for the end of the Cold War

Economic Systems continued

3. The Mixed System

This is the most common economic system in use currently, although countries all vary in the level of government intervention. As the title suggests, a mixed system combines elements of the free market with elements of government control.

Land, labour and capital are mainly privately owned with profit maximization is still the main aim whilst governments regulate industries and impose taxes and fines to correct market failures.

Through taxes and subsidies governments can encourage the production and consumption of merit goods (education) and discourage the consumption of demerit goods (tobacco).

Public goods such a street lighting and police forces are also provided through funding from tax receipts. This system benefits from efficient allocation of resources as producers supply the products demanded. It also benefits from fewer disparities in wealth since regulation can ensure competition in market places and wealth can be redistributed through progressive taxation policies.

Grab a Pen!

Lack of provision for poorer families

Provides everyone with a job

Demerit goods overallocated

Can create shortages and surpluses

Leads to lack of provision of merit goods

Has to foresee demand and supply trends

Leads to no provision of public goods

Lacks profit maximisation incentive

Income inequalities

Income can be distributed fairly

Appearance of black markets

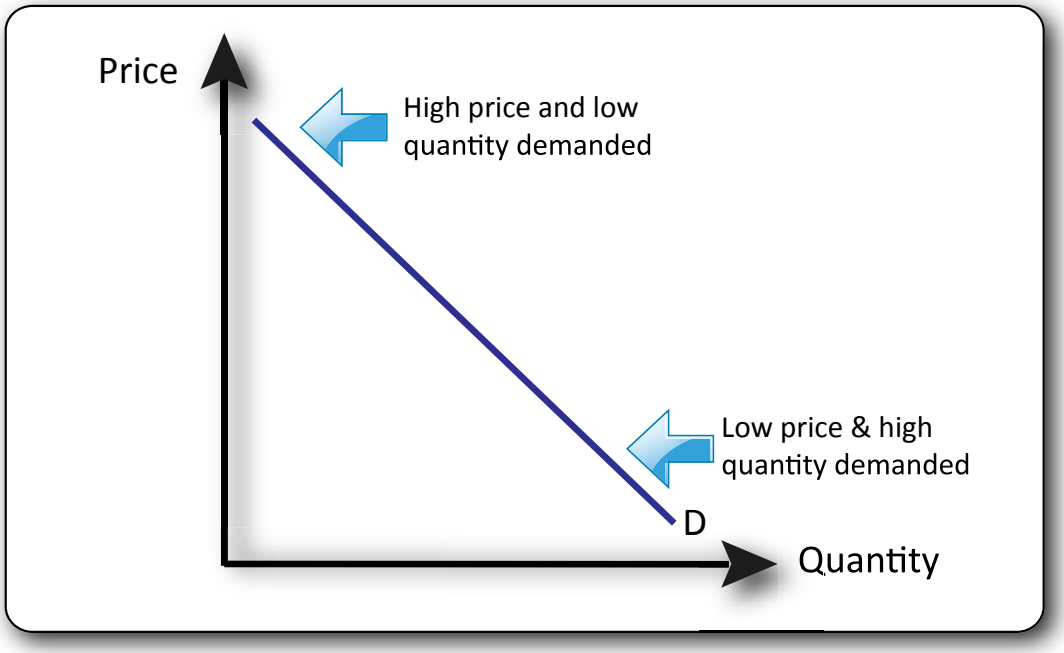
Free Market System	Planned/Central System

1. Construct a table as above and categorise the above statements [11]

Market Forces: Demand, Supply and Equilibrium

The Demand Curve

The demand curve slopes downwards from left to right. This represents the concept that at lower prices consumers will desire more of a product. At higher prices they will desire less. If, for example, a chocolate bar cost $0.20 you might want 10, but if it cost $2 you may only want 1. Demand is therefore the total willingness and ability to purchase a product at any given price.

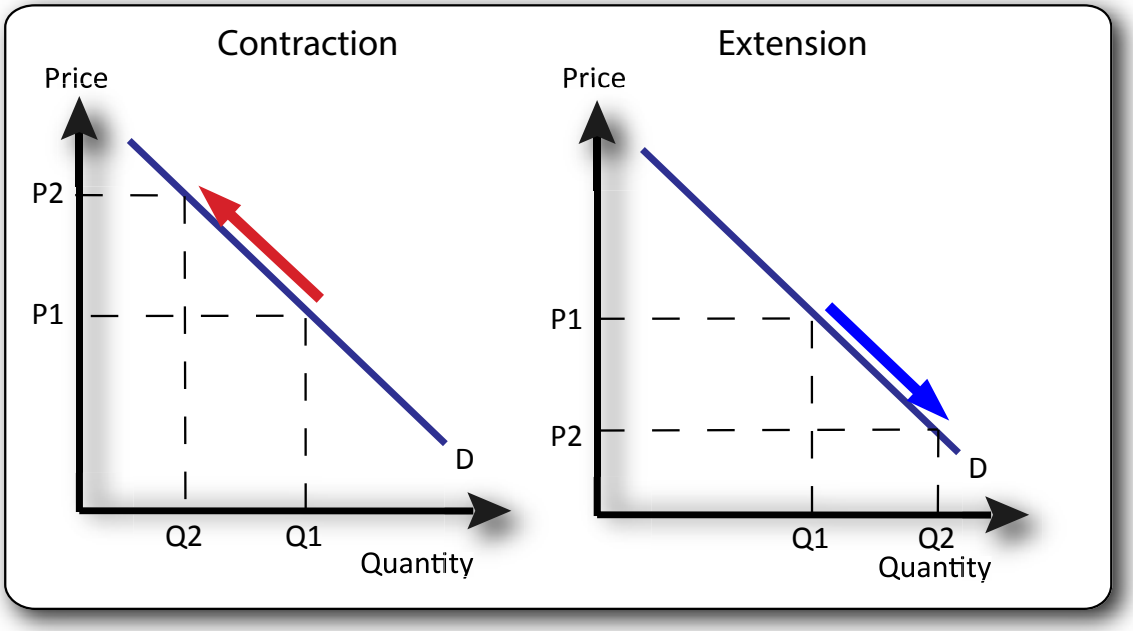


Movements along the Demand Curve

A movement along the demand curve is always the result of a change in price.

An increase in price will cause a contraction in quantity demanded which is shown by a movement along the curve to the left.

A decrease in price will cause an extension in quantity demanded which is shown by a movement along the curve to the right.



Shifts of the Demand Curve

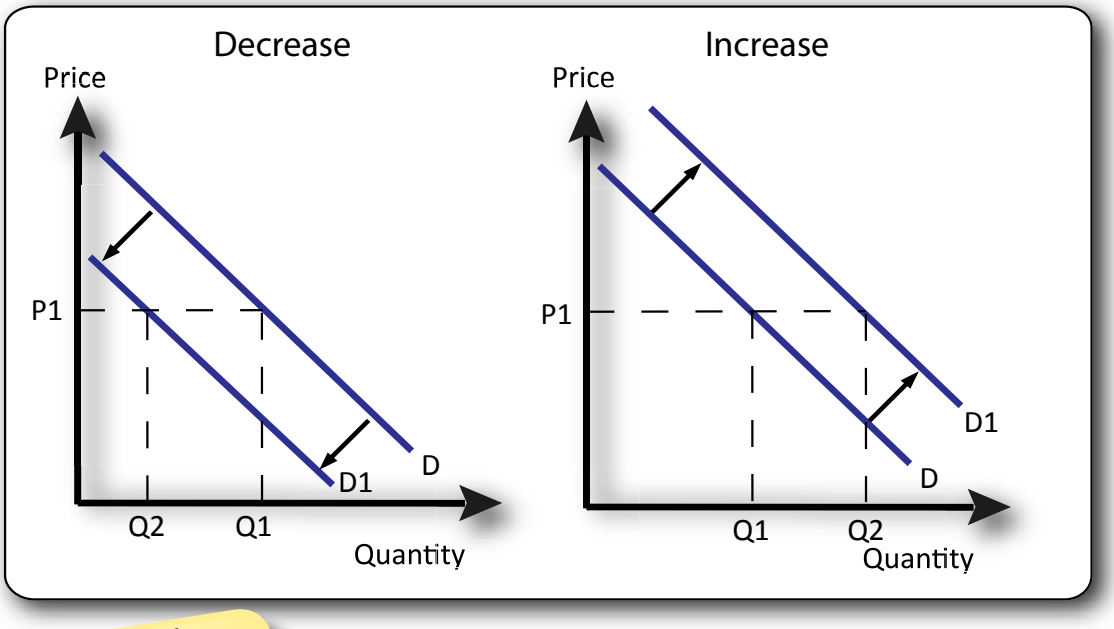
A shift of the demand curve is never the result of a change in price (of the product in question). When the demand curve shifts, this is because we want more of the product, even though the price of it has not changed.

Factors that may cause a shift in the demand curve:

- Changes in tastes or fashions of consumers
- Seasonal/climatic changes
- Advertising campaigns
- Price/advertising changes of a competitor

A shift of the demand curve to the right represents an increase in demand – there is increased demand at all prices.

A shift of the demand curve to the left represents a decrease in demand.



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Golden Commodity

ISTUDY - The allure of gold has steadily risen over the past few years due to financial instabilities in many countries, and the fear that people may end up losing their money if they leave it in banks. Furthermore, gold was still proving to be very valuable in emerging economies such as India and China where it continues to be used as a symbol of status and a fashion accessory in bracelets and necklaces.

Question

1. Draw a demand diagram to illustrate the change identified the article above. [4]

The Supply Curve

The Supply Curve

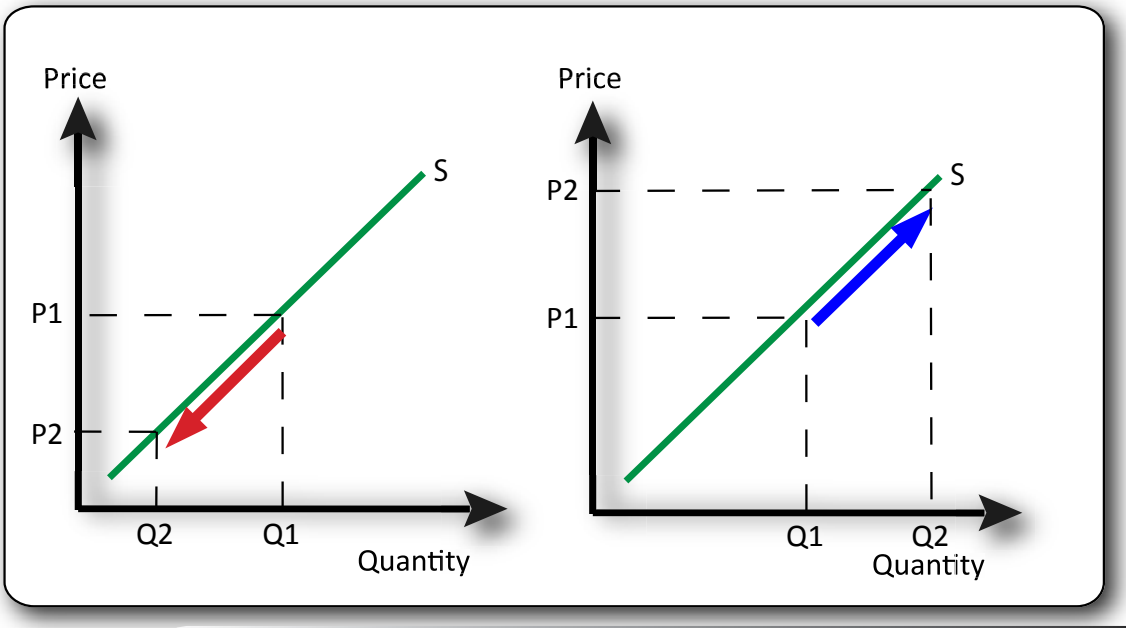
The supply curve slopes upwards from left to right. This represents the idea that at low prices firms are willing to supply less since the profit margin is lower. At higher prices they will supply more. If you had a business, for example, you would try and sell as many products as you could if you were receiving a high price, but it wouldn't be worth producing many if the price you received was low. Supply is thus the total willingness and ability to produce a good at any given price.

Movements along the Supply curve

A movement along the supply curve is always a result of a change in price.

An increase in price will cause an extension in quantity supplied which is shown by a movement along the curve to the right.

A decrease in price will cause a contraction in quantity supplied which is shown by a movement along the curve to the left.



Did you know? China produces the most Rice, Wheat, Onions, Cabbage, Potatoes, Tomatoes, Carrots, Cucumbers, Apples and Tea in the world

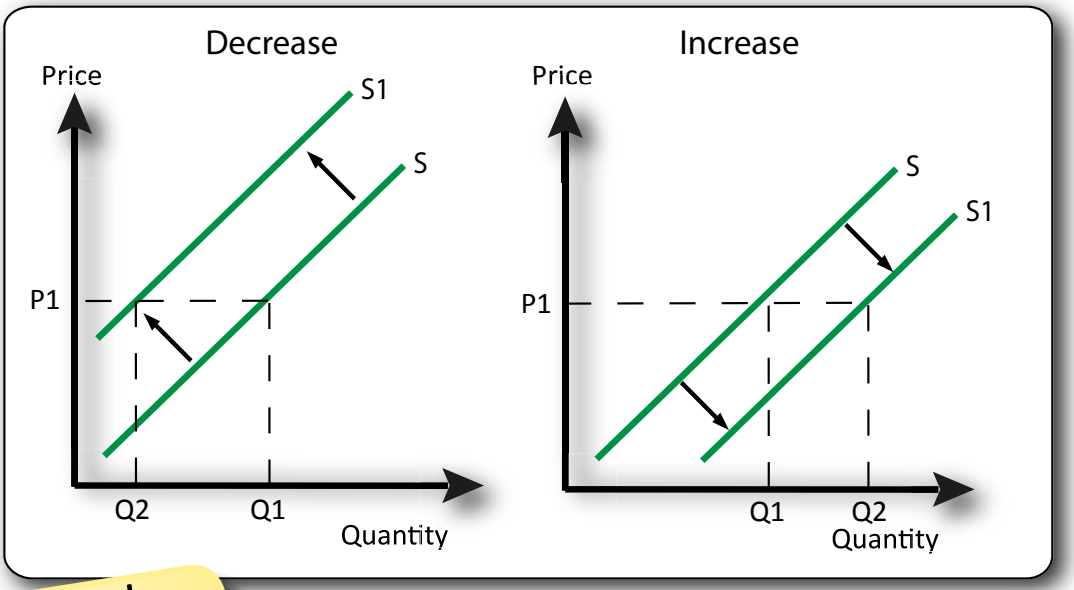
Shifts of the Supply Curve

A shift of the supply curve is not a result of a change in price. In these cases, we are willing to supply more, even though price has remained the same. Factors causing a shift in the supply curve include the following:

- Discovery of new resources
- Changes in the costs of production
- New technologies which make production more efficient
- Taxes
- Subsidies
- Seasonal/climatic factors
- Natural disasters and war

A shift of the supply curve to the left represents a decrease in supply.

A shift of the supply curve to the right represents an increase in supply.



Grab a Pen!

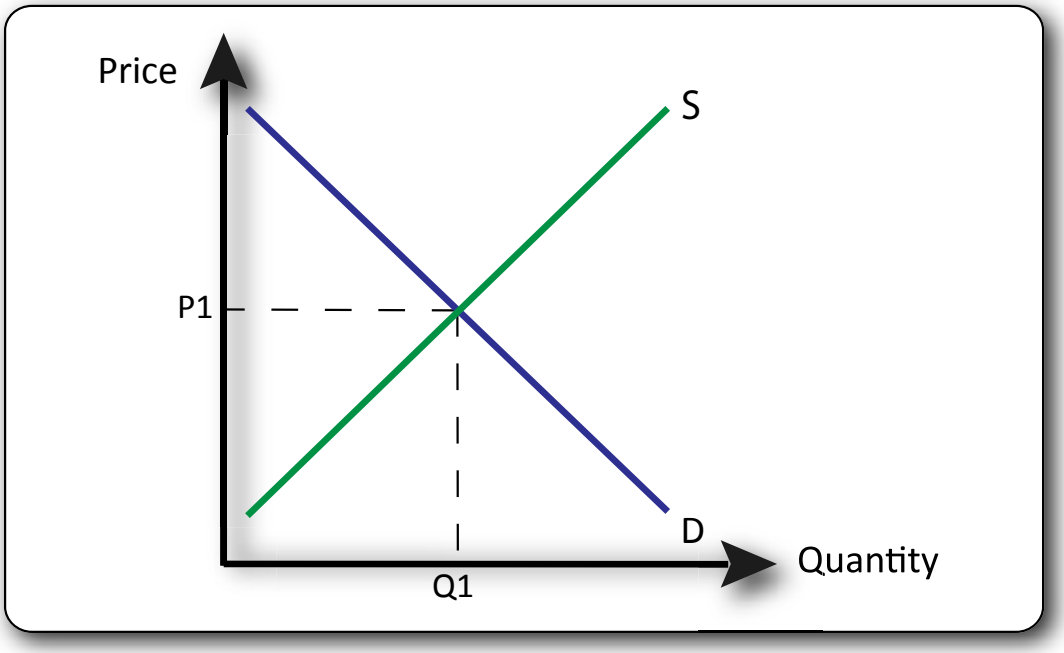
1. Using ONLY a supply diagram answer the following questions [1 mark each]
   a) A mining company decides to copy other companies and increase the price of gold
   b) Heavy rains destroy farmer Miggins' potato crop
   c) A new government comes to power and drops taxes on imports
   d) NanoBot2050 is introduced to car factories round the world; it is proven only one of these robots can do the work of 20 people
   e) After checking online, John decides to drop the price of the hamsters he is selling

2. Complete the sentence
   a) The Law of Supply states that as price _____ then quantity supplied _____ and vice versa. However, several _____ cause a _____ even though _____ remains constant [4]

Equilibrium

Equilibrium is a state of balance and in economic terms this represents a balance between demand and supply. When demand and supply are equal the market is in equilibrium. This point indicates that at this price there is enough demand by consumers to purchase all the products supplied. This why it is also called the 'market clearing price'.

Equilibrium is shown on a diagram at the point at which the supply and demand curves intersect.



If we experience a rise in demand for any reason, then the end result on the market is that prices rise. This is because firms know people want their goods and so sell them at a higher price. The amount bought also increases as people want these goods so much

If we experience a fall in demand for any reason, then the end result on the market is that prices fall. This is because firms know no one wants their goods and so have to reduce prices in order to get rid of them. The amount bought and sold consequently decreases.

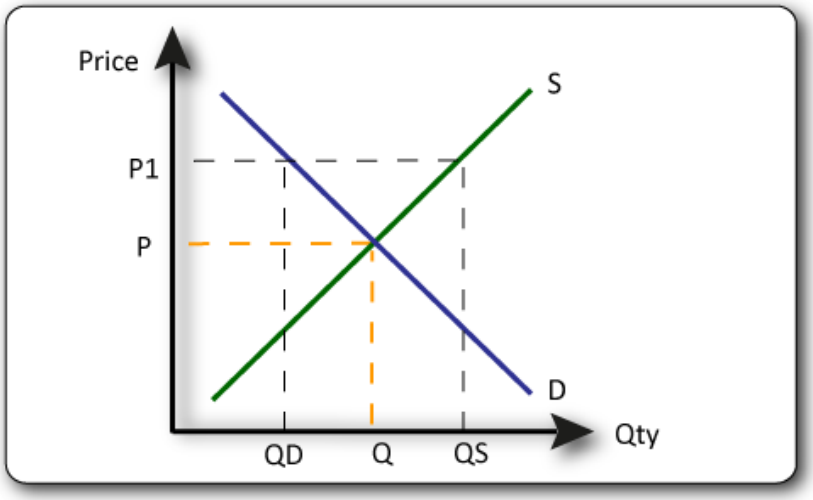
If we have an increase in supply for any reason, then the end result on the market is that prices fall. This is because we have more goods and services but people are not wanting any more than they did before. To get rid of the goods, they thus need to be sold at a lower price. The amount bought and sold increases but at a lower price.

If we have a decrease in supply for any reason, then the end result on the market is that prices rise. This is because there are now less goods and services out there, so the ones that are left become very valuable. Firms know they can therefore increase the price of these products, but sell less.

Grab a Pen!

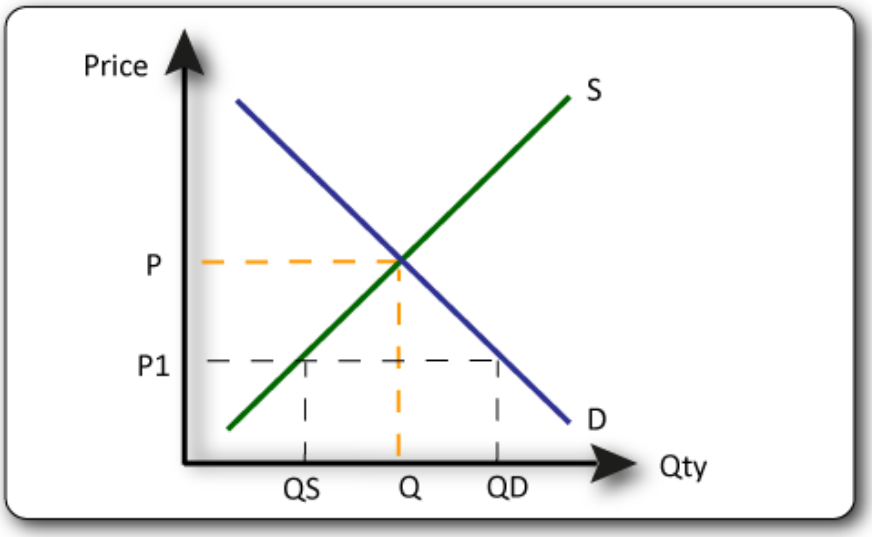
1. Complete the table below

	Price will...	Quantity supplied and demanded will...
Demand increases and Supply remains constant		
Supply increases and Demand remains constant		
Demand decreases and Supply remains constant		
Supply decreases and Demand remains constant		
Demand and Supply increase by the same amount		
Demand and Supply decrease by the same amount		
Demand increases AND Supply falls		
Supply increases AND Demand falls		



Excess Supply occurs when prices are set too high in a market. At this price firms sell more than we desire. If a government sets these prices above equilibrium, we call these price floors, as the price cannot drop below them. Otherwise, a natural correction would be to reduce the price to reach equilibrium.

Excess Demand occurs when prices are set too low in a market. People want more at this price than is being sold. If a government sets these prices below equilibrium, we call these price ceilings , as the price cannot rise above them. Otherwise, a natural correction would be to increase the price to reach equilibrium.



Elasticities

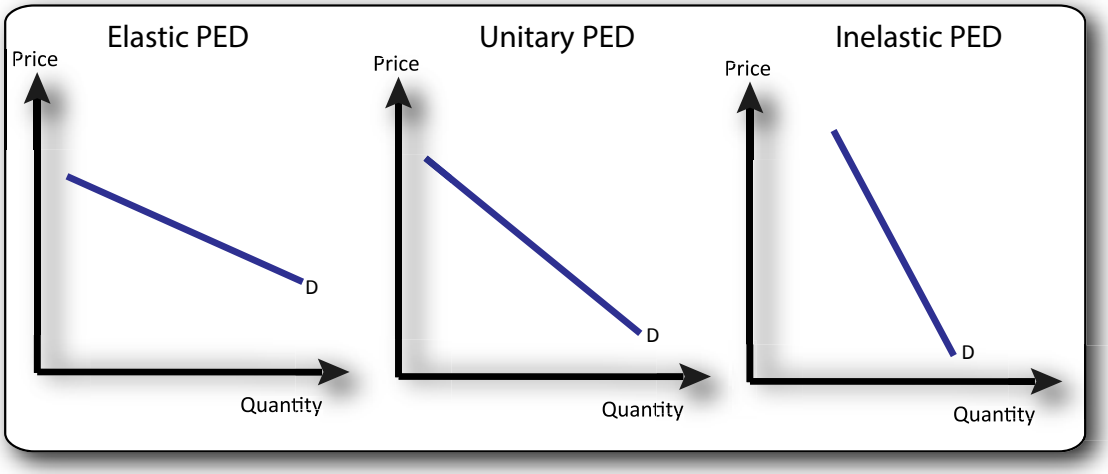
We now know that a change price causes an extension or contraction in demand. What we will now come to consider is how strong or weak that relationship is. If we increase the price of oil by 5% do we buy 5% less? This, therefore brings us on to what economists call **Price Elasticity of Demand (PED).**

Price elasticity of demand measures the relationship that a change in price will have on the quantity demanded of a product.

Price Elastic: If a % change in price will cause a larger % change in the quantity demanded then the demand for this product is considered price elastic.

Price Inelastic: If a % change in price will cause a smaller % change in the quantity demanded then the demand for the product is considered price inelastic.

Unitary elasticity: This occurs when the % change in price causes an equal % change in the quantity demanded.



Calculating PED

Using the relevant figures available to us, we are able to calculate the Price Elasticity of Demand for different products. The way we do this is by using the following formula:

$$\frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$$

Understanding the formula. A result of...

> 1 indicates that the product is relatively price elastic

1 indicates that the product is unitary price elastic

0 to 1 indicates that the product is relatively price inelastic

NB - ignore all negative values

Elasticities (continued)

Importance of knowing PED

This is an important concept for producers as it helps inform many of the pricing strategies they take.

1. **Sale**

If a company wants to clear stocks of its product, an easy way to do this would be to reduce the price (sale) which should increase the quantity sold. By knowing the price elasticity of demand the company can calculate the % decrease in price that is needed to clear the stocks. If they reduce the price further than necessary they will have lost some potential profit on the stock.

2. **Effect of rising costs**

Consider a chocolate manufacturer. Suppose the cost of milk has unexpectedly risen due to a disruption to the supplier. The chocolate producer is now faced with two choices, it can raise the price of their chocolate bars to maintain the profit margin (by passing the additional cost onto the consumer), or it can absorb the extra cost itself and accept a lower profit margin on each chocolate bar.

By knowing the price elasticity of demand the manufacturer can calculate whether increasing the price would cause a larger decrease in quantity demanded and subsequent decrease in revenue and profit than just accepting a lower profit margin at the existing quantity demanded.

The Lesser Known Elasticities:
Did you know that the concept of Cross Elasticity of Demand relates to how much demand for one product takes away from (or adds to) demand for another?

Grab a Pen!

1. The price of a school's textbooks rose from $55 to $60; the school consequently decided to buy 10% less. Calculate the price elasticity of demand of this product. [2]
2. A consumer bought 15 carrots when they cost $3, but went out and bought 45 when the price fell to $2. Calculate the price elasticity of demand for this product. [2]
3. Japan bought 20 million tons of oil when the price per barrel was $38. The following year, the price rose to $62 but Japan still bought 18 million tons. Calculate the price elasticity of demand for this product. [2]
4. A chocolate producer found that when they increased the price of their main chocolate bars from $1.50 to $3, then people wanted 50% less. Calculate the price elasticity of demand for this product. [2]

Factors affecting PED

1. Availability of substitute products.

If there are many similar products in the market place that consumer can switch to easily then price elasticity of demand is likely to be elastic. Chocolate bars are an example of this. If there are few or no substitute goods in the market place then price elasticity of demand is likely to be inelastic. Salt is a good example of this.

2. Essential Vs Luxury products

Products that we can't really do without are likely to be price inelastic – since we will probably have to buy them even if the price rises (example: soap).

Products that are a luxury such as an mp3 player are likely to be elastic since if the price increases we can easily choose not to purchase them.

3. Product Cost

Products that are very low cost and account for a tiny fraction of a consumers expenditure are likely to be relatively inelastic since a change in price makes very little difference to their spending (salt). High value products are likely to be elastic since consumers will carefully consider these purchases since they account for a significant proportion of expenditure (new laptop).

Elasticities (continued)

Did you know that OPEC stands for the Organisation of Petroleum Exporting Countries. This organisation includes the world's largest oil producers and its interests are to ensure a good price for all oil producers. Saudi Arabia is perhaps the most influential member though the UAE, Iran and Nigeria are also large producers.

ISTUDY - Developing nations have often experienced rapid growth owing to governmental decisions to subsidize energy, especially oil. This translates into lower costs of production, and also cheaper fuel for cars. However, the environmental damage being done is increasing, and there are calls from developed nations for them to stop the subsidization. Many developing country leaders are angry about these calls, saying the poor would be directly effected as a result of the change in prices, and that industry would be hurt the most.

In developed countries fuel is often taxed heavily; a fact that translates into large government revenue, owing to its elasticity

Grab a Pen!

1) Explain why fuel is relatively price inelastic. [2]

2) Why does the article argue that a removal of the subsidy would affect the poorer people the most? [2]

3) Copy out and fill in the blanks below. [6]

Price elasticity of demand relates to the relationship between _____ and _____. If a good is price elastic this means that a change in _____ will equal a larger change in _____. If a good is price inelastic this means that a change in _____ will equal a smaller change in _____.

Elasticities (continued)

Price Elasticity of Supply

This measures the impact that a change in price will have on the quantity supplied of a product. We can calculate price elasticity of supply using the following formula

$$\frac{\%\text{ change in quantity supplied}}{\%\text{ change in price}}$$

Understanding the formula. A result of ...

0 to 1 indicates that the product is relatively price inelastic

1 indicates that the product is unitary price elastic

>1 indicates that the product is relatively price elastic

NB - ignore all negative values

Factors affecting Price Elasticity of Supply

1. **Production time**

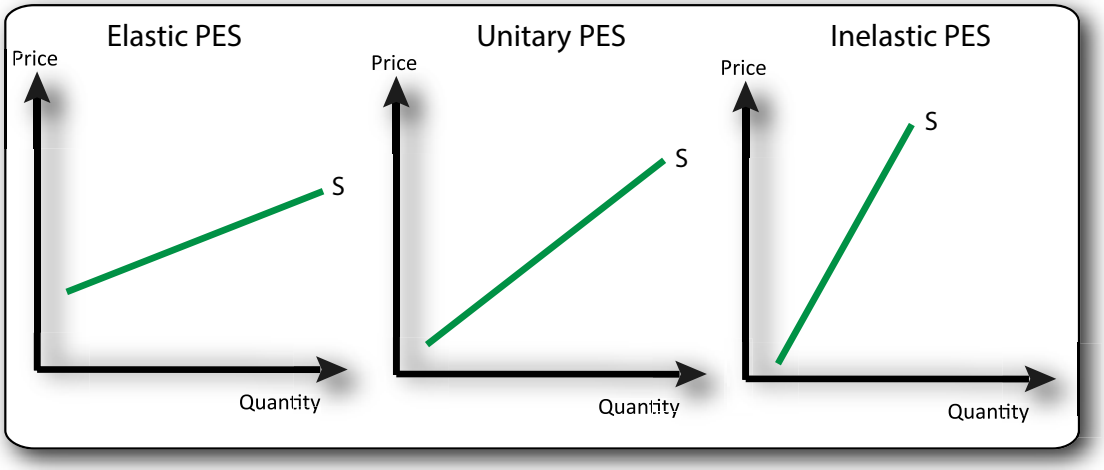
If the product can be manufactured quickly then the quantity supplied can be adjusted rapidly in response to a change in price. This would allow the product to be relatively price elastic. If however the product has a lengthy manufacturing process then the quantity supplied cannot be altered rapidly in response to a change in price. It would be relatively inelastic (for example ship building).

2. **Storage**

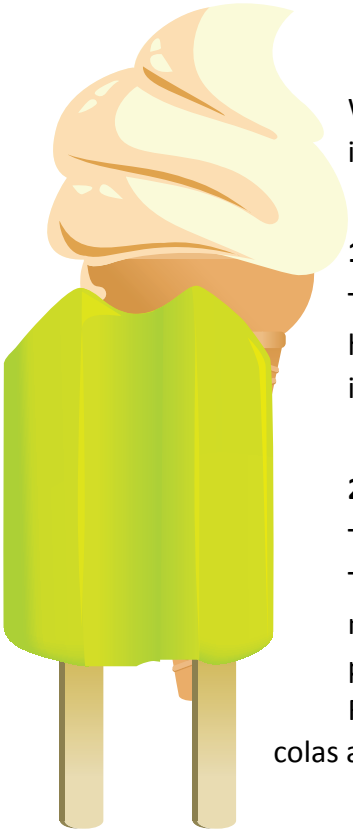
If the product can be stored easily, suppliers can hold back the quantity supplied if there is a fall in price. This allows it to be relatively elastic (tinned beans). If the product is perishable suppliers have to offer the product for sale otherwise it will degrade and lose value. This would make it relatively price inelastic (lettuce and fresh produce).

3. **Cost of changing supply**

If changing the output is expensive due to having high levels of fixed costs, firms are more reluctant to alter the quantity supplied and therefore it will be relatively price inelastic.



Types of Goods



Within every economy we can identify certain types of goods that fit into different categories.

1. Normal Goods

These are goods experience an increase in demand when consumers have increasing incomes. Most goods fall under this category. As incomes rise the demand for mobile phones is likely to rise.

2. Inferior Goods

These are goods that experience a fall in demand as incomes rise. These are often low quality, cheap or basic goods. As incomes rise in many Central American countries the demand for beans may fall as people introduce more meat into their diet as the form of protein. Rising incomes are also likely to cause a fall in the demand of cheap colas as people switch to higher quality brands.

3. Substitute Goods

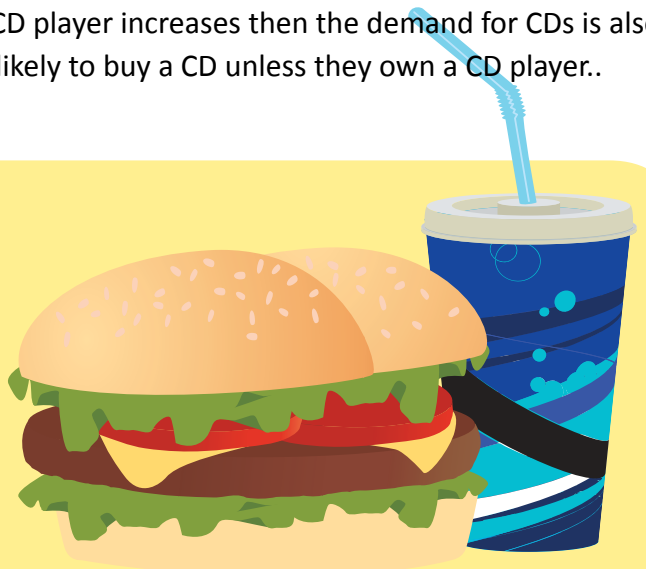
These are products which can be used as an alternative for another good. Products that have substitute goods are likely to be more price elastic since consumers can easily switch to the substitute. Corn chips can be considered a substitute to potato chips (crisps). If the price of potato chips increases consumers can easily switch to corn chips. Butter and margarine (spreads) are also examples.

4. Complementary Goods

These are goods that are bought to work with another product. CDs are complementary goods for a CD player. If the demand for CD player increases then the demand for CDs is also likely to increase. Consumers are very unlikely to buy a CD unless they own a CD player..

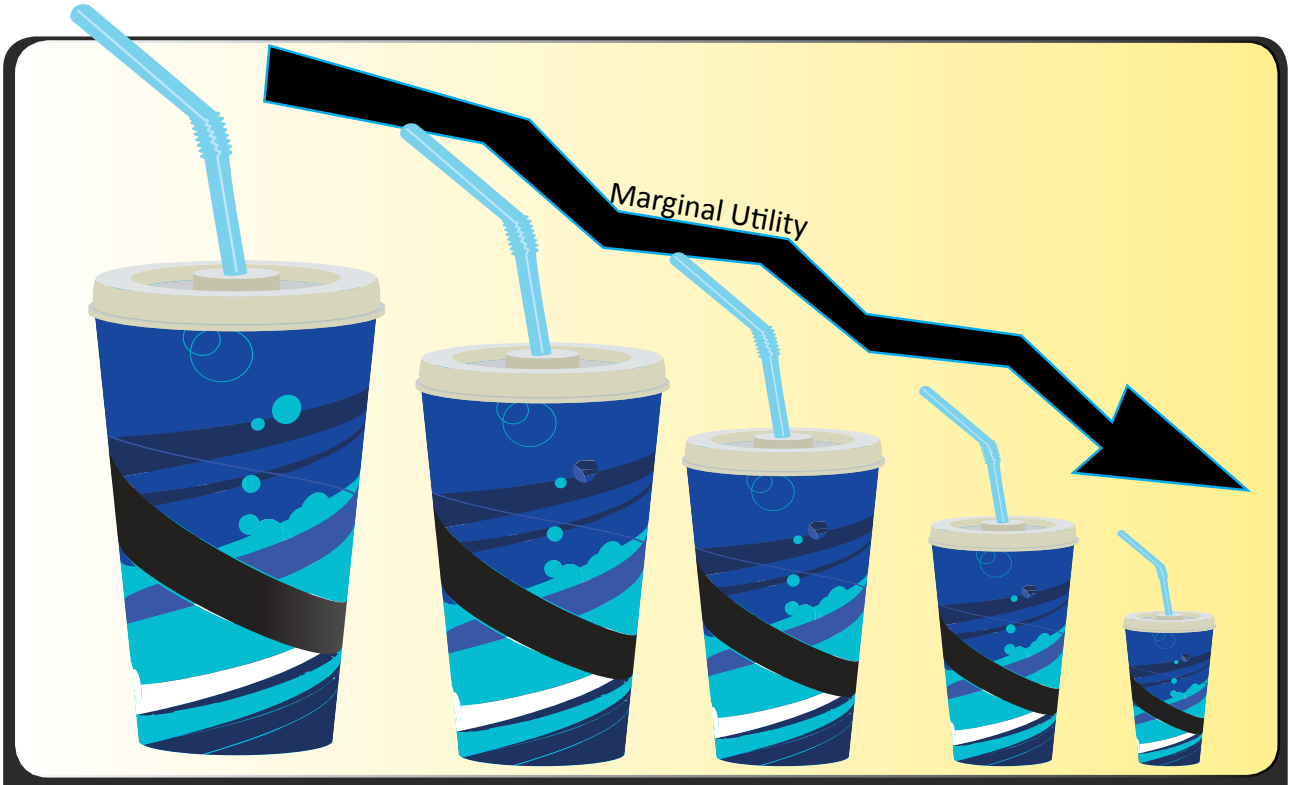
Did you know that estimates suggest MacDonalds sell 52 million burgers every day.

In comparison, there are 1.7 billion servings of Coca-Cola every day!



The Law of Diminishing Marginal Utility

This term contains words that will come up time and time again in economics.



Diminishing: reducing or becoming less.

Marginal: extra/additional

Utility: satisfaction

The whole phrase refers to the idea that consumers will get less additional satisfaction from consuming additional purchases of a product. This means that the perceived value of purchasing an extra unit will also reduce (consumers are less willing to pay the same amount for an additional product that they will get less satisfaction from). Firms must understand this concept and how it will relate to the demand for their product

.

Examples:

Soft drinks: On a hot day a consumer may really want a soft drink to quench their thirst. Consuming it will give them a lot of satisfaction. After finishing it, they are unlikely to want a second drink as much as they did the first one. If they did buy a second and drank it, they may still get satisfaction from this, but it is unlikely that it was as satisfying as the first one. A third drink is likely to give even less satisfaction.

Cars: A consumer buys their first car and it gives them great freedom. They can use it for all their journeys and they obtain a vast amount of satisfaction from it. If they were to buy a second car, it may give them satisfaction, but they can't drive two cars at once and it doesn't change their life in quite the way the first one did. In this sense the second car gives them less additional satisfaction.

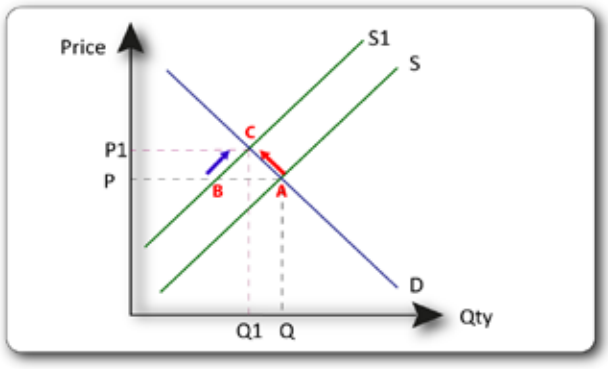
Merits of the Market System

The market system has some beneficial characteristics.

Market Clearing Mechanism

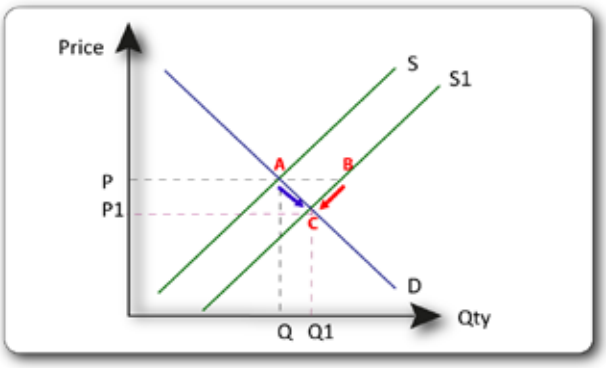
The forces of supply and demand utilize fluctuations in price to achieve equilibrium and clear the market. Let's look at a couple of examples.

The coffee market



1) Exceptionally heavy rains in Central America destroy a significant proportion of the coffee harvest. The immediate effect is likely to be excess demand (B-A). This is then corrected as the decrease in supply leads to higher prices (P1) and subsequently a contraction in demand until demand and supply are in equilibrium again.

2) The following year the climate leads to a bumper harvest of coffee in Central American countries. This leads to a situation of excess supply (A-B). To correct this, the price decreases to the point at which the extension in demand brings the market back into equilibrium.



Competition

The presence of competition between suppliers in market systems enables consumers to have choice. Firms use price as one form of competition, this leads to lower prices for consumers and greater efficiency for firms as they attempt to minimize costs and maximize profits.

Competition also encourages better allocation of resources as firms that quickly recognize changes in demand and switch their production into growing markets can benefit from increased profit. Firms that fail to recognize changes in consumers demand and allocate resources ineffectively are likely to experience declining profits and eventually may go out of business.

This can also be seen in the labour market. Workers are more likely to be employed and receive higher wages if they train or retrain with skills that are in demand or increasing in demand. In recent years web designers and mobile phone engineers have been in high demand and receive high wages.

Market Failure

What is Market Failure?

Market failure occurs when the market forces of supply, demand and the price mechanism fail to supply the correct products in the correct quantity and the lowest price. There are several ways in which market forces can fail.

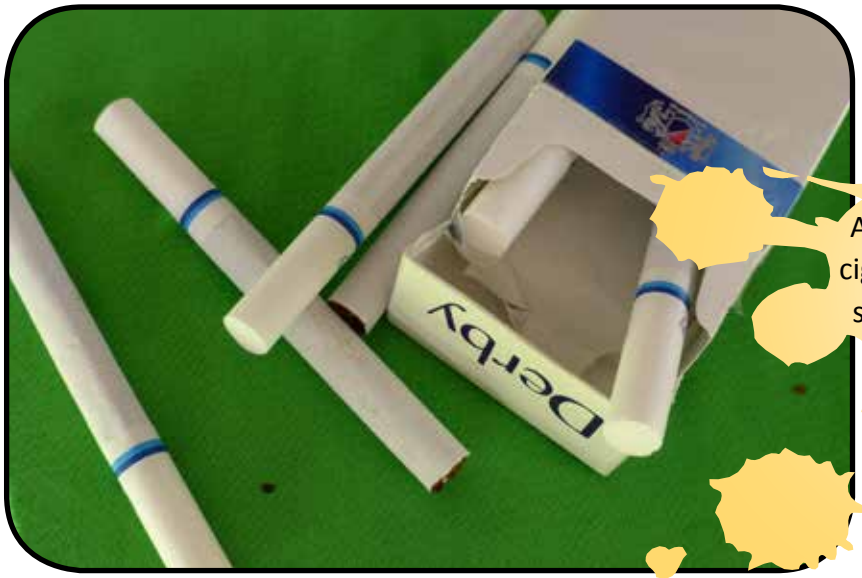
1. Failure to produce some goods

With profit maximization being a firm's main aim, market forces may lead to some products that are in demand not being supplied. Public goods may not be provided since the incentive for people to pay for the product is removed since they can benefit from it without paying. An example is paved roads Everybody living on a street will benefit from paved roads even if only a few people actually pay. This inability to restrict the benefit of a product purely to the people who pay makes firms unwilling to supply something that they can't charge for.

2. Failure to count all the costs

The production and consumption of products brings benefits and costs to the consumers, the firms supplying them and the wider society. In some cases the equilibrium price set by supply and demand fails to accurately account for all the costs.

Private and external costs can be applied to consumers and producers, as will be explored later.



Around 130 000 000 000 cigeretters are estimated smoked in the UK each year.

Grab a Pen!

Read the article below and use it to answer the questions.

1) Explain what the market failure is in the article. [2]
2) What methods can be used to tackle the market failure? [3]
3) What do you think the problems are with the idea of tradeable permits? [3]
4) How would you tackle the market failure? [4]

A New Approach?

iSTUDY - It is time to take responsibility for our actions. Daily, I have noticed firms allowing too many dangerous chemicals into our atmosphere. Whether or not this is having an immediate effect, I cannot say. What I can say is that it certainly will have an effect somewhere down the line. Take a bucket of water, for example. If you drop a teaspoon of Cola into it, you probably won't notice the difference. Do it four, five, six times and it still may not be noticeable. Do it seven hundred times and you start to notice it.

We need to think of a radical solution to these problems. Factories billow smoke out into the atmosphere. This often translates as acid rain in other countries. Our action must be a global initiative. Taxation is the usual method, but I don't think it has worked. Taxation simply stops us producing as much as we would like, whilst not actually tackling the problem of pollution in the first place. Plus, if you do as some economists claim and try and tax per pollution then this is very difficult. Does a ton of sewage waste pumped into the sea equal to one cubic meter of air pollution? Are we including noise pollution? What is pollution?

No, I suggest a more inventive approach: tradeable permits. My suggestion is that each company gets a certain amount of permits to pollute. For example, one company may get a certificate allowing them to pollute 10 million tons of waste. However, if they then pollute 9 million tons, they could sell their unused permits to another company... therefore making money from not polluting. This would encourage firms to pollute less and put the emphasis on them. Firms that pollute a lot, would end up having to buy a lot of permits, which would be expensive for them and lessen their profits.

I genuinely think this is an idea the government must take up if it wants to be taken seriously on the issue of tackling pollution.

Private Costs and Benefits

External Benefits

These are the costs/benefits directly related to/impacting a firm or consumer.

The consumer

Private Benefits: these are the benefits that a customer gets from consuming a product. In the case of an alcoholic drink the private benefits may be relaxation and pleasure.

Private Costs: these are the costs incurred by the customer from consuming a product. Using alcohol again, an example would be the financial cost of buying the product.

The producer

Private benefits: these would be the benefit to the firm from producing the alcohol. Profit would be an example.

Private costs: the costs incurred making the product (raw materials, labour costs, rent etc).

External Costs

These are costs/benefits of production/consumption on 3rd parties (other people/society).

The consumer

The external costs of alcohol may be anti-social behaviour and crime. Longer term external costs may be higher health care costs for society to fund treatment for liver damage problems in alcohol drinkers.

The producer

External benefits of alcoholic drinks firms may be sponsorship of community events such as sports. Skill acquired by workers at the firm who then leave and take those skills to another job could also be considered an external benefit.

External costs of alcoholic drinks firms could be air and noise pollution from the factory. The smell of the brewery may affect local residents. These are the costs that are often not accounted for in the market system price mechanism.

Social Costs and Benefits

When considering what items should be produced and what their price should be, it is important to calculate the social cost of this production.

Social benefits = private benefits + external benefits

Social costs = private costs + external costs

If the social benefits are greater than the social costs then it should be produced. If however the social costs are greater, then it should not be produced and the resources should be allocated elsewhere to produce something that is beneficial to society.

Below, a burst pipe in Nicaragua causes foam to flood the roads, showing us external costs

Grab a Pen!

ISTUDY - Campaigners in one part of the country yesterday managed to prove that GlobaPol, a leading industrial giant, had been using a nearby river as a dump for its waste product. Local businessmen had, for a long time, complained about the damage this was doing to both the local wildlife and the surrounding agricultural fields. One farmer said he grew a carrot with three stems, whilst a fisherman said he one saw a two-headed salmon. GlobaPol argues that it only distributes waste water into the river, and that the rest is just a consequence of natural changes. They are currently seeking compensation with villagers who claim they have had to be hospitalized after drinking dirty water in their taps.

1) Explain how the above article demonstrates the concept of external costs. [2]

2) How could external costs, such as pollution, be tackled by the government? Try and invent three different solutions. [6]

Conserving Resources versus Using Resources

Should economies use the resources available to boost output and increase incomes without worrying about future shortages of resources? Or should they conserve the resources that they have for future generations.

Countries that are relatively undeveloped and rely in primary industries (resource extraction) are likely to exploit the natural resources that they have. Exploiting the resources can generate much needed income, boost employment and allow for investment in infra-structure. It does come at a cost though. Environmental damage is likely to be significant, whether it is the destruction of habitats through deforestation, destruction of habitats and landscape for open-cast mines or depletion of fish stocks through over fishing.

The nature of non-renewable resources such as fossil fuels means that when they are used up they cannot be replaced. Countries that have relied heavily on exporting oil and gas such as Dubai and Qatar are investing money in diversifying their economies into other sectors so that future generations have the ability to generate income without fossil fuels.

Countries that are relatively developed have shifted much of their economic activity away from resource extraction and rely more on services or manufacturing using imported raw materials. This allows them to conserve the resources that they have, but also to minimize the environmental damage that is caused. Through conserving their remaining resources they retain the ability to exploit them at a later date if the demand for them creates a sufficiently high market price.

Countries should consider the social costs of exploiting their natural resources. If the social benefits of exploiting the resources outweigh the social costs, then it makes sense to use the resources. If the social costs outweigh the social benefits then they should probably conserve them. Some natural resources such as rainforests have the ability to generate income through conserving them and developing tourism.

Public Expenditure versus Private Expenditure

Does expenditure by the government or private expenditure lead to more efficient allocation of resources? Government expenditure can benefit from economies of scale and often takes into account the external costs of investments. The lack of a profit motive can lead to inefficiencies and a lack of speed. Private expenditure on the other hand focuses on efficiency, speed and only the private costs in its pursuit of high profits. This can lead to external costs and investment that carries a social cost. Public expenditure is the money spent by the public sector. Governments generate revenue through taxation, nationalized industries and privatisation. They may also borrow money if they need to spend more than they have generated.

Public money is spent in many ways and by many different people/organizations/levels of government. A significant proportion goes on infrastructure developments such as roads, railways, street lighting etc. Supplies for hospitals and schools must also be purchased. The government and local authorities can choose how much to spend and who to purchase supplies from. In this sense they can predict and target the effect that the spending will have in the economy.

The government spends money on paying its employees such as the armed forces, teachers, firefighters, council staff and the police. These all make their own decisions about whether to save or spend the money and what to spend it on.

Another significant proportion of public money is used for welfare payments. Many governments provide state pensions for the elderly, help disabled people financially, support unemployed people and provide additional income support for fuel bills for low income groups. The higher the rate of unemployment the lower the income tax receipts for the government and the higher its welfare payments will be. Countries with aging populations are facing large public expenditure on pension payments.

Public sector money may sometimes be used to subsidise private industries. Subsidies may be paid if the government wants to retain services that the private sector would stop providing due to a lack of profitability such as rural bus routes. Subsidies may also be used to support new industries being established in the country that are not yet self sufficient. Small scale solar power generation has benefitted from subsidisation in the UK in recent years.

Grants may also be paid out of public money. These are one off payments to companies. They are often used to attract firms to locate in the country and therefore provide jobs, such as Nissan in the Northeast of England. They may also be used to help firms in developing new technologies that are going to be highly capital intensive. Grants have recently been awarded in the UK for renewable energy developments such as CCS (carbon capture and storage) and wave power generation systems.

Private expenditure

This consists of the spending by individuals and private firms. Firms spend money on the resources, capital and labour that will provide the greatest profit level. Individuals spend money their needs and wants.

The government exercises some influence over private sector spending through taxation, interest rates, subsidies and grants.

Reducing income tax would increase peoples disposable income and probably their spending. To target private sector spending more accurately the government may tax certain products such as tobacco and alcohol (demerit goods) highly to dissuade people from buying them. They may also subsidise merit goods such as school textbooks to encourage spending on them.

Reducing taxes for firms will encourage them to spend more. Many governments make capital investments by firms tax deductible.

Grab a Pen!

Using the information above, design a poster to show the advantages and disadvantages of public and private spending.

Try and use real-life examples to help you in your exam. [10]

Chapter Review

Multiple Choice Questions [1 mark each]

1. A producer tries to increase prices in his shop. On a market diagram this will result in:
   a. Excess demand
   b. Increased supply
   c. Excess supply
   d. Decreased demand

2. Bad weather hits corn farmers at a time when people have higher incomes. This leads to:
   a. Decreased prices
   b. Increased prices
   c. An increase in supply
   d. A fall in demand but a rise in supply

3. PED is useful for producers in order to know
   a. Whether their good is inferior
   b. Maximum revenue
   c. How responsive supply is
   d. How many complementary goods they have

Short Answer Questions [1 mark each]

1. Price causes demand to react in one way, determinants cause it react in another. Explain how.
2. A newspaper increased its prices by 200% but still found it was an inelastic good. Why?
3. A firm grows tomatoes. They owned 38 greenhouses. They kept adding workers to harvest their tomatoes but by the 60th worker found that their profit began to decrease. Why?
4. The price of one good increases, whilst demand for another simultaneously increases too. What type of products are these? Give an example of these types of goods.
5. Producers find that their PES becomes more elastic over time. Why?
6. A rise in price of 30% leads to a fall in quantity demanded by 5%. What type of good is this? What is it's PED?
7. Explain, using a diagram, what a good with a PED of 1.25 means.

Long Answer Questions [6-8 marks]

1. Governments must decide whether to exploit their natural resources or conserve them. Discuss whether Brazil should exploit its tropical rainforest or conserve it. [6 marks]
2. A government is considering changing its economic system from a planned economy to a free market economy. Discuss whether this would benefit the population. [8 marks]
3. Define market failure and using examples explain why it may occur. [6 marks]

Unit 3 - The Individual

Barter and the need for exchange

People have always had certain items that they have needed for survival. Early humans existed through subsistence farming and **bartering**. Exchange has played an important role throughout human history and has enabled people to have a wider range of products for consumption. The items that they could not produce for themselves they swapped for something that they could produce. This system worked but had many drawbacks:

- Some items that people may produce perish quickly (fruit and vegetables) and could not be stored for swapping later on in the year.
- Other items are not easily divisible into smaller amounts to swap for other low value products (a cow unless it is killed and chopped up).
- People need to know what their product is worth in relation to all other products. Someone wanting to swap tomatoes needs to establish how many carrots, apples, eggs etc each tomato is worth.

This eventually led to money and exchange systems based on a currency. It is important to remember that money does not have to been the notes and coins that we associate it with, but must meet the characteristics identified above. Some previous civilizations used shells as money.

Grab a Pen!

You have been commissioned by Prince Jean-Marc Pierre, heir to the throne of Westernia. As his chief economic advisor, he has entrusted you to design a new currency for his country. He would like you to consider:

The aesthetic appeal
The image you portray to the people
Whether you want coins or notes and what units they are divided into

Money

Characteristics of money

Acceptable: everyone must accept it as a form of payment at its set value.
Portable: it must be easily carried without being bulky or heavy.

Durable: it must last for a long time and withstand much use without devaluing. Many countries are making plasticized bank notes now in an effort to increase their durability.

Divisible: it must be easily divided in small denominations to make it suitable for all types of transactions.

Scarce: it must be limited in its supply or it will quickly lose value and become worthless.

Functions of money

For money to be successful it needs to perform several key functions or purposes.

Medium of exchange: this means that it must enable people to sell products for money and then take that money to another seller and use it to buy products.

Measure of value: money must have a value in relation to all other products. This solves one of the problems with barter - since it enables producers to know the value of their product in relation only to money – rather than all other products.

Store of value: money must not devalue (inflation aside). If a producer receives $10 for their produce today they know that in a month that $10 note will still be worth $10. This solves another problem of barter – an apple grower previously had the problem of apples going bad relatively quickly and losing their value. This meant they had to swap them for things in the apple season and could not save them for swapping later. With money the apples can be sold and the money saved for later in the year – losing no value.

Deferred payment: this enables lending and borrowing. Money should be able to be borrowed and repaid later, and goods bought and paid for at a later date. The fixed value of money allows deals to be negotiated and the lender to know exactly what they are getting at the later date.

Banking

Commercial banks

Commercial banks are the high street banks that we are familiar with such as HSBC, Barclays and Citibank. Profit maximization is their main aim and they are usually privately owned. They traditionally make most of their money by offering savers a lower rate of interest than they charge for lending out that money to others as loans. Individuals and businesses are their customers and they provide a range of services:

- Checking/current accounts: this is a standard account for depositing money in that allows you to access the money instantly if you need it. Due to the flexibility of this type of account the interest rates are usually very low.

- Savings accounts: higher interest rates but customers don't have an ATM card for withdrawing cash instantly. There may be time restrictions on how quickly you can access the money.

- Overdrafts: a pre-agreed debt facility which allows customers to spend more than they have in their account - for a limited time period.

- Loans and mortgages: commercial banks offer a range of loans and mortgages that vary in the amount lent and the timescale for repayment.

- Credit cards: most commercial banks have a link with a credit card company such as Visa or Mastercard and link these to your bank account.

- Foreign exchange: they often provide a facility for buying and selling different currencies.

These are the most important banks in a country or economic region. They are the government's bank and are subsequently involved in implementing economic policy (monetary policy) and representing the economy or government internationally.

Owing to Europe's on-going economic problems, the European Central Bank has give huge loans called 'bail-outs' to: Greece, Spain, Ireland, Portugal and Cyprus

Central banks act as the government's bank and are not accessible for individuals and businesses (except commercial banks). The Government's tax receipts go into the central bank and its holds any gold and foreign currency reserves the government has.

The printing of notes and coins is the central banks' responsibility.

CENTRAL BANKS

Central banks are usually responsible for setting the base rate of interest; this can be a powerful tool in managing the economy. This base rate is then used by commercial banks to set their own interest rates (usually a little higher than the base rate).

Central banks also play a very important role in regulating commercial banks and making sure that the banking system is functioning correctly. In a financial emergency a central bank can act as a lender of last resort to a commercial bank that is in trouble (Northern Rock, UK).

The Swedish Riksbank is the oldest Central Bank in the world (established in 1668), followed by the Bank of England (1694).

Photo courtesy of

Stock Exchanges

Stock exchanges play an important role in economies since they facilitate the buying and selling of shares in Public Limited Companies. This enables companies to raise capital for investment. **Stock exchanges** regulate the selling of shares and provide a secure marketplace.

An insight to shares

Only Public Limited Companies can trade shares on the stock exchange. To buy and sell shares companies and individuals must use a stockbroker. A stockbroker is someone who is registered to trade in the stock exchange on behalf of clients.

When a share is bought, it means that the buyer now owns a percentage of the company (usually very small but it depends on how many shares are in circulation). This ownership of a fraction of a company is known as equity.

Why buy shares?

There are three mains aims that investors may have when they purchase shares.

1. Dividend payments: these are financial payments to all shareholders by the company from some of the profits it has made. Firms are not obliged to pay a dividend but if they have cash available they may return some of the profit to the company's owners through a dividend. Income investors look for firms that pay healthy dividends regularly. Vodafone is a good example of a company that has paid high dividends in recent times.

2. Capital gains: the market for shares is based on supply and demand. If a company is doing well, or expected to do well in the future the demand for its shares may rise. Since supply if fixed (unless people are willing to sell their shares) the price of the shares will rise. Apple is a good example of a company that has seen large share value increases in recent times.

3. Gaining control of the company: big investors and companies may use the stock exchange to buy significant proportions of a company to gain influence in its management decisions or even to completely purchase it.

Grab a Pen!

Click on this link to visit a stock exchange simulation.

- Research the companies and use the seed money to buy and sell shares.
- Monitor their progress over 3 weeks, keep an eye on the news for events that may cause fluctuations in their value.
- Write a report about your experience. How did you decide which shares to buy. Which ones performed the best and why do you think this was?
- Do you think the stock exchange is a reliable way for people to make money?

Choosing an Occupation

When individuals consider the occupation (career/job) that they wish to work in there will be various factors that influence the decision. These factors can be split into two main categories: wage and non-wage factors.

Wage Factors: Generally the higher the amount of money offered as pay, the more attractive the job is likely to be. The method of payment and performance incentives are also likely to influence the decision.

Salary: This is a pre-agreed total for the year, split into monthly sections. Because it is a set amount of money it does not depend on the hours worked – this may be a good or bad thing. Advantages of a salary are that it gives security and people can make plans based on the monthly income. It may also be easier to secure a mortgage or loans since monthly pay does not fluctuate. Professionals (teachers, police) often receive a salary.

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Wage: this is when workers' pay is based on the number of hours they work at an agreed hourly rate. This has the advantage that workers may be able to do extra hours and increase their income. If the work involves night shifts, these may be paid at a different hourly rate which again may allow for extra income to be made. Workers in factories are often paid in this form.

Piece rate: this is when workers' pay is based on their production. Often found in primary agriculture at harvest time. Coffee pickers are paid based on the weight of coffee cherries that they pick per day. If a worker is efficient they can make more money. The drawback of this form of payment is that there is no guarantee of how much you will earn, and it is often very seasonal. This makes securing bank loans difficult.

Commission: this is a method of pay that is often found in sales jobs. Usually the basic salary/ wage is very low but the employee will receive a percentage of the value of the sales they make. This provides a financial incentive to sell as much as possible and can add substantial amounts to the total pay.

Bonuses: -these are financial rewards for good performance. These have the potential to significantly increase the yearly pay and are commonly used in the banking industry.

Choosing an Occupation (continued)

Non-wage Factors

These are factors aside from the monetary rewards that may feature in an individual's decision making.

Geographical location: the proximity to the where the worker lives is likely to be important since longer journeys to work cost time and money.

Working hours: the number of hours required to work is important. But the timing of the shift is often also very important. Some jobs require night shifts or weekend shifts. The individual may feel that this impacts on family life too much. Other jobs have a set 9.00 am to 5.00 pm pattern.

Working conditions: the physical demands of the job and the working environment are often important. People do not want to work in a place that they don't feel safe in, or one that leaves them feeling stressed at the end of the day. Some companies such as Google go to great lengths to improve their working environments.

Job satisfaction: will the job stimulate the interest and provides a sense achievement. Jobs that challenge and stimulate individuals are often more desirable and can add to happiness outside of work. Monotonous jobs are often boring.

Holiday entitlement: how many holiday days are provided? Some professions such as teaching have very favourable holiday provision. Some countries offer more holiday entitlement than others.

Pension provision: jobs that have a company pension scheme and one that offers a good pension on retirement are an attractive prospect. The company making pension payments represents a form of long-term saving for the individual.

Fringe benefits: additional perks that the company may provide or offer. Typical examples are a company car or a gym membership.

Changes in earnings over time for Individuals

The uniqueness of a person's life means that there are any number of variations that may occur. This section looks at the typical changes that an individual might expect to experience in their income over the course of time.

- Low income

When starting a career, most people start at the lower levels and probably soon after leaving school. Students studying further education tend to have part time jobs and people in apprenticeship tend to be low paid as they learn the skills. The lack of experience and professional qualifications restricts younger people to lower wages.

- Rising incomes

With increased experience in a profession/trade income is likely to increase to reflect the higher value of the worker. People in trades may also have gained qualifications in those areas (electricians, plumber etc). Individuals that have completed higher education may now enter a profession at a higher level and command a higher starting salary.

Promotion, additional experience and maybe moving jobs to a higher position in a rival firm tend to allow income to rise through most of the working life for most people.

- Falling Incomes

Upon reaching retirement workers will experience a fall in income. Whilst many will have pension plans that provide some income, it is likely to be significantly smaller than the salary they received whilst working.

Some people may also reach a point in their working lives at which they decide they no longer need a rising income but would prefer more leisure time. In this case individuals choose to work fewer hours and receive less income.

External factors may also lead to a fall income for some people. Economic recession may lead to pay reductions, no bonuses to be paid and even unemployment.

Grab a Pen!

Using the above information, construct a comic-strip showing how an individual's income changes over the course of their lifetime: from birth until death. Make sure to distinguish between disposable income, and real income. [10]

Supply and Demand in relation to changes in earnings

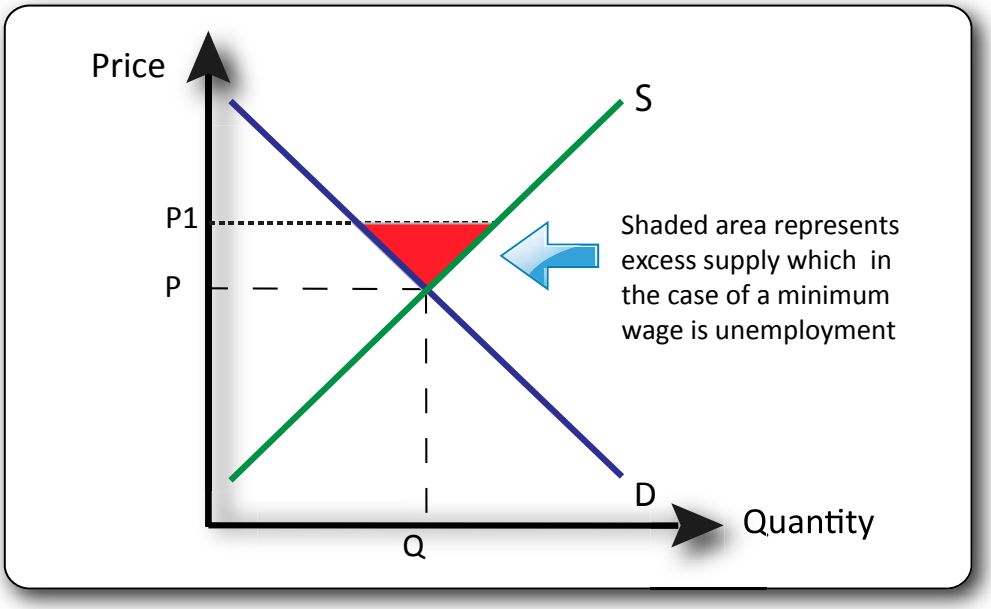
Wage levels can be considered the price of labour and are subject to the forces of supply and demand. Workers may experience increases or decreases in wage levels due to changes in the supply and demand within their occupational field.

New industries that require skilled people are likely to initially experience a shortage of available labour, this will drive up the price of hiring the labour as firms compete for the best workers.

Industries in which labour can be replaced by machinery (factory workers and agriculture) may experience falling wage levels as the demand for them reduces.

Workers in industries that have experienced steady expansion may experience rising wages unless the supply of labour entering the market increases at the same rate.

If a government decides to introduce a minimum wage then many people may experience an increase in their income. One of the drawbacks of a minimum wage is that at the higher wage level (price) more people are likely make themselves available for work. At the same time employers are likely to demand less quantity of workers at this higher price. This will lead to a situation of excess supply which in the case of labour represents unemployment. In the diagram the demand curve represents the demand for labour, the supply curve represents the supply of labour and the price represents the wage level. P1 is the minimum wage level.



Differences in earnings between occupational groups

Male/female

Traditionally men have had higher wage levels than women. There are many factors that can explain this:

More experience: this is often a result of women traditionally taking time out of the labour market to raise families.

Number of hours worked: many women opt to work in part time occupations once they have a family so that they can combined the demands of family life with generating some income to supplement the other parents income.

Level of promotion: again due to women taking time out of the labour market for families they may miss out on many promotion opportunities. The demands of raising a family may mean that they choose not to seek promotion as it will likely bring extra pressure and responsibilities.

Discrimination: there are many people that argue women are discriminated against and have found it hard to break into the higher management positions in companies that have traditionally been dominated by men.

Cultural values: some cultures actively discourage women from pursuing careers and rising up the pay scales.

Skilled/unskilled

Skilled workers are likely to receive higher wages than unskilled ones. This is a reflection of:

A higher value being placed on that skill and the likely increased productivity it will bring to the company. It is also a reflection of the time and money spent in training to obtain the qualification that guarantees a certain skill level.

Furthermore, the supply of more skilled workers is likely to be lower than the supply of unskilled workers and so the market price for skilled worker is likely to be higher.

Doctors are likely to receive a much higher wage than a taxi driver. This recognizes the fact that a doctor is likely to have had to study for 7 or 8 extra years after leaving school and incurred many costs in doing so. There are also a limited number of people that have the capability and desire to be a doctor and a limited number of places on university courses to train in this profession. This leads to a restricted supply of doctors.

Taxi drivers on the other hand need relatively few skills – essentially a driving license. This is fairly easy, cheap and quick qualification to gain that most people should be capable of. This enables a lot of people to supply themselves as a taxi driver.

Private/Public

In many economies public sector workers receive slightly lower wages than their counterparts in the private sector. This lower income is usually balanced by factors such as: increased job security, better pension provision and possibly better working conditions.

Agricultural/manufacturing/services

General variations exist between jobs in different industry sectors.

Typically agricultural workers receive low incomes as their jobs are low skilled, often seasonal and they can be replaced by machinery if the price of labour rises too much.

Workers in the manufacturing sector generally receive higher wage levels. There may be vast disparities in wage levels within this sector depending on the level of skill required. High-tech manufacturing will pay engineers and designers very well, while textile manufacturing is likely to be low paid.

The service also contains vast disparities. Workers such as waitresses bar staff and cleaners are likely to receive low wages. Bankers, accountants and solicitors are likely to receive much higher wage levels. The low paid jobs in the service sector usually have very few barriers to entry with no formal qualifications required. This creates a large supply of labour. The high paid service sector jobs usually require specific professional qualifications and are highly skilled.

Trade Unions

Trade unions are organisations that represent workers' rights. Workers become a member a trade union and then the union will negotiate with employers for improved working conditions, working hours and pay increases. The NUT (National Union of Teachers) and Unison are examples of strong trade unions in the UK. Trade unions are effective since they often represent a significant proportion of a firms workers. This gives them considerably more influence than if individual workers negotiated separately. The representation of many workers is called collective bargaining.

It also benefits employers since they can deal with a much smaller number of people in making decisions that affect the entire workforce. Negotiating with individual workers over pay and conditions would be very time consuming, adds costs to production and reduces productivity. Whilst trade unions do often argue for increased wage levels, they have to remain realistic. If wages levels are pushed too high and not matched by an increase in productivity then this will increase costs for the firm and make it less competitive. This may lead to unemployment – which would be against the interests of the trade union and its workers.

It is possible for trade unions to try and raise the wages for its members through restricting the supply of workers. This can be achieved by requiring specialist certifications or qualifications.

Demanding higher pay may be a response to inflation and so in real terms it may just maintain the purchasing power of wages. If trade unions fail to achieve reasonable improvements for their members they may choose to take more drastic action. Examples of this could be that its members refuse to work any overtime hours, or even go on strike (refusing to come into work at all). This can be damaging for firms and economies since it represents lost output and may lead to a loss in confidence by customers or other firms. It may also be damaging to the workers since they may find the firm retaliates in some way (through loss of benefits or future unemployment for example).

These sea-salt-harvesters in Zanzibar face very low pay despite the demanding nature of their work. If they had a trade union to protect them, they would be able to bargain for much higher wages, and possibly better working hours too.

Specialisation for Individuals

Specialisation in the sense of individuals refers to the worker focusing their training and experience on a specific part of the production process. This may take many forms and bring benefits or problems.

To begin with we can observe highly skilled specialisation. When workers want to obtain a highly specialized job they are likely to need extensive training. This may require extras years in education at universities, or it may be professional training received whilst working. Jobs of this nature often benefit the individual by offering high wages, job satisfaction and good working conditions. Highly specialized workers often enjoy more job security since they are difficult to replace. An example could be specialization in certain chemicals.

Workers may specialise in much lower skilled tasks. Some, such as hair-dressing, may provide much job satisfaction and a reasonable wage level.

Some workers end up specialising in production lines in factories, performing the same unskilled tasks over and over again. This form of specialization is often low paid and has little sense of job satisfaction. With low skilled specialization it is relatively easy for the worker to be replaced and so job security may be low.

Above, workers in Nicaragua specialize in pottery

Motives for spending, saving and borrowing

Spending

There are several influences on peoples motivation to spend.

Peoples' motivation for spending is usually linked to the level of disposable income that they have. Increases in disposable income due to a pay rise, reduced outgoings (debt repayment, utility bills etc) are likely to lead to an increase in the level of spending. If disposable income decreases for any reason, people are likely to reduce their level of spending.

Interest rates may play a role in expenditure. If interest rates are rising or high, loans become expensive and people are unlikely to borrow money for large purchases. If interest rates are low or credit is easy to obtain people are likely to increase their expenditure level. In recent years it has been very easy to obtain credit through credit cards, this led to a surge in many peoples' spending.

Changes in wealth also influence spending motives. In times of rising house values people feel wealthier and are more likely to increase spending.

High income groups are likely to spend a larger amount than lower income groups, but importantly this larger amount usually represents a lower proportion of their income. The explanation for this is that people have to spend a certain amount on essentials for living. As incomes rise - the amount spent on essentials is unlikely to rise in tandem with earnings. Someone who receives double the income of another person is unlikely to consume twice as much food, water and electricity. This leaves them with more income to save and/or spend on luxuries of they wish.

Saving

Saving money is an important consideration in most peoples' financial management. There are several ways in which people save and different reasons for saving.

Reasons for saving

- Target saving: saving for future purchase such as a car, a house or maybe a TV.
- Contingency saving: many people save to have a sum of money to fall back on in the case of an emergency or unforeseen event. Medical bills, car repairs, domestic emergencies such as a broken heating system in winter.
- Retirement saving: pension plans and specialist saving accounts are often used to save for the time when there is no longer an income from working.

The ability of people to save is largely dependent on their income level. Those on low wages will inevitably spend a large proportion of their income on necessities. This leaves little money for luxuries and saving. People receiving higher incomes are unlikely to spend significantly more on the necessities and subsequently have a larger proportion of their income available for saving.

Borrowing

Borrowing money is likely to feature in most people's lives at some point. It is unusual for individuals to save enough money to buy their first house in cash. Others may utilize borrowed money more frequently to purchase smaller items such as cars and to pay for holidays.

The motive to borrow is usually closely linked to interest rates. These represent the cost of borrowing money. If interest rates are it will dissuade people for borrowing money since the repayments will be high. If however interest rates are low then borrowing becomes cheap and many people will be enticed to buy now and pay later through borrowing

Grab a Pen!

- Look at the information below. Explain which individuals you believe save and spend most, and why. Do this:
  a) In proportion to their income [6]
  b) As a total value [6]

- Esteban Granola, 28, a single investment banker working in the centre of Madrid
- Tom Jennings, 55, a retired nuclear scientist whose children have left home
- Julia N'dlovo, 26, a South African teacher about to get married
- Martha O'Riley, a 19 year old Psychology graduate looking for work
- Zhang Zhiou, 44, a hard-working engineer at GloboTech, with a family of 5
- Pedro Mendes, 30, a coffee plantation worker with a large extended family

Chapter Review

Multiple Choice [1 mark each]

1. Identify the feature least likely to be of use when evaluating what makes good money
   a. Divisibility
   b. Portability
   c. Lack of scarcity
   d. Acceptability

2. A worker in China saves 30% more than a worker in the USA despite no change in production or lifestyle. A reason for this may be:
   a. The Chinese worker may have had a wage increase
   b. The Chinese worker may be close to retirement
   c. The Chinese worker may be younger
   d. The Chinese worker may be more productive

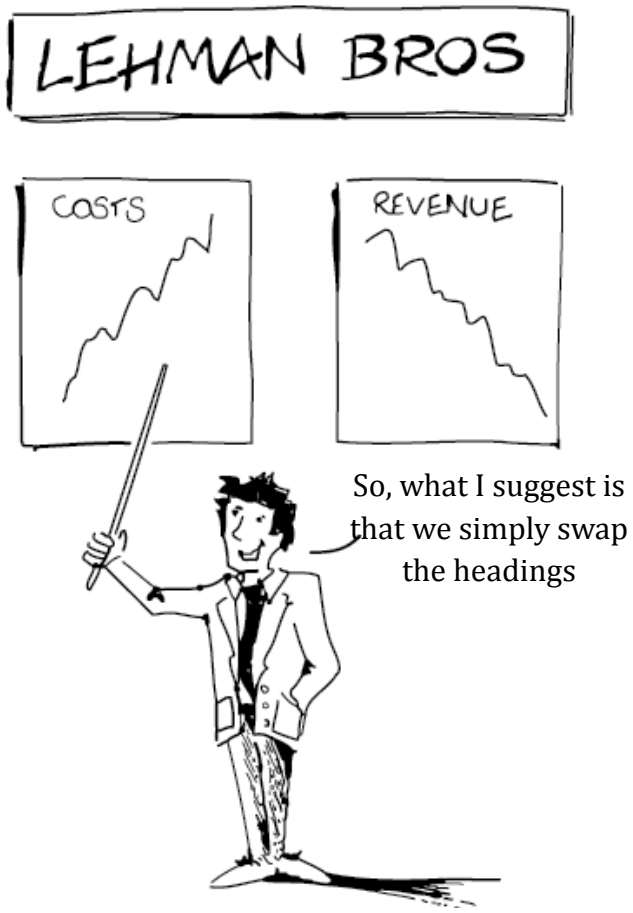
Short Answer Questions

1. What is the main difference between an Ltd and a PLC? [2]
2. Give 3 functions of money. [3]
3. Describe the role of a central bank. [4]
4. Explain how the stock exchange can benefit both individuals and companies. [4]
5. When choosing a job or occupation, non-wage factors often influence an individual's decision. Explain using examples what is meant by this statement. [6]

Long Answer Questions

1. Describe the likely changes in the level of individual's income over time. [6]
2. Discuss why individuals have different spending patterns. [8]

Unit 4 - The Private Firm



Businesses vary considerable in their size, management and purpose. This chapter looks at the variations that exist in business structures. An important term to understand first is liability. This refers the level of responsibility that the owners have for any debts that a business may incur. In many smaller companies the owners are liable for debts that the company can't afford to pay. In companies that have sold shares (privately or publicly) the owners are usually not liable for any debts exceeding the value of their shares. This is known as limited liability.

Business Organisations

Sole traders/Sole proprietors

A business that is owned by a single person is known a sole trader business. The owner may employ other people to work in the company but they have no ownership of the firm. This kind of business is usually relatively small in size and has low set up costs. Typical examples are plumbers, electricians and gardeners.

The benefits of this type of firm are that the owner gets to keep the profit and make any decisions. Their small size should allow them to be responsive the consumers demands and also establish good customer relationships.

Disadvantages related to being owed by a single person are that the owner is usually liable for any debts that the company has. This could result in them having to sell their own assets (car, house) to pay off the debts of the company. Having a single owner may limit the range of skills and ideas in the decision making processes. The amount of capital/money that a single person can raise is also likely to be relatively small so investment in the company may be low.

This rather amusingly named shop is an example of a sole trader in Tanzania, Africa. Starting a sole tradership is a daunting task but many developing countries are seeking to cash in on the growing middle classes by opening up small shops that sell necessities.

Partnerships

These are companies that have 2 or more owners (partners) and usually not more than 20. Common examples of partnerships may are dentists, accountants, solicitors and doctors practices.

They benefit from increased capital injections, a wider range of skills and ideas in the decision making processes and liability is shared between more people.

Disadvantages may be that profits are shared between the partners. There may disagreements about the decisions made. Between the partners there is still liability for any debts.

Business Organisations (continued)

Co-operatives

These are organizations that are owned jointly by their members and run in the members' interests. There are several types of co-operatives:

Trading co-operatives are formed when a group of producers team up to become a co-operative. This is common in agriculture; coffee farmers may form co-operatives to share equipment (reduce costs) and to have more influence in the market place due to controlling a larger supply. The picture below shows a women's cloth co-operative in Guatemala.

Consumer co-operatives buy in bulk to benefit from reduced prices, this is then passed on to their members as cheaper prices.

Private Limited Companies (Ltd)

Private Limited Companies are owned by several people through the sale of shares. The shares are not available to the public through the stock exchange, but sold privately to friends and family. Private Limited companies must publish annual reports for their shareholders giving details about the company's performance.

Advantages of this type of business organization include the ability to raise more capital (although it is limited to the finance that friends and family have and are willing to invest). By becoming an Ltd, the company itself becomes liable for any losses and this means the share holders only have limited liability. Shareholders can only lose the value of their shares, if this doesn't cover all the debt they are not responsible for the remainder.

Disadvantages of Ltds may be that they tend to remain relatively small since the levels of capital that can be raised from friends and family is usually fairly low.

Business Organisations (continued)

Public Limited Companies (Plc)

Public Limited Companies are listed on a stock exchange and their shares are available for anyone to buy through a stockbroker. They are often relatively large in size. To become a Plc, the company must publish information about its operations and accounts in a prospectus to inform any potential investors about the company, its direction and financial health. Each year reports must also be sent to all its investors about the previous year's performance, accounts and future direction.

Advantages of Plcs are that due to listing on the stock exchange they can usually raise large sums of capital due to the global supply of investors. This allows them to grow quickly and/or invest in the necessary capital. Shareholders have limited liability and can vote at meetings about the decisions being made.

Disadvantages of this type of company include higher administrative costs of informing all investors about extraordinary meetings and publishing yearly reports. The owners of the company may lose control of the decision making since all investors can vote at the AGM (annual general meeting) if they are not happy with the performance or decisions being taken.

MacDonalds is perhaps the best known PLC; it has become so large that it is now a multi-national too. Other notable examples are football clubs; Manchester United have twice floated on the stock exchange as a PLC, most recently under their Glazer owners.

Public Corporations

These are government run organizations and tend to be large in size. They are funded by the government and are not profit orientated. Their main aim is to provide the best service to the public. Utility and train operations are often state run (nationalized), in the UK the BBC (British Broadcasting Corporation) is a public corporation.

Advantages of public corporations include making the decisions that are in the public's interest rather than for profit maximization. In some situations such as railways and public water infra-structure it makes economic sense to just have one set of rails and pipes rather than duplicating them for different private companies.

Disadvantages include inefficiencies since the corporation will be subsidized if it fails to cover its costs. This can end up costing the public more through their taxes. The lack of competition may lead to lower levels of innovation and possibly quality. The size of public corporations can often lead to inefficient communication within the company.

Demand for the factors of production

Firms aim to maximize profits and the key to achieving this is managing their factors of production effectively and efficiently. The importance of the different factors of production will vary between industries and firms.

Some businesses such as a coffee plantation are likely to be highly labour dependent. This is an industry which cannot be easily mechanized due to the need for selecting coffee cherries of the correct ripeness and the gradient of the slope that the coffee bushes are grown on.

Other businesses such as car manufacturing are likely to be highly capital intensive as machines perform many of the tasks in faster and more uniform manner.

Firms must ensure that they get the combination of capital and labour correct to remain competitive and maximize profits. In many industries this combination must be continually re-assessed, rising labour costs may prompt firms to start switching to machines. Improvements in technology may introduce new mechanized production methods or simply improve the efficiency accuracy of achiness. Computers have revolutionized the role that machines can play in the work place.

Industrial Classifications

Firms can be broadly categorized into three main industrial areas

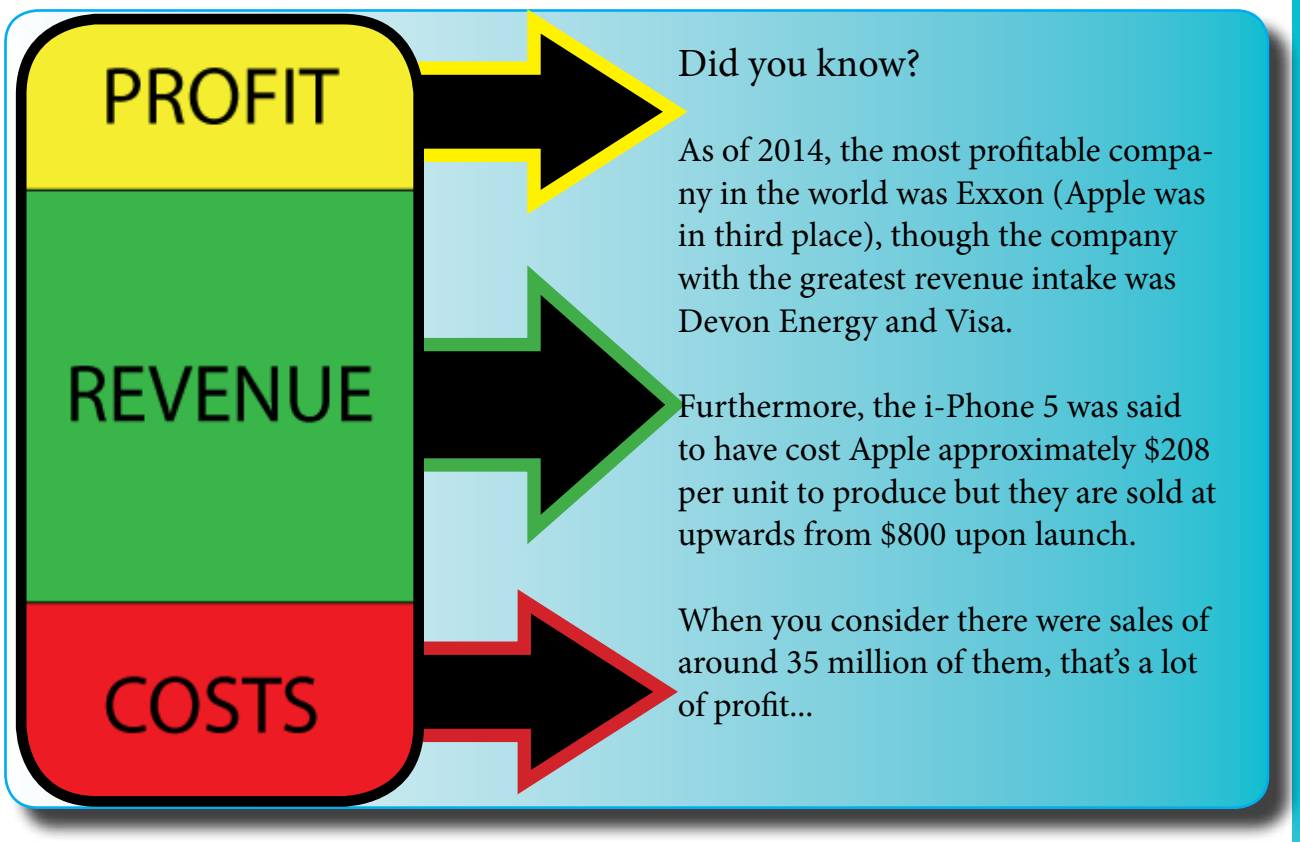
- **Primary industry**: firms involved in the extraction of raw materials and resources. This sector includes miners, fishermen, forestry and farmers. These industries tend to be labour intensive (meaning they require a lot of human resources)

- **Secondary industry:** firms involved in manufacturing and construction. Factories, carpenters and builders are included in this sector. These industries tend to be capital intensive (meaning they require a lot of machinery)

- **Tertiary industry:** firms involved in the service sector. Examples are bankers, police officers, firefighters, teachers, office staff and waiters.

The proportions of each industry in an economy are closely linked to levels of development which will be discussed in a later chapter.

Profit, Revenue and Costs



Firms are primarily concerned with the level of profit that they make. To understand how to maximize this they must first understand the importance of the costs and revenue.

Revenue

This is total amount of money a firm receives from selling its products. This figure represents the income before any of the costs of making the product or taxes have been subtracted. It is calculated using the formula:

Total revenue = total sales x price.
Average revenue = total revenue/output

Marginal revenue is the additional revenue gained from selling an extra unit. This is not necessarily the same as average revenue since if there are discounts for buying in bulk, or the firm has a special offer to clear stocks the price may have been lowered. It is calculated by the formula:

Marginal revenue = change in total revenue/ change in units sold.

Profit

Profit is the money that remains after the costs of production and any taxes have been subtracted from the total revenue. To maximize profit firms must maximize revenue and minimize costs. It is calculated by:

Profit = Total Revenue - Total Costs

The Costs of Business

A firms costs can be separated into three basic categories: fixed costs, variable costs and total costs. Within these categories is important to look at the total, the average and marginal costs.

Fixed costs (FC)

These are the costs that have to be paid regardless of output. A factory may need to employ security guards regardless of whether it as actually producing anything. It will also have to pay the rent or mortgage on the building/land regardless of output.

Total fixed costs (TFC) do not change with output and are therefore represented by a straight line on a graph.

It is important to understand the concept of average fixed costs (AFC). If the total fixed costs are $100 the producing 1 item will cost $100 in fixed costs. If we produce 2 items, then the total fixed costs will still be $100 but are now spread over 2 items resulting in average fixed costs of $50 a product. Producing 4 items would result in the average fixed costs being $25. In this sense the more products produced, the cheaper on average it becomes in terms of fixed costs.

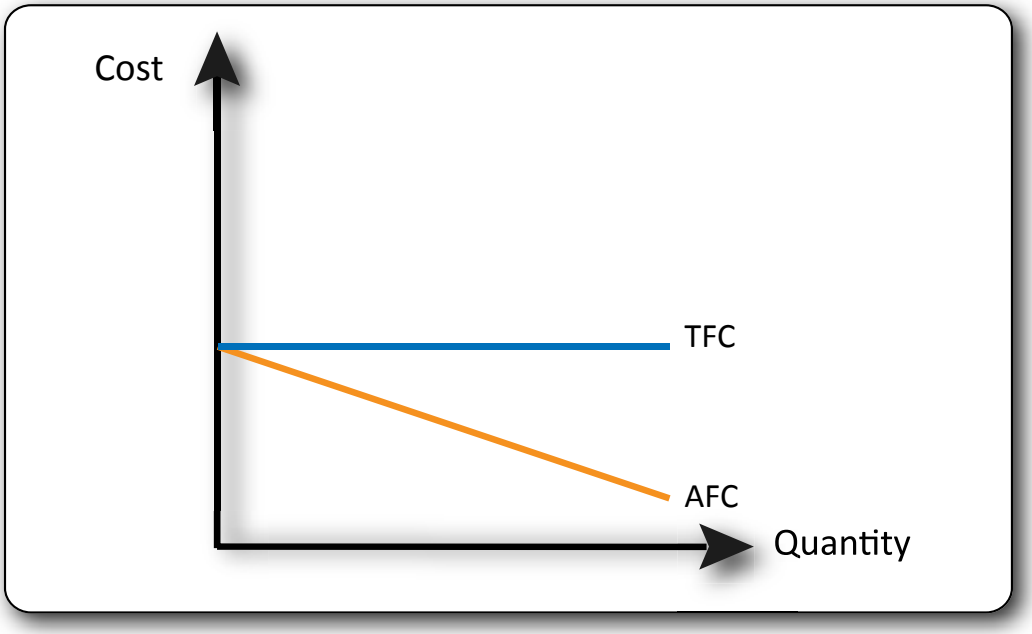
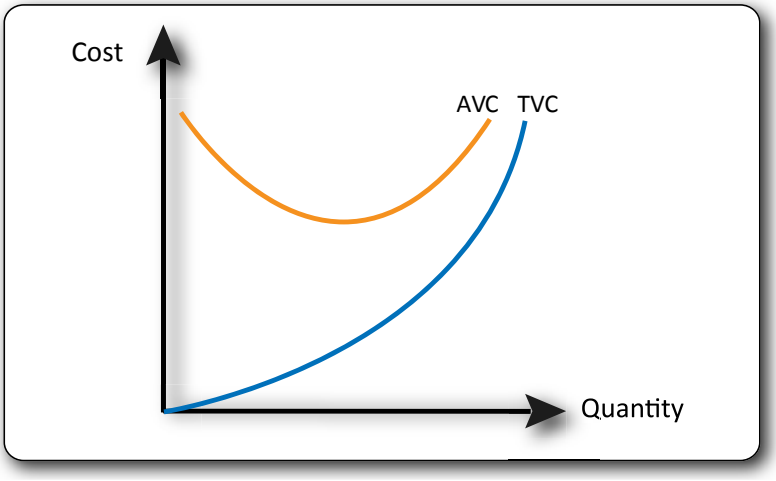


Photo courtesy of Natara, FreeDigitalPhotos.net

The Costs of Business (continued)

Variable Costs (VC)

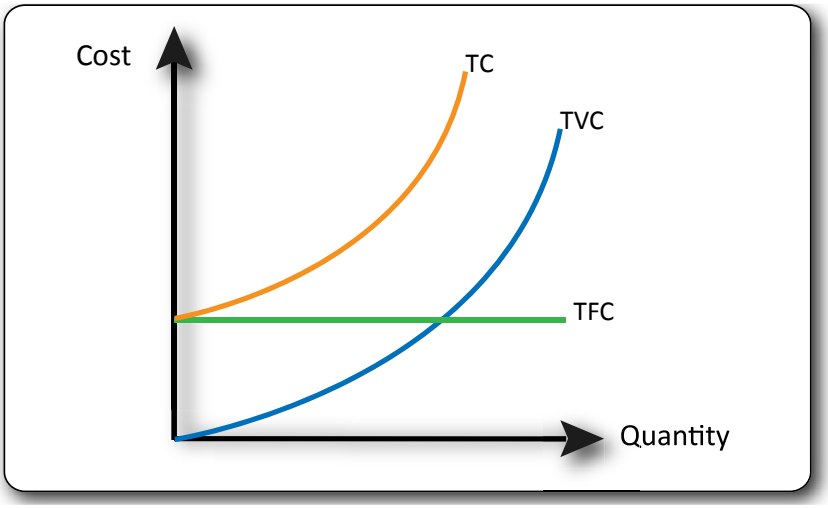
These are the costs that change with output. To produce extra items a factory will need extra raw materials and will use extra electricity. Delivering the products is also likely to cost money. Total variable costs (TVC) will be zero if there is no output, but will rise continuously as output is increased.



As output increases a firm may experience initial falling average variable costs (AVC) as they benefit from economies of scale through bulk buying and transportation costs. At some point though the average variable costs will start to rise as the increased scale of production creates diseconomies of scale.

Total Costs (TC)

Total costs are the sum of the total fixed and total variable costs. It should be remembered that the total cost curve doe not start at zero, but rather at the level of the total fixed costs – since these are paid regardless of production.



Marginal Cost (MC)

The cost of producing an extra unit. A simple way of calculating it is:

Marginal cost = Change in Total Cost/ Change in quantity

Breweries Closing their Doors

ISTUDY: Breweries in the UK have been shutting down over the last few years, causing large unemployment in various parts of Britain. Famous local beers are moving their headquarters away from the UK in order to reduce costs, taking a little bit of many towns' history with them. There were many reasons for the decision, but the high minimum wages in the UK played a large part in it. Furthermore, as large multinational beer companies spend thousands of pounds on advertising, local producers find it hard to compete.

Grab a Pen!

1) Draw a supply and demand diagram to show what has happened in the beer market. [2]
2) Which type of costs (variable/fixed) are identified as the main reason for the breweries closure? [2]
3) It is stated that a large chunk of production was moved elsewhere. Explain the effect that this will have had on both the total and average fixed costs of any remaining UK breweries. [4]

Flying Low

ISTUDY - Many airline carriers made a reduced profit in the past year, as governments sought to clamp down on environmental concerns by raising fuel taxes, whilst fuel in general has also risen in cost. Strikes also played a large part in the loss of profit, as each time a plane does not take off, airline carriers have to pay millions of pounds to the airport for the runway space anyway.

As a result of all the disruption, many major airliners are closing routes that previously they would have kept open, as they are too expensive to run now and consumers are not generally wiling to pay the enormous increase in price that would make it viable.

Grab a Pen!

1) Are the fuel costs for airlines an example of fixed or variable costs? [2]
2) Explain why the strikes last year cost airlines so much money. [2]
3) Referring to fixed and variable costs explain what airlines are doing to become more profitable again. [4]

Costs and Profits

Profit Maximisation

As previously established, private companies aim to generate the highest level of profit that they can. It is important that firms recognize the scale of production at which they have the lowest costs. Profit maximization can be found where the difference between total revenue and total costs is greatest. Alternatievely, it is where marginal cost is equal to marginal revenue (the reasons why this is the case is beyond the scope of IGCSE's though your teacher may want to explain it to you!)

Grab a Pen!

1. Copy and complete the table below; variable costs are $5 per unit and price is $15 a unit [7]

# Ice Creams	TFC ($)	TVC ($)	TC ($)	TR ($)	MR ($)	**MC ($)**	Profit/ Loss ($)
0	200	0	200	0			
5	200	25					
10							
15							
20							
25							
30							
35							
40							

2. At which level of output does the firm start making profit? [1]
3. Give 2 examples of variable costs involved in making ice cream. [2]
4. Give an example of a fixed cost of making ice cream. [1]
5. What is the equation for measuring marginal cost? [1]
6. When a firm is making 0 profit, does this mean they should stop producing? Think about the costs to the factors of production (unit 1) befor you complete your answer. [3]

Costs and Profits continued

Productivity

The output per worker is known as productivity. Firms aim to increase the productivity of their workers in an effort to increase profits. Investing in training should increase the speed or skill of the workers. Providing machinery to support workers can also increase their productivity. Computers and photocopiers have significantly increased the productivity of most office workers.

Many firms in manufacturing industries choose to specialize their workforce in certain stages of production. This allows them to become quicker at the tasks they do.

Increased productivity benefits firms in the form of lower average costs and hopefully increased profit. It can also benefit workers through the potential for more days of holiday and/or higher pay. Increases in productivity give trade unions more bargaining power.

Diminishing returns to labour

Firms understand that they must carefully choose the amount of workers that they employ. Increasing the labour force can initially bring increased productivity as many jobs are made quicker through specialization. There are limits though to these benefits and at some point adding additional workers will lead to decreases in productivity. If workers get in each other's way, have to wait for shared machinery or cannot communicate effectively, their productivity will diminish. When one factor of production remains fixed and others are thus added, we experience diminishing output - this is known as the Law of Diminishing Marginal Returns.

Characteristics of Market structures

Perfect Competition

Perfect competition does not actually exist in the real world but we should have an understanding of the theory since it would represent the most efficient use of resources. Some industries are relatively close to perfect competition, but none meet all the requirements.

The requirements:

1. Products in the market are homogenous (identical).

2. There are many firms in the market with none of them being large enough to influence the market supply and subsequent price.

3. Buyers and sellers have perfect information.

4. Free entry and exit to the market for firms (no barriers to entry or exit).

In reality products within a market are not identical. They vary in the raw materials used, the sources of the raw materials, the method and place of production. The closest example to identical products is agricultural produce. Carrots or onions for examples are all very similar, but even these vary in their shape, size, colour, the chemicals used or not used in their production and the location in which they were grown (food miles).

A local fruit and vegetable market offers a good example of a situation in which there are many suppliers/sellers and none of them are large enough to change the supply of the product in that marketplace. However, in the wider market place there are likely to be large player such as supermarkets and large scale farms which do have significant influence on the supply.

Buyers and sellers never really have perfect information about each other. Producers don't know the exact costs, materials and methods used by other producers. Buyers rarely have information about the prices at which all the suppliers are selling at.

Free entry to the market means that anyone can start producing and join the market; this does exist in many industries.

How perfect competition functions

Firms in perfect competition cannot compete on price. In this type of market situation the price elasticity of demand is perfectly elastic. If a firm raises its price consumers will not buy from it. Since the products are identical and consumers have complete knowledge of the other suppliers prices they will all buy from somewhere else.

Firms in perfect competition make what is known as 'normal profit' in the long-run which is just enough to enable them to remain in business. This means that they are unable to reduce their price since this would result in them making a loss. Since consumers have perfect knowledge they would all flock to buy from this supplier which would increase the scale of the losses and force them out of business.

Firms must accept the market price which is set by the forces of supply and demand. This form of competition makes the best use of resources since it reallocates the resources to the production of goods that are in demand and profitable. Inefficient producers will quickly go out of business.

If there is an increase in the demand in the market then in the short run the suppliers will make higher than normal profits (super-normal profits). This will quickly attract other people to join this market and start supplying which will increase the supply and push the price back down to a point at which normal profit is again being made.

If there happens to be a decrease in demand then the price will fall. This will quickly result in some suppliers leaving the industry and switching to something that is more profitable (probably the most inefficient producers). This will reduce the supply which will lead to an increase in price back to the level at which normal profit is made.

Monopolies

Monopoly situations occur when there is a single firm that is the sole supplier. In some cases it makes sense to have a single supplier since duplicating the infra-structure would be inefficient and wasteful. These industries are known as natural monopolies and include water companies, some rail companies (if they own the track) and electricity suppliers.

Characteristics of a monopoly:

1. The firm has 100% share of the market (it is the industry - there are no substitutes).
2. High barriers to entry (economies of scale allow potentially low cost of production).
3. The firm controls supply and subsequently the price level

How monopolies function

Because monopolies have no competitors and can set the price they are able to earn super-normal profit in the long run. They are also able to restrict other firms from joining the market. The scale of production allows them to operate a lower cost than a start-up company. They are also able to increase the supply which would drive the price down to a level below which a new company could compete with which would result in the competitor leaving the industry.

Monopolies might have complete control over the supply and therefore be able to set prices, but they cannot control the demand. This leaves them with an important choice. They can either:

1. Decide the price level they want to achieve and supply the quantity that would achieve this.
2. Decide the quantity they want to sell and accept the market price.

They cannot set the price and decide the quantity that will be sold.

Because of high prices and poor quality, many governments regulate industries and prevent monopolies from forming. Too much monopoly power is thus a sign of market failure.

Monopolies continued

Monopolies can benefit consumers through lower prices achieved through economies of scale. They are however often criticized for the following reasons:

- Inefficiency: the lack of competition allows monopolies to operate less efficiently than companies in a competitive market would. Since consumers have no alternative supplier to turn to, monopolies are able to pass higher costs onto customers. They have a relatively inelastic demand curve.
- Lack of innovation/poor quality: the lack of competitors bringing out new versions of rival products allows monopolies to invest less in innovation. They can also offer a poorer service/product without losing many customers.
- Higher prices: whilst monopolies can potentially offer lower prices due to economies of scale, they often charge higher prices since they can set the price can earn super-normal profit levels.
- Because of the market power that monopolies have and the potential for too much political influence

Firm Size

Firms vary considerably in size. There are advantages to being small and large – depending on the industry that the firm operates in.

Measuring firm size.

- Value of output: the amount of revenue generated by a company. A company such as Google may have relatively few staff and small premises for the level of revenue its generates.
- Financial capital: some industries require large capital investment, examples include oil and gas companies which require expensive drilling rigs and refineries. Shell invests billions of dollars a year in capital for its operations.
- Number of employees: some businesses are labour intensive and their size is measured on this. The size of a school is often measured based on the number of pupils and teachers that they teach/employ.

Perfect Competition

Features:

Very large number of firms in the industry, homogenous products, perfect information, inability to make profits, inability to conduct RnD, no market power, firms are price takers

Examples: local markets that sell fruit and vegetables

Monopolistic Competition

Features:

No abnormal profits in the long run, heavy non-price competition such as advertising, barriers to entry and exit do exist, products are semi-homogenous (with differences in specific areas), low prices for consumers, many firms in the industry, low market power except for brand loyalty

Examples:
The running shoe industry

Oligopolies

Features:

Substantial profits, necessity to collude, ability to restrict supply, large market power, around 3 firms in the industry, high barriers to entry and exit, homogenous product in some industries, competition on advertising and branding in other industries, high prices, ability to carry out RnD

Examples:
Oil (for homogenous product),

Monopolies

Features:

Large profits,
Ability to carry out RnD, High prices, large market power, ability to restrict supply, no competition, lack of choice for the consumer, very high barriers to entry and exit. For natural monopolies the extremely high barriers to entry and exit make it more sensible for just one firm to operate owing to the large economies of scale it can generate and the waste of resources 2 firms would create

Examples: Apple in the computing industry, Water companies for natural monopolies

The Growth of Firms

Firms often look to grow in size in an effort to increase the level of profit that they make. There are two main ways in which firms increase their size:

Internal growth:

This is achieved through increasing their output. It may be as a result of an expanding market or through taking a share of the market from their competitors. It may also be a result of diversifying the range of products they make and entering into new market areas.

External growth:

This is achieved by taking over or merging with another company. This can be a much quicker route to growth since the company acquired will already have capital, trained labour and a customer base. There are different types of mergers depending on the stage of production that the merging companies are involved with.

1. **Horizontal integration**: this occurs when two firms at the same stage of production merge. It often makes sense for this to occur since they are likely to understand each other's business and have complementary skills. It is likely to lead to some overlaps in capital and skilled labour (management/accountants etc) and allows the larger firm to benefit from increased economies of scale through reducing some of these costs. A result of this may be that some workers lose their jobs.

Example: Lets consider tyre manufacturers. There are many established firms that operate within the industry. If Dunlop were to merge with Michelin this would be an example of horizontal integration. The merger would increase the size of the company and they could for ways to gain from economies of scale. They could now share some of the research and development facilities and the tracks and machines used for testing the tyres. Management can be streamlined since there will be duplicate positions. Two accounting offices are not needed, one slightly larger one could meet the requirements of the now larger firm.

2, **Vertical integration**: this occurs when a firm merges with a firm that operates in a different stage of the production process. It may be a previous stage or the next stage.

a) Backward vertical integration occurs when a firm merges with a firm in the previous stage of production. Example: Dunlop deciding to merge with a rubber producer to ensure a secure and cheap supply of rubber for their tyres.

b) Forward vertical integration occurs when the merger is with a firm in the next stage of production. Example: Dunlop deciding to merge with Toyota. This would ensure that all Toyota cars were sold with Dunlop tyres.

3. **Lateral integration**: this occurs when a firm merges or takes over another firm that has nothing whatsoever to do with its previous product. e.g. If HSBC bought Burger King.

The Growth of Firms continued

ISTUDY - United Airlines and Continental Airlines confirmed recently that they have begun procedures for a full merger. The two traditional airlines have faced rising costs in recent years, as fuel prices increase and demand for transatlantic flights has not picked up much.

The two companies believe that by sharing costs, they will be able to run greater profits on many flights, allowing them also to branch out into new routes. The well-trained staff that Continental have will also be an advantage.

Although there will be some job losses - as certain positions inevitably overlap - there is also a certain amount of job creation, as new staff are hired when United move into new flight areas. Economists are still divided over the effect this will have in the long run, as it still does not address the issue of flagging demand.

Grab a Pen!

1) What type of integration is described in the article above? [2]
2) How will the merger benefit the two firms? [4]
3) Do you think the move is in the interests of the employees? [4]

Economies of Scale

Economies of scale are reductions in the average cost of production due to increasing the scale of output. As firms increase in size they can usually make savings on their average costs in a number of ways:

1. **Bulk buying**: through purchasing raw materials and capital in larger quantities it is often possible to negotiate a lower price for them. A potato chip manufacturer ordering 10000 kg of potatoes is likely to get a lower price per ton than one ordering only 100 kg.

2. **Selling**: order processing and delivery costs can usually be reduced with increases in output. Amazon is able to invest in automated order processing and ensure that delivery lorries are filled to capacity.

3. **Management**: as a firm grows it may need to employ more workers but it should be able to retain a relatively small management team. The cost of the managers is spread over increased products and so is cheaper on average. Increased scale may also enable to the firm to employ an accountant to work in the firm which would be cheaper on average than contracting external accountants to complete tasks.

4. **Financial**: larger firms with high revenues are often deemed less risky to lend money to than smaller firms due to their potential ability to pay the debt back. This is represented in lower interest rates for larger firms.

Diseconomies of scale

Diseconomies of scale are increases in the average costs of production due to increases in the scale of production. There is a point at which increasing in size no longer brings average cost savings, but is likely to start increasing the average costs. This point will differ between firms and industries. The reasons for diseconomies of scale are:

1. **Communication**: larger scale leads to more employees and more departments. This leads to more difficulties with effective communication and can slow down decision making. If firms open branches or departments in other countries then time zones and language barriers add costs and difficulties.

2. **Management**: larger firms become more difficult to manage and there is often a point which inefficiencies start to occur. Different levels of management in different departments and possibly in different countries all need to co-operate and communicate and this presents significant challenges.

Grab a Pen!

1) Define marginal cost. [1]
2) How is profit calculated? [2]
3) Explain why the long run average cost curve for firms is U-shaped. [4]
4) Define and give an example of fixed and variable costs. [4]
5) Firms should always try to increase in size. Discuss this statement [6]
6) A government is looking to nationalize the countries power supply by forming a state run monopoly. What are the possible advantages and disadvantages of doing this? [8]

Chapter Review

Multiple Choice Questions [1 mark each]

1. A firm in perfect competition is likely to face normal (i.e. 0) profit because of:
    a. Economies of Scale
    b. The Law of Diminishing Marginal Returns
    c. The number of firms in the industry
    d. Very low demand

2. Which feature applies exclusively to a private limited company.
    a. Is able to float on the stock exchange
    b. Is made up of 2-20 people
    c. Can only sell shares to friends or family
    d. Has unlimited liability

3. Coca-Cola decides to buy Heinz Baked Beans Company. Which type of integration is this?
    a. Vertical Forward
    b. Vertical Backward
    c. Horizontal
    d. Lateral

Short Answer Questions [1 mark each]

1. Put the followng firms in order of size: multinational, partnership, sole trader, PLC, Ltd
2. Give a real life example of one of each of the above.
3. Define Fixed, Variable and Average costs, giving examples.
4. Describe a situation where a firm undertakes vertical forward integration.
5. What is the relationship between market power and market structure?
6. Why do average fixed costs always slope downwards?
7. On a costs diagram, why do Total Costs always run parralel to Total Variable Costs?
8. If a firm kept the same amount of capital but kept increasing the workers in the firm, what are they likely to experience?
9. What effect do economies of scale have on a firms' costs?
10. What is the general relationship between industrial classifications and how developed a country is?

Long Answer Questions [6 marks each]

1. "It is better for a firm to stay small, than to become large". Discuss whether you agree or disagree with this question.
2. 'Governments should get involved in the economy to ensure all markets remain as perfectly competitive as possible. ' Do you agree?
3. 'Monopolies are a good idea, but bad in practice.' How far do you believe this statement to be true?

Unit 5 - The Role of Government

Big Business,
Small Government

Big Government,
Small Business

So far we have looked at demand and supply for specific markets. For example, we have seen what happens to demand for chocolate when incomes rise, or what happens to supply of rice when there has been a drought. These are very important concepts, and set a platform for another branch of economics: Macroeconomics.

Macro literally means big in Greek, and so the idea here is that we are now no longer looking at specific markets, but at the economy as a whole. We want to know what happens to all the markets combined, if certain events occur. This is the difference between Microeconomics (what you have seen so far) and Macroeconomics (what you are about to study).

Aims of a Government

There are certain concepts that first have to be understood before we can analyse what happens to an economy in different situations. Firstly, we need to know what the aims of a government are. Any government will be looking to achieve the following economic principles for its country.

1) **Stable prices –** this is so that businesses feel safe to invest, and so that people can plan out what they wish to spend on, and how much to save.

2) **Redistribution of Income** – studies have shown that countries which do not have a large divide between rich and poor are more stable, and generally happier.

3) **Full employment** – everyone who is willing to work, should be provided with that opportunity.

4) **Balance of Payments stability** – we will analyse this in later units.

5) **Economic Growth** – which we will now turn to.

Every country wishes to have all five of their aims at the same time but in reality this is very difficult to do. Governments thus have to prioritize their aims - this is where economics and politics begin to mix.

The last of these aims sounds very straight forward. But what do we mean when we say we want economic growth? It sounds simple, and we hear politicians and economists on the TV, in newspapers and online talking constantly about it. Headlines such as "Record Economic Growth Achieved!" or "Economic Growth Grinds to a Halt" are commonplace.

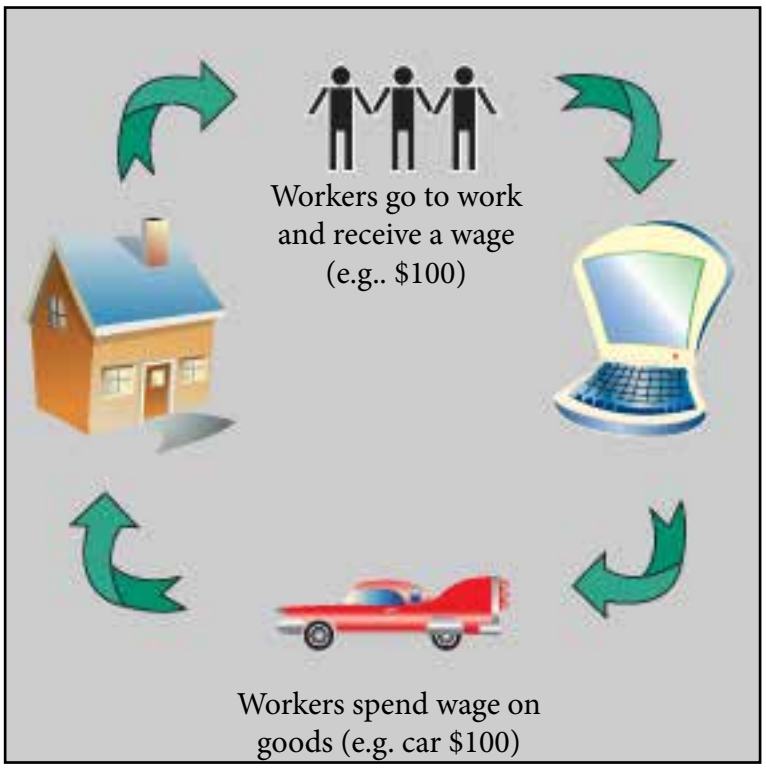
In reality, when talking of economic growth, we are looking at the rate by which GDP has changed. GDP stands for Gross Domestic Product and tells us the value of all goods and services within a country, in a year. If 2000 goods worth $1 each was everything produced in the USA, then the USA's GDP would be $2000. If the next year there were 4000 goods still worth $1 each, then the GDP would be $4000. The USA would have achieved economic growth of 100%. We work out economic growth by the following formula:

$$\frac{\text{Current-Original GDP}}{\text{Original GDP}} \times 100$$

This formula gives us a percentage change in GDP, and forms the basis of our understanding of economic growth.

The Circular Flow of Income

Now that we understand the concept of economic growth, we can attempt to explain how it happens. In basic terms, we need to see how a simple economy works. We can do this through a diagram known as **The Circular Flow of Income**, shown below.



The idea here is that we can follow how money is generated and what it is spent on. Take the example below. A person goes off to work, giving his skills in return for a payment, or wage. Perhaps the worker is builder of cars; in return for their labour he or she makes, they receive a wage. When he gets home, he then spends this wage on available goods in the economy. Because our example economy is very simple, there is only one producer. The producer makes cars. In our very basic economy, the producer knows that the worker gets say $100 as a wage. The producer therefore sets the price of his cars at $100. The worker then buys the car for $100 and the money thus returns to the producer, who can now pay the worker…. and so the whole cycle starts again.

What have we learnt from this? First, we can see that money circulates round and round the economy, from producer to consumer and back again. But more interestingly, we can see that three things are all equal

1) The amount of money the worker receives
2) The value of the products in the economy
3) The amount of money spent in the economy

We give these three things economic terms:

1) National Income

2) National Output (which shows us GDP and Economic Growth)

3) National Expenditure (Aggregate Demand)

The Circular Flow of Income continued

Overall then, the circular flow of income shows us what our country's total income is, its GDP and how much we spend! In formulaic terms:

National Income = National Output = National Expenditure

Our example economy though, is very basic. In a real economy there isn't just one person, but millions. There isn't just one producer, there are millions and there isn't just one good or service, there are tens of millions. Our example therefore is representative of a larger picture.

In fact, the Circular Flow of Income helps us understand economic growth. As economists, we measure economic growth as an increase in GDP. If National Income, National Expenditure and GDP are all equal, then an increase in one is an increase in all. But how, in our circular flow of income, do we generate more money?

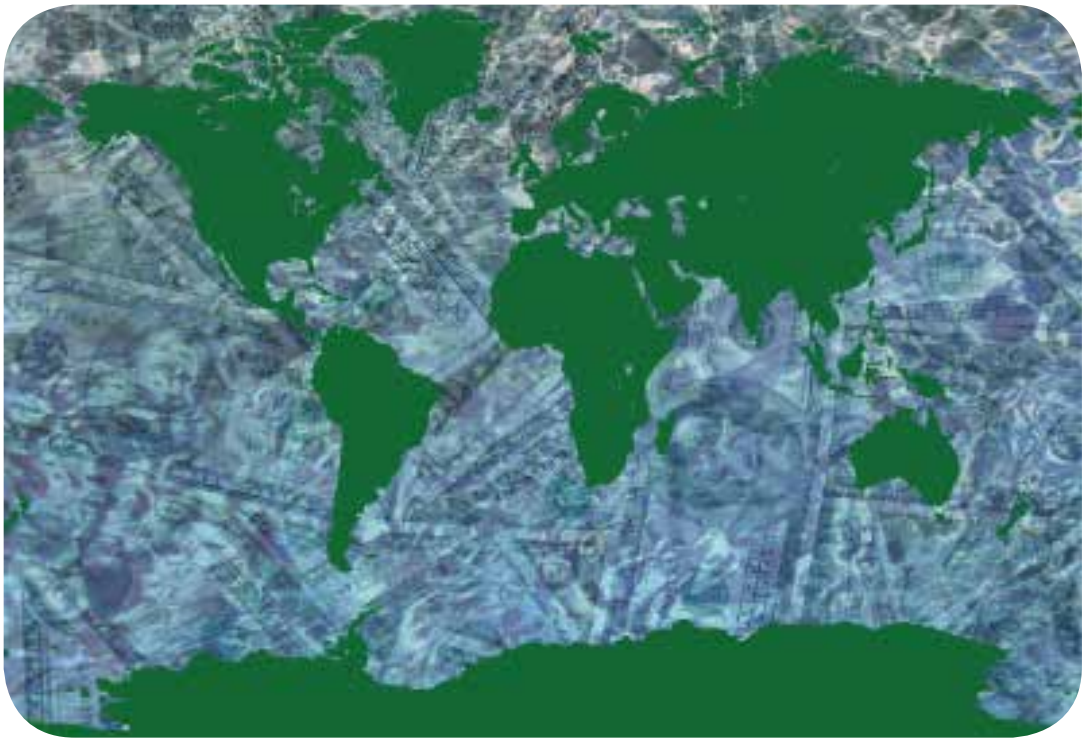
We need to add two new parts to the diagram. Firstly, money coming into the economy is known as **injections** whilst money leaving the economy is known as **leakages**. There are three main ways that money can enter into an economy. If the car producer in our diagram sold another car abroad then he would have more money, could pay his worker more, and could increase the price of his car domestically. Therefore Exports (X) is one way of increasing National Income, National Expenditure and GDP. Secondly, we have Government spending (G). If a government decides to inject more money into the economy, by either giving it to producers or by building projects, then our three components will increase again. Finally, businesses can inject money into the economy by investing (I). If a business decides to help finance another project, or buys shares in another company, then this is money entering the economy.

On the other hand, money leaving the economy – leakages – can cause a decrease in National Income, National Expenditure and GDP. Again, there are three main ways for this to happen. If we introduce the notion of savings we see how the worker may decide not to spend all of his money, but to save a portion instead. If this happened, there would be less money in the economy, the producer would have to put the price of his car down, and subsequently the workers wage would fall as the producer would not have as much money to pay him with. This is the same for our two other leakages – taxation and imports.

When more money enters the economy, we say that our economy is **expanding**, whereas when more money leaves the economy we say that our economy is **contracting**.

Aggregate Demand and Supply

Now that we have seen the basic idea behind how economies function, we can take a deeper look at two concepts that are integral to the course; Aggregate Demand and Aggregate Supply. When looking at demand, we need to understand how we can calculate the whole demand of a country.



To do this, we split demand up into several different categories. We say there is consumer demand (the average of how much people want at different prices) and we simply call this Consumption (C). But it is obvious that what consumers want is very different from what businesses want. Consumers buy goods, businesses invest. So we call the demand from businesses Investment and label it I. There is another group that has a different demand though: governments. The amount that governments spend is their demand so we call this Government Spending and label it (G). Finally we include exporters and importers as a separate group. We write this as demand for exports minus demand for imports (X-M).

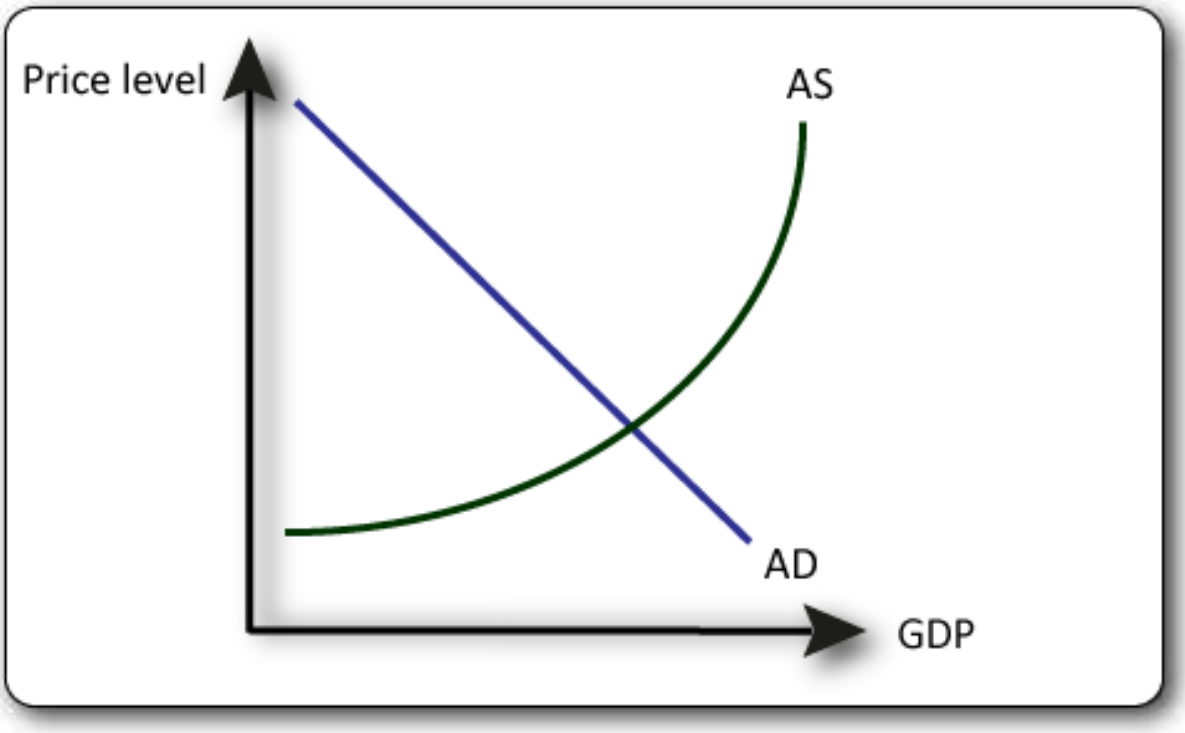
When we want to talk about macroeconomic demand, we therefore need to add up demand for all of the above categories. This is C+G+I+(X-M). This tells us the total demand in our economy, or in economic terms what we call Aggregate Demand: the total demand in an economy in a year.

Aggregate (or total) supply is not separated into categories but is just defined as the total value of all goods and services willing to be produced at different prices in a specific country over a year . The only difference between Aggregate Supply and GDP is that GDP is how much is being produced, and AS is how much is willing to be produced at different prices. GDP is thus the measurement of Aggregate Supply.

Both Aggregate Demand and Aggregate Supply can be shown on the macroeconomic diagram, explained in the next section.

The Macroeconomic Diagram

We can plot our AD and AS curves as shown below:



Notice that this diagram has slightly different labels. Instead of price we have price level because there is not a specific price for ALL goods and services – just a general level of prices. We also have GDP instead of Quantity. An increase in GDP will thus show as economic growth, as explained previously.

The above diagram shows us many things. Obviously it shows the AD and AS of a country; these lines follow the same basic principles of demand and supply studied previously. It also shows an increase in price levels (inflation) or a decrease (falling inflation). We will come to study that more later on. Economic growth, defined earlier as an increase in real GDP, is also shown on the diagram. We can also logically see the employment level of a country because if we produce more (shown through an increase in GDP) then we generally need more people to help us do this. When GDP increases, so too does employment.

Finally, the AS curve is often drawn with an upward slope. The reason for this is that in the long run, if we use all the available resources in our country, we will not be able to produce any more than is currently being achieved. Resources are being used to their maximum potential. On this steep upward sloping section, resources are scarce and so firms compete for them, making them more value and thus increasing their prices more and more.

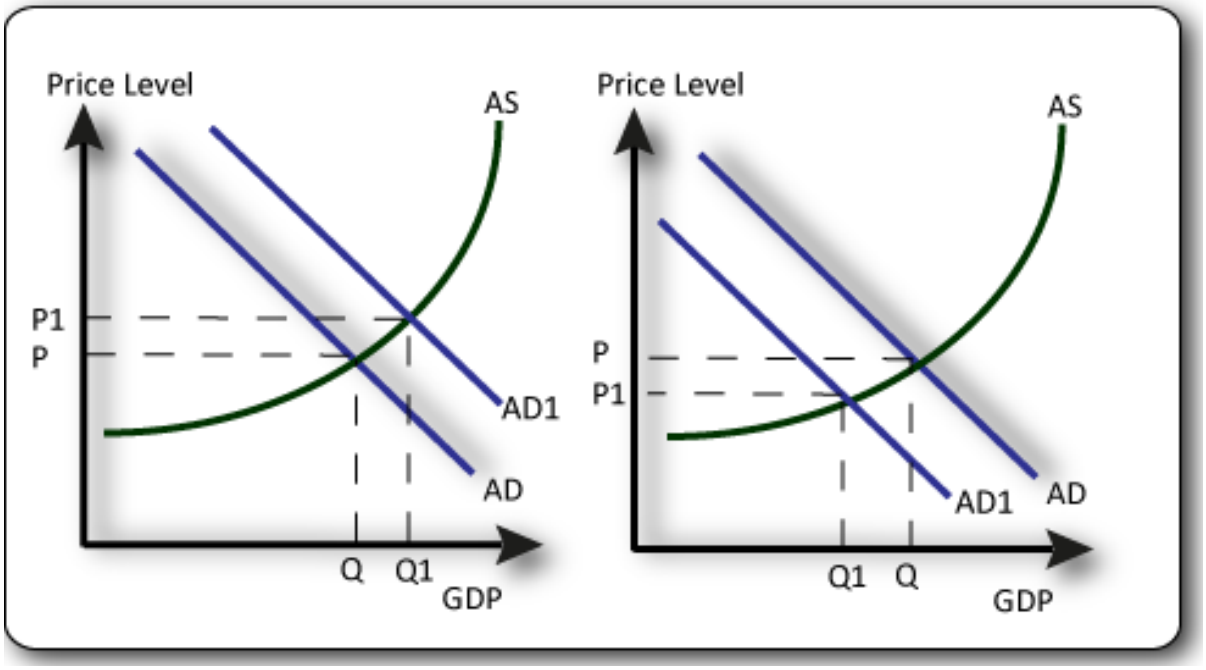
Shifting Macroeconomic Curves

As with demand and supply, a contraction or extension in Aggregate Demand is caused by price and is shown by a movement up or down the AD curve. Similarly an increase or decrease in AD is shown by a shift outwards or inwards of the AD curve.

Similarly, a contraction or extension in Aggregate Supply is caused by price and is shown by a movement down or up the AS curve, whilst an increase or decrease in AS is shown by a shift outwards or inwards of the AS curve.

Increasing either AD or AS has severe implications on the government aims mentioned at the beginning of the chapter. Firstly, we need to understand why either of these components may change. In short, anything that causes the entire average of a country's population to spend more will increase AD, whilst anything that causes them to spend less will decrease AD. Influences include:

- **Population** – more people mean that more is going to be bought in the whole country (and vice-versa)
- **Incomes** – if people are richer they will spend more, if poorer they will spend less
- **Consumer confidence** – if people feel the economic situation in their country is stable, they will be happy to spend more money.
- **Interest rates** - these influence how much people are willing to save.

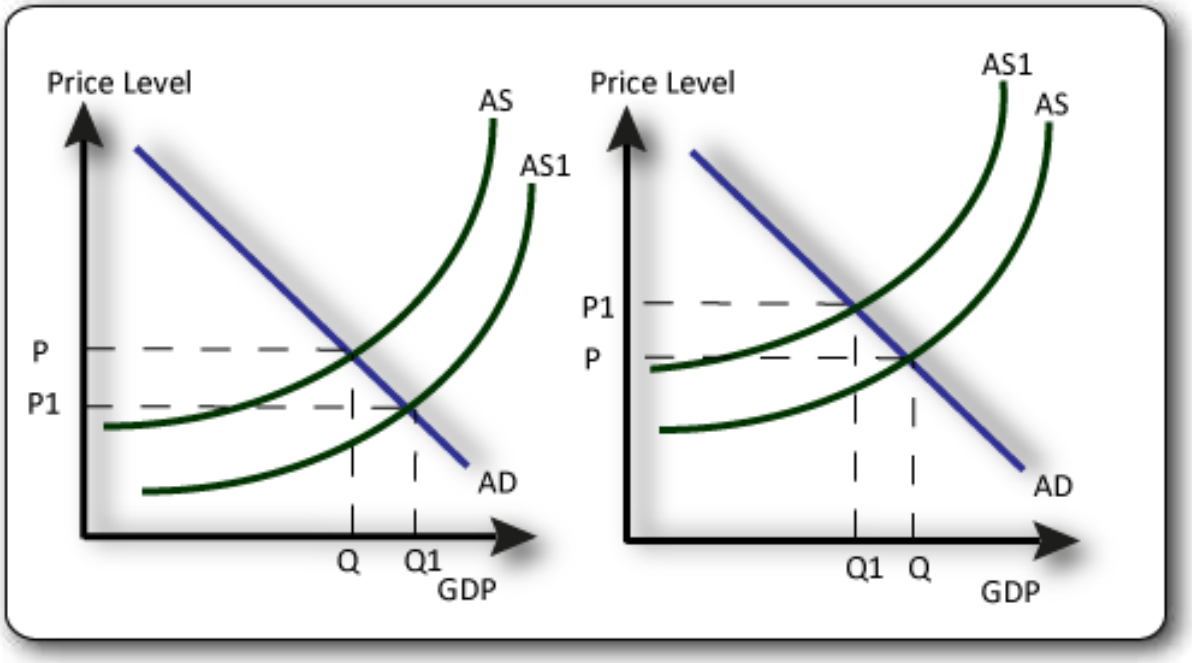


When showing an increase in AD, (AD to AD1) we can see the effects it has on the economy by drawing a diagram for it, as above. Clearly, when AD increases, people want more goods and services, so they become more valuable as their price rises (P1 to P2). Producers can raise their prices and sell at a new equilibrium price. At this higher price producers extend supply. We can see that the following instances have occurred:

- Prices have risen, showing us inflation
- Real GDP has increased, showing us economic growth
- Employment has increased

The opposite occurs if there is a decrease in AD, shown in the second diagram, above.

Shifting Aggregate Supply



Aggregate Supply also has factors that cause it to increase or decrease. These will be familiar to you however, as they are the same reasons why our PPC increases (the potential combination of goods we can produce in an economy – see unit 1). Namely:

- **An increase in Factors of Production -** this lowers the cost of production, making it cheaper to produce
- **An increase in the quality of Factors of Production -** this makes our factors of production more productive e.g. Increased education.
- **An increase in technology -** new technology makes it cheaper to produce the same goods e.g. car manufacturing machines in Japan.
- **Taxes and Subsidies** - these make it either more expensive or cheaper to produce.
- **Supply-side shocks** - including war or natural disasters

Now let us see what happens when AS increases, shown by a shift outwards in the diagram above. Now, producers can produce more than before but because there are so many goods and services available, they become less valuable, so prices fall. Producers have to lower their prices to sell their goods, and so we are at a new equilibrium. We can see that the following instances have occurred:

- Prices have fallen, showing us deflation
- Real GDP has increased, showing us economic growth
- Employment has increased.

Multiple Choice Questions: Macroeconomics

1. Which of the following is not necessarily a government aim?
   a. Redistribution of income
   b. Low interest rates
   c. Full employment
   d. Stable price levels

2. The Circular Flow of Income attempts to explain
   a. How money travels through the economy
   b. Who is making the most money in an economy
   c. Why some economies are larger than others
   d. How equal society is

3. With no leakages and injections in an economy, National Expenditure is
   a. The total amount of money entering an economy
   b. The same as National Income
   c. The amount of goods produced within a country
   d. The same as demand

4. Which of the following economic indicators does the macroeconomic diagram not show us?
   a. Inflation
   b. Unemployment
   c. Interest Rates
   d. Economic Growth

5. Which of the following formulas is shows Aggregate Demand
   a. C+G+I+(X+M)
   b. G+C+X+(I-M)
   c. C+G+I+(X+M)
   d. C+G+I+(X-M)

6. Between 2011 and 2012 Germany experienced a falling population. What is likely to have happened as a result, assuming all other things are equal?
   a. Aggregate Supply increases
   b. Aggregate Demand increases
   c. Aggregate Supply decreases
   d. Aggregate Demand decreases

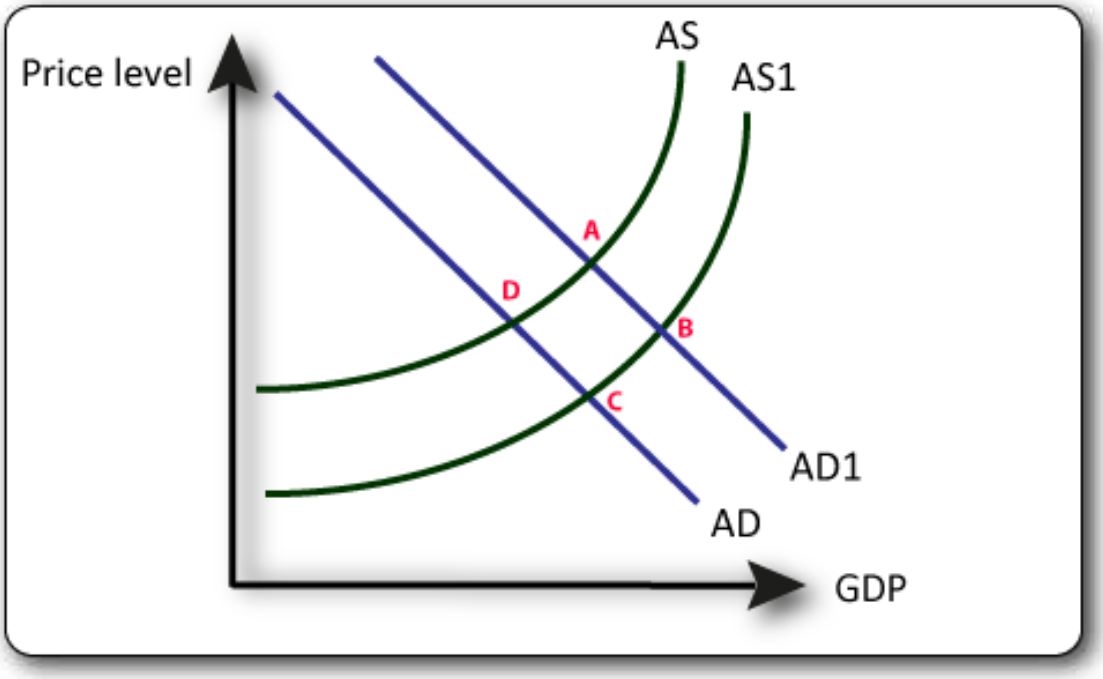
Continued on next page.

Multiple Choice Questions: Macroeconomics (cont.)

7. Eastern Europe accounts for a large amount of the world's food production. However, in 1986 Ukraine experienced nuclear radiation in Chernobyl. This had the effect of decreas ing food production, shown as a reduction in Aggregate Supply for the Ukraine. What is the best reason for this shift in AS?
   a. Costs of production for food increased
   b. The quality of the land was reduced
   c. People had to buy imported food
   d. Less workers were needed

8. Which combination of factors will likely lead to very high prices in an economy?
   a. The discovery of new minerals and new machinery
   b. Falling costs of production and greater consumer confidence
   c. Rising oil prices and falling populations
   d. A recent natural disaster and increased incomes

9. In 2001 China faced increasing oil prices and population growth at the same time. Which point on the diagram likely represents the effect on China's economy?



Demand and Supply-Side Policies

So far we have seen what happens when AD and AS shift naturally. Governments, however, know that shifting AD or AS can help them achieve their aims – especially stable prices, economic growth, balance of payments stability and full employment.

Imagine, for example, that a country suffered from high unemployment and low GDP. Surely, all the government would have to do would be to find a way to increase aggregate demand from AD to AD1 and these two problems would be solved! Or they could just find a way to shift AS and thus solve them this way instead.

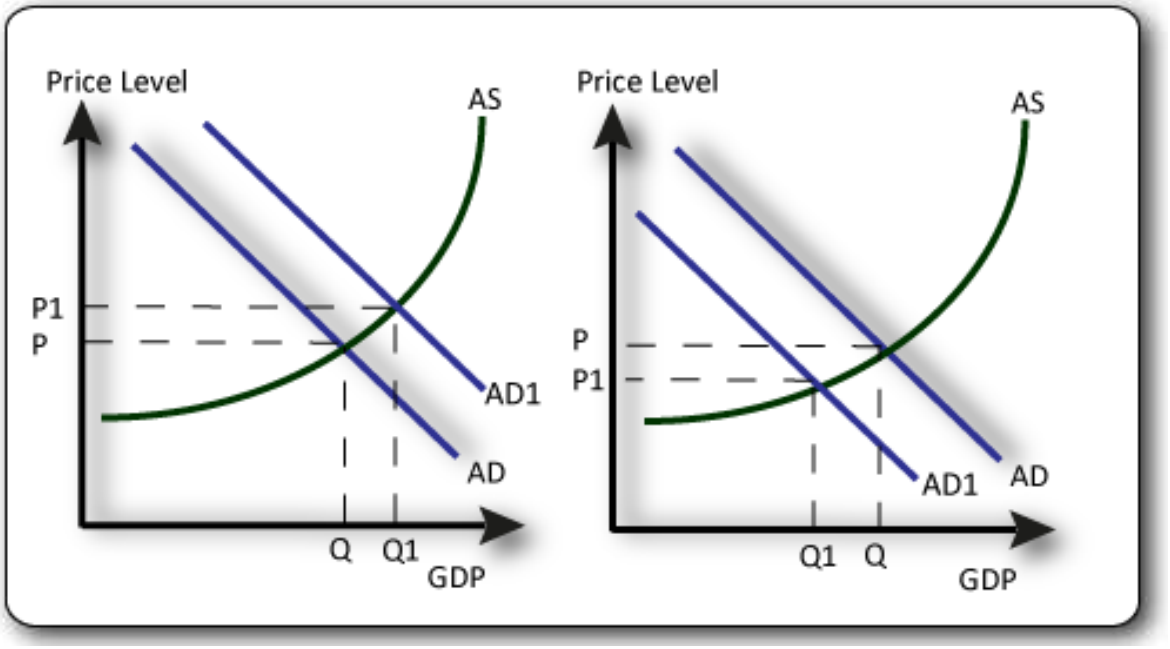
When governments get involved in the economy, they are said to be manipulating the economy. They can do this in two ways:

1) **Demand Side Policies** – these are designed to manipulate AD.
   There are two types:
   a) Fiscal Policy
   b) Monetary Policy

2) **Supply Side Policies** – these are designed to manipulate AS. There are two types:
   There are two types:
   a) Market Oriented
   b) Government-led

These policies will now be looked at individually in the sections below.

Fiscal Policy



Fiscal policy is a technical way of saying that the government is using taxes or government spending in order to change AD.

If the government wants to increase AD, it can do the following things:

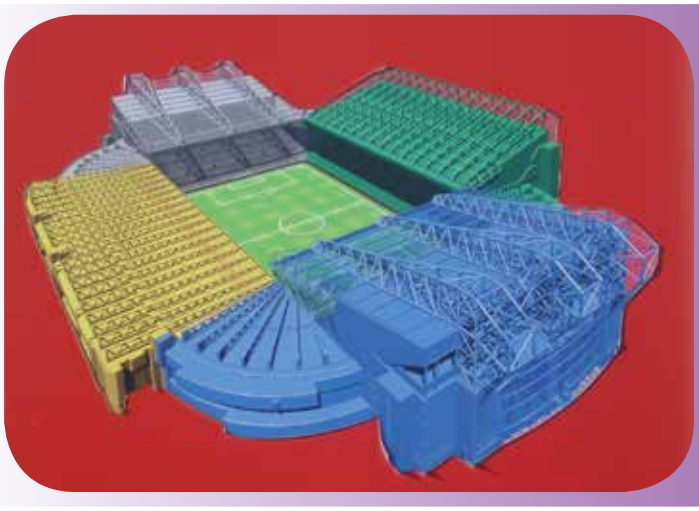
- **Decrease Taxes** – this has the effect of leaving people with more disposable income, so they are free to spend more, thus increasing AD.
- **Increase Government Spending** – for example by building new roads. This creates jobs, giving people more money and causing them to spend more. It can also lead to the multiplier effect (this will be discussed later).

These two strategies are known as 'expansionary fiscal policy' as they cause the economy to grow, as shown in the first diagram above.

Conversely, if the government wanted to decrease AD using Fiscal Policy they could:

- **Increase Taxes** – causing people to have less disposable income
- **Decrease Government Spending** – for example by cutting government jobs.

These two strategies above are known as 'deflationary fiscal policy' as the aim is for the economy to shrink, shown in the second diagram above.



National stadiums are often a good example of government spending on public goods - this provides jobs for many people and can also generate further revenue in the future through ticket sales. Countries that host large sporting events such as the Olympics may thus have to undertake large amounts of fiscal policy.

Monetary Policy

Monetary policy is concerned with manipulating the supply of money within a country, which causes AD to change. Have you ever looked at a bank note and thought 'Why doesn't the government just print more of these and make everyone richer?' or, 'If I had a bank note printer I would print loads of money and make myself rich.' You're wrong. Printing money doesn't necessarily make you richer. To understand this, we first need to recall what money is.

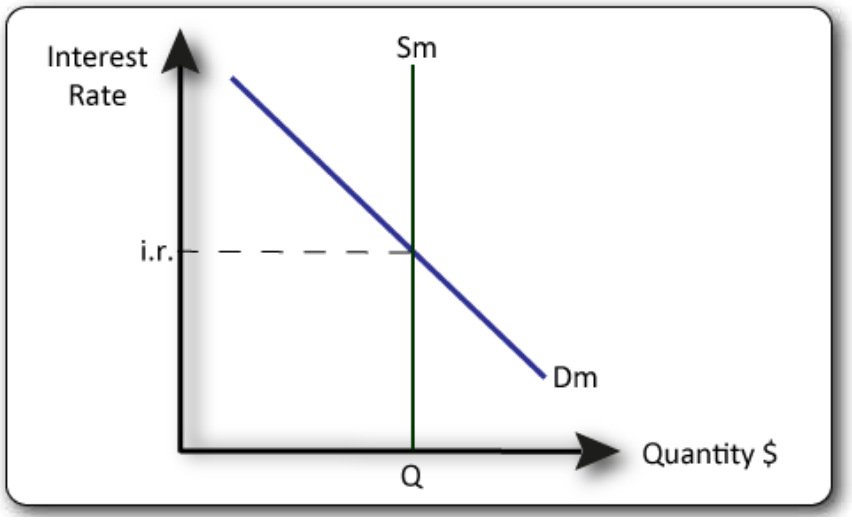
Money, like everything else, is a good. It has no real value – the paper it is printed on is worth just a few cents or pence at most. In the past, you could have exchanged your money for gold, but this is no longer the case. Like everything, if there were lots of it, its value would fall. For example, we can see this in our Circular Flow of Income mentioned at the beginning of the chapter. Imagine the government just decided one day to print loads more money and inject it into the economy. What happens? The worker's wages go up, but so too do the prices in the economy. Before he was receiving $100 for his work and buying a car for $100. Now he is receiving $200 and spending $200. He has more money in numerical terms, but in real terms, he is exactly the same off. We say that his purchasing power has remained the same.

Purchasing power relates to how far your money goes. If you can buy a lot with your money, you have a high purchasing power and vice versa. Printing more money may increase the amount of bank notes in your pocket, but it doesn't actually make you richer once shops realize that the money you have is less valuable.

Nevertheless, there is still an important way printing money influences the economy. We said that money was a good. All goods have a price. We call the price of money its interest rate. This literally means how cheap or expensive money is in your country. If there is a high interest rate, this means that money is very expensive to take out of banks, and instead of borrowing you will save. Banks often attract savers with high interest rates as savers can make money by just leaving their savings in a bank account. The bank will pay you the interest rate for you to keep it in the bank account (so that they can invest it!) On the other hand, a low interest rate means that the price of money is very cheap; surely you want to go out and take as many loans as possible whilst you can! If a whole country does this, AD will increase, creating economic growth.

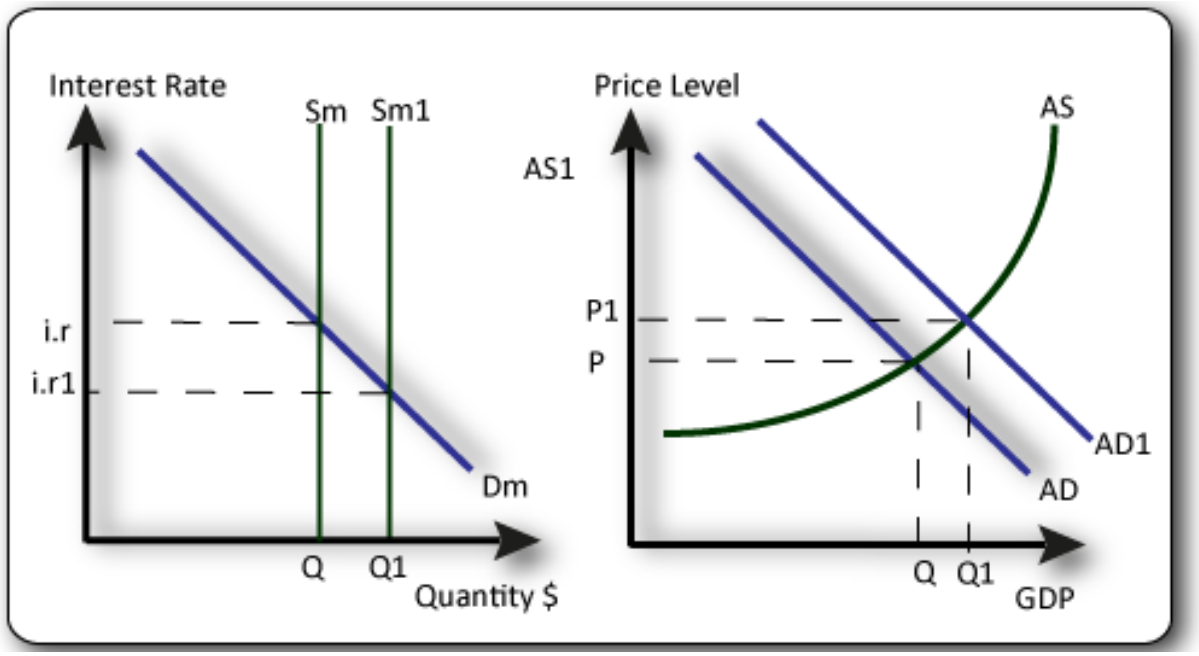
Monetary Policy continued

We can examine these situations on a diagram. Look at the diagram below.



You will notice that it is not a macroeconomic diagram, but a diagram for just one market: the demand and supply of money (Dm and Sm). The first thing that will hit you is that the supply of money – Sm – is vertical. Why is this? A vertical supply line means that supply is fixed. The government sets the supply of money in an economy, and so there is only one quantity no matter how high or low the price of it is. You will see that instead of writing 'price' we label the Y axis as 'interest rates' as these are the price of money.

If the government decided to increase the supply of money by printing more of it, we would show this by an outward shift on the supply of money curve as shown on the first diagram below (Sm-Sm1). We can see that this has an effect on interest rates. They fall from i.r to i.r1. If interest rates fall, people will borrow more, as mentioned above. We know that if people borrow more, they will spend more. This must mean AD will also increase - we thus need our macroeconomic diagram to show this. If the government uses monetary policy to increase AD this is known as expansionary monetary policy. If they use monetary policy to decrease AD (by decreasing the supply of money in the economy, raising interest rates and thus decreasing AD) this is known as deflationary monetary policy.



Market-Oriented Supply-Side Policy

These policies aim at increasing AS by 'freeing-up' the market. What this means is that certain actions need to be undertaken in order to allow AS to increase. An example comes with reducing minimum wage. If minimum wage was lower, firms would hire more workers and produce more goods and services, thus increasing supply. By being too high, minimum wage restricts the market and does not allow AS to naturally increase. Other ways include:

- **Getting rid of red-tape and bureaucracy** – oftentimes firms produce less than they ought to because they have so many forms and rules they have to follow. Getting rid of these makes it faster to produce, saving time and money.
- **Reducing the power of trade unions** – trade unions keep wages high. Wages are a big part of a firms' costs of production. If trade unions were made less important, firms could spend less on their workers by reducing the wage.
- **Changing laws and legislations** – if previously firms were only allowed to supply a certain amount, then when this is changed they are free to produce more
- **Reducing taxes on firms** – this allows them to produce more at the same price.

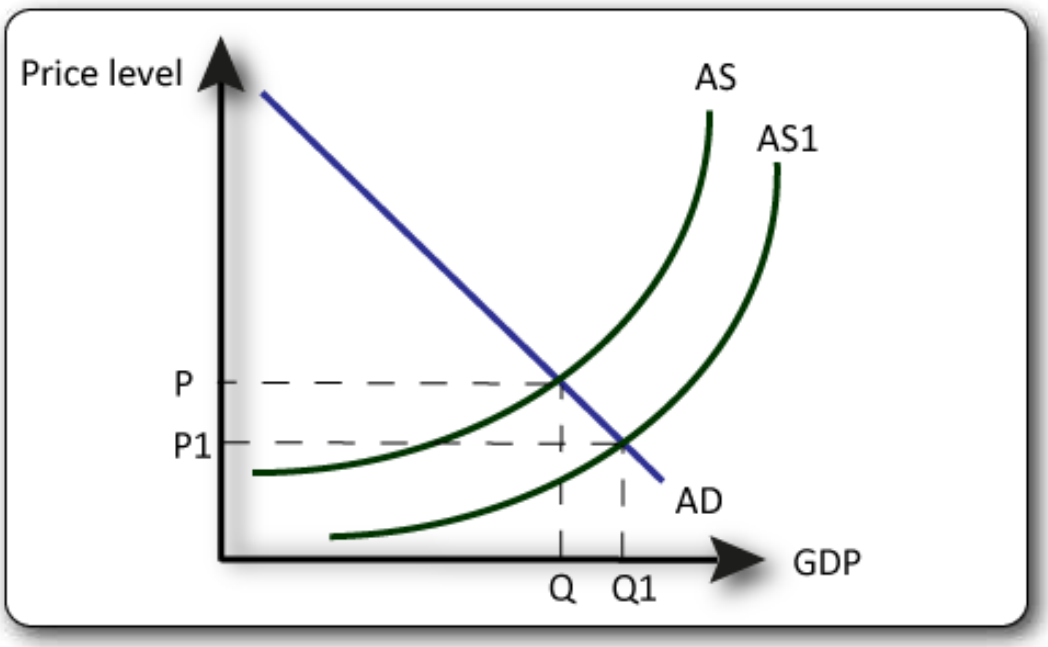
By pursuing these changes, a government will be able to pursue expansionist market-oriented supply side policies.

Although market-based approaches are relatively easy to undertake and seem a fast solution, they also pose several ethical problems. Is it right to lower peoples' wages? Also, trade unions are often the only voice some workers have. Meanwhile, reducing taxes may cause an increase in supply but the opportunity cost is the revenue a government does not now receive.

Interventionist Supply-Side Policy

Whilst market-oriented approaches involve little government involvement, interventionist strategies rely heavily on it. What occurs here is that governments pour money into ways to make the economy more productive. There are several examples, but education is perhaps the clearest. If the government invested heavily in education then when graduated, those workers should then be able to produce more goods and services with the same resources. AS would thus increase. Other examples may include:

- **Investment in healthcare** – this makes the workforce able to produce more as they are healthier.
- **Research and Development** – can lead to new ways of doing things, or the discovery of new production techniques like genetically modifying crops
- **Investment in technology** – combine harvesters do a lot more work, at a faster rate, than humans. Car plants in Tokyo are now almost all totally automated
- **Subsidizing entire industries** – this allows firms to spend money on the above, or to buy more factors of production which make them more productive.



Multiple Choice Questions: Demand and Supply-side Policies

1. Which of the following is not a Demand Side Policy?
   a. Increasing taxation
   b. Printing less money
   c. Improving education
   d. Building a stadium

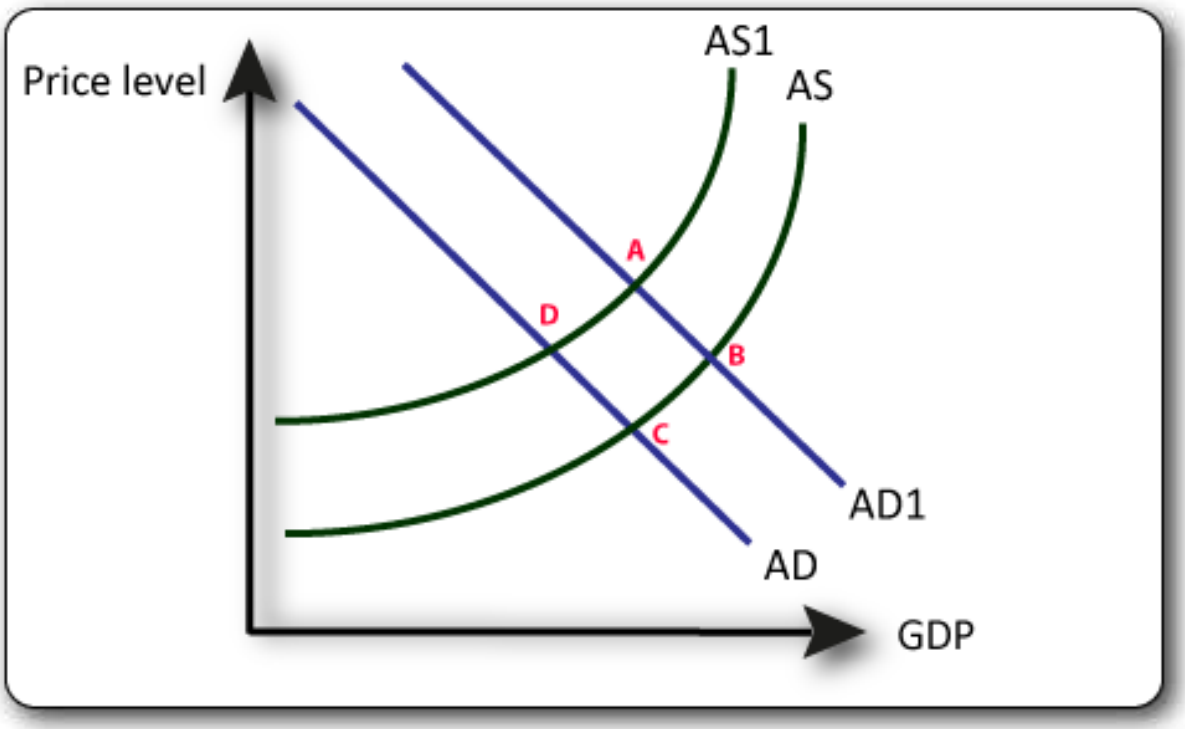
2. Which combination of policies are only fiscal policies?
   a. Printing more money and building schools
   b. Creating new roads and investing in education
   c. Lowering taxation and reducing the power of trade unions
   d. Constructing a stadium and lowering taxes

3. Which of the following is a Market Oriented Supply Side Policy?
   a. Changing the minimum wage
   b. Buying new machinery
   c. Changing taxation
   d. Investing in healthcare

4. What would be the effect on an economy of printing more money?

	Interest Rate	Expenditure	Aggregate Demand
a.	Rises	Falls	Falls
b.	Falls	Rises	Rises
c.	Rises	Falls	Rises
d.	Falls	Rises	Falls

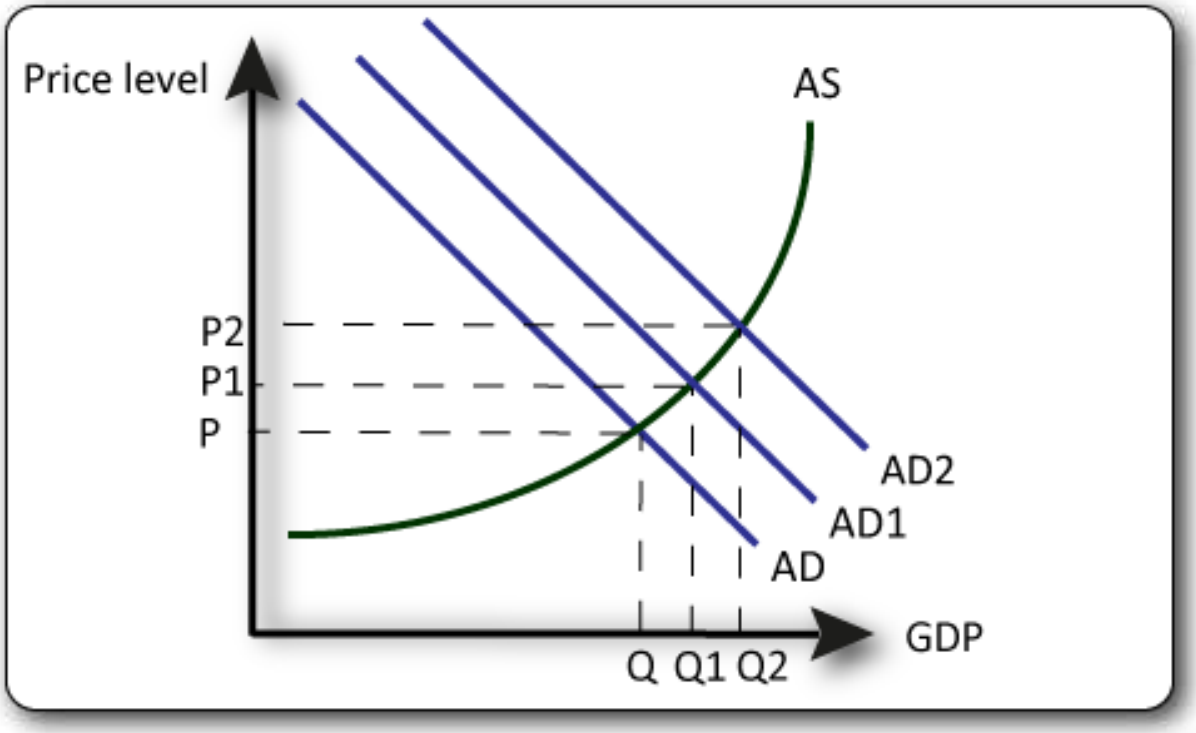
5. If a government experienced rapid inflation caused by excessive spending in their country and attempted to alleviate this by creating more jobs, mark on the diagram below which point they would be at.



The Multiplier Effect

Some economists argue that expansionary demand side policies can have very positive effects on the economy. Take an increase in government spending as an example (expansionary fiscal policy). By increasing government spending, more people have jobs. If more people have jobs, this means more people have a wage and thus larger disposable incomes. If people spend this disposable income, more workers are needed to keep up with the increasing AD. If more workers are needed, more people have a wage…. And the cycle starts again! If this is seen in an expansionary demand side policy it is known as the multiplier effect (as one small increase by the government multiplies economic growth several times over).

If however, the government undertakes contractionary fiscal or monetary policy the cycle works backwards and becomes known as the de-multiplier effect.



Which policy to choose?

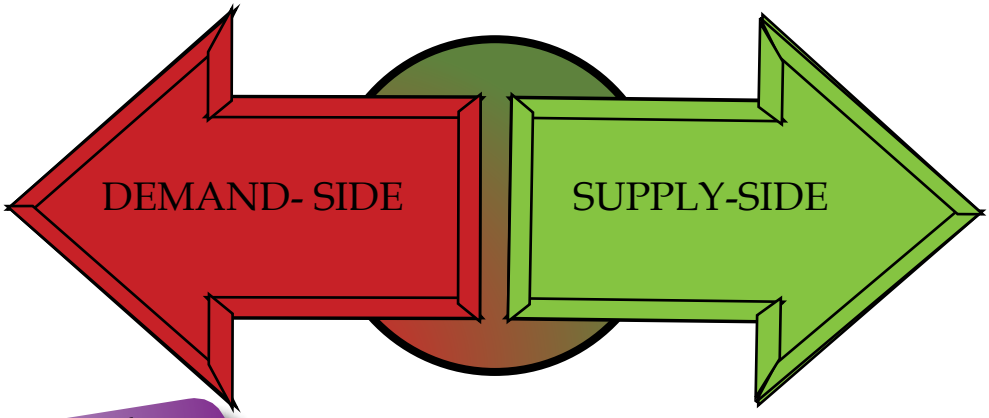
When facing economic problems, governments therefore have the opportunity to wield either Demand Side or Supply Side policies to help combat the situation. However this is often a very difficult thing to do as choosing one policy to solve one particular problem may lead to the creation of another problem in another area!

Let's take a few scenarios to understand this. Imagine a country is facing very low employment levels. They need to therefore boost jobs in their country. Imagine now that they use Demand Side Policies to do this.

We can see that by boosting AD more jobs are created to satisfy the rising demand. However, at the same time inflation increases. They now may need to use another policy to combat this in the long run. Also, if they are using government spending as their tool, this could lead to a budget deficit and the need for the government to raise taxes to regain some money… but this is the opposite policy of what they first intended!

Or, let's imagine that this country uses Interventionist Supply-Side Policies to deal with unemployment. If they decide to build more schools this will certainly increase GDP (as AS increases) but then how long will this take? 10 years? 15 years? Will a government be prepared to wait this long? Also, the question of expense must be taken into consideration again.

So we can see that no policy is without its problems. Instead the government has to direct its economic policy according to the relevant information that it has, in order to choose the most sensible path.



Grab a Pen!

Have a look at the following problems:

• High Unemployment • Low Productivity • High Inflation • Large Debt • Lack of Trade

On a large sheet of paper detail as many advantages and disadvantages with combatting them with Demand or Supply Side Policies as you can. Think about the following criteria to help you:

a) Cost b) Timing c) Impact on other economic policies d) Political impacts e) Likelihood of success f) Who is affected most. [10]

Aims of Taxation

We have seen how taxation is a fiscal policy tool that is often used by governments around the world. However, there are many reasons for taxation:

a) To reduce income inequalities - we can take from the rich and give to the poor.
b) To increase government revenue in order to pay off debt
c) To increase merit and public goods and services
d) To reduce external and social costs caused by polluting firms

But taxation itself is a general term, as there are different types of taxes. In general we can identify:

- **Direct tax** – a tax on income, profits or wealth
- **Indirect tax** – a tax paid on the value of a good or service. For example, if you buy a meal at a restaurant, you will have to pay for the meal and for a tax (of around 13%) on the value of your meal. This is known as Value Added Tax (VAT).

We have seen that reducing taxation can lead to economic growth, but now we need to consider how it conflicts with another macroeconomic goal: the redistribution of income.

If we reduce tax, surely we have less money to help the poorest in our society. This brings us to the question of whether we should reduce tax for some people but keep it high for those who can afford it. Unfortunately, people would then say this was unfair. As a result, governments follow different taxation systems, depending on their needs and wants. There are three main types:

	Tax Band 1	Tax Band 2	Tax Band 3
Income per year	$10 000 or less	$10 000 - $90 000	$90 000 and above
% Tax	5%	10%	50%

1) Progressive Taxation

With a progressive taxation system, citizens are put into 'income earning bands' and charged taxation according to these bands. The higher your income, the greater percentage of taxation that you need to pay on income in a particular bracket. For example, the government may set bands as in the table above.

If Jo Bloggs earned $6 000 a year, Tim Timmins earned $28 000 a year and Gordon Bennett earned $110 000 a year they would all pay different amounts of tax:

- Jo Bloggs would pay $600 (5% of $6000)
- Tim Timmins would pay $2 300 (5% of $10 000+ 10% of $18 000)
- Gordon Bennett would pay $23500 (5% of $10 000 + 10% of 80 000 + 50% of 20 000)

Taxation continued

2) Regressive Taxation

Regressive taxation is the opposite to progressive taxation; the higher your income, the less percentage you pay in tax. Once again, citizens are allocated a tax band and must pay accordingly. The situation may look like this:

	Tax Band 1	Tax Band 2	Tax Band 3
Income per year	$10 000 or less	$10 000 - $90 000	$90 000 and above
% Tax	25%	10%	5%

Using the same income examples as before, in this case:

- Jo Bloggs would pay $1500 (25% of $6000)
- Tim Timmins would pay $4300 (25% of $10 000 + 10% of $18 000)
- Gordon Bennett would pay $11500 (25% of $10 000 + 10% of $80 000 + 5% of $20 000)

Be careful to distinguish that the higher salary earners may still pay a larger amount but a smaller percentage.

You may also note that there are other types of regressive taxation: if tax on cigarettes was a fixed amount (say $2) then this amount would be a greater percentage for a low income earner, compared to a high income earner. For example, if Jo Bloggs – earning $6 000 a year had to pay $2 in tax this would be 0.03% of his salary in tax. But for Gordon Bennett – earning $100 000 – this would be 0.002% of his salary! A fixed amount therefore hurts those on smaller incomes.

3) Proportional Taxation

In this case, citizens pay the same percentage in tax, regardless of their income. There are no tax bands – everyone pays the same % - for example 10%. If you earn $100 a year, you thus pay $10. If you earn $100 000 a year, you pay $100. Again, note that the amount each person pays is different but the percentage is the same.

	Tax Band 1	Tax Band 2	Tax Band 3
Income per year	$10 000 or less	$10 000 - $90 000	$90 000 and above
% Tax	10%	10%	10%

Grab a Pen!

1) Explain the difference between the two different types of taxes, and the three different tax systems. [6]

2) Labelling the Y axis of a diagram as 'Income' and the X axis as '% Tax' illustrate the three different taxation systems. [6]

What makes a good tax?

Fairness - a good tax takes into account how much we are able to pay, and what we should morally contribute back into society. Those with higher incomes should therefore pay more.

Easiness to collect - there is no point in having a tax, if everyone avoids paying it

Cheap to collect - if the government spends more collecting the tax then it receives, there is absolutely no point in having it.

Should reflect changes in inflation - if we pay 3% income tax and yet inflation (and wages) have risen for five years by 10%, this tax is becoming unrealistic.

What are the consequences of taxation?

The consequences of increased taxation depend on whether we are talking about indirect taxes or direct taxes.

1) **Indirect Taxes** - these, as mentioned before, are a tax on goods and services. They are therefore aimed at producers and so influence supply

- Supply falls. It is now more expensive to produce the same goods so supply decreases. The vertical difference between the two supply curves shows us the value of the tax.
- Prices increase. Consumers have to now pay for the good and for the tax (though who pays for the tax does depend on its elasticity - a factor outside the consideration of IGCSE Economics!)
- Government revenue increases. This is especially true if the good is demand inelastic as we continue to buy the good, regardless of the increase in price.

2) **Direct Taxes** - these, as mentioned before, are a tax on income and wealth. They are aimed at consumers and so influence demand.

- Demand falls. Consumers now have less money and so are able to spend less on goods and services. Output thus falls too. The vertical difference between the two demand curves shows us the value of the tax.
- Prices fall. Suppliers must charge a lower price to try and get rid of their goods as no one is now buying them.
- Government revenue increases. The greater the increase in direct tax, the more the government can spend on the public sector and merit or public goods.

It is important to note that if we are looking at the effect of a tax on the whole economy we would use a aggregate demand and supply diagram but if it were just for a single product, we would use a market demand and supply diagram as it would just be for that specific product.

Finally, the effects would be reversed if the tax was decreased, rather than increased as explained above.

Subsidies

Governments not only receive revenue by taxing products, but they can also give out revenue they already have to individuals or firms.

1) **Subsidies** - When a government decides to allocate some of its revenue to a firm or producer, this is known as a subsidy. It has the following effects:

- Increased production - for firms, it is now cheaper to produce the same amount of goods as before, since they can use the subsidy to buy materials (or pay wages) they previously had to pay for. This is thus an increase in S or AS.
- Decreased prices - as more is now being produced, its value falls, causing prices to fall too.
- Increased employment - firms will now take on more workers than previously, as they can now afford them.
- Increased international competitiveness - as the products are cheaper, producers are now able to compete with cheaper foreign substitutes and sell their product abroad. This is known as 'protectionism' and may have an effect on the exchange rate (to be seen later).
- Decreased government revenue - the government must use tax payers' money to finance subsidies. It cannot therefore spend this money elsewhere.

2) **Benefits**- When a government decides to allocate some of its revenue to an individual, these are known as benefits. There are several types of benefits, such as money given to those who cannot find a job (unemployment benefit or commonly called 'the dole'), benefits given to those who are sick or disabled (disability benefits) or simply benefits given to those with very low incomes. Though they are very varied, benefits have some common effects

- Increased aggregate demand
- Lower income inequalities
- Decreased government revenues.

Photo courtesy of Toa55, FreeDigitalPhotos.net

The Macroeconomy

Class Project!. Below, is the economic activity of Tanzania. These facts and figures are from the CIA World Factbook; a free online resource. Using your knowledge of economics, create a SWOT analysis of Tanzania's economic situation.

Once this is done, use your knowledge of economics to prepare a presentation explaining what policies you believe would best help achieve its macroeconomic goals.. Your teacher may split you into groups of different countries - to be found at https://www.cia.gov/library/publications/the-world-factbook/

GDP $64.71 billion	GDP - real growth rate: 6.7%	GDP - per capita $1,500	GDP - composition by sector: agriculture: 27.8% industry: 24.2% services: 48%
Labour force: 24.06 million	Labour force - by occupation: agriculture: 80% industry and services: 20%	Population below poverty line: 36%	Investment (gross fixed): 26.1% of GDP
Budget: revenues: $4.603 billion expenditures: $6.125 billion	Tax revenues: 19.7% of GDP (country comparison to the world: 164)	Budget surplus (+) or deficit (-): -6.5% of GDP	Public debt: 36.9% of GDP (country comparison to the world: 81)
Inflation rate 11.1% country comparison to the world: 198	Agriculture products: coffee sisal, tea, cotton, cashew nuts, tobacco, cloves, corn, wheat, cassava (tapioca), bananas, fruits, vegetables; cattle, sheep, goats	Industry - agricultural processing (sugar, beer, cigarettes, sisal twine); mining (diamonds, gold, and iron), salt, soda ash; cement, oil refining, shoes, apparel, wood products, fertilizer	Oil - production: 0 bbl/day Oil - consumption: 38,000 bbl/day country comparison to the world: 106
Oil - exports: 0 bbl/day (2009 est.) country comparison to the world: 201 Oil - imports: 30,040 bbl/day (2009 est.) Oil - proved reserves: 0 bbl (1 January 2011 est.)	Exports - partners: China 14.2%, India 9.9%, Japan 7.7%, Germany 6.7%, UAE 4.5% (2011) Imports - partners: India 19.8%, China 17%, South Africa 6.5%, Kenya 5.8%, UAE 4.6% (2011)	Reserves of foreign exchange and gold: $3.573 billion (31 December 2011 est.) country comparison to the world: 96	Debt - external: $9.114 billion (31 December 2011 est.) country comparison to the world: 95 $8.259 billion (31 December 2010 est.)

Multiple Choice Questions: Taxation

1. A worker faces 10% tax on his wage every month. What type of taxation is this?
   a. Regressive
   b. Direct
   c. Progressive
   d. Indirect

2. Which of the following is not a benefit of increasing taxation?
   a. Improvement in the distribution of income
   b. Increased government revenue
   c. Disposable income falls
   d. Ability to control external costs

3. Lee, Juan and Lucy earn $10 000, $20 000 and $30 000 a year, respectively. The govern ment imposes a 10% tax. What type of tax is this?
   a. Progressive
   b. Regressive
   c. Proportional
   d. Indirect

4. The best definition of a natural monopoly is:
   a. A market which the government identifies as needing only one supplier to satisfy all demand
   b. A market where there are no external costs
   c. A small market which the government subsidizes
   d. A market which operates better with no government intervention

5. In 2009 prices in all restaurants across the country rose by 2%. What is the most likely reason for this?
   a. A rise in income tax
   b. A rise in business tax
   c. An increase in VAT
   d. A fall in costs of production

The Government as Producer and Employer

We know that if the government undertakes Demand or Supply-side policies it impacts the whole economy. In fact, we can also see how the government alone plays a very large role in the overall growth of an economy, as it is both a producer and employer.

Take Juan, for example. His job is to be a teacher for a public (or state) school. These are schools provided by the government for the benefit of the population. He, and everyone who works in the school, is therefore working for government. We all pay the government in taxation (as explained above) and the government then pays people like Juan to work for them.

There are thousands and thousands of people in each country who work for the government. We call them civil servants as they work for the benefit of the whole of society. They are an important concept in macroeconomics as their presence makes it easier to undertake fiscal, monetary or supply-side policies. For example, if the government wanted to create an expansionary fiscal policy, they could build more schools and hire more public-school teachers. Similarly, if the government reduced the wage cap (a maximum wage available) for all civil servants, then this would be an example of a market-oriented supply-side policy.

The government can also produce certain goods. If you think back to Unit 2, you will remember how in a pure free-market economy public goods will not be provided, whilst merit goods will be underprovided. The government will therefore step in and make sure that merit goods – such as hospitals, schools, public swimming pools and public toilets – are provided properly. They will also ensure that basic public goods are provided – such as street lighting..

Finally, if the government feels there are some goods that are natural monopolies, they may decide to nationalize these industries and produce the goods themselves. What do we mean by this? Take railways as an example. If railways were all privately owned, then surely we would end up with four or five train-tracks all going to and from the same place. Surely this is a waste of resources!! Instead, it makes more sense for the government to take control of the whole industry (what we call nationalization) and provide the railway service themselves. There would thus be less external costs. Other examples are water pipes or electricity wires.

The government therefore produces many goods, and so contributes toward GDP in a big way. This is why if the government decided to stop building roads we would have a deflationary fiscal policy – all the civil servants building roads would become unemployed (reducing AD) and less would be produced. As a result, the government has a big role to play in production and employment for any economy.

Chapter Review

Multiple Choice Questions

1. Progressive taxation means
    a. Everyone pays more tax
    b. The higher your income the greater the value of your tax
    c. The higher your income the greater the percentage of your tax
    d. The higher your income the less you pay in percentage terms

2. National Output tells us
    a. How much is being made in the economy
    b. How much is being spent in the economy
    c. How much is being earned in the economy
    d. All of the above.

3. The difference between interventionist and market-oriented supply side policies is
    a. One involves the active participation of the goverment
    b. The outcome of interventionist policies are more successful
    c. Market-oriented are designed to affect AD too
    d. Both a and b.

Short Answer Questions (1 mark each)

1. What are the five aims of a government?
2. How is economic growth measured?
3. Name three leakages from an economy
4. Name three injections into an economy
5. Define Aggregate Demand and its equation
6. Define Aggregate Supply and its equation
7. Name three factors that may cause AD to shift
8. Name three factors that may cause AS to shift
9. Define macroeconomic equilibrium
10. List the two demand side and two supply side policies
11. Distinguish between direct and indirect taxation
12. What are the three main forms of taxation?
13. Which form of taxation is often seen as fairest?
14. Define a natural monopoly
15. Define civil servants

Long Answer Questions

1. Using a diagram, explain how the circular flow of income works and its effects [8]
2. 'Printing money is the best solution to low economic growth'. How far do you agree with this statement? [8]
3. Evaluate the problems a government may face when wishing to use supply-side policies to create economic growth. [8]

Unit 6 - Economic Indicators

As economists, can identify three indicators which help us understand the economy's situation in a better way: Unemployment, inflation and output.

Unemployment

Unemployment can be defined as the number of people within legal working age actively seeking a job, but who do not have one. Any country with a high level of unemployment is obviously not producing as much as they are able to produce and is therefore being inefficient. As a result, it is very important for governments to make sure that everyone is working.

Unemployment is a general term though, used to describe many different forms such as:

1) **Structural** – this type of unemployment occurs when the skills that a worker has no longer match the jobs available within that country. For example, in the United Kingdom in the 1980s, the Prime Minister closed down many of the country's coal mines. Consequently, thousands of workers had mining skills that were no longer required in the country.

2) **Frictional** – this type of unemployment occurs in every country and is simply the time spent by workers as they leave one job but are yet to join another. Anyone moving between jobs is thus frictionally unemployed.

3) **Cyclical (or Demand Deficient)** – when the Aggregate Demand of a country falls (for any of the reasons mentioned in the last unit), then less wanted, and so less needs to be produced. Workers who are given their notice because the economy has entered a recession are therefore a victim of cyclical unemployment.

4) **Seasonal** – some workers are only needed at certain times of the year; when they are out of work they are seasonally unemployed. E.g. Strawberry pickers or ski instructors

Consequences of unemployment

Unemployment poses several problems for any government. Obviously the severity of the consequence depends on the type; structural is seen as much more problematic than frictional, for example, as it implies that there are real problems with your economy a whole.

Nevertheless, there are general consequences that we can apply to most causes. In the first instance, unemployment obviously leads to less disposable income for the nation. If people have less money, they will spend less, and so Aggregate Demand will fall further. If we are experiencing cyclical unemployment, we could say that unemployment would thus be both an effect of decreasing AD and a further cause!

Secondly, unemployment can become a drain on the government. Not only is the government unable to earn revenue from the unemployed workers' taxes, but it also has to pay money in the form of benefits in order to help them survive. Benefits – or transfer payments – are amounts of money given by the government to the unemployed (or sick) in order to reduce income inequalities and ensure a basic survival package for everyone. Unemployment benefits are often referred to as 'the dole'. By not receiving taxes and paying for benefits, the government's budget takes a double-hit and worsens greatly.

In addition to this, unemployment causes social problems. People with no jobs often feel disillusioned with life, and are more prone to stealing and crime – especially if unemployment benefits are low. Governments then have to spend money ensuring that any social unrest is cleaned up.

When looking at specific types, we can also see that if we have high levels of seasonal and structural unemployment then our economy needs restructuring, workers need retraining and the government needs to start investing in different sectors of the economy. This is very expensive and can take a long time. Similarly, technological unemployment can lead to structural unemployment, and an effort must be made to retrain workers.

Grab a Pen!

In groups of 5, pick a form of unemployment. Each person must spend 5 minutes thinking of ways to solve their form of unemployment. At the end of the time, they have 5 minutes each to teach the rest of the group their solutions. Rate your solutions on a scale of 1-5 (best to worst) [10]

Multiple Choice Questions

1. In 2010 the USA faced stiff competition from Japan in car manufacturing. Japanese cars were much cheaper and as a result many US car production branches were shut down. What type of unemployment did the workers in these US plants experience?
   a. Cyclical
   b. Structural
   c. Seasonal
   d. Frictional

2. If the Swedish government decided to create an online application database with all available government jobs on it, which type of unemployment would they be likely trying to solve?
   a. Cyclical
   b. Structural
   c. Seasonal
   d. Frictional

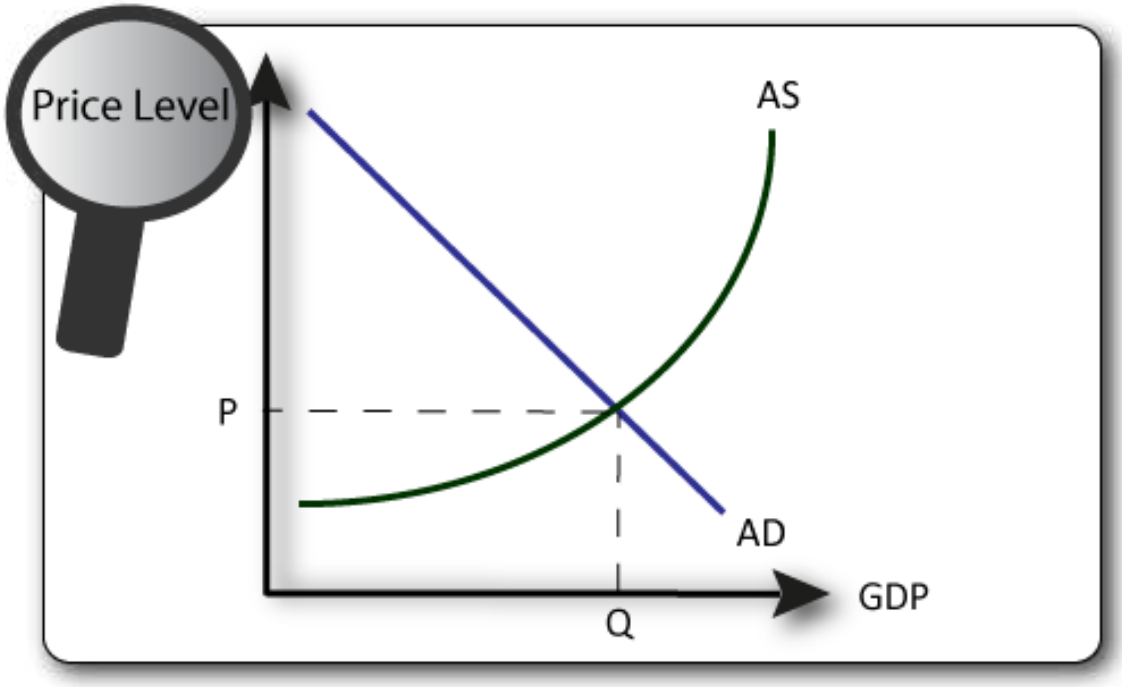
3. Which of the following is not necessarily a consequence of unemployment?
   a. Greater budget deficit
   b. Less output
   c. Social unrest
   d. Rising inflation

4. "Less workers are needed but productivity may actually increase." Which type of unemployment could this statement most likely be referring to?
   a. Cyclical
   b. Structural
   c. Seasonal
   d. Frictional

5. Why is it healthy to have a natural rate of around 3% frictional unemployment in an economy?
   a. It means the economy is not overheating; if demand increases we can still keep up with it.
   b. It shows that we can improve our overall economic performance
   c. So that the government can monitor transfer payments
   d. To ensure that those in work do not get complacent and know that they can easily be replaced.

Inflation

Whilst unemployment gives us a good understanding of our economy's situation, the general level of prices is another tool that helps us do so. If we experience continuous rising price levels in an economy this is known as inflation. Similarly, a continuous fall in the price level of an economy is known as deflation. On our macroeconomic diagram, we show inflation or deflation on the Y axis, which records the overall price level of our economy.



You may well have heard people talking of how things were cheaper 'in their day', or how the price of goods and services has increased over time. But how do we know this is true? To really make a sound economic judgment, we have to be able to measure inflation or deflation accurately. The problem is, there are thousands and thousands of goods and services in any economy. How do we collect all the information about their prices every year?! This is impractical, so economists have devised a system known as the Retail Price Index to calculate inflation.

Measuring Inflation

A good way to imagine the Retail Price Index is as a big basket. Economists take 500 of what are considered to be the most widely used goods and services in that country's economy, and drop them into this hypothetical basket. They add up the prices of all these goods and services and record them under the heading 'Base Year'. The base year simply means the first year of recording. Base years are chosen when the year has been unremarkable, so that nothing can distort prices – you wouldn't start recording prices in a year when there was a terrible earthquake for example, as prices would be strange that year. They then give the base year the index value of 100. Look at the table below to understand this.

	Value of Goods and Services	Index Value
Base year (2001)	$1 000 000	100
2002	$1 500 000	150

Once the index value has been set at 100 for the Base Year, economists wait until the next year to receive the information on what the value of goods and services are. If, for example, in 2002 the value of goods and services rose to 1 500 000 then we divide the new value, by the original value and multiply it by 100. In this case that would be

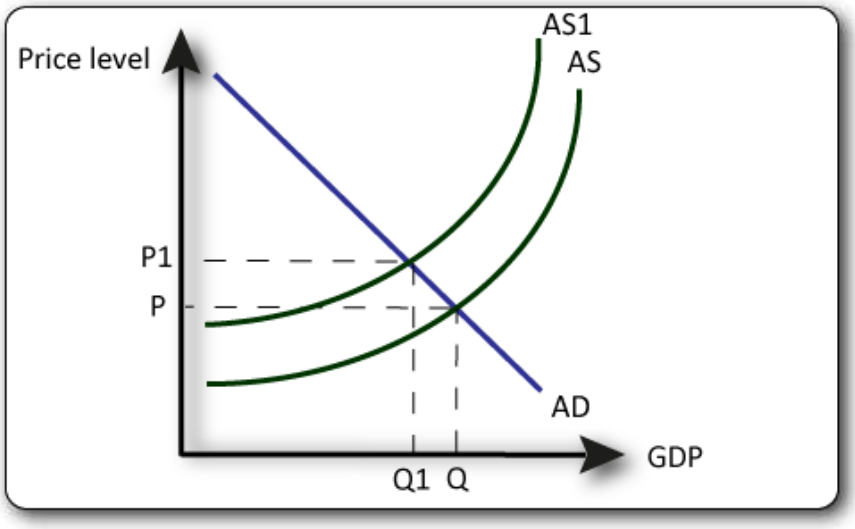
1 500 000/1 000 000 x 100 = 150.

We then enter the new index value and can instantly see that between 2002 and 2001 there was a 50% increase in prices – inflation was thus 50%. We call this entire system the Retail Price Index (RPI). There is also another very similar system known as the Consumer Price Index (CPI) which follows the same approach but has different criteria for its basket of goods.

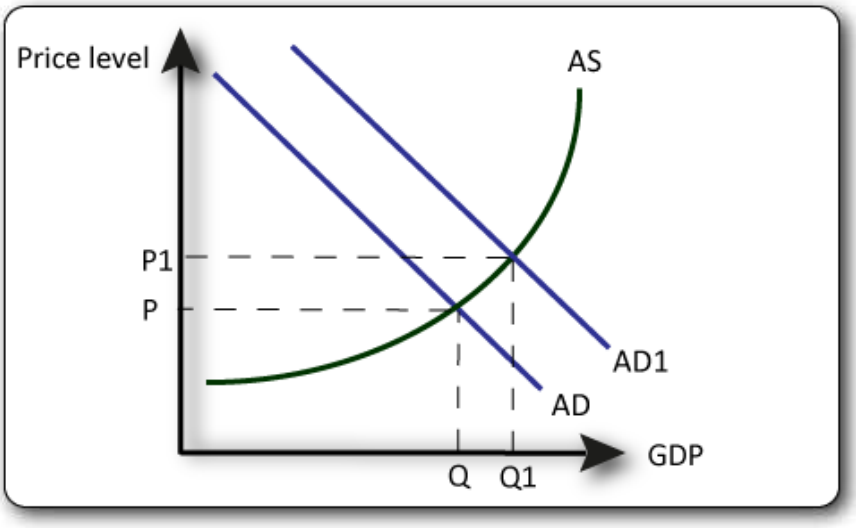
Causes of inflation

There are different types of inflation within an economy – prices may continuously rise for differing reasons. Below are the main ways in which inflation occurs.

1) **Cost-push inflation** – this type of inflation occurs when the cost of producing goods within a country rise. For example, if there was a drought and many food crops died then their prices would rise. As a result, less would be produced and a higher price will be charged. Prices therefore rise, causing inflation to be 'pushed' upwards, as seen below. Another example of cost-push inflation could be when wages rise. This is sometimes known as a wage-price spiral (where prices increase in an economy, so employees ask for a higher wage, which causes AS to fall… leading to higher prices, which cause employees to ask for a higher wage, and the whole cycle starts again)



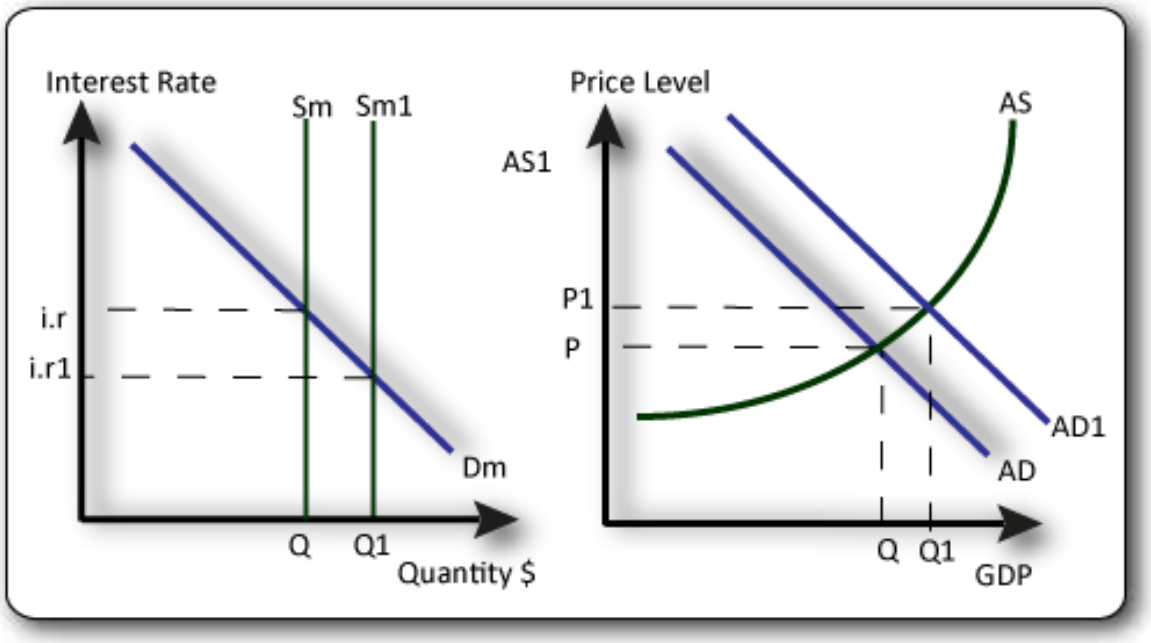
2) **Demand-pull inflation** – this type of inflation is caused by rising aggregate demand in a country. When people – for any reason – want to buy more and more goods and services, then they are willing to pay a higher price to do so.

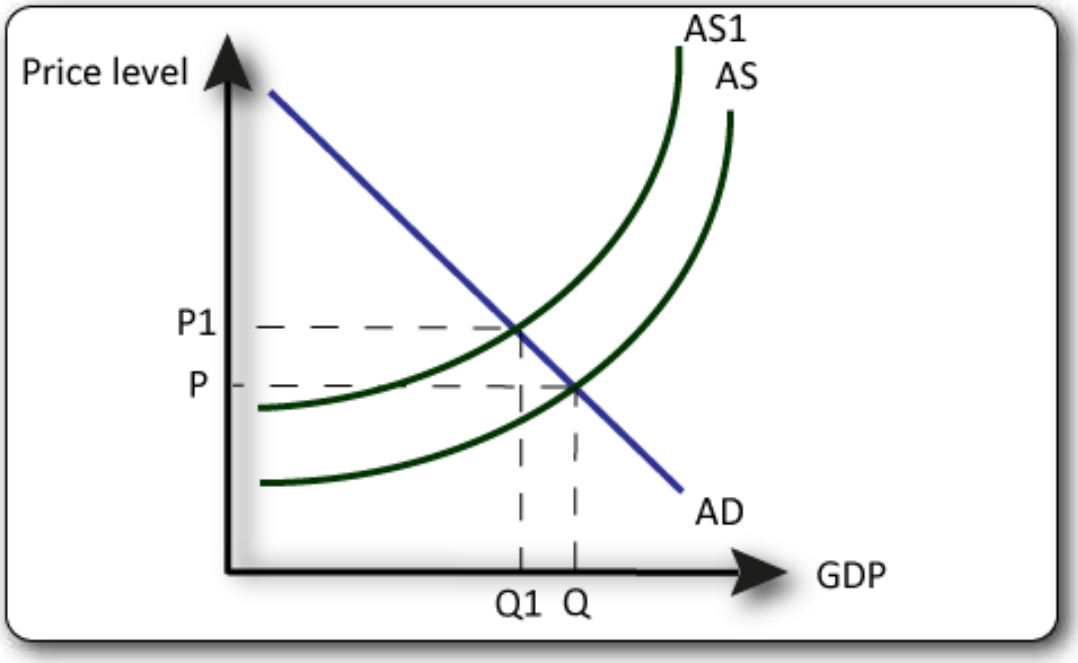


Causes of inflation continued

3) **Printed inflation** – this type of inflation occurs when a government decides to print more money. By doing this they are undertaking monetary policies, discussed in the previous unit. Printing more money leads to lower interest rates (i.r – i.r1) which causes more borrowing and therefore more spending. Aggregate Demand thus continues to increase (AD-AD1). We have seen this before, in Unit 5 as expansionary monetary policy.

4) **Imported inflation** – this is similar to cost-push inflation as it makes goods within our country more expensive. An example of this comes with oil. Many countries import oil, and if the price of oil rises, then so too does the cost of domestic goods.





Consequences of inflation

Inflation can have severe economic consequences. Whether or not these are good or bad entirely depend on the nature of the inflation, and on whether wages are also increasing. By looking at each type individually we can work out how harmful inflation may be, before drawing some more general conclusions.

With cost-push inflation we can see that there are negative impacts on economic growth and employment. As products become more expensive to make, less are made and so their value increases. Less production though, means less choice and greater unemployment. This could lead to worsening income distribution, as poorer people do not have jobs and cannot afford to live in the more expensive society.

Demand-pull inflation though, leads to economic growth as suppliers extend production to meet the growing demand for goods and services. More people are hired, and resources that were not used are now being used. This is a good thing. However, higher prices may cause a wage-price spiral, as workers ask for higher wages, causing AS to fall, as costs of production have now increased. Also, if aggregate supply cannot extend as fast as aggregate demand increases then we will be left with excess demand in our economy.

The danger of printed inflation lies in the fact that it could lead to hyperinflation if the government is not careful (this concept will be explored in the next sub-section). Other than this, it has the same negative (and positive) consequences as demand-pull inflation.

Imported inflation is also very dangerous. Not only are we buying more expensive goods from abroad, but this usually means that we lose jobs in our own economy. Whereas before we may have been buying domestic goods, switching to foreign goods means that the domestic workers are no longer needed. This could also cause AD to fall as less people have jobs, and therefore have lower incomes.

Hyperinflation

Hyperinflation is a severe form of inflation. It occurs when prices get rapidly out of hand, to the point where money loses its value. Though it is very uncommon for this to happen, notable examples are Germany in the 1920s and Zimbabwe in 2008. In both cases too much money was continuously printed, causing prices to rise faster and faster.

Grab a Pen!

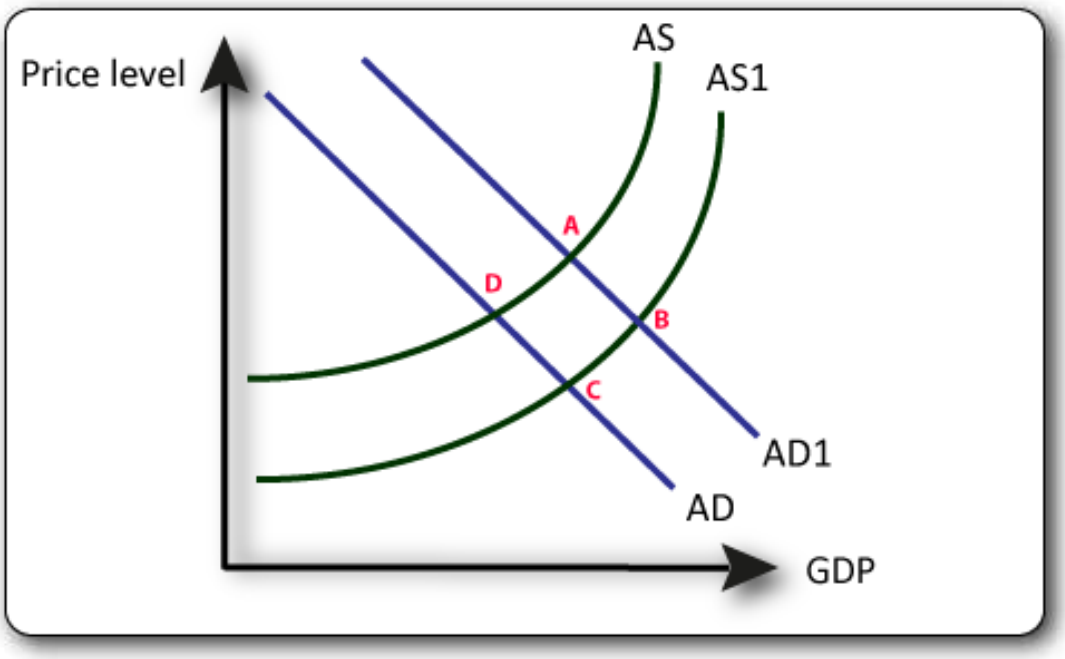
Essay: 'Which macroeconomic policy is best suited to solving a country's inflation problems?' [15]

Multiple Choice Questions

1. Which statement best describes inflation?
   a. A rise in prices in a country over a given time period
   b. An immediate increase in the price levels of a country in a time period
   c. An increase in the prices of goods and services in a country at one time.
   d. A sustained increase in price levels of a country in a given time period

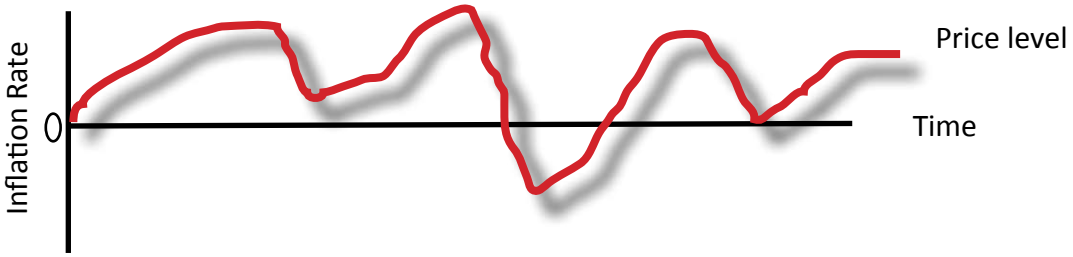
2. In 2012 the UK saw increasing bills for heating and electricity attribute to inflation in the country. What type of inflation is this likely to be?
   a. Cost-push
   b. Demand-pull
   c. Printed
   d. Imported

3. Look at the diagram below. Assuming a country's government was facing rising oil prices and was simultaneously printing more money, where would they be on the diagram?

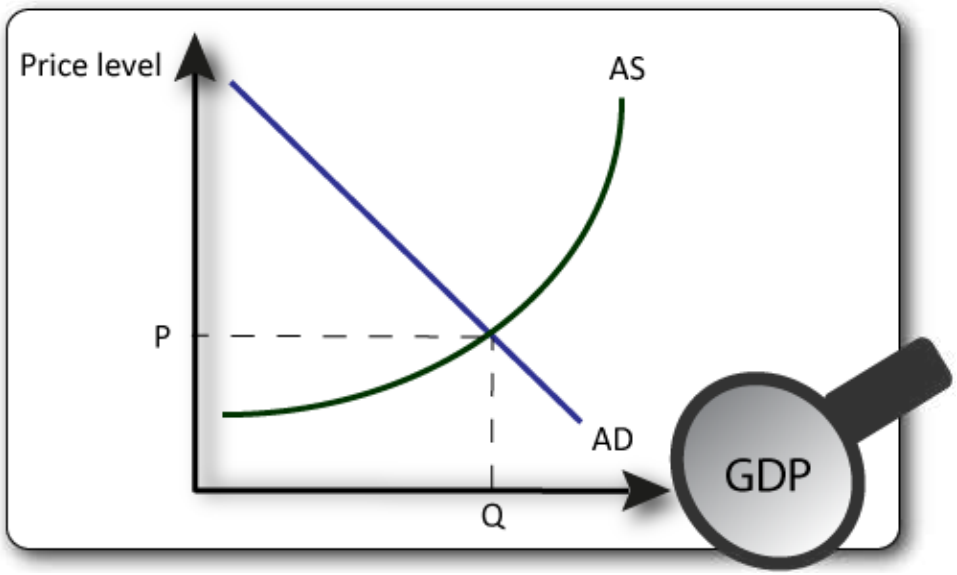


4. Which of the following is not an aspect of the Retail Price Index
   a. Weighting
   b. Basket of goods and services
   c. Base Year
   d. Productivity

5. On the diagram below which point represents deflation?



Measuring Output



As mentioned in Unit 5, National Output is an indication of economic growth. We measure national output (the amount of goods and services bought and sold in an economy) through Gross Domestic Product, or GDP. This is the value of all goods and services produced within a certain country in a given time period. However GDP is a very general conclusion. Economists have come up with more specific forms of GDP to help us understand economic growth better.

Real GDP – (include nominal here) – imagine we wanted to compare GDP in 2001 to GDP in 1997. We know that GDP is the value of goods and services in a country over a time period. We calculate value by simply multiplying price with quantity. For example, if in 1997 we produced 1 good and its price was $10 then our GDP would be $10. But, what if we produced 1 good in 2001 and yet the price was now $20. Our GDP has increased to $20 but are we really any better off? Not really. All we really have had is $10 inflation. By getting rid of the inflation, we then come out with a real GDP measurement.

Real GDP per capita – we can take our GDP measurements one step further. Imagine Norway has a real GDP of $100million. Then imagine Brunei has a real GDP of $90 million dollars. It would seem that Norway is better off than Brunei. But this measurement does not take into account population. That's when we use Real GDP per capita. This therefore divides real GDP by the total population. If Norway had 10 million people its real GDP per capita would be $10, if Brunei only had 1 million people its real GDP per capita would be $90, suggesting that Brunei is actually better off!

GNP – this is very similar to GDP except that whilst GDP measures the value of all the goods and services produced within a country in a given time period, GNP focuses on the value of all the goods and services produced by citizens of that country. For example, if the USA was measuring its GNP then this would include any money sent home by any MacDonalds' round the world, but would not include businesses that are in the USA but are owned by foreign companies.

Real GNP per capita – this measures the value of all goods and services produced by the citizens of a country only, per person. This is very similar to real GDP per capita, above.

Conservation vs Consumption

As economics is the science devoted to dealing with the problem of scarcity, we are often having to make choices over whether to use our resources, or keep them stored safely away. There are definitely arguments for both sides.

To begin with, it could be said that using our resources creates jobs, which leads to greater spending and a multiplier effect; having them in the ground means we are not reaching our full potential and so will have unnecessary unemployment within our country. This is obviously undesirable. For example, if Tanzania left gold untouched within their country, this would mean people who could have been gold miners do not have a job, or have to search elsewhere. This is inefficient.

Furthermore, using our resources allows us to trade. In the above example, if Tanzania did not use its gold, it would have to import it if needed, and would not gain from being able to sell it. They would therefore have a worse balance of payments (to be studied in the next unit).

Finally, it could be argued that not using resources - which leads to less economic growth - can lead to poverty, and that poverty leads to worse effects than economic growth. For example, increased healthcare costs, but the inability to provide for them. Similarly, pollution may be caused by poor people trying to survive by cutting down trees for firewood. This could be avoided if we had access to better ways of doing things, created through research and development... which is caused by economic growth!

On the other hand, there are arguments that suggest using our resources is not always the wisest thing to do. To begin with, if a country lacks a strong government, there may be little regulation over how the resources are used. Social and external costs may arise through firms that pollute without any consideration for the environment. If a country has a lot of oil, it may be profitable to drill for it, but it may also mean the loss of many natural surroundings.

In addition, if resources are used for certain purposes such as the military, they may provide jobs, but do they really help the development of a nation? North Korea, for example, uses most of its resources on its military programs, which curbs inflation but does not necessarily mean people are happier, or that more goods are available.

Another reason not to consume all resources within a country is in order to ensure that your country can survive any sudden catastrophe. For example, if there was a global shortage of say oil, and the UAE had not used all of their oil up, they could either sell it for a very high price, or ensure their population did not go without it. This would thus safeguard them against catastrophes. The best attitude to therefore have is to undertake sustainable development. This is the ability to use your resources to meet the needs of the present, without compromising future generations' welfare. This concept will be looked at in Unit 7.

Chapter Review

Multiple Choice Questions [1 mark each]

1. A rise in unemployment can be attributed to:
    a. A fall in Aggregate Demand
    b. A rise in Aggregate Demand
    c. A fall in Aggregate Supply
    d. Both a and c.

2. A negative consequence of demand-pull inflation could be
    a. Lower incomes
    b. Less production
    c A loss of purchasing power
    d A fall in GDP

3. The difference between real GDP and GDP is
    a. Real indicates that inflation has been considered
    b Real GDP is GDP + inflation
    c GDP indicates economic growth, real GDP indicates economic development
    d There is no difference; real GDP is just the full title.

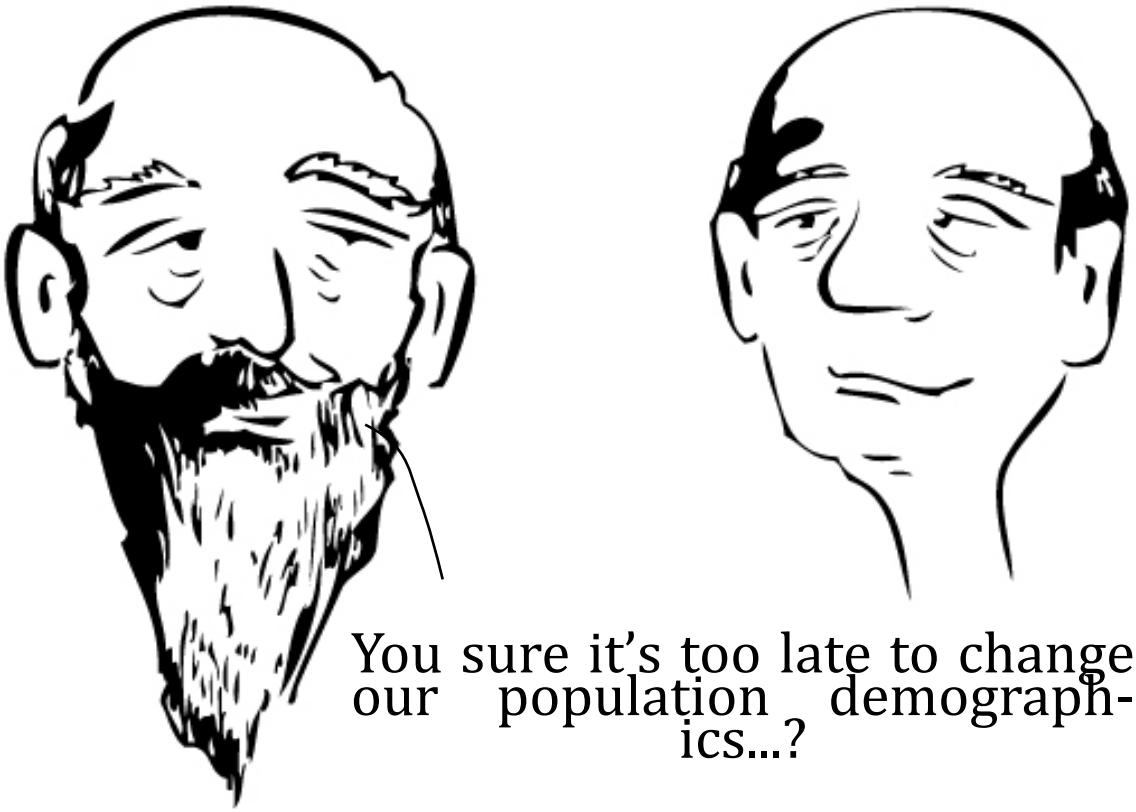
Short Answer Questions (1 mark each)

1. What are the 5 types of unemployment?
2. Which type of unemployment occurs when people lose confidence in the economy?
3. List four consequences of unemployment in an economy
4. Name the system used to calculate inflation
5 . What is a price index?
6. Define inflation.
7. If prices rise due to an increase in costs of production, which type of inflation is this?
8. What are the other types of inflation?
9. Name 3 consequences of inflation.
10. List 2 solutions to frictional unemployment
11. Outline two ways to solve demand-pull inflation
12. How is output most commonly measured?
13. What are the other measurements of economic growth.
14. How might economic growth be bad?
15. List 3 reasons why economic growth is good.

Long Answer Questions [8 marks each]

1. 'Unemployment always requires fiscal intervention.' How true is this statement?
2. 'Inflation is not neccessarily a sign of a weak economy'. Evaluate this view
3. ' To achieve happiness, a country must undergo strong economic growth.' Is this true?
4. Explain how inflation, unemployment and economic growth are all linked and how trying to solve one, may lead to problems with another

Unit 7 - Development Economics



As economists, we are often talking about 'economic growth'. Too often though, we mistake this for something that it is not – economic development. Whilst some countries may achieve high economic growth, are their citizens better off? This is where economics becomes a bit blurry – in order to answer that question we need to first decide what we mean by better off. This is usually referred to as 'welfare'. Economic development considers the welfare of a country's citizens, whilst economic growth just looks at increasing GDP.

When considering welfare, it is clear that some countries are better off than others. Some countries' people enjoy good health care, clean water and cheap luxury goods. Other countries experience high pollution, low life expectancies and a lack of job opportunities. We therefore split countries into two distinct catagories: 'Developed' (which indicates high levels of welfare) and 'Developing' (which indicates low levels of welfare).

Measuring Development: The HDI

Many factors affect the welfare of a nation. Measuring GDP does give us an indication of development as it shows us how great the income in that country is, as mentioned in the previous chapter. However, it still has its problems. Even when we divide it by the total population (to get GDP per capita) and use the RPI to account for inflation (real GDP) and even combine these (real GDP per capita), there are still problems (these indicators of GDP were looked at in the last unit). For a start, none of the GDP measurements tell us who makes the money in our country. A country may have a very high GDP per capita, but if one person is earning 90% of the income and the rest have a very low income, then surely this is not an indication of a developed country.

Another problem comes with the fact that we cannot tell where GDP comes from. If North Korea spends millions of dollars developing weapons, this shows up as economic growth... but is anyone better off in reality? A final problem with GDP can be considered in the following way: if people break something, money is spent fixing it. This shows up as an increase in spending (thus an increase in GDP)... but again, we are not better off.

The Human Development Index is a different way to measure development. It attempts to put a more holistic measure of welfare into one equation. The way this is done is similar to the way the RPI is calculated. First, a hypothetical basket is created. Within this basket we put 3 different welfare measurements: Life expectancy (how long an individual is expected to live at birth), Education (mean years spent in school and mean years expected to be spent in school) and Income (GNI per capita PPP). Each measurement has complicated equations behind them to give a score between 0 and 1 (with 1 being the best). The total score for a country is then calculated, and then divided by the number of measurements within it, to give us an average. Take the example below:

Measurement	Life Expectancy Index	Education Index	Income Index
HDI score	0.7	0.3	0.5

For the hypothetical country above, the HDI would be 0.7+0.3+0.5 = 1.5. This is then divided by the number of measurements: 1.5/3 = 0.5. The above country's final HDI is thus 0.5. The lower a country's HDI, the less developed it is seen.

Nevertheless, the HDI is not perfect: statistics are often hard to come by and many other important considerations are omitted (such as impact on the environment). It is, however, often seen as the best composite indicator available to economists.

Identifying a Developing country

There are many ways to identify a developing country, even if we do not have real GDP per capita or the HDI. In fact, we must be careful as not all developing countries are at the same stage – the World Bank actually divides 'developing' into four groups: low, low middle, middle and high income earning countries. In general though, the following characteristics define a developing country:

1. **They have high birth rates** – due to a lack of contraception and education, as well as the low age of marriage (in Turkey it is legal to be married at 14, for example)
2. **They have high death rates** – due to a lack of healthcare and education, or poor hygiene.
3. **They have a large proportion of their employment in the primary sector** – seen later

Many developing countries are burdened with poverty. Poverty can be divided into two types: relative poverty and absolute poverty. To be in relative poverty, this would mean that we are poor compared to the average person in our country. For example, if you live in Denmark but cannot afford a fridge, you are relatively poor. This is more prevalent in developed countries. Absolute poverty refers to the inability to provide for your own survival – usually this is when we earn less than $2 a day.

As mentioned earlier, many developing countries have a large amount of their labour force at work in the primary sector. The primary sector is the stage of the economy which extracts commodities from the earth. Commodities, in economics, can be defined as raw materials that need harvesting or mining. Tin, fish, cotton, rice and coffee are all examples.

Whereas there is nothing wrong in having a large workforce in the primary sector, it generally means that a country does not gain from the more valuable section of society: the secondary and tertiary sectors. The secondary sector are the manufacturing industries, whereas the tertiary sector are highly-skilled service-based industries such as banking, teaching and architecture. If you imagine that your country grows and sells coffee, then they may make quite a lot of money doing so. Currently coffee sells for around 75 cents per 250g in the primary sector. Usually you buy a 250g worth of coffee in a packet, in the supermarket. The price the coffee grower would receive for this is 75 cents. The price that you paid is something like $4 or $5. Clearly, all the value has been added after the primary sector, in the secondary sector. The developing country thus misses out on all this value-added profit by being reliant on the primary sector. Furthermore, commodities face wild fluctuations in price since bad weather, disease and substitutes can all damage their production greatly. This makes them an unreliable source of income.

Grab a Pen!

1. List the different forms of GDP in order of which you think is best in measuring economic growth, explaining the benefits and drawbacks of each [4]
2. Using a step-by-step illustrated analysis, explain how the HDI works. [6]
3. Distinguish between two different types of poverty [2]
4. Explain, using examples why over-reliance on the primary sector is often seen as negative to economists. [5]
5. Describe the basic identifiers of a developed country [3]

Alleviating Poverty

Did you know? According to the International Monetary Fund, Burundi, Zimbabwe and Congo DR are the three poorest countries in the world

How then can we get rid of poverty? Methods to this are known as policies to alleviate poverty. Poverty has always been a problem. Marie-Antoinette's famous reply to the fact that her people were starving in 18th Century France was supposedly, "Let them eat cake." Many people have tried to come up with solutions, but let's consider the following options:

1) **Micro finance** – the brainchild of Mustafa Youssaff, Micro finance came into favour in the 1970s. The idea was to give the very poorest members of society loans of a very small amount in order to help boost their production. Prior to the 1970s, the poorest members of society were seen as a bad loan option, as they had no assets so banks could not guarantee the repayment of their loans. The way bank loans work for most people, if you can't pay back the money to the bank, the bank has the right to take away key assets that you own – your car, or house for example. However, Youssaff found that the poorest members of society were creditworthy, because they needed the money so much. By giving tiny amounts – say $20 a time – he found that the very poorest people were so keen and grateful that they worked incredibly hard to ensure they could get another, slightly larger, loan next time. The Grameen Bank is the main bank for Micro finance.

2) **Aid** – this comes in many forms. The main form of aid that we read about is usually from one country to another. This is known as bilateral aid. Aid can come in the form of financial donations, in response to natural disasters, such as the £40m given by Britain to Sri Lanka after the Asian Tsunami disaster of 2005. It can also come in the form of services – the USA donates thousands of military specialists to help train Afghanistan's national forces, for example. It can also come with strings attached, which means that a country must fulfil certain objectives before being allowed the aid. Finally, aid can come from individual non-governmental organizations. These are known as NGO's, and are nonprofit making firms that seek to help in local conditions by providing relief. For example, NGO's can do anything from providing free schooling for the poor in Tanzania or installing clean-burning stove's in Guatemala.

3) **IMF and World Bank loans** – these organizations are groups of nations that get together and decide collectively to make loans available for poorer nations. These can sometimes be at a special rate. Special-rate loans from the International Monetary Fund and World Bank is known as multilateral aid.

Population

It is a striking fact that around 85% of the world's population live in developing countries. That is close to 6 billion people. In fact, there is a connection between large populations and development. Developing countries tend to have large populations for several reasons:

1. **Lack of contraception** – this means that there are more opportunities for children to be born, when this was not necessarily the intention.

2. **Lack of Education** – a lack of education can lead to a lack of understanding over how hard it is to support many children; without this knowledge, many people go on to have many children.

3. **Low marriage age** – women can get married at a very young age in many developing countries (as young as 15 in Mali and Niger) and so are able to bear children over a long period of time.

4. **Poor gender equality** – when women have work and job opportunities then they are likely to get married later in life, and can therefore have less children.

Population Pyramids: Interpreting the Data

Photo: Stuart Miles FreeDigitalPhotos.net

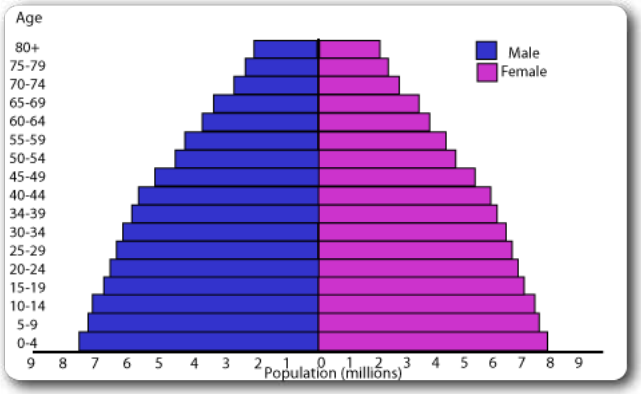
We use 'population pyramids' as a way to compare and contrast different countries' population trends. We can identify developed and developing countries using this data.

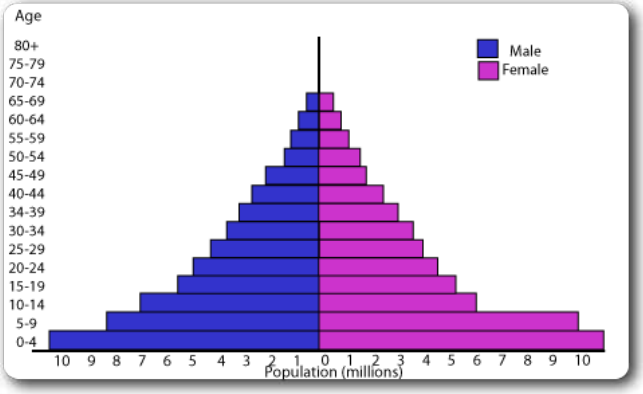
In developing countries there are high birth rates, as people need many children to either help them do manual labour (such as work on the fields) or because the likelihood of survival for all of them is low. The birth rate is calculated as the number of births per 1000 people per year. As a result, we can see that the base of the pyramid (which shows the amount of people in the age category 0-4) is very large.

However, not all of these children will survive as they grow older, due to disease, poverty and war. Consequently, we see that as we progress up the age categories, the numbers quickly get lower. We describe developing countries' population pyramids as therefore having steep sloping sides. This is indicative of a high death rate – the number of deaths per 1000 people per year.

Not only do they have steep sloping sides, but developing countries' population pyramids are also comparatively shorter than developed countries. This is because very few people live to an old age, so the oldest age categories have few people in them. Again, this is owing to poor diet, disease and general instability. We can thus say that there are low life expectancies amongst the poorest countries.

If dependents are termed as those who rely on another person for a wage, then we can identify anyone below 19 and above 60 (in general) as being a dependent. The large majority of a developing country's dependents come in the below 19 category. Finally, population pyramids show us the gender ratio. Whilst this depends from country to country, we can pull out some notable exceptions such as China which has a very high Male to Female ratio, as boys are considered more valuable than girls. This results in the population pyramid having one side 'heavier' than the other.





Developed Countries' Population Pyramids

On the other hand, developed countries have a lower birth rate, seen in the pyramid below. This is because many women work and so get married later in life, leaving less time for children. Furthermore, the widespread availability of contraception and general education mean that births are less frequent. This is shown in the population pyramid below, where the base of the pyramid is very narrow (few people in the 0-5 age bracket). At the same time, the good standard of healthcare and widespread education means that less people die of disease and poverty. At every age bracket, more people are likely to survive than die so the population pyramid has gentle curving sides; an indication of a low death rate.

Developed countries often have many ageing citizens since they have access to such good medical care. Our population pyramid shows us this as we reach very high age categories. Unlike in developing countries, we can see a large amount of people over the age of 60, 70 and even 80. There is thus a high life expectancy.

Whilst this is a very commendable thing, it does mean that developed countries sometimes face the problem of fairly high dependency ratios. With less people being born, and more people living to an older age, developed countries have a lot of people in the above 60 bracket, with less people paying tax to provide for their pensions. Gender ratios in developed countries are generally similar.

	Country A			Country B	
Age	**Population (thousands)**		**Age**	**Population (thousands)**	
	Male	Female		Male	Female
0-4	500 000	550 000	0-4	195 000	190 000
5-9	450 000	475 000	5-9	198 000	198 000
10-14	400 000	392 000	10-14	197 000	196 000
15-19	320 000	320 000	15-19	195 000	194 000
20-24	220 000	200 000	20-24	195 000	193 000
25-29	180 000	190 000	25-29	193 000	193 000
30-34	175 000	190 000	30-34	191 000	190 000
35-39	200 000	240 000	35-39	188 000	186 000
40-44	120 000	180 000	40-44	186 000	185 000
45-49	100 000	110 000	45-49	184 000	185 000
50-54	91 000	100 000	50-54	175 000	179 000
55-59	72 000	86 000	55-59	172 000	175 000
60-64	59 000	62 000	60-64	166 000	169 000
65-69	42 000	38 000	65-69	163 000	165 000
70-74	20 000	34 000	70-74	160 000	159 000
75-79	6 000	14 000	75-79	155 000	157 000
80+	1 000	3 000	80+	149 000	152 000

Grab a Pen!

Using the data fill in the population pyramids for the following two countries. Describe their general characteristics and which you feel is more developed. Be careful to explain your answers thoroughly. [8]

Changing Times: The Effects of Population Growth

Populations around the world are growing. This is not necessarily a bad thing, depending on where we are in our economy. To an economist, overpopulation occurs when the resources available are not enough to sustain the population. Underpopulation on the other hand, suggests that the resources available in the country are not being used because there are not enough people to do so. This is thus a form of inefficiency as we could be making more things. Economists believe that optimum population is the most desirable point in a society – this is where the resources of a country are being used effectively, compromising future generations as a result. Resources and population are in equilibrium. Our aim is therefore to be at optimum population with sustainable development.

An overpopulated country can face many difficulties. Have a look below at some of these:

1. **Scarcity**: Resources will become scarce, and as a result prices in an economy will skyrocket. Imagine, for example, there were too many people in your country for the amount of water that was around. How much would you pay to get your water? How much would everyone else pay? Suddenly, you would find yourself spending all your money trying to ensure that you received the basic needs mentioned in Unit 1.

2. **Unsustainable development** - Overpopulation causes unsustainable development as we are using more resources than is beneficial for future growth. For example, if our country was overpopulated and we cut down all the trees, then there would be no way of producing tree-based products in the future.

3. **Social Costs** - Furthermore, the loss of key resources may disrupt the natural order, causing high social costs. In this example, without trees, pollution would increase, which would lead to worsening health. The government has to pay more money to public services, causing less money to be available for other projects; a high opportunity cost.

Underpopulation causes problems too though.

1. **Poverty Trap** - In this case, if a country is not using enough of its resources it may become stuck in a poverty trap. This is when there is not enough money being generated in the economy. Whilst this may not seem like a bad thing as long as people are happy, if they are not happy, there is very little way for them to break out of the trap. If there is little demand and supply in the country then there will be low wages, making it hard to be innovative and set up new enterprises. This therefore leads to low demand and supply… or what we can call a Poverty Trap.

2. **Vulnerability** - countries that are comparatively worse-off than other countries are therefore more vulnerable to exploitation from other countries.

3. **Lack of choice** - Underpopulated countries will also have a lack of access to goods and services as they will not be able to afford more expensive products from abroad. This thus means their people are worse off.

Why develop?

Finally we need to understand what benefits countries gain from seeking to develop This may seem like a silly question, but it cuts right to the heart of development economics:

1) **To enjoy better standards of living** – no one wants to be ill when they can be healthy, or to work long hours when they can work short hours. People in developing countries often work long hours in labour-intensive jobs, often under a hot sun. Examples include harvesting and farming. Similarly, in developed countries, farmers do not have to toil under the same circumstances; technology and research has enabled them to work shorter hours.

2) **To enjoy greater choice** - If we increase people's incomes, they will then be able to start buying the goods that they want. When you have a very low income, you can only afford goods necessary for survival; all your money goes on food, clothing, warmth, water and shelter. With higher incomes you can afford all this and any other goods you feel may increase your satisfaction of life – books, TVs, cars etc.

3) **To increase government revenue** - people in developed countries have high incomes and so pay more money to the government. The government can then use this money on providing better roads or education or anything else. However, the government in a developing country does not have this ability as it receives hardly any tax revenue from its poorly paid citizens.

Drawbacks to Development

Nevertheless, there are also drawbacks to development.

1. **Development and GDP are generally tied together.** An increase in GDP though can lead to greater opportunity costs and greater social costs. Factories that did not previously exist, will now start buying up vast tracts of land, leading to a loss of natural habitat and an increase in pollution, for example.

2. **Developing must also mean that we use up our resources.** Rather than conserving them, we begin to use minerals and resources that previously we had in abundance. This creates a greater dependency on these items, which may not be sustainable for the future.

3. **Loss of culture** – if development is modelled on another country's version of success, then it can lead to a loss of culture and identity. Many Central American countries have found that their old beliefs and practices (shown above) have been eroded, to be replaced by MacDonalds' and Burger Kings instead.

Why do some countries remain less developed?

There are many reasons why certain countries are prevented from reaching higher levels of economic development. This varies from country to country and often the effects of each barrier to entry are greater in some countries than others.

Firstly, we can cite geographical factors for continued underdevelopment. Countries that find themselves cut off from trade routes – either because of a lack of access to the sea, or because of mountain rages or inhospitable climates – generally attract less investment than others. Indeed, geographical factors often lead to poor transport and communication services. Economists believe that infrastructure is key to development as it makes the spread of ideas and goods much easier. A company that sells fizzy drinks may want to sell to people high up on a mountainside, but will refrain from doing so if it is too expensive to get up there.

Other reasons why some countries remain less developed can simply be because there isn't much to develop in the first place! Countries that do not have any natural resources, such as minerals, coal or oil, generally do not have an absolute or comparative advantage in anything (these terms will be considered in the next unit). As a result, they have nothing to offer and receive little income from abroad. This is not necessarily true of every country though; some countries that have little resources have still built up in other innovative ways – such as a tax-free banking system (the Bahamas, for example).

Human factors also play a large role, however. In many countries, the effects of colonization were felt a long time after European colonizers left; tribes that were previously enemies but made to work together during colonization found themselves enemies once more, after decolonization. Furthermore, a lack of preparation for democratic systems in many developing countries meant that politicians were able to practice much corruption.

As a result valuable resources were either mismanaged or simply lined the pockets of a few wealthy individuals. The King of Swaziland, for example, has a private jet whilst many of his citizens live with wages of under $1 a day.

It is for these reasons that solutions to poverty are seen as desirable, though they too have their drawbacks, as we have already seen.

Chapter Review

Multiple Choice [1 mark each]

1. Look at the table below. Which country could suitably be identified as the least developed country?

	Population	% employed in Primary Sector	Birth rate
a.	200m	72	923
b.	150m	22	155
c.	255m	30	740
d.	50m	2	100

2. Look at the following population pyramid. From this information we can conclude:
   a. The death rate is higher amongst females than amongst males
   b. Life expectancy is low
   c. The country's total population is just below 8million people
   d. This country is a fairly developed country

3. Despite having a very high GDP, some countries are still classed as developing. What can be inferred from this information?
   a. The country produces poor quality goods
   b. Corruption is a major problem in the country
   c. A few people produce all the goods and the rest suffer
   d. The HDI has not worked properly in this country

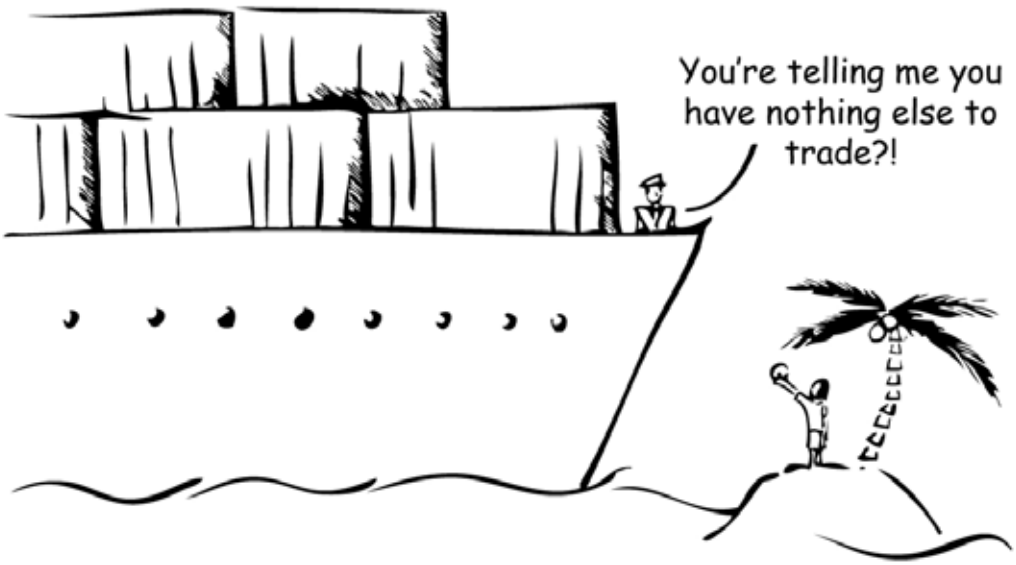
Short Answer Questions [1 mark each]

1. Give one reason why a country should conserve its resources.
2. Describe a population pyramid belonging to a developing country.
3. What is the main cause of poverty?
4. How are population and development linked?
5. Name three solutions to development.

Long Answer Questions [8 marks each]

1. 'Microcredit is definitely the best method for alleviating poverty'. Discuss.
2. 'The quest for economic growth and development usually involves greater costs than benefits.' Discuss the validity of this argument.
3. Population growth has both benefits and drawbacks. Explain why.

Unit 8 - International Trade



So far we have looked macroeconomics from a domestic viewpoint. In reality though, trade plays a crucial role in a country's economic health. Aggregate Demand reflects this because in the formula C+I+G+(X-M) the brackets represent the amount of money received and spent in trade. X stands for Exports, whereas M stands for Imports. If these change, so does Aggregate Demand.

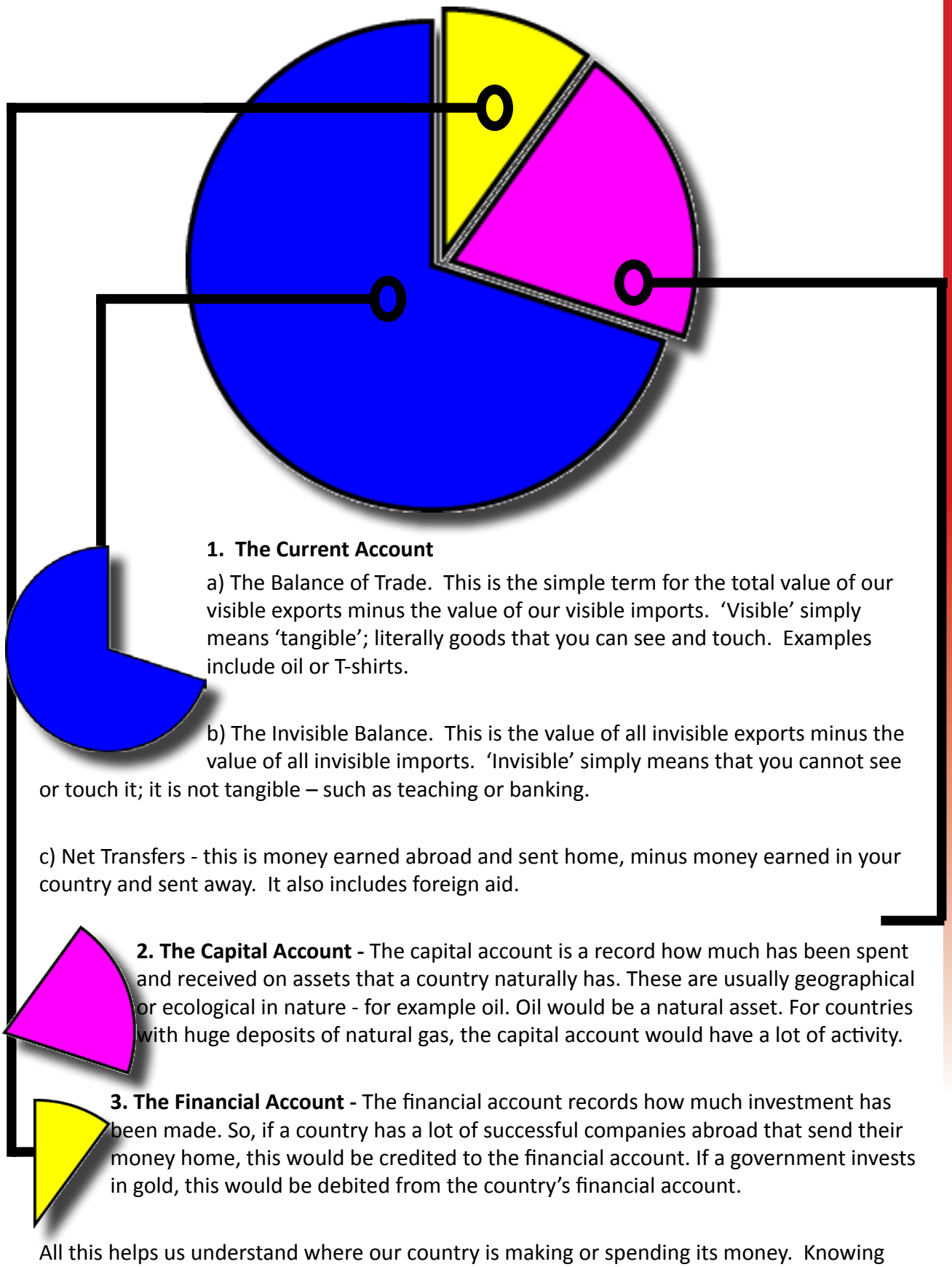
There are some basic ideas we first need to understand. To begin with, we call any form of trade a 'transaction'. We must then realize that when we sell goods to other countries, we call these exports and when we buy goods from other countries, we call these goods imports.

Obviously though, we don't usually trade goods in return for goods. We trade money for goods. Money gained from exports are known as credits, money spent on imports are known as debits. Our credits minus our debits give us our **Balance of Payments**: it is the value of all our trade transactions in a certain time frame.

However, the Balance of Payments is pretty vague – we want to know where this money was spent or received. We therefore group certain trade transactions into one of three accounts and each of these accounts is also divided up. We will consider these accounts on the next page.

The Balance of Payments

The Balance of Payments is split into the following accounts:



1. The Current Account

a) The Balance of Trade. This is the simple term for the total value of our visible exports minus the value of our visible imports. 'Visible' simply means 'tangible'; literally goods that you can see and touch. Examples include oil or T-shirts.

b) The Invisible Balance. This is the value of all invisible exports minus the value of all invisible imports. 'Invisible' simply means that you cannot see or touch it; it is not tangible – such as teaching or banking.

c) Net Transfers - this is money earned abroad and sent home, minus money earned in your country and sent away. It also includes foreign aid.

2. The Capital Account - The capital account is a record how much has been spent and received on assets that a country naturally has. These are usually geographical or ecological in nature - for example oil. Oil would be a natural asset. For countries with huge deposits of natural gas, the capital account would have a lot of activity.

3. The Financial Account - The financial account records how much investment has been made. So, if a country has a lot of successful companies abroad that send their money home, this would be credited to the financial account. If a government invests in gold, this would be debited from the country's financial account.

All this helps us understand where our country is making or spending its money. Knowing this, we can attempt to improve our balance of payments if it is worsening. We use these terms when talking about our balance of payments. See it as a large spreadsheet governments can refer to when analysing their transactions.

Problems with the Balance of Payments

When the value of our imports is greater than the value of our exports then money is leaving the economy. The Balance of Payments is worsening and we have what is known as a Balance of Payments deficit. Clearly this is a problem. To deal with this, we need to either reduce our imports or increase our exports. This can happen in the following ways:

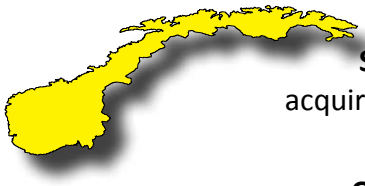
A **Inflation** - if we decrease inflation in our country, people will want our goods as they will be comparatively cheaper.

B **Interest Rates** - by increasing interest rates, people should spend less - if they were previously buying imports, this will be a good thing for the deficit.

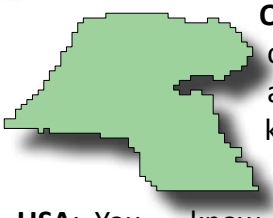
C **Exchange Rates** - causing our exchange rate to change can cause imports and exports to change (this will be considered later).

D **Protectionism** - these are interventionist measures the government undertakes to stop imports entering the country (this will be considered later).

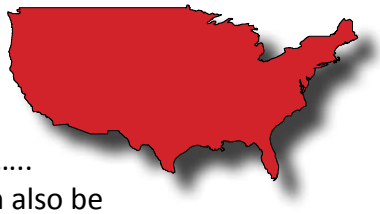
But let's take a step back first to consider why countries want to trade in the first place, before returning to the ideas above.



Sweden: Unfortunately for us, coconuts do not grow here. We trade to acquire exotic goods and unobtainable machinery to help our economy grow.

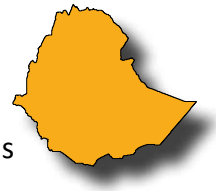


Qatar: There are only 1.7 million people in our country but we have a lot of oil. What's the point of keeping all this oil and not selling it to people abroad who will pay good money? The United States needs our oil, why keep it to ourselves? We need to reach larger markets.



USA: You know, you can really cut costs if you trade. For example, our big companies buy their raw materials from abroad, cheaply, which means there are cheaper goods for our consumers. Take Apple for example – they buy metal in China, labour in India, ….. and sell their goods in dozens of countries. Economies of scale can also be found abroad as it allows our companies to grow to new, larger, sizes.

Thailand: We found that it was ideal to trade with Singapore. Singapore produced more mobile phones than us with the same resources, and we produced more mangoes than them with the same resources. So we decided to just specialize in what we had an absolute advantage in, and then just trade the rest. It works for both of us.



Ethiopia: We do not have an absolute advantage with our trading partners Tanzania at all. However, we have found that it is still beneficial to trade. This is because we have comparative advantage (this is explained below)

Malaysia: Surely the more people we trade with, the more people rely on us. As a result, who would want to risk any politically destructive strategy with our country when they need our goods? Trade leads to political harmony and political harmony leads to peace. As the saying goes, 'keep your friends close, but your enemies closer!'

The Theory of Absolute Advantage Explained

One reason why countries trade is due to the idea that output and profits can be increased by doing so. This is reflected in the Theory of Absolute Advantage as well as the Theory of Comparative Advantage (seen after absolute advantage).

By using a two-country scenario, we can attempt to explain how this works. Let's take Absolute Advantage first. Imagine Germany and Holland are looking to trade with one another. To make it easy, we are assuming that there are only two goods to look at: cars and computers. For simplicity's sake, we are also assuming that both countries have 50 workers working on each product. We can draw this information into a table, as below.

	Cars	Computers
Germany	60	200
Holland	40	250
World Output	100	450

It is clear from the information available to us, that Germany uses the same amount of workers as Holland to produce more cars. We thus say they have an absolute advantage in cars. Similarly, Holland uses the same amount of workers to produce more computers. Holland therefore has an absolute advantage in computers. The combined amount of cars produced is 100, whilst the combined amount of computers is 450.

What we can conclude is that each country should switch all production into the good which it produces more of, with the same resources. For Germany this would mean moving all their computer workers over into car manufacturing, and for Holland, moving all their car workers over to computer manufacturing. With double the workers – and assuming that the Law of Diminishing Marginal Returns does not apply – each country should be able to double their output. The new production figures would look as they do below:

	Cars	Computers
Germany	120	0
Holland	0	500
World Output	120	500

Clearly, by specialising in the good which they have the absolute advantage in, world output has increased. Before there were 100 cars in our hypothetical example, now there are 120. Before there were 450 computers, now there are 500. World output has increased, and now the countries should be able to trade to acquire what they want. After trade, output may look like it does below, if they decide on a 50:50 split.

	Cars	Computers
Germany	60	250
Holland	60	250
World Output	120	500

Absolute advantage shows us then that greater output and profits can be achieved, and is a good reason for trade.

Comparative Advantage

Imagine, however, if one country had an absolute advantage in both products. Take a look at the example below (again let's assume each country has 50 workers on each product)

	Coffee	Pineapples
Kenya	100	200
South Africa	150	600
World Output	250	800

It is evident that South Africa produces more coffee and more pineapples than Kenya, whilst using the same amount of resources. They have an absolute advantage in both products. Nevertheless, the theory of comparative advantage tells us that these two countries should still trade! The reason for this lies in the opportunity cost of transferring resources.

In our example above, if South Africa decided it wanted to specialize in coffee the opportunity cost would be the 600 pineapples they give up. In fact, to produce one extra ton of coffee, they give up 4 pineapples as the opportunity cost ratio is 600/150=4.

On the other hand, if Kenya wanted to specialize in coffee, they would only give up 200 pineapples. They face a lower opportunity cost than South Africa. To produce one extra ton of coffee they only give up 2 pineapples as their opportunity cost is 200/100 = 2. It is thus much easier for Kenya to specialize in coffee .

However, if we now look at switching from coffee to pineapples, we see that South Africa has the comparative advantage. This is because they lose less by switching into pineapples. Again we can work out the opportunity cost: for Kenya it is the 100 coffee tons given up, divided by the 200 pineapples gained (100/200 = 0.5). For South Africa it is the 150 coffee tons given up, divided by the 600 pineapples gained (150/600 = 0.25). South Africa faces a lower opportunity cost of switching into pineapples.

Let's now see what happens when, having worked this out, the countries specialize in the products with comparative advantage:

	Coffee (tons)	Pineapples
Kenya	200	0
South Africa	0	1200
World Output	200	1200

What we see is that total world output for coffee actually falls, whilst total world output for pineapples rises dramatically. Combined world output rises though: previously it was 250 tons of coffee and 800 pineapples which is a combined world output of 1050, whilst now it is 200 tons of coffee and 1200 pineapples, which is a combined world output of 1400.

Comparative Advantage (continued)

Knowing that world output has increased, the countries may trade again. They will trade on whatever terms are favourable. In our example, they have split the coffee 50:50 but shared out the pineapples differently.

	Coffee (tons)	Pineapples
Kenya	100	500
South Africa	100	700
World Output	200	1200

If either country now feels it has too many pineapples, it is free to sell these on to another country. Comparative advantage is therefore the idea that countries should trade when one country has a lower opportunity cost of transferring its resources compared to another, as this allows for specialization and greater world output.

Free Trade vs Protectionism

So far we have been examining strong reasons for trade. It would seem as though countries are better off by trading. But there is a negative side to trade. We try and correct these problems by using protectionist policies. These are aimed at intervening to either reduce imports or boost exports. This obviously therefore reduces trade. Firstly then, let's examine the negative aspects of trade.

- It can lead to overspecialization and structural unemployment - It creates an economic domino effect if one country has any type of natural disaster.
- It does not encourage self-sufficiency in times of hardship.
- Small domestic firms cannot compete with international global giants.
- It can increase unemployment if a country has no absolute or comparative advantage.

These are very real problems that countries incur. As a result they undertake protectionist policies. There are four different types of these, as shown below.

1. **Subsidies** – this is when a government seeks to stop imports by making domestic goods cheaper. They do this by giving money to small domestic firms. This protects them from large companies that can create economies of scale through trade. As a result, in theory, both domestic producers and consumers are better off, and perhaps – because of the low prices – exports will also rise. It is also known as the 'infant industry argument'.

Advantages: Consumers receive low prices, producers can increase supply

Disadvantages: Hard to identify which industry to invest in to begin with. Consumers may have to buy a lower quality good. There's no guarantee the small firm will grow anyway. Government has to pay.

2. Exchange Rates – by fixing the value of your currency, you can make your goods cheaper and therefore stop people from buying goods from abroad. This will be considered later.

3. Quotas – this is when the government sets a physical limit on the amount of imports allowed into a country. For example, the UK could say 'we're only allowing in 30 000 umbrellas'. Once those are bought, everyone else has to buy domestic alternatives.

Advantages: Allows young industries to compete, without blocking out all foreign firms. Costs nothing.

Disadvantages: Assumes that there are domestic alternatives. What if there were no UK umbrellas? Hard to set the right number – too much and it won't work, too few and there may be shortages.

Free Trade vs Protectionism (continued)

4. Tariffs – this is simply the term we use for a tax on imports. For example, if the UK wanted to use protectionist measures in the strawberry industry, they could tax foreign firms 20% on every strawberry packet sold. Foreign prices are therefore higher, leading consumers to buy the domestic goods instead.

Advantages: Easy to put into practice. Generates government revenue which can be used for subsidies. Allows consumers to continue buying foreign goods if they are far superior.

Disadvantages: Leaves us open to retaliation – where opposite governments just do the same to our exports.

5. Embargoes – this is just a complete ban on a country's exports. Examples would include countries that are at war (in the 1920s the equivalent of the UN tried to put an embargo on oil against Italy for their invasion of Abyssinia). Another example may include when the President of Uzbekistan banned all cigarettes after he was told to stop smoking… just incase it reminded him of it! It has the result of completely halting any incoming imports.

Advantages: Immediate boost to the balance of payments.

Disadvantages: Is too quick for domestic industry to step in and leads to shortages. Usually is followed by retaliation and political ill feeling.

Grab a Pen!

Create a step-by-step comic strip illustrating the story of Snowistan – a country that used to trade freely with its neighbours Coldania and Winterland. Create a scenario where Snowistan found that it did not want to trade with Coldania, and why – despite producing more goods than Winterland in all areas – they continued to trade with them.

Questions for Review

Multiple Choice [1 mark each]

1. Protectionism may lead to
    a. A decreased budget deficit
    b. Government revenue
    c. Government debt
    d. All of the above, dependant on the type of protectionism

2. Comparative advantage
    a. Leads to greater world output
    b. Leads to the creation of an absolute advantage
    c. Reduces world trade
    d. Is a form of protectionism

3. A surplus on the current account means
    a. A balance of payments surplus
    b. Visible exports have increased or visible imports decreased (in volume)
    c. Visible exports have decreased or visible imports decreased (in value)
    d. Visible exports have increased or visible imports decreased (in value)

Short Answer Questions[1 mark each]

1.. What is the difference between the balance of trade and the balance of payments?

2. Examine where each of the following items should appear in the balance of payments (assume the first country mentioned is the 'home country')
    a. Italy buys 3000 euros worth of cabbages

    Answer: Visible import on the current account for Italy (-E3000)
    b. The UK sells 50million pounds worth of teacher training skills
    c. Kenya sells 10% of its coastline to China
    d. An Indian worker, working in the UK sends $10 000 wages back home.
    e. The US firm MacDonalds opens up in Australia, making $40 000 profit
    f. A Hong Kong worker makes $1000 from dividends on his shares abroad
    g. Holland sells 300 000 clocks abroad.

3. If Mali had neither an absolute nor a comparative advantage in trade with Sweden, why might they still want to trade with Sweden?
4. How could it be argued that the producer, consumer and government benefit from trade?
5. How does a country's balance of payments worsen?

Long Answer Questions [6 marks each]

1. "Clearly, if we have a current account deficit, our balance of payments will wors en'. Do you agree?
2. A country is looking to boost its domestic production of cotton. It is deliberating between a quota and an embargo. Explain which you think will be best.

Exchange Rates

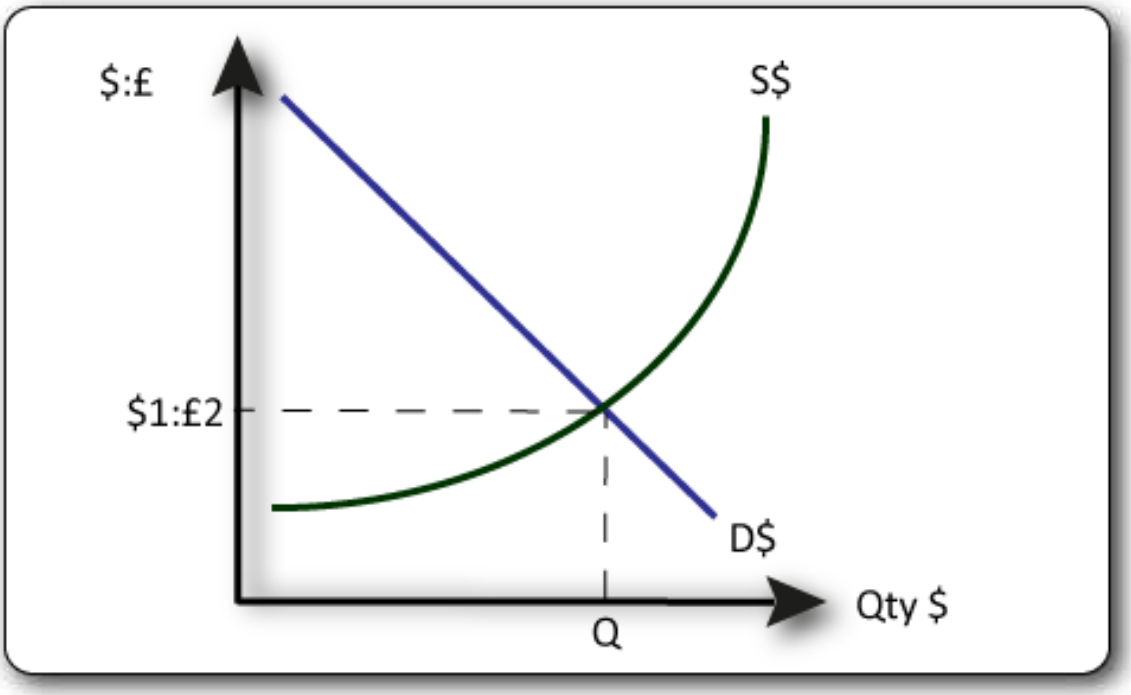
Exchange rates have already been mentioned as a way to correct a balance of payments deficit or to boost exports and reduce imports. Now we are going to consider how. Before we do so, there are several important considerations to take into account.

- We refer to the country we are discussing as 'the home country'. It is for this country that diagrams are drawn.

- Macroeconomic Exchange Rate Diagrams are different – exchange rate diagrams are about currencies. Label your X axis as Quantity of home currency and your Y axis with the home currency first, and the other country's currency second. E.g. $:E (this would mean dollars in terms of Euros and that the USA was our home country)

- The global supply of your currency slopes upwards, unlike with domestic supply of money. This is because a country cannot control all of their currency round the world. Supply is therefore not fixed.

- It is always easiest to label equilibrium as 1:2. The initial number will always be 1. We shall see why later.



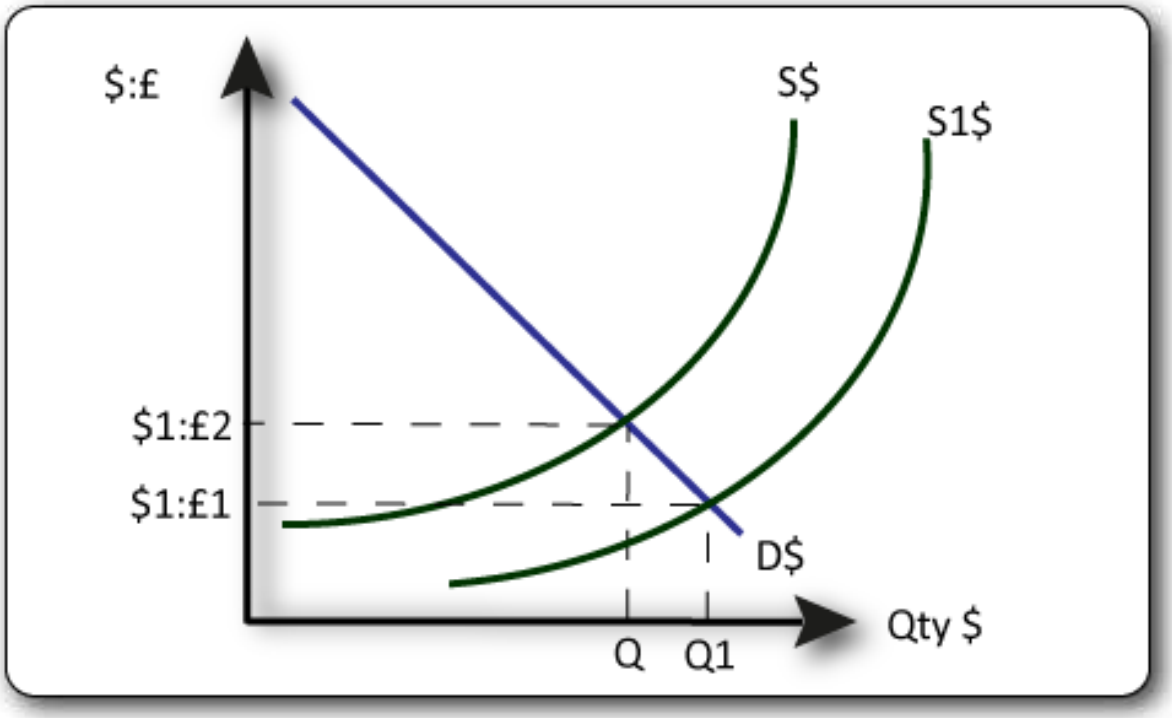
Exchange Rates continued

What, however, is an exchange rate? Put simply, it is just the price of one currency in terms of another currency. Or how valuable one currency is compared to another. There are therefore thousands of exchange rates – dollars to pounds, pounds to shillings, rupees to roubles, yen to colones. That is why we write it as $:£ (for example) - the colon simply means 'in terms of'. By doing this, we can see how many pounds we can get for our dollars.

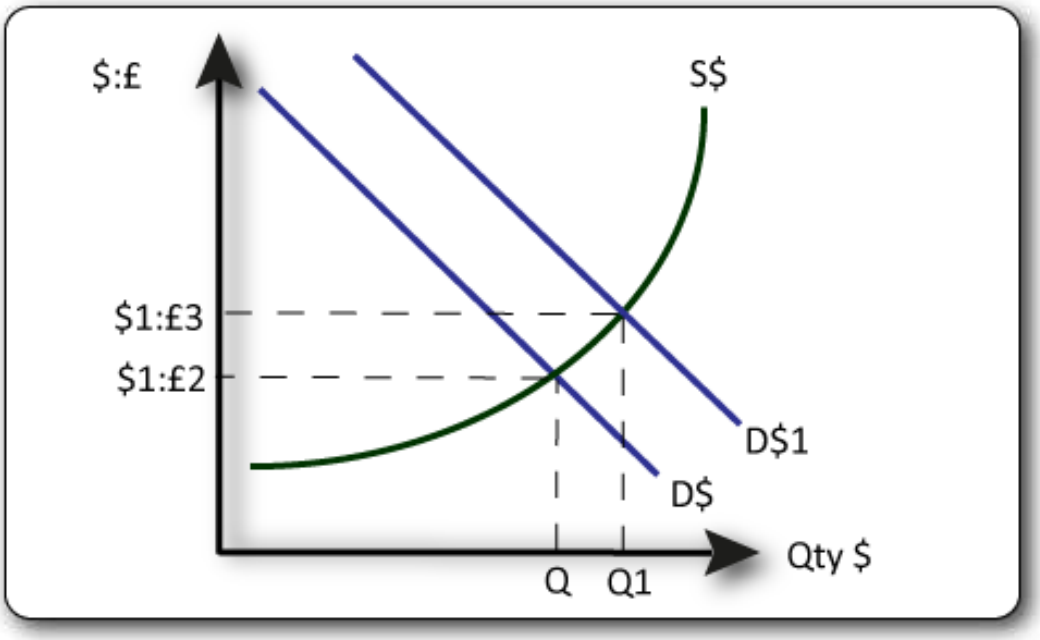
What does this have to do with trade though? Well, imagine we are the USA – our currency is the dollar– and we are trading with the UK (whose currency is the Pound Sterling). We ask for two hundred jars of the finest UK jam. They agree. So we offer them ... what?

We obviously have to offer them Pounds as they have no desire for our dollars. We therefore have to first change our dollars into pounds. We can show this on a diagram. Since our 'home country' is the USA, dollars come first in our Y axis, and Demand, Supply and Quantity are all of dollars. To buy the jam, let's consider what we have done. We first needed to buy the Pounds. Demand for Pounds increased, but this cannot be shown on our diagram, since it shows Demand and Supply of dollars. What did we buy the Pounds with though? Dollars ! So we supplied more Dollars to get the Pounds. This is shown as a shift in supply of Dollars: S$-S$1. Look at what this has done to the value of our currency. It has fallen.

When talking about falling currencies we use the word depreciate. We can say there has been – in this case – a depreciation of the US currency. If a currency rises in value, we say it has appreciated. Appreciations and depreciations happen naturally and for several reasons. They can be due to demand or supply of our currency.



What causes exchange rates to change?



In the news we are forever seeing headlines such as 'China's currency set to fall against the dollar' or 'Britain forecasts appreciation of the pound'. We know what these now mean, but we still need to understand why they change.

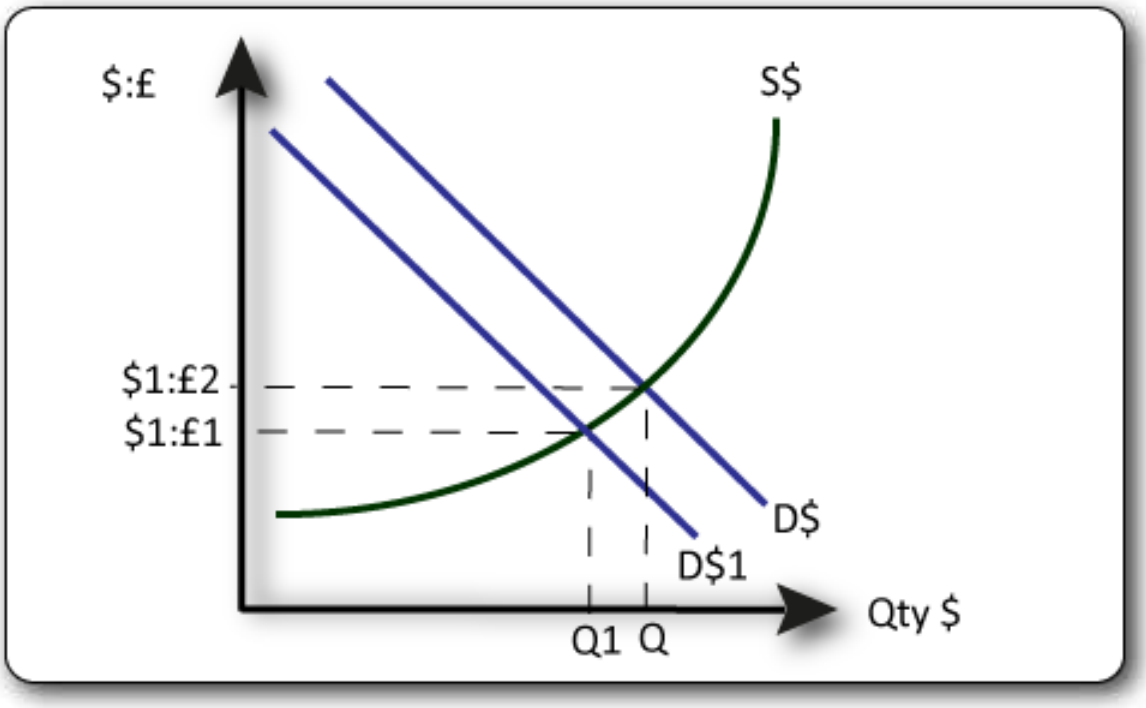
The Speculator - speculators make money from buying currencies at a low value, in the hope that they will rise. When high, they then sell them and earn a handsome little profit. Famous examples include Warren Buffet.

The Balance of Payments - the more you import, the more you supply your currency and demand other currencies, whilst the more you export the more your currency is demanded and the more a foreign currency is supplied. This causes appreciations or depreciations.

Interest Rates – If interest rates are high, we see foreigners buying up our currency in order to save their money in our banks (as it gives them more money in the long-term). However if they are low, people may supply our currency in order to save abroad.

Domestic Prices – rising prices in our home country mean that countries abroad will stop buying our goods as they are now more expensive. We will therefore see a fall in exports, a worsening balance of payments and a deteriorating exchange rate (and vice-versa). In fact, anything that causes domestic prices to rise (or fall) will have the same effect.

Effects of a depreciation



Look at the above diagram. There has been a depreciation of the dollar. Before, 1 dollar was equal to 2 Pounds. That meant, to buy a good from the UK that cost £20 Pounds, an American only had to pay $10 dollars. Now, the exchange rate is 1:1. This means to buy that same £20 good, the American must pay $20. It is harder for him to buy UK goods, so he buys less in the long term.

Simultaneously, the UK resident previously had to spend £2 pounds to buy a good worth $1 dollar. Now, he only has to spend £1 pound to buy that same good. Surely he will therefore buy more American goods in the long-run.

In the long run, the exchange rate should balance out because a depreciating exchange rate will ultimately lead to cheaper goods, so demand for that currency will rise, causing the exchange rate to appreciate again...which makes that countries goods more expensive... causing demand for their currency to depreciate... and the cycle begins again!

Effects of an appreciation

On the above diagram, an appreciation would be shown if we went from DS1 to D. In this case, the dollar would be getting more expensive relative to the pound.

Different Exchange Rates

We have so far been assuming that currencies operate under supply and demand – or market forces. However, there are actually 4 different types of exchange rates.

1) The Floating Exchange Rate

This is the type we have looked at so far: Currencies are free to appreciate or depreciate as high or low as market forces determine. (illustrated with first diagram, below)

2) The Fixed Exchange Rate

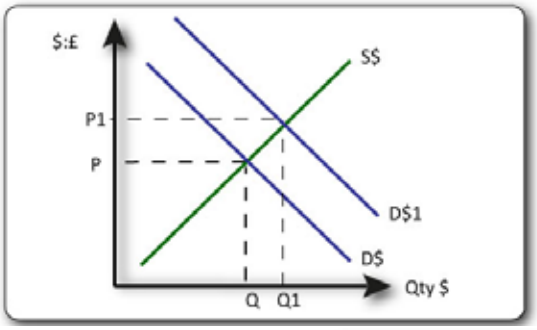
This is the opposite to the floating exchange rate. The government decides the value of the currency in relation to all other currencies and intervenes continuously to make sure it stays at this value. For example if Cuba fixed their exchange rate at 1:1 and it appreciated, the Cuban government would have to supply more of their currency onto the market to make sure it depreciated again. When governments intervene to make sure the value of a currency stays low, this is known as a devaluation (not a depreciation), and when they intervene to increase the value of the currency then this is known as a revaluation (not an appreciation). This helps economists distinguish between natural market forces and government intervention. (illustrated with last diagram below)

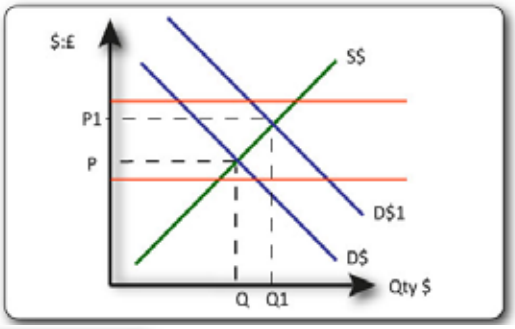
3) The Managed Exchange Rate

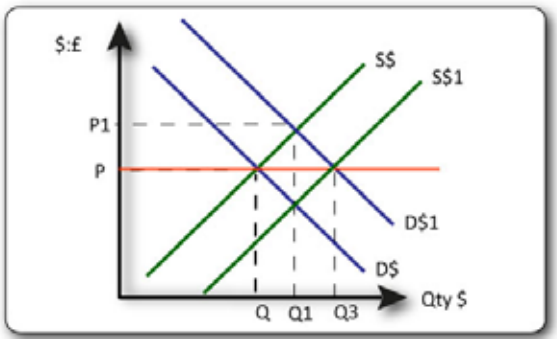
This is a mixture of the fixed and floating exchange rates. What happens here is 'boundaries' or 'upper and lower limits' are set on a country's exchange rate by a government. Within these limits the exchange rate can appreciate and depreciate, but the government steps in when these limits are reached in order to maintain stability for the currency. (second diagram)

4) The Pegged Exchange Rate

This is when the government decides not to set its own currency value but to just follow the exact appreciations and depreciations of another currency. For example Panama has a pegged currency to the US dollar so when the US dollar appreciates by 10% relative to the UK pound, then so does Panama's currency.







Chapter Review

Multiple Choice [1 mark each]

1. What is an exchange rate?
    a. The value of different goods in a country
    b. The value of one currency in relation to another
    c. The value of one currency in relation to inflation
    d. The value of a good in relation to a currency

2. What does 'the dollar is getting stronger' mean?
    a. An appreciation or revaluation
    b. An appreciation or devaluation
    c. A depreciation or revaluation
    d. A depreciation or devaluation

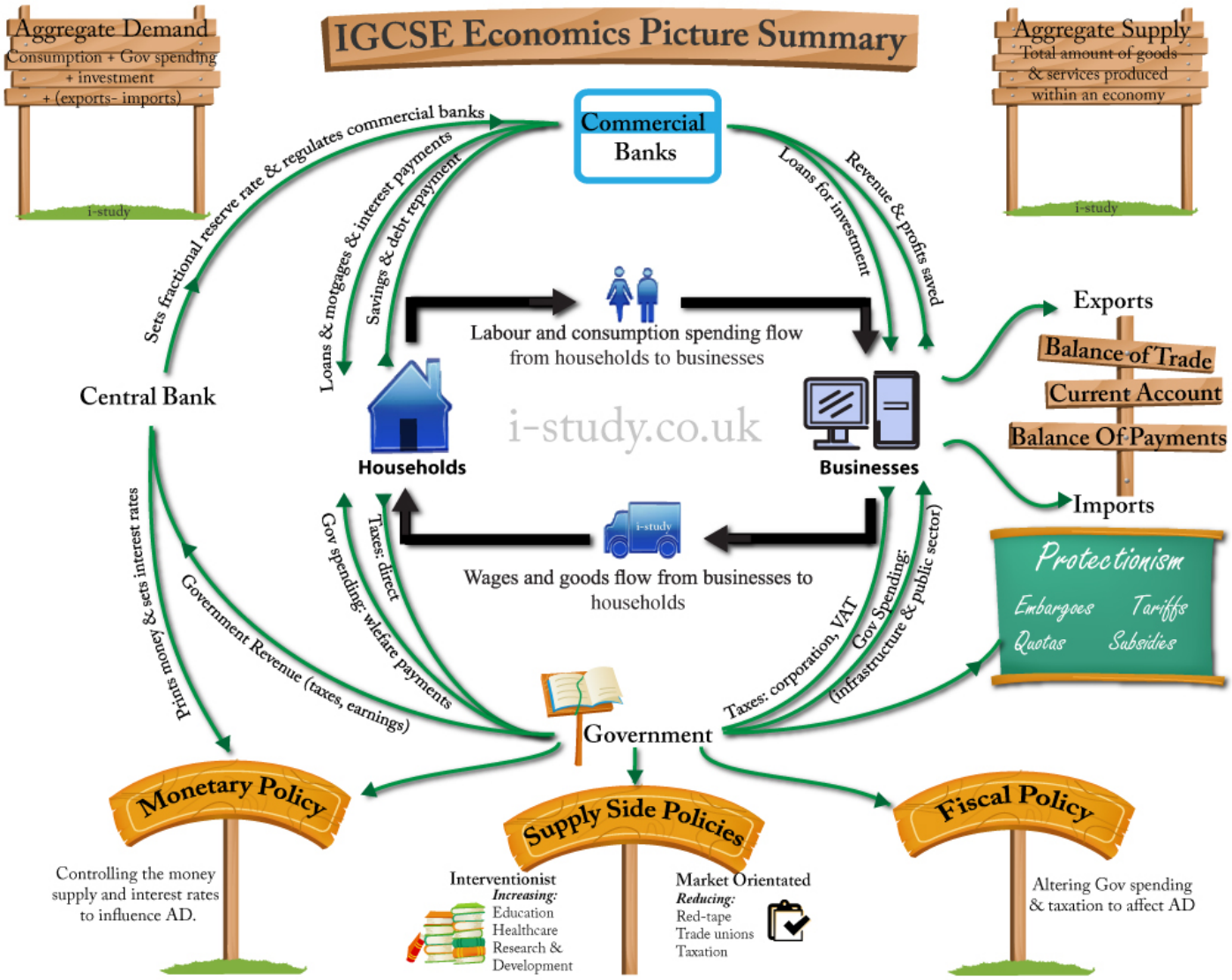
3. Which form of protectionism does not seek to change import prices?
    a. Tariffs
    b. Quotas
    c. Subsidies
    d. Embargoes

Short Answer Questions [1 mark each]

1. Name the currencies of the following countries
    a) The United Kingdom b) Russia c) Germany d) China e) Japan
2. What can we tell about the impact of buying imports on our currency?
3. What can we tell about the impact of selling exports on our currency?
4. What is the difference between a depreciation and a devaluation?
5. Name the four exchange rates and list them in 'market-force' order.

Long Answer Questions [6 marks each]

1. Explain, using a diagram, how the UK's government could intervene if their currency (Pound Sterling) depreciated below set limits.
2. Illustrate on two macroeconomic diagrams (Domestic and International) the short term effect of an appreciating exchange rate owing to increased demand for Italian cars.
3. Until as recently as the 1970s many currencies had an exchange rate that was linked to gold. This was known as 'the Gold Standard'. Each currency had an exchange rate that was set to gold. Using your knowledge of economics, come up with arguments as to why this was not really sustainable in the long term.
4. 'Exchange rates are the ideal form of protectionism'. Is this true?
5. Using two diagrams – one for Italy and one for the USA – explain the effect on the two currencies of increased exports of American sugar. Mention:
    a. Exchange Rate effects for both countries
    b. Balance of Payments for both countries
    c. Macroeconomic effects for both countries (price, real GDP, employment)



Grab a Pen!

Using ALL of your knowledge of economics, design a poster showing how all units of the IGCSE economics course are inter-related

Worksheets

Contents

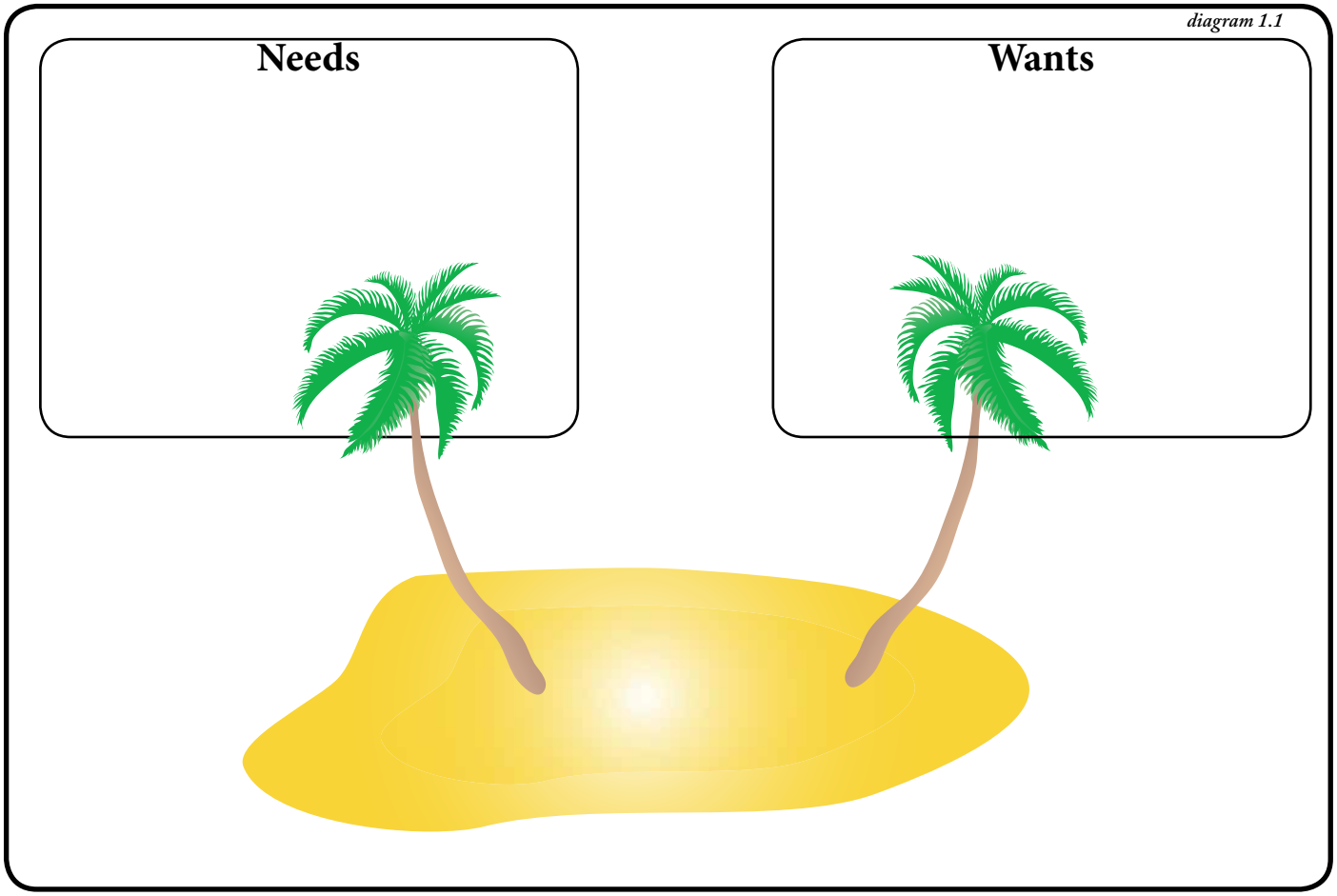
The Basic Economic Problem

w/s 1.1

1) Consider the following scenario and fill in the boxes in the diagram below. (4 marks)

You are stranded on a desert island. What are you needs for survival? What would you want to have with you if you could to make the stay more comfortable/endurable?

diagram 1.1



In the above scenario you have a few available *resources* such as wood, fish, sand, salt water. Some of them are obviously limited in their supply and so could be considered *scarce*.

2) In your own words define the following terms: (4 marks)

a) needs

b) wants

c) resources

d) scarcity

In the real world we have the same scenario. Billions of people have basic needs for survival, they also have unlimited wants/desires. The planet has a limited supply of resources which we can use to satisfy these needs and wants. We have to choose how to best use the resources, this is the *Basic Economic Problem*.

The Factors of Production

w/s 1.2

To produce goods and services the ***factors of production*** need to be allocated accordingly. If the business gets this aspect wrong it is likely to be uncompetitive and eventually go out of business. Setting up a business is always a ***risk*** but the reward for getting it right is the ***profit*** the business makes.

1) The four factors of production are: (4 marks)

a) b) c) d)

2) Identify whether the following industries are likely to be land, labour or capital intensive. (8 marks)

a) A cattle farm _____

b) A modern car factory _____

c) A hairdressing salon _____

d) A bank headquarters _____

e) Intensive market gardening (greenhouses) _____

f) Googles main offices _____

g) Harvest time in a coffee plantation _____

h) Harvest time on a wheat farm in the US _____

3) Explain why a car manufacturer may decide to replace workers with capital on its production lines. (4 marks)

_____

_____

_____

_____

_____

_____

_____

_____

3) In economics a computer bought by a firm for its account keeping is classified differently to a computer bought by an individual for playing games and surfing the internet. Explain why. (3 marks)

4) Discuss how firms and governments can try and make the labour force more productive (6 marks).

The costs of Factors of Production

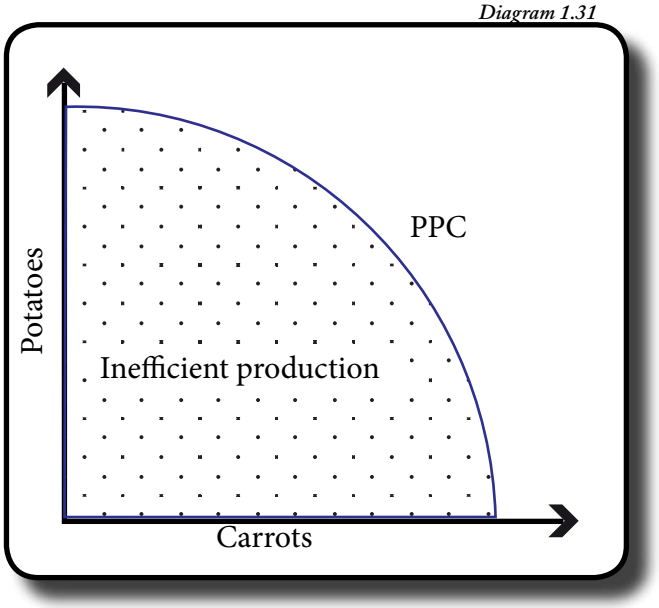
The cost of labour are the wages/salary, the cost of land is the rent and the cost of capital is interest.

Production Possibility Curve

w/s 1.3

The ***Production Possibility Curve*** (PPC) is also sometimes called the ***Production Possibility Frontier*** (PPF). It is a diagram that shows the potential output of the economy if all the ***factors of production*** are being used in their most efficient way. In economics we simplify output/production to two variables.

Diagram 1.31

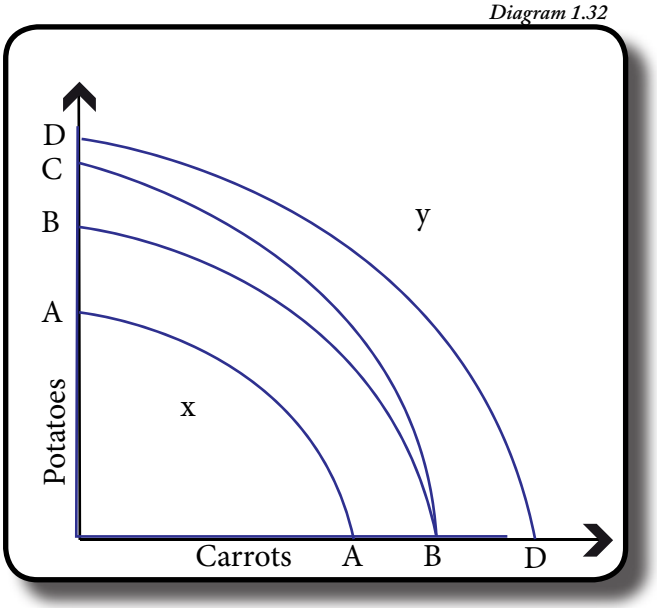


Production to the left of the line represents under-used factors of production such as land not being used or unemployed people.

Most countries output is at a position slightly inside the line since in the real world there are virtually always some under-used resources.

It is possible to shift the whole curve to the right through:
- an increase in the factors of production.
- new technologies or production methods.
- increases in the quality of the factors of production.

Diagram 1.32



1) Use the diagram on the left to answer the following questions. You should write the letters for the new curve or position in the space provided.

For each question assume that the starting curve is BB.

a) A chemical company has released a new fertiliser that significantly increases the output of both carrots and potatoes. _____

b) A new law has been introduced which requires all farmers to leave 1/4 of their fields fallow (bare) in an attempt to increase soil quality. _____

c) A government has banned the use of machinery & chemicals in all types of vegetable farming. _____

d) Genetic modification of potato plants has enabled each plant to grow more potatoes. _____

2) Explain why the economy may only be producing at point x. (3 marks)

_____

_____

_____

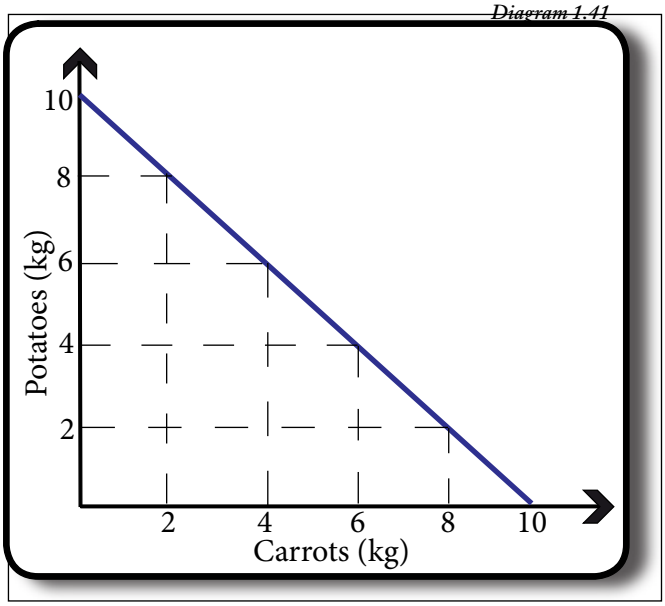
_____

Opportunity Cost

w/s 1.4

Opportunity cost is defined as *the cost of the next best alternative*. When governments, firms or individuals make decisions about how to use time, money, resources, labour etc there were other options that they chose to forgo. This concept is applied throughout economics and it is essential that you understand it.

Diagram 1.41



1) Using diagram 1.41, answer the following questions.

a) What is the opportunity cost of increasing carrot production from 0 to 2 kg? _____

b) What is the opportunity cost of increasing carrot production from 2 to 6kg? _____

c) What is the opportunity cost of increasing potato production from 4 to 6 kg? _____

d) How many kg of potatoes can be produced if the economy is producing 10kg of carrots? _____

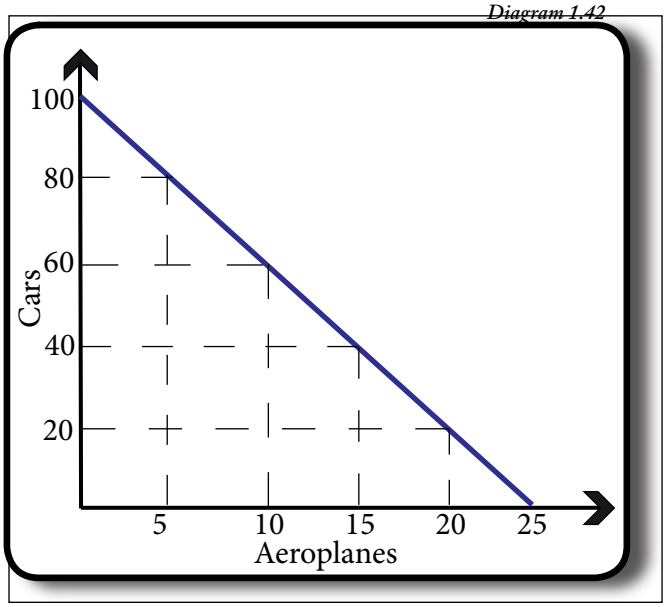
e) Suggest why the possible output of carrots and potatoes is proportional. (2marks)

_____

_____

_____

Diagram 1.42



2) Using diagram 1.42, answer the following questions.

a) What is the opportunity cost of increasing aeroplane production from 10 to 15? _____

b) What is the opportunity cost of increasing aeroplane production from 10 to 25? _____

c) What is the opportunity cost of increasing car production from 80 to 100? _____

d) Suggest why the economy has to forgo 20 cars for every five extra aeroplanes that produced? (3 marks)

_____

_____

_____

_____

3) A government decides to increase its spending on healthcare. Define opportunity cost and state how it applies to this decision. (4 marks)

4) Choosing to study IGCSE Economics has an opportunity cost. Explain this statement. (2 marks)

Wordsearch: The basic economic problem

w/s 1.5

E	D	B	D	F	E	F	A	R	L	E	L	U	R	D
G	N	J	A	W	N	X	H	B	N	R	X	E	E	L
R	N	T	Q	Y	T	I	C	R	A	C	S	X	I	A
U	G	B	R	O	E	E	E	W	K	O	I	Z	P	N
O	E	B	T	E	R	Q	J	T	U	F	V	G	J	D
B	O	I	D	W	P	U	G	R	T	T	J	O	A	Q
A	A	W	J	A	R	R	C	N	A	U	X	O	B	Y
L	G	Q	Z	B	I	E	E	I	I	J	C	P	N	A
K	K	A	R	C	S	S	I	N	W	K	Q	W	S	N
J	V	K	A	M	E	V	O	J	E	A	R	F	U	R
H	B	N	Q	B	C	Q	Z	C	Y	U	N	O	S	J
R	L	S	Y	D	K	W	P	F	P	L	R	T	W	T
L	Z	A	Z	G	J	X	P	U	Y	Y	M	J	S	M
O	P	P	O	R	T	U	N	I	T	Y	C	O	S	T
N	E	E	D	S	I	I	D	Q	X	X	S	F	O	V

1) Write the answer to at the end of the statement and then find it in the wordsearch. (11 marks)

a) Factor of production that is the organisation of the other 3 factors. _____

b) The person who set up a firm and organises land, labour & capital. _____

c) The type of capital that is not used up in the production process. _____

d) The name for the human effort used in the production of a product. _____

e) The physical space that a firm is located on, or the resources in the ground. _____

f) The things that are essential for people to have a basic quality of life. _____

g) The cost of the next best alternative when a decision is made. _____

h)Items/things that are useful to us or that can be made into other products. _____

i) The idea that resources are limited in supply but wanted by many people. _____

j) The things/products people would like to have to improve their quality of life. _____

k) The type of capital that is used up in the production process (raw materials). _____

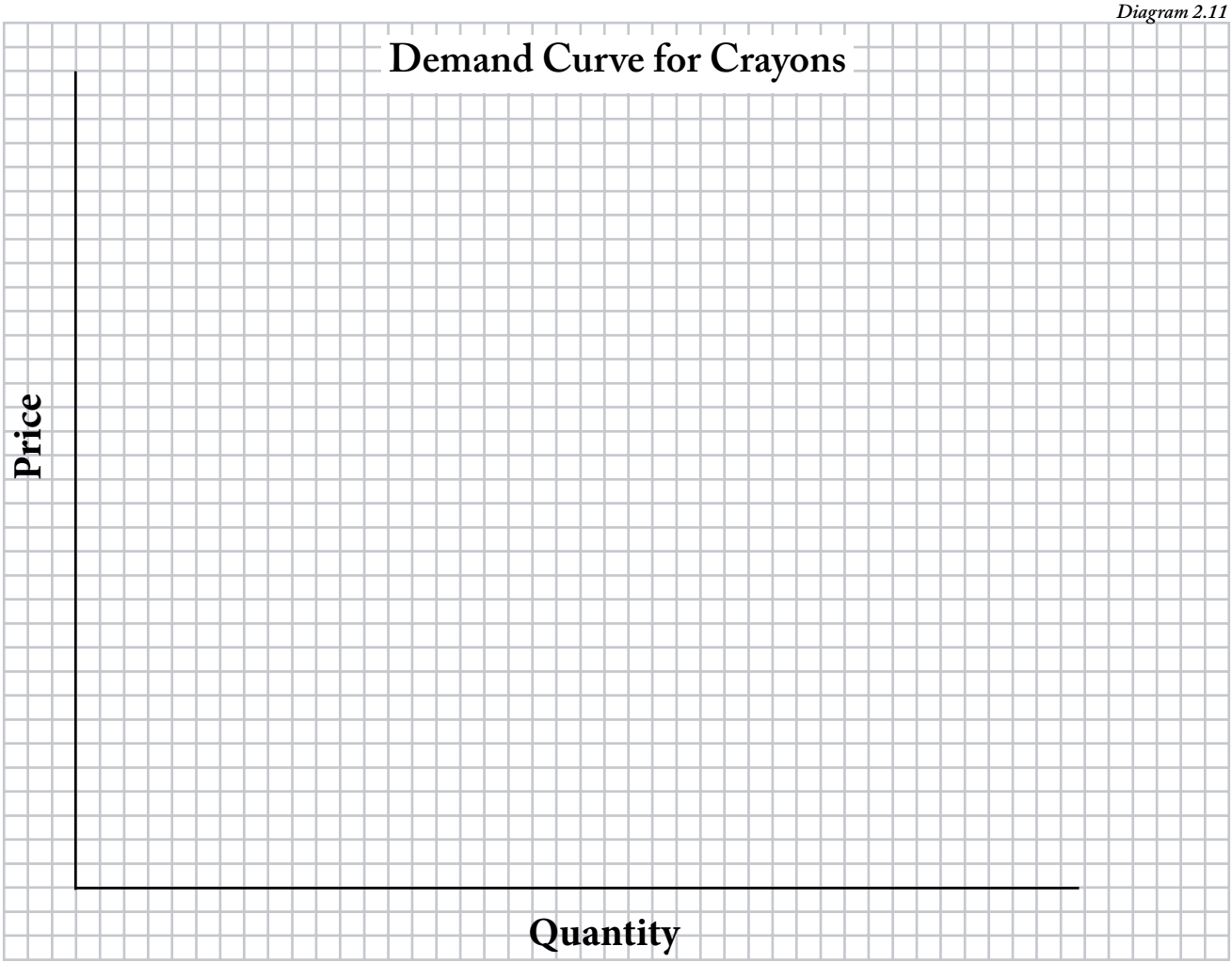
Demand Curves

w/s 2.1

Demand is the want/willingness of a person to buy a product. Demand in economics is shown on a diagram as a straight line although it is referred to as a curve. It virtually always slopes downwards from left to right although the angle of the line may vary considerably.

1) Plot the demand curve for crayons using the data below the chart area.

Diagram 2.11



Price	$0.50	$1.00	$1.50	$2.00	$2.50	$3.00	$3.50	$4.00	$4.50	$5.00
Quantity	10	9	8	7	6	5	4	3	2	1

2) Write a simple explanation of why the demand curve slopes in this direction.

Extension & Contractions of Demand

These are caused by a change in the price of a product/service. At the new price level consumers are likely to increase or decrease the quantity that they are willing to purchase. ***Extensions of demand*** represent a higher quantity demanded due to a reduction in price. ***Contractions of demand*** represent a lower quantity demanded due to an increase in the price.

3) On diagrams 2.12 & 2.13 correctly draw and label the changes to the demand curve. (4 marks)

Diagram 2.12

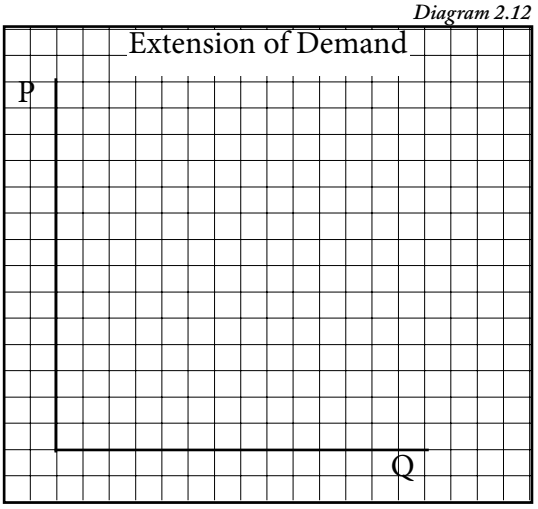
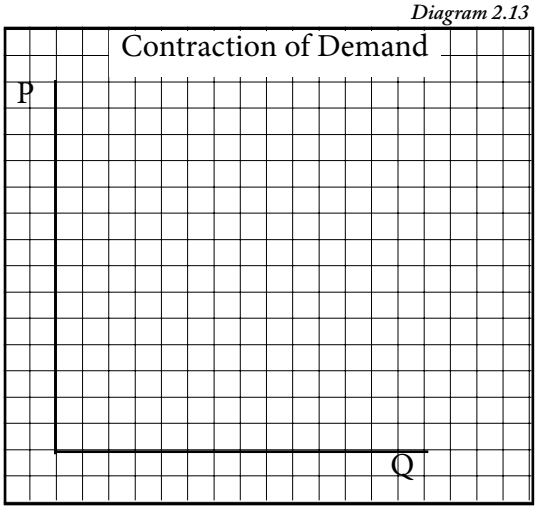


Diagram 2.13



Increase & Decrease in Demand

These are caused by a changes other than price. Changes in fashion or tastes, seasonal factors, increased competition are examples of such changes. ***Increase in demand*** represents more being demanded at every price level. ***Decrease in demand*** represents less being demanded at every price level.

4) On diagrams 2.14 & 2.15 correctly draw and label the changes to the demand curve. (4 marks)

Diagram 2.14

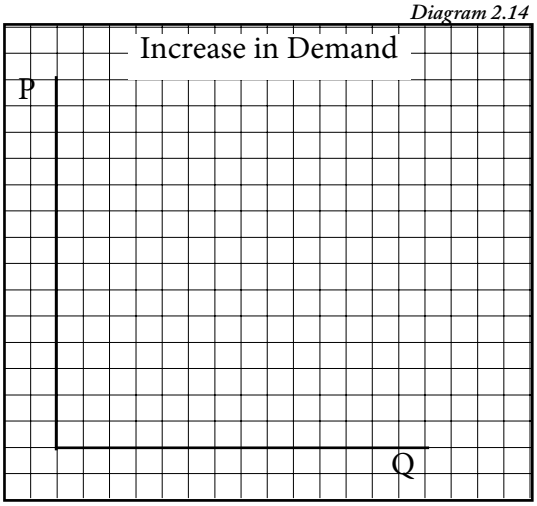
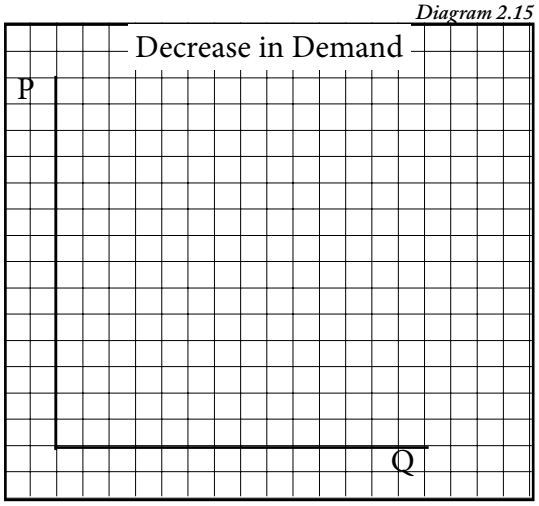


Diagram 2.15



Cut out and classify the following scenarios into 4 categories based on their impact on the demand curve:

Contraction	Extension	Increase	Decrease

A soft drinks company decides to have a special discount of 30% off all its products.

A local ice cream maker is celebrating a summer heatwave.

An umbrella company is celebrating as the wettest summer for 20 years is predicted.

A train company has passed increases in fuel costs on to customers to protect its profit margin.

A decrease in the cost of milk has enabled a chocolate manufacturer to reduce its prices.

A biscuit manufacturer has seen sales fall as consumers want healthier snacks.

An increase in the cost of imported coffee has led to Starbucks raising its prices.

Successful advertising campaigns about damage to health have affected cigarette sales.

Colas have gone out of fashion as people switch to healthier alternatives.

A wine company has decided to increase the price of its wine to cover higher labour costs.

A hotel offers all rooms at half price for the whole of December.

A CD manufacturer is suffering as consumers tastes change towards MP3 formats.

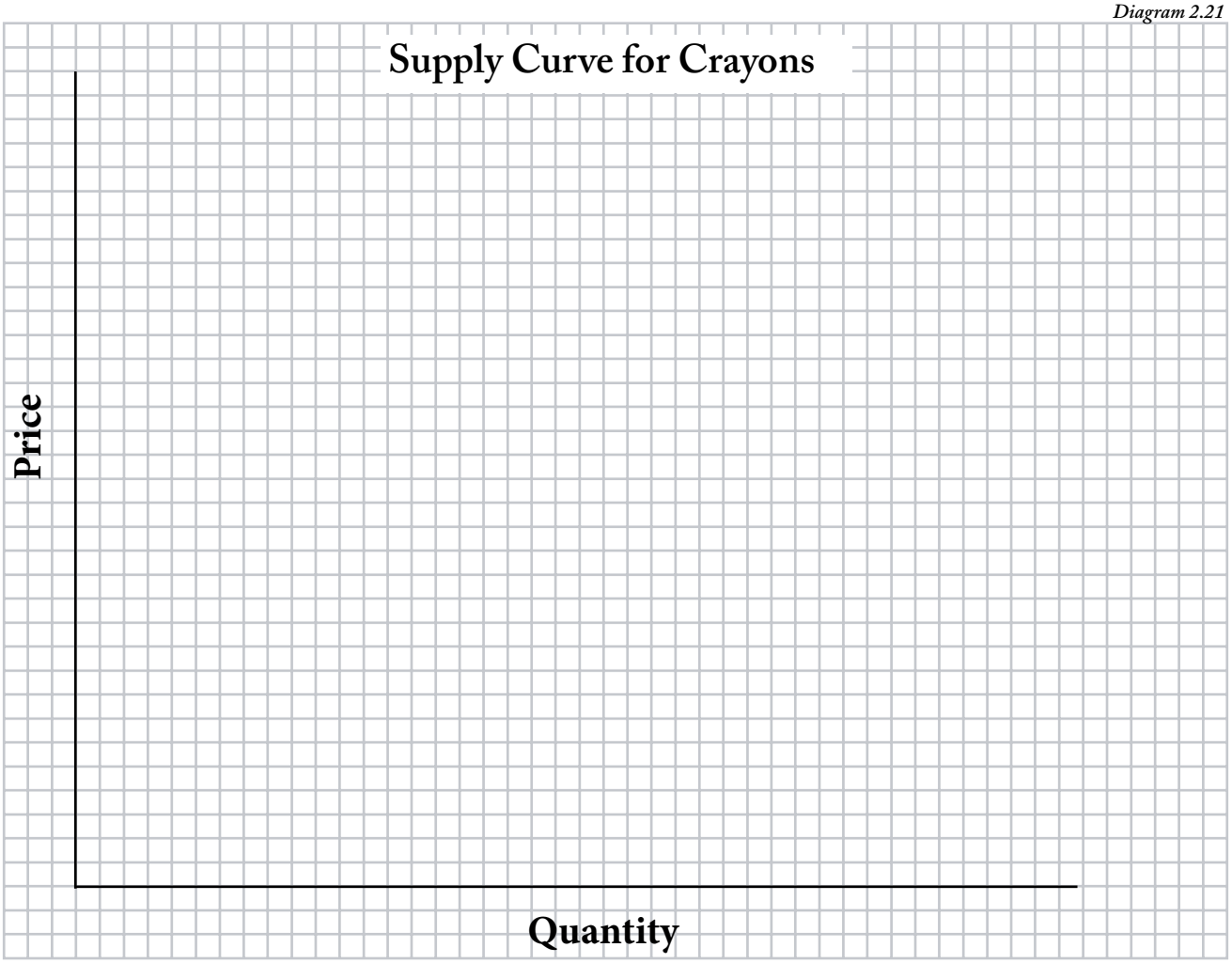
Supply Curves

w/s 2.2

Supply is the number of goods/services firms are able & willing to supply at a range of prices. Supply in economics is shown on a diagram as a straight line although it is referred to as a curve. It virtually always slopes upwards from left to right although the angle of the line may vary considerably.

1) Plot the demand curve for crayons using the data below the chart area. (3 marks)

Diagram 2.21



Price	$0.50	$1.00	$1.50	$2.00	$2.50	$3.00	$3.50	$4.00	$4.50	$5.00
Quantity	2	3	4	5	6	7	8	9	10	11

2) Write a simple explanation of why the supply curve slopes in this direction. (2 marks)

Extension & Contractions of Supply

These are caused by a change in the price of a product/service. At the new price level firms are likely to increase or decrease the quantity that they are willing to supply based on the change in the profit level. ***Extensions in supply*** represent firms increasing the quantity that they are willing to provide due to an increase in price. ***Contractions in supply*** represent firms offering less quantity at a lower price.

3) On diagrams 2.22 & 2.23 correctly draw and label the changes to the supply curve. (4 marks)

Diagram 2.22

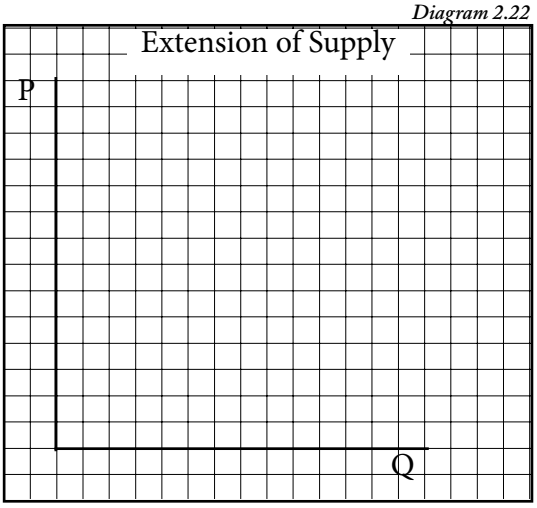
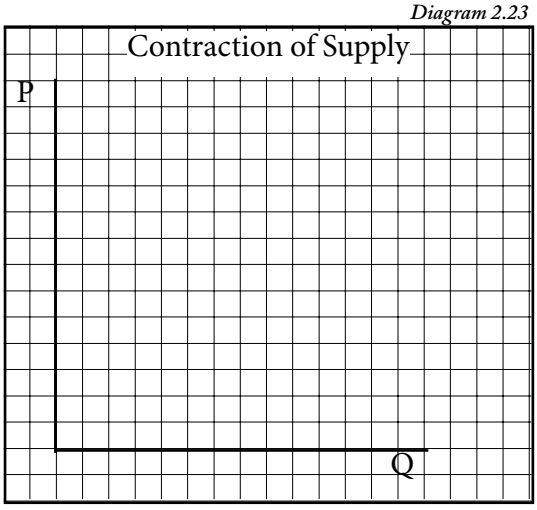


Diagram 2.23



Increase & Decrease in Supply

These are caused by a changes other than price. New technologies, seasonal factors, discovery of new resources are examples of such changes. ***Increases in supply*** represent more being supplied at every price. ***Decreases in supply*** represent less being supplied at every price.

4) On diagrams 2.24 & 2.25 correctly draw and label the changes to the supply curve. (4 marks)

Diagram 2.24

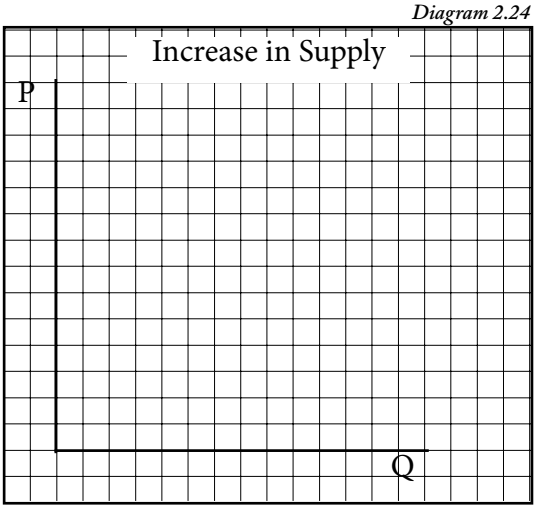
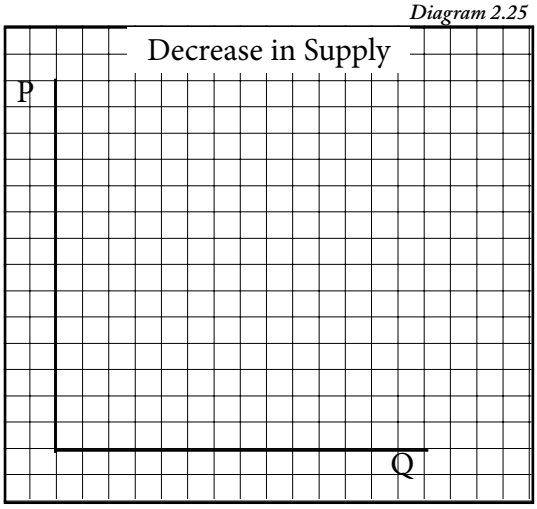


Diagram 2.25



Cut out and classify the following scenarios into 4 categories based on their impact on the supply curve:

Contraction	Expansion	Increase	Decrease

A bakery is feeling the effects of an increase in the price of the flour that it buys .

An oil company is celebrating the discovery of a new oil field in the Gulf of Mexico.

Coffee retailers are disappointed after unusually wet rainy season in Costa Rica led to a poor coffee harvest.

Petrol prices have increased.

The price of chocolate bars has been falling.

Sugar producers have been affected by a drought in Brazil.

Flooding in the UK has destroyed most potato plantations. .

A new more efficient method of producing car tyres has been invented.

Perfect climate conditions have led to a bumper harvest of maize.

Wine producers are reacting to the government increasing the tax on alcohol.

Oil producers react to falling international oil prices.

British Airways responds to a decrease in tax on aviation fuel.

Equilibrium

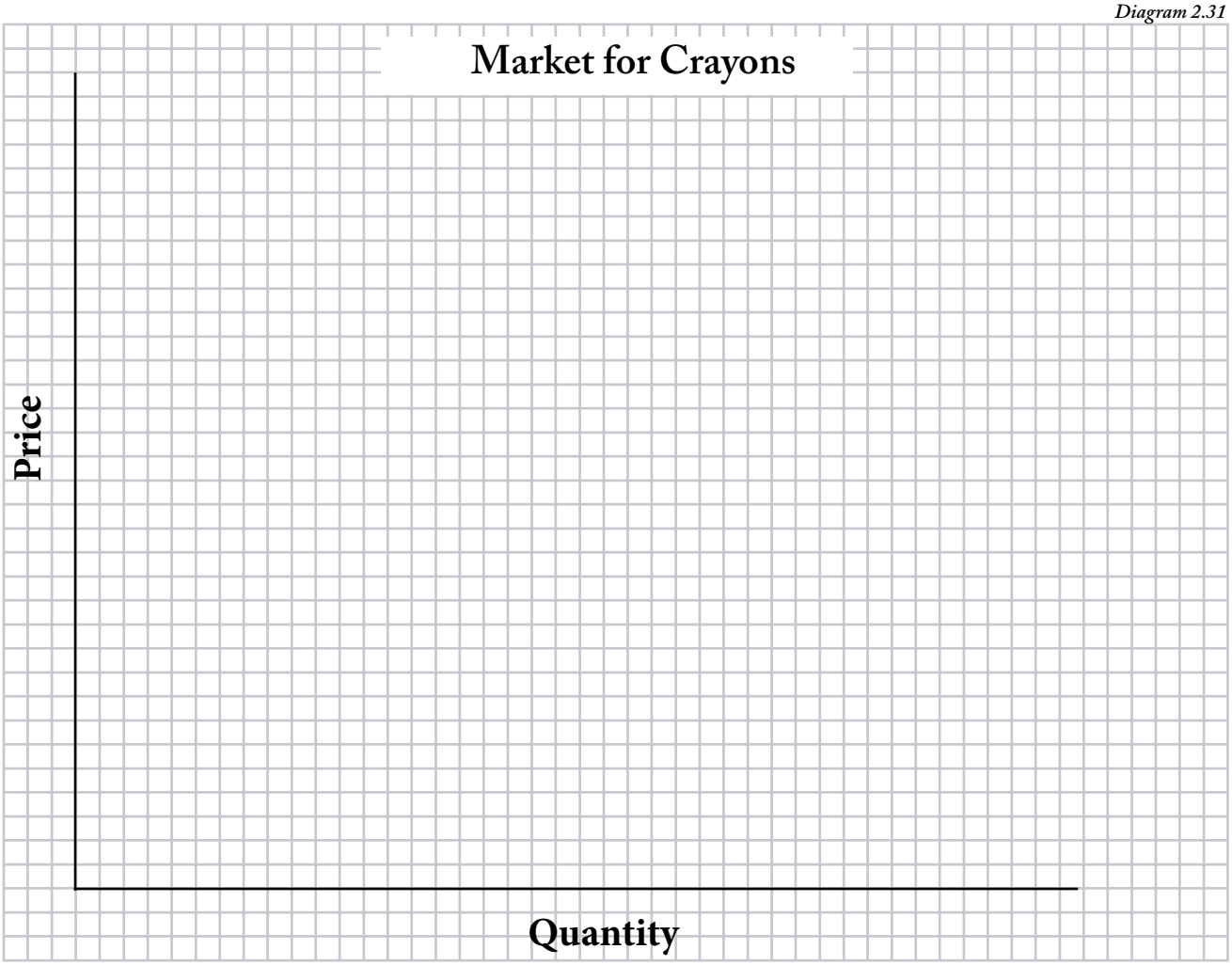
w/s 2.3

Equilibrium is the point at which supply and demand are equal. It is the point at which the curves cross when seen on diagrams. It is also known as the ***market clearing price*** since at this price level consumers are willing to buy all the products/services that firms are willing to supply.

1) Draw and label the supply and demand curves for crayons. Identify the equilibrium point. From this point draw a line down to the quantity axis & mark it "*Q*" and one across to the price axis and mark it "*P*".

(4 marks)

Diagram 2.31



Price	$0.50	$1.00	$1.50	$2.00	$2.50	$3.00	$3.50	$4.00	$4.50	$5.00
Quantity Demanded	10	9	8	7	6	5	4	3	2	1
Quantity Supplied	2	3	4	5	6	7	8	9	10	11

Diagram Tips

When drawing supply and demand diagrams there are a few rules you should always follow:

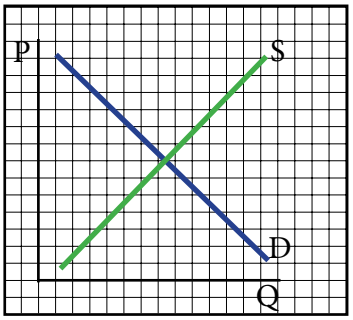
a) Label the demand curve "*D*", any shifts should then be shown as "*D1*", "*D2*" and so on.
b) Label the supply curve "*S*", any shifts should then be shown as "*S1*", "*S2*".
c) Show the equilibrium point and identify the "*P*" & "*Q*" points on the axis.
d) After a change in supply or demand you should identify the new equilibrium point and label accordingly.

Changing Equilibrium

1) Read each of the statements and then show the change in equilibrium on the diagram next to it. Label the changes correctly.

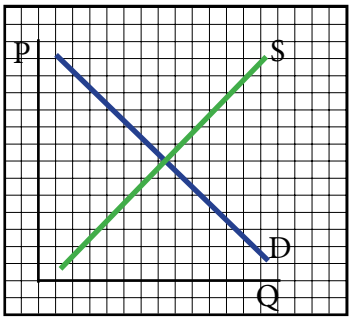
a) Market for train tickets

The cost of electricity has risen which is a major proportion of the cost for rail companies.



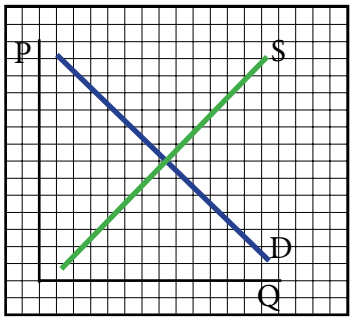
b) Market for CDs

Consumers have shown a preference for the MP3 music format which is the major competition for CDs.



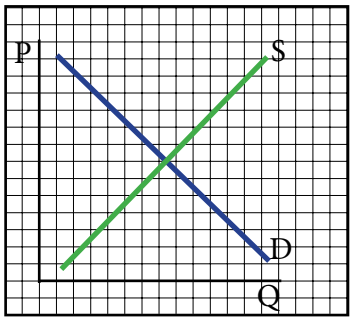
c) Coffee market

Excellent climatic conditions for coffee growers throughout Central America have resulted in a bumper harvest.



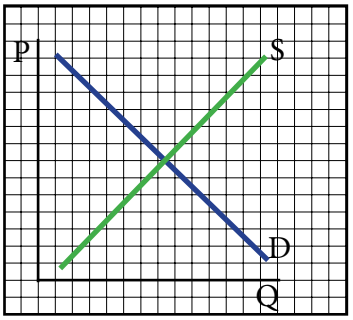
d) Chocolate snack bar market

Chocolate manufacturers have benefitted from a reduction in the price of milk. Unfortunately consumers are switching to healthier snack options.



e) Orange juice market

A hurricane destroyed many orange plantations in Florida. Consumers are choosing orange juice over more sugary options such as coke.

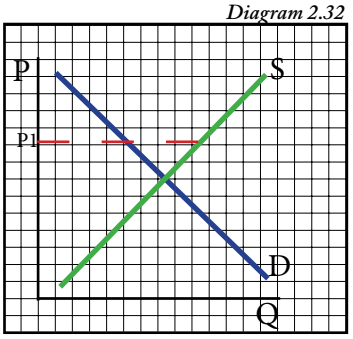


Tip
When finding new equilibrium points, take each change individually and draw the new curve or new position on the curve. Then take the next change and do the same.

Excess Supply and Demand

2) Correct the following situations relating excess supply or demand.

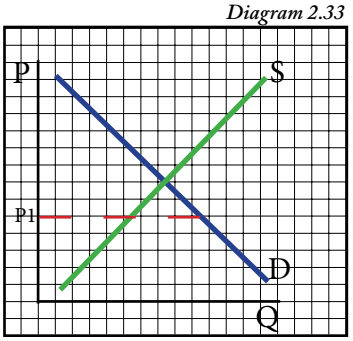
Diagram 2.32



a) Carrot farmers have set their prices above the level which consumers are willing to pay (P1). This has created a situation of excess supply (diagram 2.32).

Explain how this situation can be corrected and show the changes on the diagram. (3 marks)

Diagram 2.33



b) The low price of ketchup (P1) is below the level at which many firms are willing to supply, but is very attractive to consumers. This has created a situation of excess demand (diagram 2.33).

Explain how this situation can be corrected and show the changes on the diagram. (3 marks)

3) Underline the correct changes in the following scenario. (5 marks)

The coffee industry has been through many changes in recent years. High prices attracted many new farmers which increased the *supply/quantity supplied*. This initially led to *excess supply/excess demand* which was corrected through an *increase/decrease* in the price of coffee. The result of this was an increase in *demand/quantity demanded* which brought the market back into equilibrium. Investment in innovation in the industry has led to the development of a machine that can harvest coffee much more efficiently than workers, this should lead to an increase in *supply/quantity supplied*.

Exam Tip

You must remember to label all diagrams correctly in exams. Marks are awarded for the correct labelling of diagrams and you will loose them if the diagram is correct but missing labels.

Complimentary & Substitute Goods

w/s 2.4

Complementary goods are those which are purchased to be used with another product. If the demand for one rises, the demand for the other is likely to rise.
Substitute goods are those which can be purchased as an alternative to another product. If the price of one rises, the demand for the other is likely to rise.

1) Identify whether the following product combinations are complimentary or substitutes. (6 marks)

a) Sugar and Splenda _____ b) Cars and petrol _____

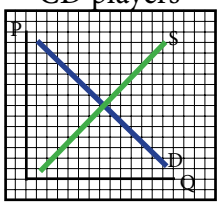
c) Butter and margarine _____ d) CDs and CD players_____

e) Cds and MP3s _____ f) Tea and coffee _____

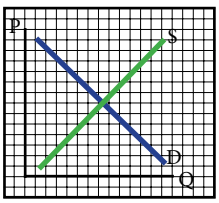
2) Underline the correct change in each scenario & complete the diagrams below each scenario. (8 marks)

a) There has a been a steady decline in the sales of CD players, this is likely to lead to a ***fall/rise*** in the demand for CDs.

CD players

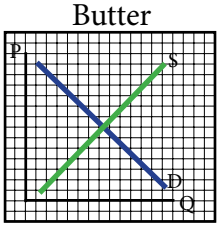


CDs

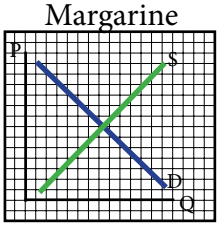


b) The price of butter has risen considerably, this has led to an ***increase/decrease*** in the demand for margarine.

Butter

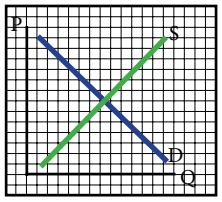


Margarine

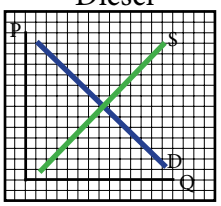


c) Sales of diesel cars have surged in recent years, this has led to an ***increase/decrease*** in the demand for diesel.

Diesel Cars

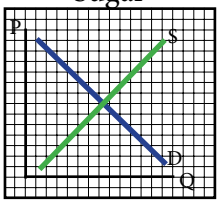


Diesel

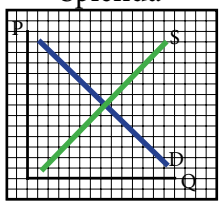


d) Consumers are increasingly concerned about the health impacts of sugar consumption and are looking for alternatives, this would cause in ***increase/decrease*** in the demand for Splenda.

Sugar



Splenda



Economic Systems

w/s 2.5

Most governments in the world operate a ***mixed economic system*** to varying degrees. This , as the name suggests, is a mixture of the two extreme systems which are ***Free Markets*** and ***Command Economies***. Neither of these systems exist in their pure state in the real world but you should have an understanding of them.

1) Cut out/write out and correctly classify the statements below into the columns. (12 marks)

Land privately owned	Prices set by the government	Government chooses what to produce
Land owned by government	Firms aim to maximise profits	Public goods not provided
Prices set by supply and demand	Large disparities in wealth exist	External costs unable to be recouped
Public goods provided	Black market likely to exist	Over consumption of demerit goods

Free Market Economic System	Command/Planned Economic System

Wordsearch: Allocation of Resources

w/s 2.6

Y	T	I	L	I	T	U	D	S	Y	F	N	O	M	E
K	R	Z	Y	K	I	N	F	M	E	Y	O	U	P	X
E	T	A	X	E	A	W	E	K	E	S	I	D	R	T
J	L	Z	T	M	T	M	F	E	D	R	T	C	I	E
G	E	A	E	N	V	A	X	L	B	Y	C	W	C	N
O	C	D	S	S	E	T	V	I	V	E	A	W	E	S
S	Z	N	C	T	E	M	L	I	Q	F	R	F	S	I
R	O	T	Z	R	I	I	I	C	R	R	T	H	S	O
B	R	C	N	Q	U	C	O	L	N	P	N	C	L	N
C	J	A	I	Q	I	S	I	U	P	J	O	S	B	C
E	L	G	E	A	T	D	Q	T	M	M	C	S	R	D
D	S	U	P	P	L	Y	U	O	Y	F	O	E	X	T
S	U	B	S	T	I	T	U	T	E	K	Z	C	X	W
W	P	Q	J	P	Z	Z	A	N	N	Q	N	X	C	W
L	R	B	A	J	I	E	N	H	G	O	I	E	M	H

1) Write the answer to at the end of the statement and then find it in the wordsearch. (15 marks)

a) A good that is bought to go/work with another product/good. _____

b) A movement along the demand or supply curve to the left. _____

c) The sum of all the things that must be paid for when producing a product. _____

d) The willingness and ability of a consumer to purchase a product. _____

e) The responsiveness of the quantity demanded to a change in price. _____

f) The point at which supply and demand are equal. _____

g) Too much of something such as supply when the price is above the equilibrium point. _____

h)A movement along the demand or supply curve to the right. _____

i) Costs that have to be paid for by a third party/someone else. _____

j) The amount that a consumer has to pay for a product. _____

k) The costs that are bourne by a consumer or firm. _____

l) Private costs + external costs = _____ costs.

m) A product that can be used as an alternative to another product. _____

n) the willingness and ability of firms to produce products and offer them for sale. _____

o) An alternative term for the satisfaction gained from the consumption of a product. _____

Social Costs

w/s 3.1

Private costs are those that are borne by the firm/consumer.
External costs are those that are born by a 3rd party (someone else)
Social costs are the sum of private and external costs.

1) Shade in the statements in 4 different colours according to the key (choose the colours). (10 marks)

Private costs ☐ Private benefits ☐ External costs ☐ External benefits ☐

The cost to a person of buying cigarettes.

The profit to a firm from the sale of cigarettes.

The damage to other peoples health from cigarette smoke.

The cost to health services for dealing with drunken accidents.

The increased skill level of a worker after leaving school.

A person uses first aid skills from work to help in a road accident.

The cost to a business of training workers.

The satisfaction felt after having a glass of wine.

The increased employability of a person after finishing school .

The relaxation an individual feels after a cigarette.

One of the roles of government in economies is to take action to make firms accountable for ***external costs***. The price of many products does not accurately reflect the true cost of producing them since the cost of cleaning up ***externalities*** such as air pollution (or the cotton society of climate change) are not included.

3) Identify and explain the ways in which a government may try and make firms accountable for the external costs that they create. (6 marks)

When deciding whether to exploit natural resources such as gold reserves countries should consider whether the ***social cost*** outweighs the ***social benefit***. Timescales also need to be considered since the exploitation of a natural resource will deplete it for future generations.

3) Identify the social costs involved in extracting gold through large scale mining and discuss whether countries should exploit or conserve such resources. (6 marks)

Individuals earnings

w/s 3.2

Individuals earnings change over their lifetimes, and each person will have specific events that influence them. Most peoples earnings follow a similar pattern though.

1) Cut out the statements below. Using the blank chart on the next page construct a line graph to show the general changes that are likely to occur (choose an income scale). Paste the statements at the appropriate places on your line chart. (8 marks)

I'm working part time in a restaurant as a waiter having just finished education. I am looking for a better job.

I have just been promoted to a managerial position after showing lots of potential. I have only been working here for a couple of years.

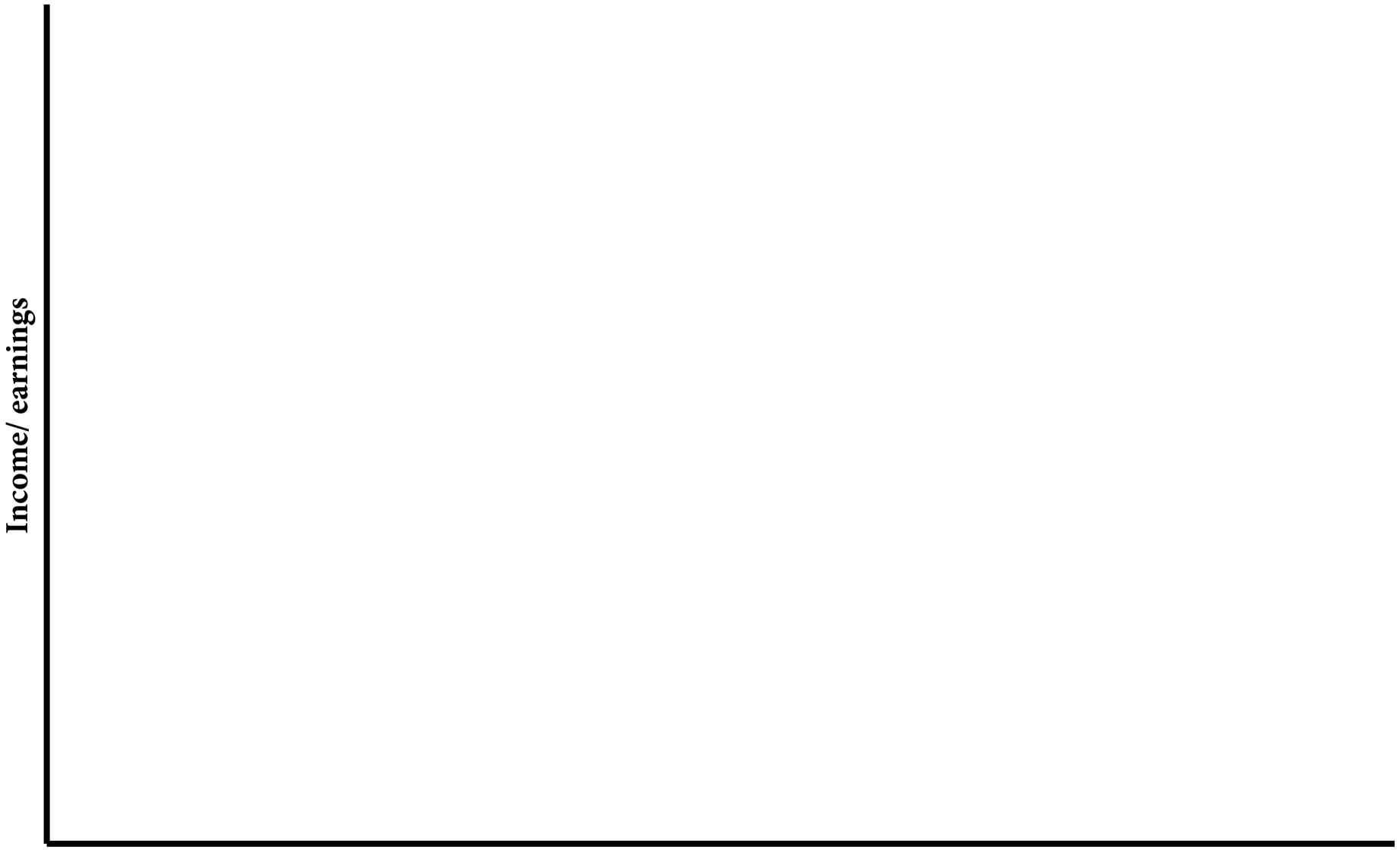
Each year I get a pay rise to reflect the extra experience that I have gained. Having worked here for over 10 years it means my salary is considerably higher.

I have taken a number of courses outside of work and become more qualified over the last 5 years. I am now much more specialised and can ask for higher wages.

Having worked for the last 30 years I have decided to reduce my workload and become part time. I would like to have time to enjoy leisure activities.

I have just retired from my job after 40 years of working with the company. I am living on my pension, although it is much smaller than the amount I used to earn whilst working.

Line Chart showing the Changes in a Typical Individuals Earnings over a Lifetime



Wordsearch: Individuals as producers, consumers & borrowers

S	K	C	N	P	O	S	T	D	C	N	F	E	S	E
O	P	R	E	L	B	A	S	O	P	S	I	D	T	H
N	R	E	B	V	K	X	M	Z	K	W	W	C	O	W
Q	O	D	C	P	W	M	W	Z	S	F	E	Z	C	G
L	S	I	U	I	E	C	E	N	T	R	A	L	K	R
T	K	T	S	R	A	S	V	U	C	H	L	O	E	E
Q	M	S	C	S	A	L	X	H	A	Y	T	Z	X	L
X	V	I	E	L	I	B	I	E	X	F	H	F	C	B
E	A	C	A	G	C	M	L	Z	K	F	N	T	H	I
L	A	R	U	T	A	B	M	E	A	J	H	U	A	S
M	Y	C	Q	P	A	W	A	O	B	T	J	Q	N	I
E	U	W	O	T	N	Q	R	F	C	S	I	W	G	V
B	H	B	R	S	U	N	O	B	K	W	W	O	E	I
O	K	O	L	M	Y	V	X	H	B	B	S	N	N	D
O	P	F	K	E	V	J	P	X	X	D	F	L	G	N

1) Write the answer to at the end of the statement and then find it in the wordsearch. (13 marks)

a) A payment for achieving a target in the workplace. _____

b) Collection of assets (houses, land, shares in companies, money saved). _____

c) The Governments bank. _____

d) The type of bank the individuals and firms use. _____

e) System of pay based on a % of sales. _____

f) Income that is left over after paying essential costs. _____

g) Characteristic of money that means it can split into small amounts. _____

h) Characteristic of money that means it lasts a long time/doesn't break. _____

i) The place at which shares in Plcs are traded. _____

j) Characteristic of money that means it can be easily carried around. _____

k) A method of payment that is based on an annual sum divided into months. _____

l) Training to become increasingly skilled in a particular job/field. _____

m) Method of paying workers (often by the hours they work). _____

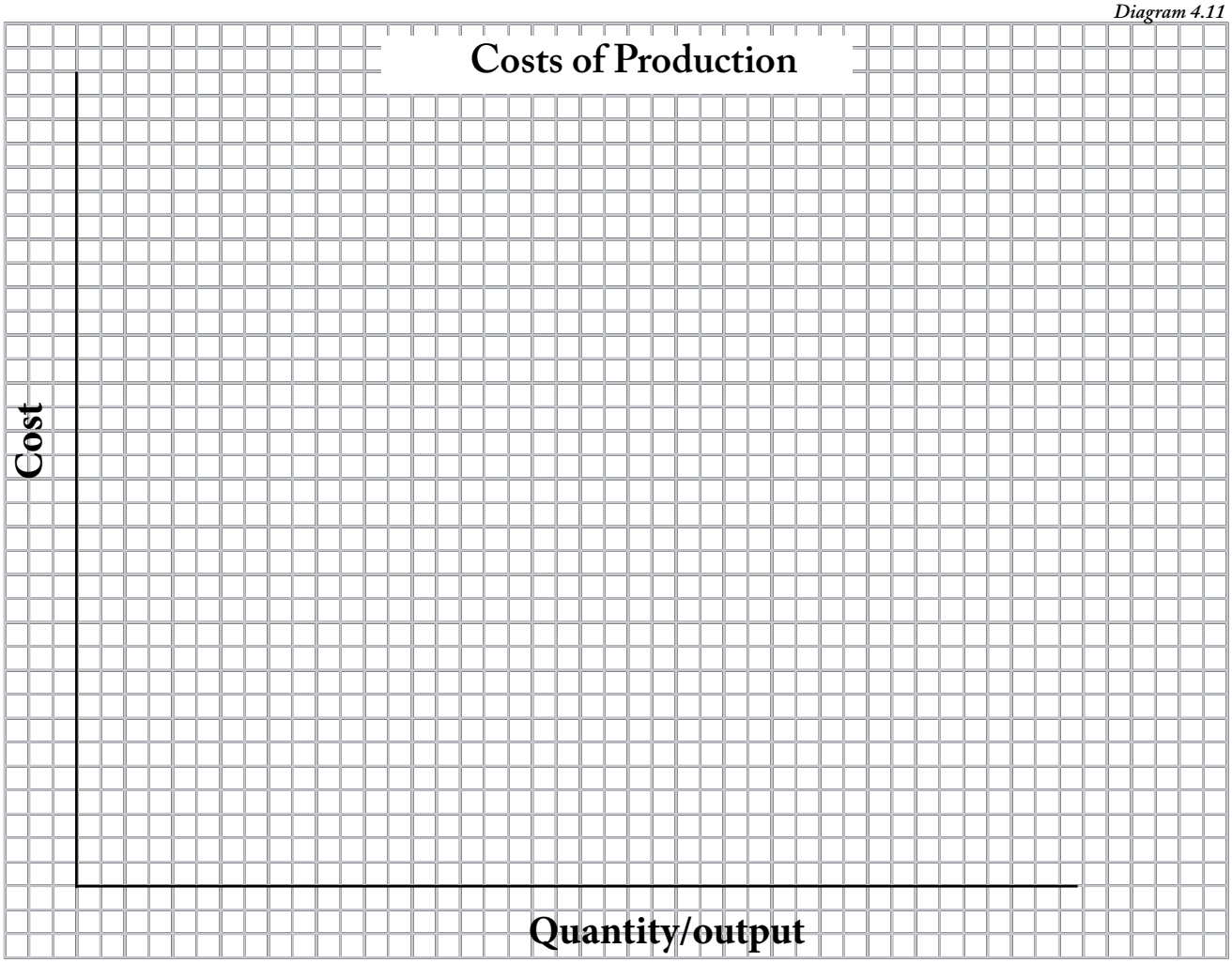
Firms costs & revenue

w/s 4.1

In virtually all the worlds economies, ***profit maximisation*** is the main aim for private firms. It is vital that they record and understand the costs that they incur so that they can calculate the price that the product should be sold at.

1) Using the data table 4.12 draw on the cost curves for the firm. Remember to label them. (6 marks)

Diagram 4.11



Output	0	5	10	15	20	25	30	35	40	45	50	55
Variable Costs (VC)	0	15	30	45	57.5	70	82.5	95	105	115	125	135
Fixed Costs (FC)	8	8	8	8	8	8	8	8	8	8	8	8
Total Costs (TC)	8	23	38	53	65.5	78	90.5	103	113	123	133	143

Table 4.12

Remember
The total cost curve does not start at 0, but at the level of the fixed costs, since these must be paid even if nothing is produced.

2)

a) Using table 4.12 write Average Fixed Costs (AFC) in the blank row and calculate its value for each level of output. Then draw and label this curve on the graph. (3 marks)

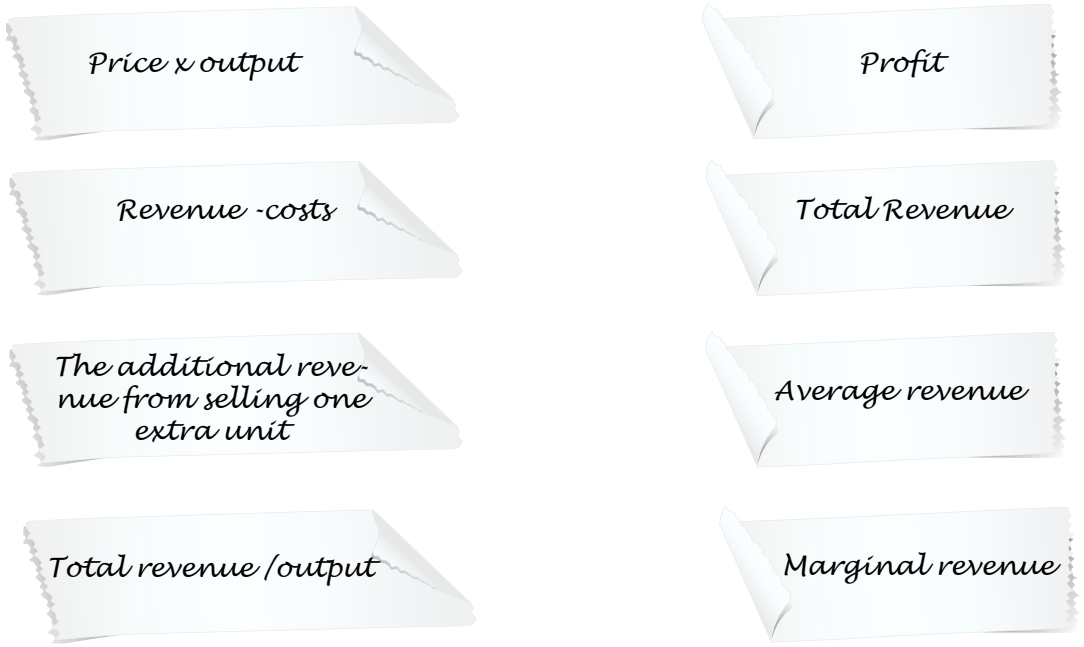
b) Explain why AFC curve slopes downwards (2 marks)

3) Match up the term with the correct definition. (5 marks)

Costs that must always be paid, regardless of output.	Average costs
Costs that vary with output.	Total cost
Fixed costs + variable costs.	Marginal cost
The costs of producing one extra unit.	Variable costs
Total costs divided by output.	Fixed cost

4) Firms generally aim to increase output since it allows reduced average fixed costs per unit. It also allows reduced ***average variable costs*** (AVC) up to a certain point due to ***economies of scale***. Define economies of scale and explain how they reduce a firms (AVC). (6 marks)

5) Match the term with the correct definition. (4 marks)



6) Underline the correct terms (in italics) throughout the following paragraphs

a) A firm producing chocolate has decided to increase its prices, its price elasticity of demand is relatively inelastic. This should lead to an ***increase/decrease*** in total revenue. Costs have remained the same so the firms profit should ***increase/decrease***.
The following year a drought causes an ***increase/decrease*** in the supply of milk which led to an ***increase/decrease*** in its price. Milk would be considered a ***variable/fixed*** cost for the chocolate manufacturer. The firm has decided to keep the price of its chocolate the same and accept ***increased/decreased*** profit levels.

(6 marks)

b) A commercial aviation firm is looking to increase its profit level. The demand for seats on its planes is highly elastic so any increase in price would lead to a large ***increase/decrease*** in sales. Taxes on aviation fuel have just risen by 1% and these are a ***variable/fixed*** cost. The airline decides to look for ways to reduce its costs, and one suggestion is to stop offering free drinks during flights. This would reduce its ***variable/fixed*** costs. Another suggestion is to have less cabin crew on flights who are paid a salary, this should reduce its ***variable/fixed*** costs.

(4 marks)

c) A firm would like to clear some surplus stock that it has and decides to put the products on sale. This should ***increase/decrease*** the ***quantity demanded/demand*** and ***increase/decrease*** total revenue. It will also ***increase/decrease*** marginal revenue and ***increase/decrease*** average revenue.

(5 marks)

Calculating cost, revenue & profit

w/s 4.2

1) Using the information given below complete table 4.21.

Pietro makes and sells ice-cream, although he only has one flavour and in one size.

His fixed costs are $40, his variable costs are $2 per unit and he charges $5 for each ice-cream.

Table 4.21

Quantity	Total FC $	Total VC $	Total Cost $	Price $	Total Revenue $	Marginal Revenue $	Profit/Loss $
0							
5							
10							
15							
20							
25							
30							
35							
40							
45							
50							

Productivity & diminishing returns to labour

w/s 4.3

Hiring extra workers should increase the ***output*** of a firm which can allow greater ***profits*** to be made. It is important to understand the concept of ***productivity*** though and whether additional workers are as productive. Adding extra workers may increase productivity as workers can assist each other, but if they are hindering each other it may decrease productivity and firms aim to avoid this. Reducing additional productivity is known as ***diminishing returns to labour***.

1) State 2 ways in which firms may be able to increase the productivity of their workers. (2 marks)

a)

b)

When calculating the whether to hire an extra worker there are some figures firms need to work out:
Marginal product of labour - this is the extra output an additional worker produces.
Value of marginal product - this is the value of this additional output.
Marginal cost of labour - this is the cost of employing an additional worker.

2) Using the information below, complete table 4.31. (3 marks)

Pietro's ice-cream operation has been expanding and he is keen to know how many extra workers to employ. The cost of an extra worker is $7, the price of ice-creams is still $5.

Table 4.31

Number of Workers	Number of Ice-creams Produced	Marginal Product	Value of Marginal Product	Marginal Cost of Extra Worker
0	0			
1	5	5	$25	$7
2	12	7	$35	$14
3	20			
4	30			
5	38			
6	44			
7	49			
8	53			
9	54			

3) At which number of workers does the firm start experiencing diminishing returns to labour.

4) At which point does an additional worker cost more than the additional revenue they generate?

5) At which point should the firm stop hiring extra workers? Explain your answer. (3 marks)

Monopolies & perfect competition

w/s 4.4

Private costs are those that are borne by the firm/consumer.
External costs are those that are born by a 3rd party (someone else)
Social costs are the sum of private and external costs.

1) Shade in the statements in 2 different colours according to the key (choose the colours). (12 marks)

Perfect Competition ☐ Monopolies ☐

Consumers have perfect information about the market.

Products are homogenous (identical).

Firms can benefit from economies of scale.

Can make super-normal profits.

Firm can control supply in the market.

Firms may operate inefficiently

Firms can enter of leave the market freely.

No producer can influence the market price level.

There can be a lack of innovation .

Prices for consumers may be higher.

Firms make normal profit.

Barriers to enter the market likely to exist.

Wordsearch: Private firms as producers & employers

w/s 4.5

S	L	L	S	V	U	Y	E	R	X	R	P	Y	Y	T
O	A	Y	A	G	E	Q	R	P	J	I	R	Q	T	R
L	N	J	G	T	J	R	R	S	H	U	I	O	I	Z
E	I	M	Y	B	O	O	T	S	S	M	V	G	V	I
T	G	O	H	H	F	T	R	I	C	Z	A	G	I	W
R	R	T	C	I	O	E	W	F	C	I	T	E	T	Q
A	A	E	T	C	N	R	B	O	T	A	E	F	C	E
D	M	D	E	T	I	M	I	L	C	I	L	B	U	P
E	A	K	R	M	A	X	R	Z	H	B	I	M	D	R
R	B	A	E	Q	H	E	F	G	O	J	M	H	O	E
Z	P	E	L	B	A	I	R	A	V	N	I	C	R	V
C	O	O	P	E	R	A	T	I	V	E	T	T	P	E
M	O	N	O	P	O	L	Y	R	N	V	E	A	B	N
S	S	M	D	E	X	I	F	O	A	W	D	Z	L	U
G	S	Q	J	M	F	W	S	M	A	C	F	M	W	E

1) Write the answer to at the end of the statement and then find it in the wordsearch. (14 marks)

a) An organisation owned by its members and the rewards are shared. _____

b) The type of costs that don't change with output. _____

c) The type integration when firms at the same stage of production merge. _____

d) The cost of producing one extra/additional unit . _____

e) A firm that has 100% of the market. _____

f) The type of firms that are owned by 2 to 20 people. _____

g) Type of firms that sell shares to friends and family (not to the public). _____

h) Output per worker. _____

i) Revenue minus costs. _____

j) The type of company that sells shares on the stock exchange. _____

k) Output multiplied by price. _____

l) An individual that owns and runs a firm (with unlimited liability). _____

m) Fixed + variable costs = _____ costs.

n) The type integration when firms at different stages of production merge. _____

Fiscal Policy

w/s 5.1

Governments can use *fiscal policy* to try and influence aggregate demand in the economy. The tools they can use to do this are *taxation* and *government spending*.
Expansionary fiscal policy aims to increase AD through increasing government spending and reducing taxation.
Contractionary fiscal policy aims to reduce AD through increasing taxation and decreasing government spending.

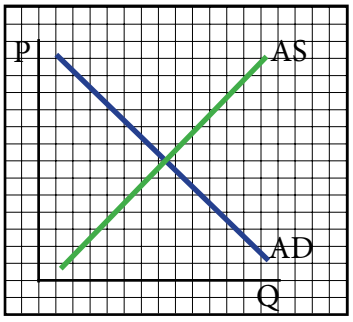
1) Fill in the gaps in the following sentences with the correct arrows: ↑ ↓

a) The government reduces income tax. This should ____ consumer spending and so _____aggregate demand. It is hoped that firms will ____ the number employers to _____ their output.

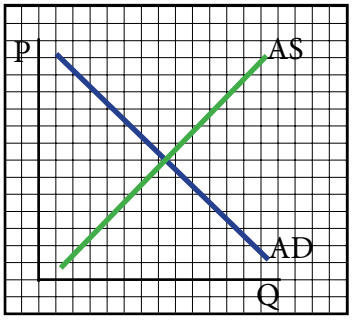
b) The government has announced an increase in its spending and no change to the current tax rates. This is will ____ aggregate demand and subsequently _____ unemployment.

2) Show the impact on the AD curves of each of the following changes.

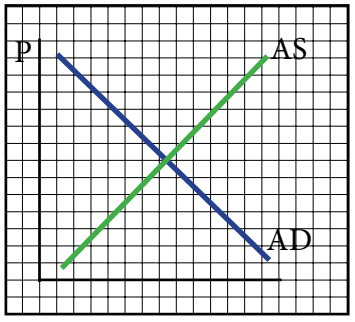
a) The government increases income tax by 1% but leaves government spending unchanged.



b) The government announces plans to re-energise the economy through a large increase in government spending. It is targeting infra-structure development. It will leave taxes unchanged.



c) The government has announced that income tax will rise by 0.5 %, it estimated that this will raise $10 billion. It has also announced a $15 investment in education.



Wordsearch: The role of government

w/s 5.3

E	Y	M	D	L	F	K	T	I	I	D	P	T	S	Y
G	X	G	O	I	F	C	I	N	F	I	R	N	E	H
N	S	P	S	N	E	G	J	M	R	R	O	E	I	Y
S	O	C	A	R	E	E	A	P	W	E	G	M	D	B
X	A	I	I	N	C	T	O	P	G	C	R	Y	I	G
L	V	D	T	T	S	W	A	N	M	T	E	O	S	H
P	N	I	I	A	H	I	J	R	Z	K	S	L	B	N
I	K	O	R	F	L	Y	O	C	Y	D	S	P	U	N
E	N	G	M	J	E	U	V	N	I	F	I	M	S	S
S	G	B	F	I	W	G	G	Z	A	G	V	E	Q	J
E	V	I	S	S	E	R	G	E	R	R	E	L	K	W
L	E	A	K	A	G	E	S	J	R	T	Y	L	V	E
U	T	M	S	C	G	Y	P	U	J	G	W	U	Q	J
Z	Y	Y	W	L	S	B	I	S	J	G	S	F	B	V
C	O	N	T	R	A	C	T	I	O	N	A	R	Y	M

1) Write the answer to at the end of the statement and then find it in the wordsearch. (13 marks)

a) Fiscal or monetary policy that shrinks the money supply or AD. _____

b) Taxes taken directly from income or wealth. _____

c) Fiscal or monetary policy that increases the money supply or AD. _____

d) Government policy based on taxation and government spending. _____

e) Government aim to do with the labour force. _____

f) Taxes on spending. _____

g) Money coming into the economy (exports, investment, gov. spending). _____

h) Money leaving the economy (imports, savings, taxes). _____

i) Government policy utilising the money supply & interest rates. _____

j) Taxes that take a higher percentage from the higher earners. _____

k) Taxes that take a higher percentage from low income groups. _____

l) Rules that governments impose on firms and industries.

_____

m) Payments a government makes to firms to reduce their operating costs. _____

Economic output

w/s 6.1

Economic output and development can be measured in a number of different ways. You should understand the differences (and strengths/weaknesses) of: *GDP*, *GDP/capita* and the *HDI*.

1) Use the 3 sets of data below to draw 3 separate bar charts & then use the graphs to answer the questions on the next page. The data is the top 10 ranked countries for 2012.

Country	GDP ($000 000)
USA	15 660 000
China	12 380 000
India	4 735 000
Japan	4 617 000
Germany	3 194 000
Russia	2 509 000
Brazil	2 362 000
UK	2 323 000
France	2 253 000
Italy	1 834 000

Data: www.cia.gov

Country	GDP/capita ($ 000)
Qatar	102.8
Liechtenstein	89.4
Luxembourg	80.7
Macau	74.9
Bermuda	69.9
Singapore	60.9
Jersey	57
Falkland Islands	55.4
Norway	55.3
Honk Kong	50.7

Data: www.cia.gov

Country	HDI (2011)
Norway	0.943
Australia	0.929
Netherlands	0.910
US	0.910
New Zealand	0.908
Canada	0.908
Ireland	0.908
Liechtenstein	0.905
Germany	0.905
Sweden	0.904

Data: http://hdr.undp.org

Top 10 GDP 2012

USA China India Japan Germany Russia Brazil UK France Italy

Top 10 GDP/capita 2012

Qatar Liechenstein Luxembourg Macau Bermuda Singapore Jersey Falklands Norway Honk Kong

Top 10 HDI 2011

Norway Australia Netherlands USA New Zealand Canada Ireland Liechtenstein Germany Sweden

2) The USA and China both have substantially higher GDP figures than the following countries. Suggest reasons why this is the case. (4 marks)

USA:

China:

3) Define GDP/capita. (1 mark)

4) None of the countries that rank in the top 10 for GDP are present in the top 10 for GDP/capita. Suggest reasons for this pattern (it may be helpful to find out how these countries generate income). (4 marks)

5) The Human Development Index is often considered a better measurement of economic progress for countries. Explain the advantages the HDI has over the other methods mentioned. (6 marks)

Unemployment

w/s 6.2

Unemployment refers to the section of the labour force that are willing and able to work but do not have a job. Unemployed people represent inefficient use of the ***factors of production*** and indicate that the economy could increase its output.

1) Identify the following types of unemployment. (4 marks)

a) Workers between jobs. _____

b) Workers with the wrong skills due to an industry that has declined. _____

c) Fruit pickers unemployed in the Winter months. _____

d) Workers that have been made unemployed due to a downturn in the economy. _____

Governments may try to increase ***Aggregate Demand*** in an effort to encourage firms to take on more workers in order to increase output. Firms may choose to increase output through investment in capital rather than hiring additional workers though. ***Fiscal*** and ***monetary policy*** are used to influence Aggregate Demand.

2) Complete the following sentences. (14 marks)

a) A government decides to increase spending on road building. It is hoped that this will _____ unemployment and have a multiplier effect in the economy. This as an example of _____ policy.

b) A government decides to reduce the rate of income tax. It is hoped that this will leave households with _____ money to spend and _____ aggregate demand. This is an example of _____ policy.

c) A countries interest rate is reduced in an effort to _____ spending and _____ saving. It is hoped that this will _____ aggregate demand and lead to a _____ in the unemployment rate. This is an example of _____ policy.

d) A government makes the decision to devalue its currency through _____ the money supply. It is hoped that this will _____ exports and consumption of domestically produced goods. This should have the knock on effect of _____ unemployment. This is an example of _____ policy.

Remember that both fiscal and monetary policy can be ***expansionary*** or ***deflationary***. Expansionary policy is usually chosen to reduce unemployment through increasing demand in the economy.

Governments aim to reduce unemployment since it often has many negative effects. Crime, consumption of demerit goods, lost output, reduced income tax revenue and increased welfare payments are examples.

3) Many governments consider structural unemployment to be the worst type of unemployment to have in an economy.

a) Explain why they hold this view. (3 marks)

b) Suggest ways in which they can attempt to solve it. (4 marks)

4) Unemployment represents inefficient use of the factors of production which leads to lost output in economies. It also has a negative impact on government budgets, explain this statement. (6 marks)

Inflation

w/s 6.3

Inflation is a sustained rise in the general price level in an economy. Governments generally aim to have ***price stability*** in their economies. ***Deflation*** occurs when the general level of prices is falling. This often considered as undesirable in economies.
Remember not to confuse falling inflation (prices still rising but a slower rate) with deflation.

1) Using the following words, explain how inflation is measured. (6 marks)

base year	hypothetical	percentage	weighting	basket	goods

2) Identify whether the sentence is true or false in the boxes alongside each statement (8 marks)

a) An increase in the money supply that is not matched by increased output is an example of demand pull inflation. ☐

b) A rise in the cost of labour is an example of imported inflation. ☐

c) Increases in aggregate demand when there is full employment is likely to result in inflation. ☐

d) A rise in the cost of raw materials from other countries is an example of imported inflation. ☐

e) Increasing interest rates is likely to slow down/reduce the level of inflation. ☐

f) Inflation above the rate of interest is bad for savers. ☐

g) Inflation above the rate of interest is good for people in debt since it erodes the real value of the debt. ☐

h) A pay rise below the rate of inflation would leave a worker worse off in real terms. ☐

Wordsearch: Economic indicators

w/s 6.4

T	X	M	G	A	H	B	M	S	M	S	B	A	P	G
T	N	E	M	Y	O	L	P	M	E	N	U	J	R	T
Y	F	V	D	U	D	Z	T	A	O	L	W	O	E	A
E	V	K	K	E	X	E	S	W	A	V	S	Y	C	I
A	E	V	R	R	M	O	T	R	U	S	X	H	R	G
T	V	C	V	T	N	A	U	R	D	M	P	J	O	T
I	A	R	I	A	H	T	N	O	O	Z	N	U	F	I
P	M	W	L	R	C	Q	M	D	H	P	K	D	R	N
A	X	J	Q	U	P	E	D	F	P	Z	M	U	U	F
C	A	V	R	P	S	L	S	I	X	U	M	I	O	L
U	Y	T	U	T	G	S	I	Y	U	J	L	E	B	A
E	S	H	I	I	F	S	Z	A	Q	M	R	L	A	T
H	L	C	W	G	H	S	U	P	T	S	O	C	L	I
F	R	I	C	T	I	O	N	A	L	E	J	D	O	O
F	T	I	Y	I	A	C	D	F	Z	K	R	R	M	N

1) Write the answer to at the end of the statement and then find it in the wordsearch. (12 marks)

a) The term that means per person (ie. GDP per ?). _____

b) Inflation caused by rising costs of production such as labour costs. _____

c) Inflation caused by AD increases outstripping AS increases. _____

d) The type of unemployment when people are between jobs. _____

e) The words for the letters G and D in the term GDP. _____

f) The type of inflation due to rising costs of goods brought from abroad. _____

g) The term for the general increase in the price level in an economy over a year. _____

h)The term for all of people working and the unemployed. _____

i) The words for the letters R & P in the term RPI. _____

j) The type of unemployment due to the time of year (fruit pickers, ski instructors etc). _____

k) Unemployment caused by an industry closing and leaving workers with wrong skills. _____

l) When members of the labour force are not working. _____

Development & economies

w/s 7.1

1) Shade in the statements in 2 different colours according to the key (choose the colours).

More Developed ☐ Less Developed ☐

High birth rate.

Low death rate.

High GDP/capita.

Low life expectancy.

Score close to 0 on the Human Development Index.

Score close to 1 on the Human Development Index.

Long life expectancy.

Low birth rate.

Low GDP/capita.

High death rate.

High literacy rate.

High % of people lack access to clean water.

2) Many of todays developed countries achieved rapid economic growth through exploiting natural resources.
Discuss whether this is the best option for all less developed countries as a strategy for development.
(8 marks)

3) Traditionally development has been measured through economic success such as GDP. Increasingly the Human Development Index is being used to measure development.

Describe the Human Development Index and explain why looking at social indicators as well as economic ones is widely believed to give a more accurate picture of economic progress. (5 marks)

4)
a) In pairs or groups read through the different development factors.
b) Discuss which ones developing countries should prioritize and which ones are not as important.
c) Write them into the diamond grid with the most important at the top and least at the bottom.
d) Justify your selection in the boxes at the sides.

Access to clean water

Longer life expectancy

Increased literacy rate

Increased number of doctors /1000 people

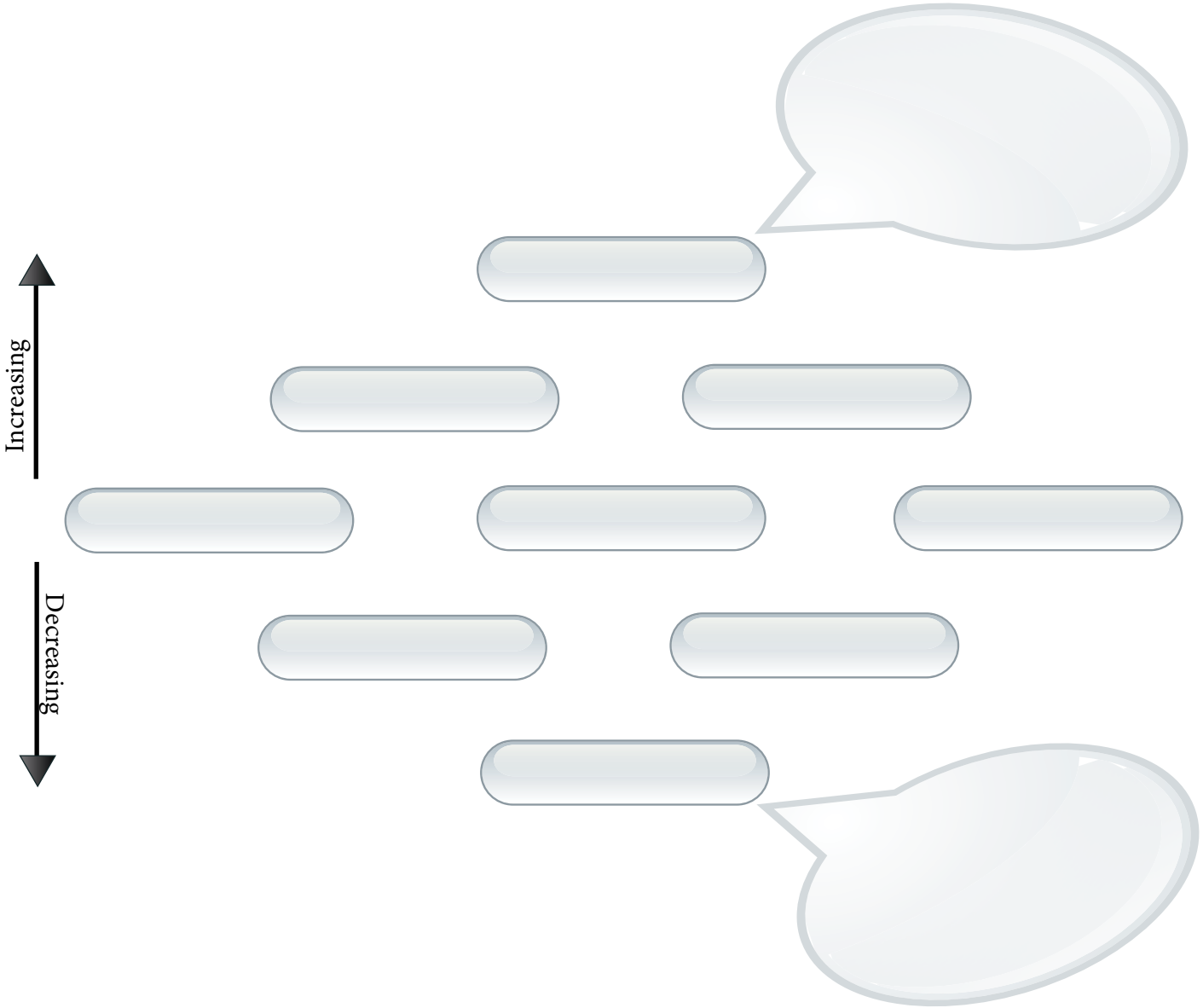
Reduced birth rate

Reduced death rate

Increased GDP/ capita

Improved waste collection services

Improved sanitation



Wordsearch: Developed and developing countries

w/s 7.3

M	N	N	L	O	A	G	E	H	N	Q	S	B	I	S
F	E	R	T	I	L	I	T	Y	R	A	T	E	E	Y
C	T	Q	O	T	T	I	B	H	A	T	J	C	C	V
J	M	C	L	A	K	E	L	T	Z	P	O	N	Y	W
C	I	P	C	R	Q	E	R	X	V	N	A	U	R	R
V	G	M	V	Y	T	G	T	A	D	T	D	B	A	O
M	R	W	X	C	G	X	G	A	C	Y	D	W	I	R
Q	A	C	L	N	L	U	R	E	R	Y	I	Y	T	Q
M	T	B	Y	E	M	Y	P	A	N	H	R	F	R	V
Y	I	D	S	D	G	X	M	E	M	X	T	A	E	O
X	O	F	B	N	E	I	B	P	T	R	U	A	T	D
K	N	J	C	E	R	P	O	V	E	R	T	Y	E	E
M	X	M	F	P	F	Y	E	T	F	L	K	J	C	D
A	D	I	X	E	T	A	R	H	T	R	I	B	G	S
D	L	B	W	D	S	R	E	G	M	Z	J	M	Q	H

1) Write the answer to at the end of the statement and then find it in the wordsearch. (11 marks)

a) The number of births per 1000 of the population. _____

b) The number of deaths per 1000 of the population. _____

c) The ratio of the population that is of working age and not of working age. _____

d) The average number of children that would be born to a woman over a lifetime. _____

e) The number of years that on average a person could expect to live for in a country. _____

f) The % of adults that can read and write. _____

g) Number or immigrants minus number of emigrants in a given time period ._____

h)The lacking of basic possessions to live a basic standard of life. _____

i) Industrial category involved in raw material extraction. _____

j) Industrial category involved in raw manufacturing and construction. _____

k) Industrial category involved in the provision of services. _____