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The National Economy

OCR F582 AS Economics

Q&A

Rapid Revision Handbook

☑ Step by step guide to key concepts
☑ Question and Answer format
☑ Glossary

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2010 Edition

Contents

Introduction to Macroeconomics

What is macroeconomics? *Macroeconomics* studies aggregate or total behaviour ie how *all* consumers, firms the government and overseas economic agents interact. *Microeconomics* considers how individual firms and consumers behave in *individual* markets.

How to economists study macroeconomics? Economists build models to describe, analyse and predict economic behaviour.

What is a model? A model is simplified view of complex relationships and processes, used to make predictions. For example, a supply and demand graph is a simple model that predicts equilibrium market price

Give examples of macroeconomic models.

- The relationship between households firms and governments and the overseas sector is captured in the *circular flow of income*
- The main model used in macro is *aggregate supply and aggregate demand* which predicts the equilibrium level of national income.

Why do economists disagree? All economists construct models to analyse and predict behaviour. However, they often draw different conclusions about cause, effect and the strength of relationships in the same model

What are economic sectors? To help build a macro model economists divide the economy up into four different sectors: households, firms the government and overseas. Sectors interact.

Define a household. A household is an individual or group of people who live at the same address. Households own a factor services which, In a market economy, they hire out to firms.

Define a firm. A firm is an organisation that hires and organises resources to make products

What are economic agents? Agents is a term used to describe households and firms

How do household and firm sectors interact?

- Households receive payments (income) for hiring out their services (eg labour) and then buy the output of firms (consumption)
- Firms hire land labour and capital (resources) owned by households to produce goods and services (products) for which they pay wages rent etc (income). Firms receive payment (consumption) when products are sold.

What is a government? The government is the body that passes and enforces laws, collects taxes to finance public expenditure, and intervenes in the free market to change behaviour.

What is the government sector? In macroeconomics the focus is on the role of government in collecting taxes (T) to fund spending on public services (G), and transfer payments

Give examples of government spending Government (G) spending is state expenditure on public services eg NHS doctors' salaries & state schools.

Define transfer payments. Transfer payments are unearned benefits paid out to households by the government e.g. unemployment, disability and child allowances

What is the international sector? Domestic economic activity in an open economy results in imports and exports. The international sector is made up of

- Domestic purchase of overseas made products: *imports* (M)
- Overseas purchase of UK made products: *exports* (X)

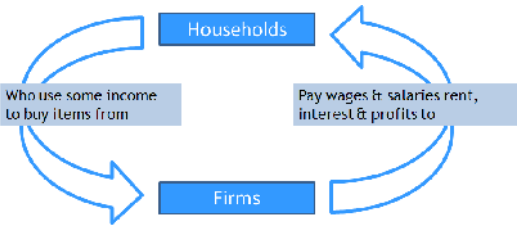
Circular Flow of Income

What is the circular flow of income? The circular flow of income is the movement of money around the economy. This process can be illustrated in the circular flow of income model

Explain the circular flow of income model. The circular flow of income illustrates economic activity between four sectors in an economy over a given time period eg one year.

Illustrate the circular flow of income

The *circular flow of income* shows the flow of money from economic activity between households and firms. Households receive payments for their services (income) and use this money to buy the output of firms (consumption).



What does the term flow mean? Flow refers to an amount per period of time. There is the flow of income earned by households, and the flow of expenditures on the purchase of the output of firms. This flow is measured over a given time period usually one year, using money. The total amount of money earned is called *gross domestic product*.

How to households earn income? Households earn income by hiring out their factor services to firms. Workers receive wages or salaries; lending out capital earns interest; entrepreneurs receive profits; landlords are paid rent.

Is there any other source of household income? Yes. The government pays some households benefits eg jobseeker allowance. This unearned income is called transfer payments.

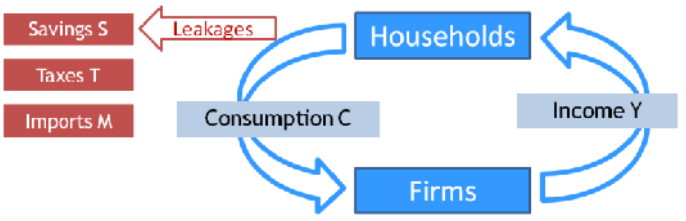
Explain disposable income. Disposable income is net household income left after deducting direct taxes such as income tax, and adding state benefits such as child benefit.

What a discretionary income? Discretionary income is income left from disposable income after paying for essentials such as food and housing costs. Discretionary income can be saved or spent on non-essentials such as holidays, eating out and going to the cinema or consumer goods.

Do households spend all of their income? No. Part of household income is withdrawn from the circular flow of as *savings*, as *taxes* to government and as payment for overseas made products ie *imports.* The technical term is leakages or withdrawals

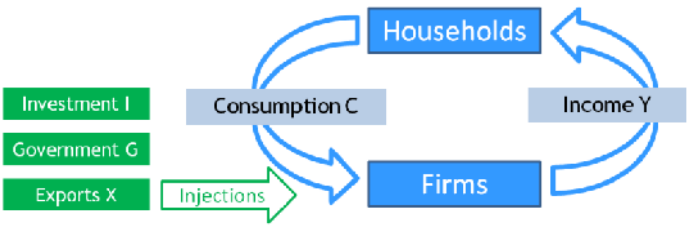
Define leakages. *Leakages* are household withdrawals of potential spending from the circular flow of income. Leakages are sometimes called *withdrawals*

Illustrate leakages from the circular flow of income. Leakages occur when households put some income aside in *savings* (S); to pay government *tax* (T); Buy foreign made products: *imports* (M)



Define injections. Injections are additions of extra expenditure into the circular flow of income

Illustrate injections into the circular flow of income. Injections occur when firms receive income from selling their output to other firms *investment* (I), the government, (G) or overseas through *exports* (X)



What is macroeconomic equilibrium? Macroeconomic equilibrium occurs when in a given time period, eg a year, the value of injections equals value of leakages.

Measuring the price level

What is the price level? The price level is the average of the prices of a group of defined products.

Why is it important to measure the price level? The level of economic activity in an economy in a given time period is measured using GDP. The value of GDP can go up either because more products are being produced, or the prices of products have risen. Measuring the price level allows economists to eliminate the effects of inflation and identify real increases in GDP.

How is the price level established? The price level is reported as an index value eg 103. Understanding price levels involves understanding how indexes are calculated.

What is an index? In statistics, an index is a single number calculated from a set of variables such as prices. The initial value of an index in the base year when it is first estimated is 100.

What is a price index? A price index is a method of measuring the average change in the prices of a group of defined products, over time. The index value of 100 in the base (first) year is the benchmark against which to measure subsequent changes. Eg a rise in the index in year 2 to 105, means a 5% rise in general prices. The annual rate of inflation is five percent.

What is inflation? Inflation is a sustained rise in the price level. This means that, on average, the prices of products in an economy are going up over time.

How is inflation measured? Inflation is usually reported as the percentage change in the price level, over the last 12 months. Economist talk about the **annual rate of inflation**

Give examples of price indices. In the UK two main price indices are the consumer prices index (CPI) and the retail price index (RPI)

How are indexes like Consumer Prices Index (CPI) calculated?

- A *base year* is chosen during which prices were relatively stable
- A survey (ONS Expenditure and Food Survey) is undertaken to identify a representative basket of consumer goods and services bought by any 'typical' household.
- Each item in the shopping basket is *weighted* to reflect its relative importance to a household. Eg food has higher weighting than transport.
- Every month, the ONS surveys a sample of prices for a selection of representative goods and services in a range of UK retail locations. Survey results are fed into a computer that calculates an overall index value for that month.
- The initial value of the index in the base year is 100. A change in prices means a change in the index value. Eg a rise from 110 to 112 means an increase in general prices, that is, *inflation*. If the price index value falls then the economy is experiencing *deflation*

What is the difference between the CPI and RPI? The CPI excludes housing costs such council tax & mortgage interest payments, included in the RPI. RPI inflation generally exceeds the CPI's.

Is a price index reliable indicator of all prices? An index is an average, ie, the one number which best describes an event. Different households have a different experience of inflation as:

- Different *regions* may be experiencing different rates of inflation.
- Different *households* have different tastes Can one basket of goods be representative of all households eg pensioners and a young family?
- Given different consumption patterns, can one set of weightings be representative of all economic agents. Do pensioners and young families place equal weight on nappies?
- New or improved products and may not be captured in the current index
- It is perfectly possible for essential items such as food to rise in price while less essential items such as plasma TVs fall. On average, the price of most items is rising.

Measuring nominal and real GDP

Explain Gross Domestic Product GDP is a monetary measure (£ billions) of total (gross) output (product) within a country's borders (domestic) in a given time period eg one year.

Who estimates GDP in the UK? The Office of National Statistics (ONS) issues quarterly and annual figures estimating the nation's gross domestic product (GDP) for that time period.

How is GDP estimated? There are three methods of estimating GDP for a given time period:

- *Income method*: add up all the incomes earned producing a country's output
- *Expenditure method*: add up all the money spent on a country's finished output
- *Output method:* add up the value of final UK output. Intermediate output is ignored

A detailed understanding of each method is not required at AS.

Define current prices. The prices operating in the year GDP was produced eg 2009.

Define constant prices. The prices operating in a base year eg 2002

What is a base year? A base year is the benchmark year used to compare the price level in one period with that in another. The year compared to the base year is the current year.

What is nominal GDP? GDP valued at current prices eg 2009 output valued at 2009 prices.

Why are nominal GDP figures misleading. GDP has a price and a quantity component. If the price level doubles with the same amount of output is produced, then nominal GDP also doubles but real national GDP remains unchanged. So it is best to adjust GDP to remove inflation effects.

What is real GDP? Real GDP is nominal GDP adjusted for inflation ie current output valued at constant (base year) prices. Eg 2006 output valued at 2003 prices - where 2003 is the base year

How is real GDP calculated? To calculate real GDP use the formula:

Real GDP = Nominal GDP x price index in base year/Current price index.

Eg if nominal GDP is £900Bn and the price index= 200 then real GDP = £900Bn x 100/200=£450Bn

What is recent UK nominal and real GDP? At £ billons base year = 2003[i]

Year	2000	2001	2002	2003	2004	2005	2006	2007
Nominal GDP	959	1,003	1005	1118	1184	1234	1304	1382
Real GDP	1042	1066	1088	1118	1155	1176	1209	1247

Components of aggregate demand

Define aggregate demand. Aggregate demand (AD) is the total planned spending on domestic output at a given price level, in a given time period, usually one year.

What is domestic mean? Domestic means in a given country e.g. the UK

List the components of aggregate demand. Aggregate (total) demand consists of

- *Consumption* (C): domestic household spending on consumer products
- *Investment* (I): expenditure by UK firms on capital eg plant, building and machinery
- *Government* spending (G): state expenditure on products but not transfer payments
- *Net exports* (X-M): the difference between spending by overseas residents on UK output (X) and UK residents spending on overseas output (M)

Consumption

Define consumption? Consumption (C) is domestic household spending on products.

What factors affect the level of consumption? Main influences on household spending are:

- *Real disposable income* It is the major determinant of the level of consumption. An increase in disposable income increases consumption.
- The *average propensity to consume* (apc). The lower the value of the apc, the lower the amount of consumption for a given level of income
- *Interest rates* affect the cost of borrowing and reward for saving. A fall in interest rates reduces the incentive to save and reduces the cost of borrowing. Consumption rises.
- *The availability of credit.* A decline in the willingness or ability of banks to lend to households reduces the level of consumption
- *Consumer confidence* Improved optimism about economic prospect raises consumption
- *Wealth* Higher house or share prices encourages more consumption eg by remortgaging
- *Technological advances* such as flat screen televisions encourages consumption
- *Distribution of income* government policies that redistribute income from the rich to the poor increase consumption because the poor have a higher average propensity to consume

How is the level of GDP linked to level of consumption? GDP is a measure of total output in the economy. An increase in GDP means an increase in output. Households earn more income from producing more output and national income rises, boosting consumption.

Give a worked example of the average propensity to consume. If national income is £800bn and consumption is 600 billion than apc = £600/£800= 0.75

Why does the apc usually fall as income rises? As income rises households can afford to save a larger proportion of their income and still maintain a high level of consumption. Poor households may spend all of their income on necessities. Their apc = 1

Why do lower interest rates normally encourage extra consumption? A cut in interest rates reduces the reward of saving and the cost of borrowing. Net borrowers eg, households with a large mortgage, have more money to spend, although net savers will have reduced income.

What is the distribution of income? The distribution of income is how earnings is divided among households

Saving

What is saving? Saving is a decision to postpone consumption

Define saving. For households, savings is that part of disposable income which is not spent.

What is dissaving? Dissaving occurs when household spending (consumption) exceeds disposable income and consumers draw on past savings to maintain current living standards

What is the savings ratio? The savings ratio or *average propensity to save* (aps) is the proportion of disposable income which is saved.

Are savings component of aggregate demand? No. Savings are unspent disposable income

List factors influencing the level of savings.

- Savings rise with the *level of real disposable income*
- The higher the *average propensity to save*, the greater the level of savings for a given level of income
- a fall in *consumer confidence* if households are uncertain about their future level of income or job prospects increases precautionary (just in case) saving
- *government policies* such as ISA tax free savings schemes can encourage saving

- the *age structure of the population* influences savings as the young and old often have little disposable income left to save. Incomes and savings peak in middle age.
- *Wealth* is the current value of assets. Savings increase wealth. Where house prices and shares are rising, there is less need to save to maintain a target level of wealth

Define wealth. Wealth is the current value of an individual's assets ie the value today of their savings, house and shares.

How are savings and wealth linked? An increase in savings increases wealth. Savings is that part of wealth that can most easily be converted into cash

Why can increasing wealth increase consumption? Many households have a target level of wealth they want to hold eg £100,000. Any increase in the value of assets means they can sell some of their shares or remortgage their house, increase consumption and still retain the same level of wealth.

What is mortgage equity withdrawal? Mortgage equity withdrawal occurs when households borrow against an increase the value of their house, often to finance extra consumer spending.

How can falling asset prices affect consumption? Falling house or share prices reduce the value of wealth. Households concerned to maintain a target level of wealth react by reducing consumption and instead increasing their savings to restore the target level of wealth.

Investment

What is investment? Investment (I) is spending by domestic firms on capital goods eg factories and machinery. Capital or producer goods are used to create other products.

Why do firms invest? Firms invest in capital goods if the expected return is greater than the cost of buying the plant buildings or machinery ie they can make a profit from their investment.

Define capacity. Capacity is the maximum amount of output a firm can produce with its current resources, in a given time period.

Explain capacity utilisation. Capacity utilisation is the extent to which a firm is using its resources. The firm is operating at full capacity when it is using all of its land labour and capital

Define spare capacity. Spare capacity occurs when firms have unused producer goods**.** Spare capacity increases in recessions as falling GDP requires less output and less use of equipment

What is the drawback in operating with spare capacity? Having unused or underused resources is inefficient. Unproductive resources incur unnecessary costs.

Do firms always operate at capacity? A business can find in times of recession or changing fashion that there is insufficient demand to require the use of all available resources.

Can firms operate beyond capacity? Introducing overtime and shift work allows a firm to produce beyond its maximum capacity. Higher overtime wage rates increase unit costs.

How does capacity utilisation affect investment? Firms are more likely to invest the closer they are to full capacity - given current levels of demand are to be sustained in the long run

What factors influence investment spending? Firms take account of:

- *Real disposable income* households use extra income to increase consumption which encourages firms to invest in new plant and equipment. However firms must believe that the high level of demand will be sustained in the long run, before committing to investment
- *Capacity utilisation*: investment is encouraged where firms are operating close to full capacity - especially where businesses are expecting sustained economic growth
- *Interest rates* affect the cost of borrowing money to finance expenditure on new plant and machinery. A fall in interest rates increases potential profits and so encourages investment

- *The availability of credit* A decline in the willingness or ability of banks to lend to firms reduces the level of investment
- *Business expectations*. Improved optimism about economic prospects increases investment.
- *Macroeconomic stability* firms that feel 'certain' about future interest rates & exchange rates are more likely to invest than if future interest rates and exchange rates are uncertain.
- *Corporation tax* is a tax paid on profits. Corporation tax cuts allow firms to retain more profit and is an incentive to invest. Government *investment subsidies* also encourage investment
- *Order books*. Firms with full order books and waiting lists are more likely to invest
- *The cost of capita*l a fall in the price of producer goods encourages investment
- *Technological advances* encourage investment. Firms now have the opportunity to manufacture new or better products. The increased efficiency of latest machinery reduces unit costs and improved profit margins.

Government

List factors likely to influence government spending These factors are influential:

- *The government's view on the effectiveness of state intervention to correct market failure.* The economic recession starting in 2009 have seen a significant increase in government spending in an effort to boost aggregate demand and avert a depression
- *Economic system*: governments in countries such as the United States which rely on free markets to allocate resources, spend a lower proportion of national income than the state in planned economies such as Cuba
- *The election cycle* governments seeking re-election may increase spending on public services and social infrastructure such as schools and hospitals to win political support
- *The economic cycle*. In a recession, governments spending on unemployment benefits rises
- *Tax revenues*: higher tax revenues allow more government spending on public services
- *Technological advances*: medical and IT advances can lead to more government spending.

How is the level of government spending and GDP linked? The higher national income (GDP), the more taxes paid to government and the greater its ability to spend. A slump reduces income tax & corporation tax revenues forcing the government to make spending cuts or borrow funds from the private sector to maintain services, increasing the national debt

Are transfer payments counted as a government spending? No. Earned income is money households are paid for supplying factor services. Transfer payments such as unemployment & child benefits are unearned income received for no corresponding output. State benefits are financed from taxes collected on earned income. Spending power is transferred

Net Exports

Define imports & exports. *Imports* are products a country buys from other nations. *Exports* are domestically produced items sold abroad.

Define net exports. Net exports are the value of exports once the value of imports is deducted.

- *Imports* (M) is spending by domestic residents on products made overseas
- *Exports* (X) is spending by overseas residents on domestically made products
- *Net exports* [X-M] is the difference between a country's exports earnings and its total spending on imports

List the main factors affecting net exports. Net exports are affected by income levels in the UK and overseas; international competitiveness, that is, the relative price and quality of domestically made goods compare with imports; and exchange rates

- *Domestic real disposable income* eg in a boom, UK residents usually use higher incomes to buy more imports. Falling UK GDP and incomes generally result in less spending on imports

- *Overseas real disposable income* overseas agents generally reduce their spending on UK made products their own economy is in recession and GDP and incomes are falling
- *International competitiveness*: the relative price and quality of domestic goods and services relative to foreign products. Exports rise and imports fall if domestic products become more competitive. This is why relative inflation rates are important for net exports
- *Exchange rate*: a fall in the value of a country's exchange rate (*deprecation*) makes its exports cheaper, in terms of foreign currency, and its imports more expensive. If demand for imports and exports is price elastic, spending on imports falls; earnings from exports rises. Net exports [X-M] improve
- Government *restrictions on free trade* such as tariffs (a tax on imports) and quotas (limits on the volume of imports) reduce imports

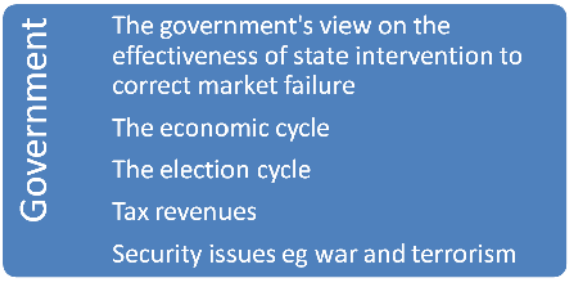
Why [X-M]? Spending by overseas residents on domestic output increases that country's aggregate demand. Spending by UK residents on overseas output reduces aggregate demand at home. The overall impact on aggregate demand is the difference between exports and imports.

What is the composition of aggregate demand in the UK for each component?

UK Aggregate Demand 2007 (£ million)[ii]					
C	**I**	**G**	**X**	**M**	**GDP**
799,476	236,470	255,315	339,434	-383,162	1,246,895
64%	19%	20%	27%	-31%	100%

Consumption is the major component of the demand. Investment is relatively small but highly volatile. Government spending accounts for 1/5 of total demand. A trade deficit means that the net exports are negative reducing the overall level of aggregate demand.

Draw diagrams showing the main factors affecting the components of aggregate demand



Aggregate demand curve

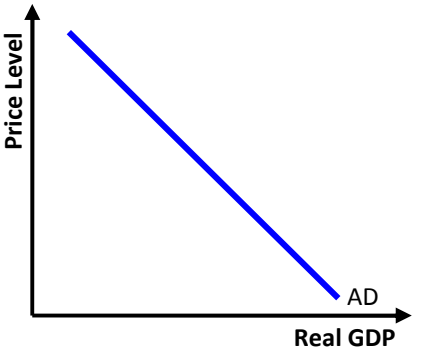
What is an aggregate demand curve? An aggregate demand curve shows total planned spending on domestic output at a different price levels, over a given time period. In short, the AD curve shows the quantity of goods and services that all households, firms, the government and the international sector want to buy at any price level

Draw an aggregate demand curve and explain the axes.

The AD curve shows how much output (GDP) economic agents plan to buy at each price level.

The horizontal axis measures the level of output of the country in terms of real GDP (£Bn). Real GDP indicates the level of national income, output and employment. The higher the level of real GDP, the higher the level of economic activity.

The vertical axis measures the price level. The price level is a measure of all prices in the economy. An increase in the price level means inflation and a decline in the purchasing power of money.



What is the relationship between demand and price level? Aggregate demand is inversely related to the price level. Aggregate demand and the price level move in opposite directions. This means an increase in the price level causes a contraction in aggregate demand. Similarly a fall in the price level causes an extension of aggregate demand. In short, a change in the price level results in a movement along the AD curve but does not shift the AD curve.

Why does an aggregate demand curve slope down from left to right? Aggregate demand (AD) normally rises as the price level falls because of:

- *Wealth effect*: A decrease in the price level increases the purchasing power of wealth which encourages households to increase consumption.
- *Interest rate effect*: A lower price level usually reduces the interest rate and so encourages greater spending on investment and consumer goods
- *Exchange rate effect* As domestic prices fall, UK products become more price competitive. Foreigners buy more UK products leading to higher UK exports (X). UK consumers switch from imports to UK made products increasing consumption

Why can aggregate demand curves shift? A change in a component of aggregate demand, household (C), firm (I), government (G) or net exports [X-M] causes the AD curve to shift.

The aggregate demand curve shifts to the right and economic agents increase their planned spending at all price levels. For example, there may be higher

- Consumption from improved consumer confidence
- Investment due to a cut in interest rates
- government spending on hospitals to make an election pledge
- Increased Net export spending as a result of a depreciation of sterling

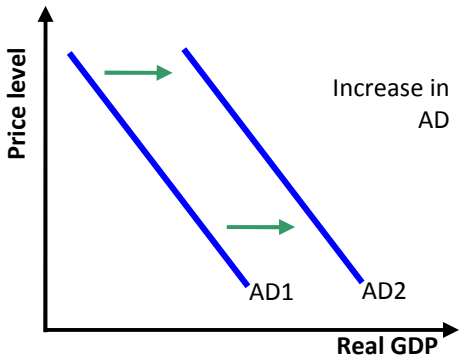
Changes in aggregate demand

Why can level of aggregate demand in the economy change? A change in aggregate demand can be brought about by

- a change in the *price level* causing a *movement along* the aggregate demand curve
- a *change in a component of aggregate demand* causing a *shift* in the aggregate demand curve

Does a change in the price level shift an aggregate demand curve? No. A change in the price level causes a movement along the AD curve.

Draw a diagram to illustrate an increase in aggregate demand



The aggregate demand curve shifts if any factor, apart from the price level, affecting a component of aggregate demand changes. The aggregate demand curve shifts only if there is a change in a component of aggregate demand ie a change in C, I, G or [X-M]

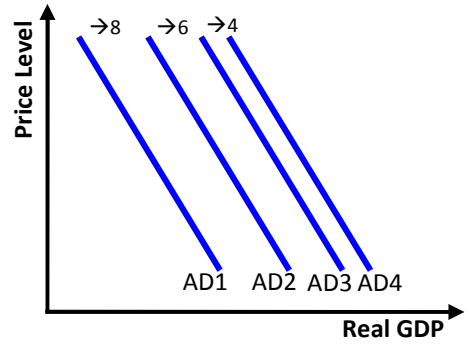
Look back carefully over the list of factors affecting consumption, investment, government spending and net exports. A change in any one of these factors affecting a component of aggregate demand affects total planned spending in the economy at each price level and so the position of the aggregate demand curve.

For example improving consumer confidence or lower interest rates increase aggregate demand that all price levels, shifting the AD curve to the right.

Aggregate demand and the multiplier

What is the multiplier effect? The multiplier effect is the process by which a change in an injection or leakage in the circular flow of income brings about a greater change in GDP. The multiplier effect occurs because spending creates income for others, part of which is re-spent.

Give an example of the multiplier effect. If government increases its spending by £8b, firms supply more output by hiring more factor services from households. The AD curve shifts from AD1 to AD2. The multiplier effect is a dynamic process taking place over time.



Households receive extra income of £8: part is spent; part is not spent. Assume they spend £6b and save £2bn, extra spending requires firms to further increase output by hiring more factors so that household income rises, again.

The initial injection of demand of £8b generates further rounds of income, output & expenditure of £6b, £4b, etc.

The overall increase in GDP is higher than the initial increase in government spending

What is a negative multiplier effect? The multiplier effect can work in reverse. For example, falls in investment spending means firms cut production and hire fewer workers. Suppliers see a fall in the demand for their products. Household incomes fall causing consumption to contract. The overall decrease in GDP is bigger than the initial fall in investment spending.

How does the multiplier effect affect regions? Specialisation means that specific industries can dominate economic activity in particular regions. For example Honda is a major employer in Swindon. The decision in 2009 to suspend production for four months had a big impact on local shops as workers cut their spending, and on those ancillary firms in the region supplying products.

Aggregate Supply

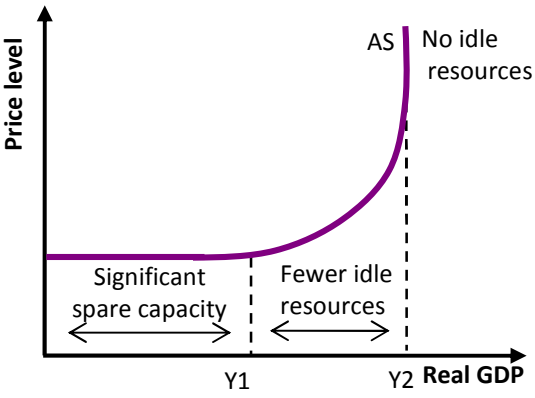
Define aggregate supply. Aggregate supply (AS) is total planned output by all domestic producers at a given price level,

How do firms increase aggregate supply? Increasing the level of total planned output requires producers in an economy to use more land, labour and capital. For example firms raise production by hiring more staff.

Define potential GDP. Potential GDP is the highest level of output (real GDP) a country can produce with current resources that delivers both full employment and stable inflation.

What determines potential GDP? Productive capacity is determined by the quantity and quality of resources available to a country in a given time period eg the number of workers in the labour force and their skills; the number of modern machines; the quality of management; the country's stock of natural resources and quality of land

Define an aggregate supply curve. An aggregate supply (AS) curve shows total planned output by domestic producers at different price levels in a given time period, usually one year.



aw an aggregate supply curve and explain its shape. The maximum amount of output (GDP) an economy can produce a given time period is called *productive capacity* or *potential output* and occurs at Y2.

The shape of the aggregate supply curve depends on the impact on unit costs of increasing the level of output.

The aggregate supply curve is price elastic when unit costs are unaffected as the level of economic activity increases. If the economy is operating well below capacity, firms can hire extra workers at the same wage rate and buy extra raw materials and components at the same unit cost. The aggregate supply curve is horizontal and perfectly elastic up to Y1.

Why can aggregate supply curves slope upwards? The aggregate supply curve becomes increasingly price inelastic as the economy moves towards full capacity, at Y2. Beyond Y1 resources become scarcer and shortages and bottlenecks occur in the economy. Firms are competing for the scarce extra resources required to raise production, causing unit costs to rise. Firms may need to introduce overtime and pay staff higher hourly wage rates. Less efficient workers and machinery are employed and their lower productivity increases unit costs. Firms are only willing to increase aggregate supply given a higher price level.

Why do aggregate supply curves eventually become perfectly inelastic? Economies are at full capacity when all available resources are employed. Productive capacity is reached at Y2 in the above diagram. An increase in the price level fails to bring about an increase in aggregate supply because all current labour and capital are employed.

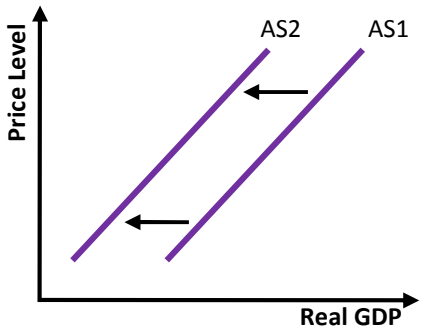
How do time periods affect aggregate supply? Economists distinguish between short run and long run factors affecting aggregate supply:

- in the *short run*, aggregate supply is affected by *costs of production*. A fall in cost of raw materials or wages causes an increase in aggregate supply
- in the *long run*, aggregate supply is determined by the quantity and quality of resources

Why do aggregate supply curves shift? It is helpful to distinguish between short run and long run factors

- In the *short run* the main factor causing a shift in the AS curve is unit cost of production. Firms react to an increase in the unit cost of production by reducing the amount of total planned output at any price level. The AS curve shifts to the left
- In *the long run* the quantity and quality of resources available to economy can change. For example, investment in new machinery and training increases the level of potential GDP shifting the AS curve to the right.

Why are AS curves sometimes drawn as an upward sloping straight line? The shape of the AS curve is often simplified in textbooks. An upwardly sloping straight line AS curve means that that unit costs are assumed to rise as the level of economic activity increases.



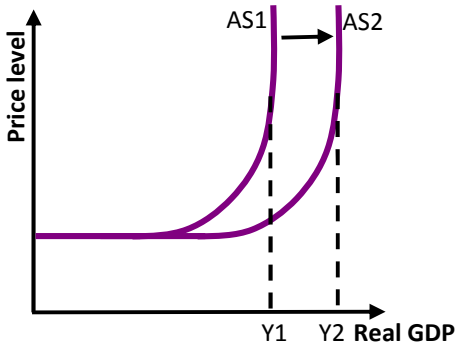
Illustrate the effect of an increase in costs of production on aggregate supply

An increase in costs production means producers are less willing and able to supply output at any given price level. The AS curve shifts upwards and to the left. An increase in the cost production occurs if productivity falls, the price of raw materials or components increases, or wage rates rise

List potential reasons for rising unit costs. The costs production can increase because of:

- An increase in wage rates
- increases in price of domestic or imported raw materials or components
- higher oil or energy prices
- an increase in corporation tax or reduction in government subsidies

Illustrate the effect of an increase in productive capacity on aggregate supply



The position of the vertical part of an aggregate supply curve is determined by the maximum amount of GDP a country can produce with its current resources ie productive capacity. The associated level of GDP is called *potential GDP*.

An increase in the quantity or quality of resources increases productive capacity and the level of potential GDP. The aggregate supply curve shifts to the right as more can be produced each price level. Such shifts occur in the long run, as a result of economic growth.

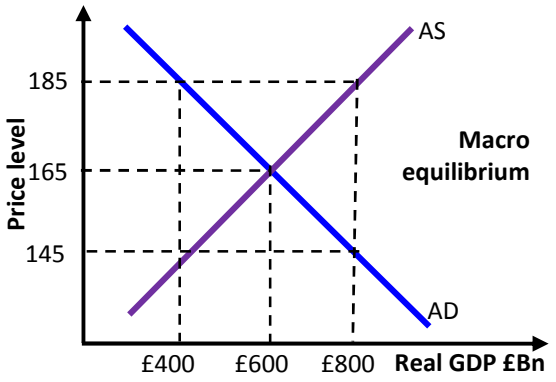
What causes an increase in productive capacity? Extra resources increase potential output, causing an outward shift in the AS curve. This process takes time and can be caused by

- A larger labour force from immigration or increased labour force participation
- Net investment increasing the country's stock of capital
- Training and education leading to improved skills and increased productivity of labour
- Technological advances eg innovation and improved manufacturing processes
- Management training improves organisation and so increases in productivity of workers
- Measures to stimulate enterprise eg tax breaks for entrepreneurs, deregulation and privatisation

See the section on economic growth for further discussion of the above points.

Macroeconomic equilibrium

Define macroeconomic equilibrium. Equilibrium is a state of balance; a situation where there is no tendency for change. Macroeconomic equilibrium occurs when aggregate demand equals aggregate supply. There is no tendency for output or the price level to change.



Use AD & AS analysis to illustrate macroeconomic equilibrium. The intersection of the AD & AS curves gives equilibrium level of GDP: £600b. This is called *actual GDP*. There is no pressure on prices or output to change – the economy is in balance.

At higher price levels, eg 185, excess supply of output results. Firms plan to supply £800b; economic agents plan to spend £400b at this price level. Only by reducing prices can firms reduce stocks of unsold goods.

At lower price levels, eg 145, then planned output of £400Bn cannot meet planned aggregate demand. Only an increase in all prices can persuade firm to increase output. Equilibrium is restored when the price level reaches 165.

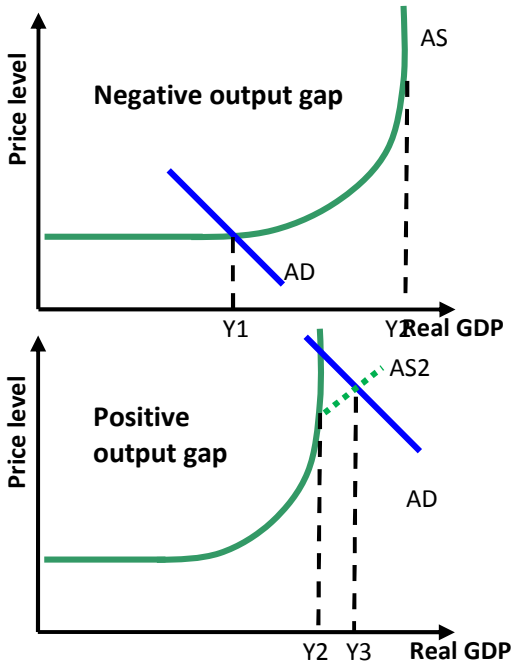
Actual and potential GDP: output gaps

What is the difference between potential and actual GDP? *Potential output* is the highest level of real GDP a country can produce that delivers both full employment and stable inflation. *Actual GDP* is the level of real GDP produced by a country in, say, one year.

Define an output gap. Potential and actual GDP can diverge. An *output gap* is the difference between an economy's actual and potential real GDP.

How are output gaps expressed? Output gaps are often expressed as a percentage of potential output using the equation (actual GDP- potential GDP)/potential GDP

Distinguish between positive and negative output gaps. A *negative output gap* exists when the actual level of output is below potential output. A *positive output gap* occurs when the actual level of output exceeds potential output



Illustrate a negative output gap.

Y2 is the potential level of GDP and is the value of output made when all resources are fully employed. Y1 is the actual level of output given by the intersection of the AD and AS curves.

The output gap equals Y2 - Y1 and there are unemployed resources in the economy.

Illustrate a positive output gap.
It is possible for an economy to produce above its productive capacity *in the short run* by working overtime, extra shifts, delaying maintenance of equipment and hiring staff not usually in the labour force. The aggregate supply curve becomes AS2.The actual level of output Y3 exceeds potential GDP Y2, causing a positive output gap = Y3-Y2

How can an economy produce above potential GDP? Actual GDP can exceed potential GDP by working overtime, shifts, delaying maintenance and hiring staff not usually in the labour force.

What is the economic impact of an output gap?

- A positive output gap means actual GDP > potential GDP causing inflationary pressure
- A negative output gap means actual GDP < potential GDP causing cyclical unemployment

Does potential GDP rise over time? The level of potential output is determined by the quantity and quality of a country's resources, and the state of technology. New technologies, net investment, net economic migration or increased productivity results in economic growth and a rise in an economy's productive capacity and level of potential GDP.

What is trend growth? Trend growth is the expected long-term increase in potential output.

What causes trend growth? Trend growth is caused by an increase in the economy's productive capacity and measures how fast an economy can grow at full employment and without inflationary pressure - the economy's 'speed limit'

Economic Shocks

What are economic shocks? Economic shocks are unanticipated events that affect aggregate demand or supply. They cause a shift in the aggregate supply or demand curve.

- *External shocks* are an unexpected event that take place outside the UK, but affects the UK economy eg a US recession reduces UK exports; rising world oil prices affect import prices
- *Domestic shocks* are an unexpected event that takes place in the UK eg falling house prices;

What are supply side shocks? Supply side shocks are unanticipated events that affect domestic producers. Costs and prices change, causing a change in short run aggregate supply.

Give examples of supply side shocks. Events affecting firms' unit costs include

- Record 2008 *world oil prices* increasing the cost of transport and items using oil as an input.
- The rapid expansion of developing countries such as China has increased the world price of *commodities* such as copper and tin and the price of *food* items such as rice
- A switch to bio fuels increased the world price of *agricultural products* such as maize

What are demand side shocks? Demand side shocks are unanticipated events that affect economic agents, causing a change in the level of aggregate demand

Give examples of demand side shocks. Events affecting the level of aggregate demand include

- *Conditions in the economy of trading partners.* The UK is an open economy. The level of UK exports (hence aggregate demand) is affected by eg a recession in the US or a boom in China
- *Investment* in new technologies eg ICT
- A sudden, severe and unexpected change in *exchange rates* affecting the relative price of imports and exports eg the fall in the value of sterling (£) and strength of the euro

What is the impact of an economic shock? An economic shock changes the level of aggregate supply or demand and so moves the economy away from its current equilibrium. Income, output, employment and prices levels change and output gaps may open up. Economic agents then have to respond and adjust their behaviour

- Consumers may find they have more/less income to spend
- Government may need to adjust its macroeconomic policies if it is to achieve its objectives. And to help the economy absorb the shock effect. Eg change interest rates and taxes
- Firms may need adjust their prices, output and employment levels eg hire or fire staff

Changes in aggregate demand

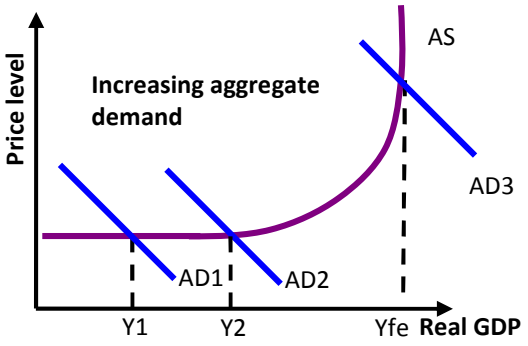
What determines the level of economic activity in an economy? Macroeconomic equilibrium determines the level of income, output, employment and inflation in an economy.

How can changes in aggregate demand or aggregate supply affect the economy? Changes in AD and AS move the economy to a new level of macroeconomic equilibrium which changes the amount of income households earn and spend, the amount of output produced by firms, the number of workers employed or unemployed and the price level hence inflation.

Consider the factors that determine the impact of a change in aggregate demand on the economy? The impact of a change in aggregate demand depends on:

- the original level of economic activity
- the magnitude of the change in aggregate demand
- the size of the multiplier

Use a graph to show the effect of an increase in aggregate demand



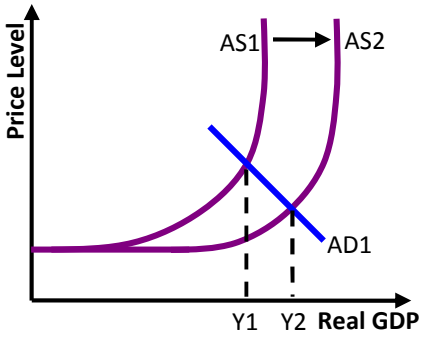
An increase in aggregate demand shifts the AD curve to the right. If the economy is in equilibrium well below potential GDP, eg Y1, then an increase in aggregate demand causes actual economic growth.

For example, an increase in aggregate demand from AD 1 to AD2 increases output and employment with no inflation. Rises in GDP beyond Y2 generate both inflation and increases in real GDP until YF when any further increases in AD are inflationary.

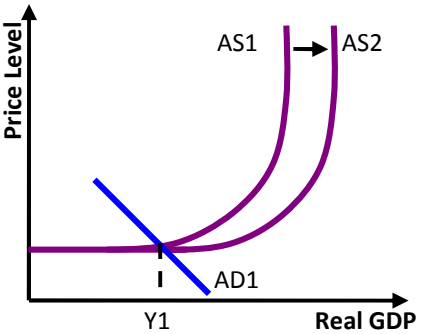
Changes in aggregate supply

Consider the factors that determine the impact of a change in aggregate supply on the economy? The impact of a change in aggregate supply depends on:

- the level of aggregate demand
- the magnitude of the change in aggregate supply



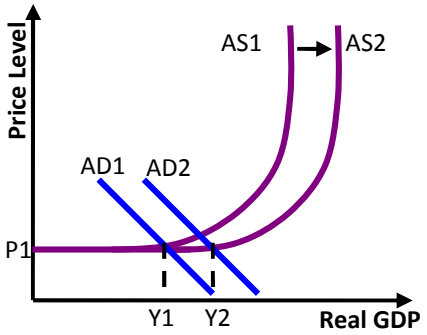
The increase in aggregate supply from AS1 to AS2 moves the economy to a new position of macroeconomic equilibrium at Y2. This causes a decrease in the price level (deflation) and an increase in GDP (output)



Where an economy is operating well below potential output, an increase in aggregate supply has no impact on the level of economic activity. GDP remains at Y1. Prices are unaffected

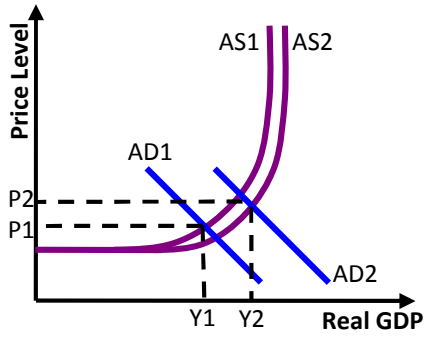
Changes in AD and AS

How is the AD and AS model used? The AS/AD model is used to predict the equilibrium level of national income. The diagram below this is Y1 and is measured in terms of real GDP. The model is also used to predict the effect of a change in a component of aggregate demand and supply on output, prices and unemployment in an economy.



What is Non-Inflationary Continuous Expansion (NICE)? NICE occurs when aggregate demand and supply grow at the same rate so that there is no upward pressure on prices.

Illustrate NICE. The initial level of national income is Y1. A concurrent and matching increase in aggregate demand and supply moves the economy to a high level of national income, with no impact on the price level which stays at P1



Explain overheating. An economy overheats when aggregate demand grows at a faster rate than aggregate supply resulting in inflation.

Illustrate overheating. The initial level of national income is Y1. An increase in aggregate demand greater than the increase in aggregate supply moves the economy to a high level of national income, and higher price level, P2

What is the UK experience of Non-Inflationary Continuous Expansion? The UK experienced NICE for over 10 years until 2009 when the credit crunch and a world recession caused a fall in aggregate demand and aggregate supply so that the level of national income and price level fell.

Government macroeconomic policy

Measuring economic performance

What is the role of government in macroeconomics? The government is responsible for managing the economy. Government action can affect key economic variables such as the level of output, unemployment, and inflation and has a large influence on economic performance

What happens if governments mismanage the economy? In the UK, the electorate hold the government responsible for economic performance. Governments that fail to deliver satisfactory levels of eg employment growth and prosperity find it difficult to get re-elected

What is meant by the term economic performance? Economic performance assesses how well a country is using it scarce resources.

How is economic performance measured? Economic performance is measured using macroeconomic indicators eg GDP and productivity

What is an economic indicator? Any economic *metric* (statistic) that measures the level of economic activity eg GDP, economic growth, inflation or unemployment rate, or current account

What is the most commonly used measure of economic performance. Real gross domestic product is a key indicator of economic performance as it measures the total value of products made by country in a year. An increase in real GDP means higher output.

What is the difference between national income and GDP? Each term measures the level of economic activity in the country in say a year. National income is the total amount earned by

households for making this year's output. GDP is the value of that output. In short, national income and GDP can be used interchangeably. They both measure economic performance.

What constitutes improving economic performance? A country's economic performance can be improving

- *over time* eg the value of real GDP is increasing year on year so that more products are available to satisfy more wants and needs
- in *comparison with other nations eg* the UK economy is growing faster than other nations

List other indicators of economic performance.

- lower *unemployment* means the country is making better use of its resources
- a lower and stable *inflation* rate indicates improving economic stability
- an improved balance of payments indicates an improved international trade position
- improving *productivity* indicates each workers is generating more output with given inputs
- improving public finances eg a sustainable budget position and national debt level
- improving quality of life eg less stress and improving levels of happiness

What is the standard of living? The standard of living refers to the average amount of GDP for each person in a country ie *per capita GDP*.

How is the standard of living calculated? The standard of living (SoL) for a given year is found by dividing real GDP by the size of the population. SoL= real GDP/size of population

Is real GDP a reliable measure of economic activity? Certain categories of economic activity are not recorded by the authorities and so are excluded in official GDP figures. For example

- *Non-marketed output* eg DIY, unpaid housework and voluntary activities are ignored
- *Undeclared or illegal economic activity* in the *informal economy* means official figures may underestimate GDP by up to 13%. Eg work done for cash is undeclared to the state

Is the informal economy a problem? Undeclared economic activity means:

- economic data becomes unreliable eg the value of real GDP and the level of unemployment is underestimated
- the government receives less tax revenue and is less able to fund public services
- lower productivity as firms operating in the informal economy stay small to avoid detection and forego potential economies of scale

Does increasing real GDP necessarily mean increasing living standards? An increase in real GDP means an increase in output. However living standards may not improve if

- there is a larger increase *population growth* eg a 3% rise in real GDP and a 10% rise in population causes an overall fall in the standard of living
- the increase in real GDP is unevenly distributed with little of any benefit for the poor
- creating extra output causes more stress or less leisure time
- The increase in real GDP is from investment displacing consumption, reducing *current* economic welfare. More capital means products are available in *future* time periods
- Is unsustainable with increased economic activity generating more negative externalities such as pollution, noise and congestion
- Is the result of more e*conomic regrettables eg* more defence spending

Does an increase in standard of living improve happiness? Some economists argue that once a 'satisfactory' standard of living is achieved, say $15,000, further increases in real GDP may or may not improve self-reported happiness as recorded by eg Satisfaction with Life Index

How can the relative economic performance of countries be assessed? Economic indicators assess economic performance. Eg a country with a higher standard of living (more real per capita GDP), or higher productivity (output per worker), has better economic performance

How can living standards in different countries be compared? Economist estimate real per capita purchasing power parity using a common currency, the US$, to compare living standards

Can GDP be used to make comparisons of standard of living between countries? GDP places a monetary value on the amount of goods and services created by a country in one year and so can be used to compare the relative economic performance of countries. However raw GDP figures will need adjusting to remove the effects of:

- *inflation*: use real GDP and not nominal GDP
- *population*: divide a country's real GDP by the size of its population ie real GDP per person
- *exchange rate distortions*: measure GDP using use a common currency eg $ with the same purchasing power in each country

Is per capita real PPP$ a reliable indicator of economic performance? Using per capita real PPP$ ignores issues such as composition of output, quality of products, size of informal economy, length of working week & stress levels, pollution levels, sustainability issues, and income & regional inequality factors ie the distribution of income

Macroeconomic policy objectives

What does the term *government policy objectives* mean? A *policy* is a course of action; an objective is a desired outcome. Government policies are measures taken by the state to achieve the stated aim such as low inflation or high economic growth. The government selects those measures most likely to deliver stated macroeconomic objectives

List potential Government macroeconomic objectives. Typical objectives include

- low and stable *inflation*
- low *unemployment*
- high and sustainable *economic growth*
- a satisfactory *balance of payments* and
- *Economic stability* avoiding the 'boom and bust' associated with the economic cycle
- an acceptable *distribution of income*

Inflation

Define inflation. Inflation is a sustained rise in the price level over time

Define the inflation rate. The rate of inflation is the percentage increase in the price level over a given period of time, usually one year.

How is the annual rate of inflation measured? The annual rate of inflation is found by calculating the percentage change in a given price index eg the CPI, over the last 12 months

Define purchasing power. The amount of products a unit of currency, eg one pound, can buy

What are the general consequences of inflation?

- *Purchasing power falls*. The value of money decreases as each pound buys fewer products.
- *UK products become less competitive* if UK prices are rising faster than our trading rivals
- *Sustained inflation* may cause economic agents to develop inflationary expectations, fuelling a price-wage spiral. Workers may demand higher wages in anticipation of higher prices

What is anticipated inflation? Anticipated inflation is the expected rate of inflation for the near future. Economic agents take account of anticipated inflation eg in their wage demands.

Why is anticipated inflation important? Economic agents take action to protect themselves from the effects of inflation. Eg workers base current wage claims on anticipated inflation.

What are the costs of anticipated inflation? Anticipated inflation generates

- *Shoe leather costs:* economic agents take action counter the effects of inflation by holding less cash and making additional trips to the bank to put cash into interest bearing accounts
- *Menu costs:* the additional cost of firms constantly changing price lists and displays.

What is unanticipated inflation? Unanticipated inflation is unexpected inflation. The failure of economic agents to estimate the future rate of inflation, accurately, causes shocks and problems.

Is unanticipated inflation an issue? Unanticipated inflation destabilises an economy:

- *Uncertainty* about future prices increases risk and so discourages investment.
- *Income and wealth are randomly redistributed*. When a loan is repaid its purchasing power has fallen so that debtors gain while creditors lose - if the rate of interest charged does not compensate for expected inflation.

What factors determine the impact of inflation? The overall effects of inflation depend on its:

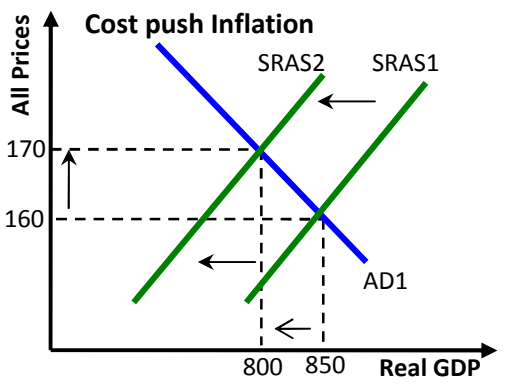
- *Rate*: 1% annual inflation rate doubles prices every 72 years. A 10% inflation rate doubles the price level every 7.2 years. Hyperinflation destroys the value of money quickly.
- *Duration:* the longer inflation lasts, the greater its impact
- *Stability:* accelerating or fluctuating inflation is a bigger challenge than stable inflation rates.
- *Unanticipated inflation* causes uncertainty which undermines macroeconomic stability.
- *Relative international rate*. Where UK inflation rates are higher than those of our trading partners, price competitiveness is lost. Imports are encouraged; exports are discouraged.

When is inflation a particular problem? High, unstable, accelerating and unanticipated inflation over several years imposes far higher economic costs than short lived, low, stable, declining and anticipated inflation. Particularly when the inflation rate is in excess of rivals.

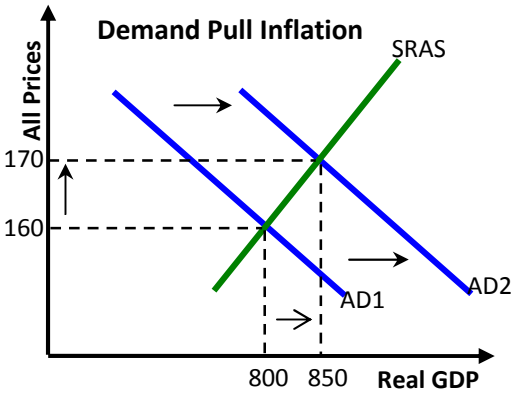
What is cost push inflation? Cost push inflation is caused by increasing prices of inputs eg wage rise, increased import price (imported inflation) or higher indirect taxation.

What is demand pull inflation? Demand pull inflation results from increases in aggregate demand unaccompanied by an increase in aggregate supply. There is "too much money chasing too few goods", bidding up prices and causing inflation.

Use AS & AD to illustrate Demand Pull & Cost Push inflation



Cost push inflation is caused by increases in the price of inputs such as oil and commodities shifting the SRAS curve to the left.



Demand pull inflation results from increases in aggregate demand unaccompanied by an increase in aggregate supply, shifting AD to the right

What is deflation? Deflation refers to a sustained decrease in the price level.

What are the general consequences of deflation?

- *Menu costs* of updating menus, price lists, brochures, etc are incurred
- *Purchasing power increases* and households can buy more products with their income
- *The real value of debt rises*: creditors gain; debtors lose
- *Falling asset prices* (eg houses & equities) reduce personal sector wealth. Households may *increase savings* in attempt to restore previous wealth levels
- *Sustained deflation* may cause economic agents to *postpone purchases* in the expectation of buying the item at a lower price in the future. A deflationary spiral sets in.

Is deflation a problem? The impact of deflation depends upon its rate, duration and the extent to which it is anticipated.

- One off falls in the price level increase purchasing power which can stimulate consumption, hence aggregate demand.
- Sustained falls in prices can set off a deflationary spiral. Economic agents began to delay purchases in anticipation of further price falls. This causes firms to cut prices in the hope of stimulating sales.

Income distribution

Define income distribution Income distribution is the extent to which national income is shared out between households

Why are governments often interested in income distribution? Free markets may leave some households with little if any income, denying them access to necessities eg education.

How can the state improve income distribution? To improve access to essentials and correct inequality the state intervenes and redistributes income by using taxes collected from the rich to pay benefits to the poor - or supply public services at little or no cost to the end user eg NHS.

Unemployment

What is the working age population? The working age population refers to men aged 16 to 64 and women aged 16 to 59

Define the labour force. The labour force is the total number of people *employed* and those registered as *unemployed*. Labour force = number of employed + number of unemployed

What is economic inactivity? The *economically inactive* are jobless people of working age or those not seeking a job through early retirement, family, long-term sickness or full-time study.

Define unemployment. A situation when people who are willing and able to work are unable to find a paying job

Define the unemployment rate. The unemployment rate is the proportion of the labour force that is unemployed. Given by the equation: *total unemployed/ number in the labour force x 100*

How is the level of unemployment measured? There are two main measures:

- *Claimant count*: total of all those claiming unemployment benefit (Job Seeker's Allowance)
- *Labour Force Survey* (LFS): the total of all those who have looked for work in the past month and are able to start employment in the next two weeks. An internationally used measure

Is the claimant count method reliable? This method is quick and inexpensive but understates the 'true' level of unemployment because many people are interested in finding work but do meet all of the criteria for claiming Job Seeker's Allowance.

Is the method Labour Force Survey method reliable? The LFS is an internationally used broader, if slower & more expensive, method of measuring unemployment then the claimant count method. Using LFS methodology, only persons actively looking for work are classified as unemployed. This excludes discouraged workers who want a job but have given up looking.

What are the consequences of unemployment?

- *Productive inefficiency* through lost output (opportunity cost)
- *Lost government tax revenue* and increased expenditure on unemployment benefits
- workers with the skills to qualify for visas may emigrate, reducing domestic potential output
- *trading partners* experience reduced demand for their exports
- *Poverty* and *social exclusion*; loss of status, alienation and frustration.

Does any stakeholder gain from unemployment? Firms find it easier to recruit and staff are less likely to demand wage increases for fear of redundancy. Inflationary pressure is reduced.

Why is the length of unemployment important? Workers who are unemployed for a few months while finding a new job are less of a problem that those without a job for years

Does a fall in unemployment mean a rise in employment levels? A fall in unemployment numbers has no impact on employment figures if workers are leaving the labour force through retirement, education, emigration, a Government training scheme or becoming long term sick

List the main types of unemployment. There are three types: frictional, structural and cyclical

Explain frictional unemployment. Frictional unemployment occurs when workers with appropriate skills for vacancies are jobless. Job seekers need time to find new employment

Give examples of frictional unemployment. A redundant worker, school leaver, graduate or re-entrant (returning parent) with appropriate job skills for vacancies are looking for a vacancy.

What causes frictional unemployment? Frictional unemployment is caused by imperfect information in labour markets. Those frictionally unemployed have the appropriate job skills for vacancies. They are unemployed because it takes time to match employers and job applicants.

Is frictional unemployment a problem? The reallocation of resources requires worker to change jobs. Minimising the time taken to search and find a new post minimises the impact

Explain structural unemployment. Structural unemployment occurs when workers in declining industries lose their job but have inappropriate skills or mobility for vacancies. Structural unemployment is a result of structural change in the economy and the immobility of labour.

What is structural change? Structural change is a change in the relative importance of the primary, secondary and tertiary sectors of an economy over time eg the decline of manufacturing and rise of the service sectors in the UK since the 1980s.

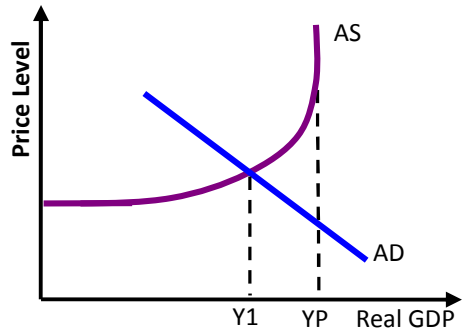
Give an example of structural unemployment. A worker in a declining industry such as coal loses their job, but lacks the skill and training to fill a vacancy for a computer programmer. The skills possessed by this jobless worker do not match those required by potential employers.

Explain cyclical unemployment. Cyclical unemployment is the result of insufficient aggregate demand. Workers lose their job because of a downturn in the economy.

What causes cyclical unemployment? Cyclical unemployment is linked to the economic cycle and occurs when jobs are lost because of a recession.

Does full employment mean that there is no unemployment? Frictional unemployment always occurs in dynamic economies. Full employment occurs when there is no cyclical unemployment typically when the unemployment rate is 3%

Use AS & AD to illustrate cyclical unemployment



In the diagram opposite macroeconomic equilibrium occurs at Y1. Actual GDP Y1, is well below the potential level of output YP.

There insufficient aggregate demand to require the use of all resources in the economy.

Given the economy is in equilibrium there is no automatic mechanism to move the economy towards YP. The implication is that government action is needed to stimulate AD

What is hysteresis? Hysteresis is unemployment causing unemployment. Employers are reluctant to take on the long-term unemployed as they may have lost job skills or are unfamiliar with new technologies. The unemployed lose confidence and become less active in seeking a job

Identify factors determining the impact of unemployment. Factors include the

- *number unemployed*: 3 million out of work has a bigger impact than 1 million
- *unemployment rate*: 3% is close to full employment; 10% is typical of a recession
- *length of unemployment*: an average of 12 months has a bigger impact than 1 month
- region and age: unemployment is divisive if it falls on a particular area or age group

Economic growth

Define economic growth. Economic growth is an increase in real GDP.

How is economic growth measured? Economic growth is measured by changes in real GDP

What is the economic growth rate? The annual economic growth rate is the percentage increase in real GDP over twelve months.

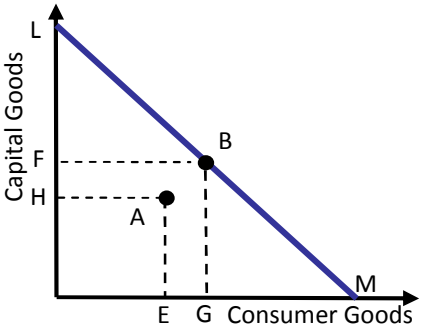
How is the annual rate of economic growth calculated? The annual growth rate is found using the equation

(current real GDP – last year's real GDP)/last year's real GDP x 100

For example: if UK real GDP rises from £1,210bn in 2006 to £1,247bn in 2007 then the annual economic growth rate is (£1,247bn - £1,210bn) / £1,210bn x 100 = 3.1%

What is the impact of increasing growth rates? The higher the rate of economic growth the shorter the period of time required to double GDP. A 1% growth rate double GDP every 72 years; 2% growth 72/2 = 38 years; 10% growth = 72/10 = 7.2 years

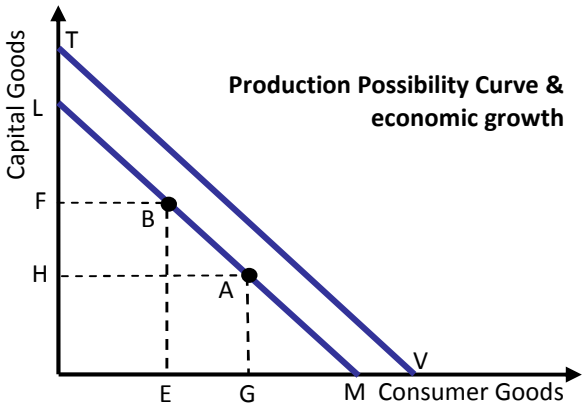
Can economic growth be negative? A fall in GDP over time indicates lower output. For example a -2.5% annual growth rate means that output has fallen my 2.5% over the year.



Use production possibility curves to illustrate actual economic growth Assume the economy is at point A. H consumer goods and E consumer goods are produced. There are unemployed resources

The economy can move from point A to B by bringing unemployed workers and idle plant buildings and equipment into production. The output of capital goods rises to F, and consumer goods G. Real GDP rises

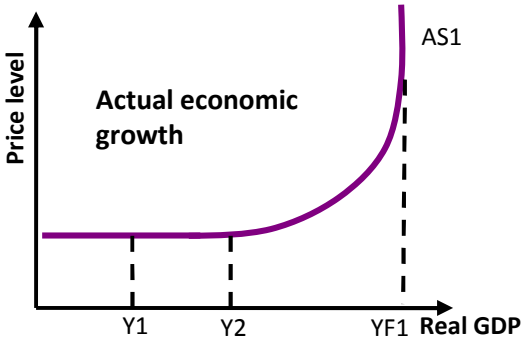
Use graphs to illustrate the opportunity cost of economic growth

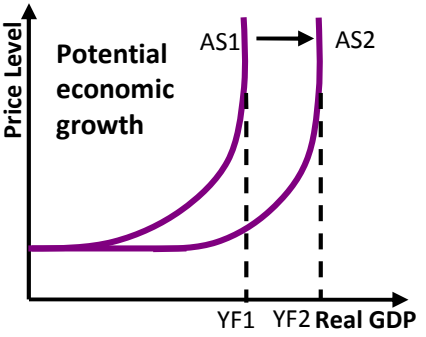


Assume the economy is at point A. OH is the amount of investment required to cover depreciation. Net investment =0. Reallocating resources from consumer to producer goods reduces current consumption. If the economy moves from A to B, the opportunity cost of FH more capital (net investment) is EG sacrificed consumer goods.

In the next time period, extra producer goods increase productive capacity shifting the PPC from LM to TV. The economy can now make more consumer & more capital goods.

Use aggregate supply and demand graphs to distinguish between actual and potential economic growth





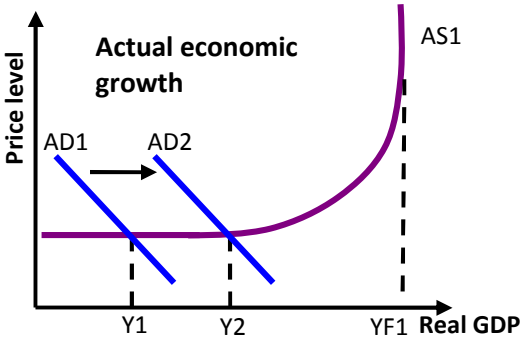
In the short term, the quantity and quality of resources is assumed to be fixed. Aggregate supply for the current time period is shown by AS1 Increasing output and achieving actual economic growth involves making better use of existing resources eg real GDP rises from Y1 to Y2

In the long term an improvement in the quantity and quality of resources shifts the aggregate supply curve from AS1 to AS2. Increasing output and achieving potential economic growth involves making use of new or better resources Productive capacity rises from YF1 to YF2 and is an example of potential economic growth

Identify the causes of economic growth. Economic growth occurs when there is an increase in real GDP and/or an increase in productive capacity. Real GDP can increase over time:

- In the short term, the quantity and quality of resources is fixed. Increasing output and achieving *actual economic growth* involves *making better use of existing resources* eg hiring unemployed workers because of an increase in aggregate demand
- in the long term, sustaining increases in output and achieving *potential economic growth* involves increasing productive capacity by
    - *increasing the quantity of resources* available to an economy eg by investment
    - *improving the quality of resources* eg by education, training & new technologies

Use AD & AS graph to show actual economic growth from a rise in aggregate demand



An economy is in macroeconomic equilibrium were aggregate demand equals adequate supply. Y1 is the initial level of actual GDP, and is well below potential GDP, YF1, because of insufficient demand.

An increase in aggregate demand shifts the AD curve outwards from AD1 to AD2. The higher level of aggregate demand causes a new equilibrium and higher level of actual GDP. The rise in actual GDP from Y1 to Y2 is actual economic growth

Identify the causes of potential economic growth. Potential real GDP can increase due to

- a greater *quantity of resources* from
    - net investment that increase a country's stock of capital
    - economically inactive becoming part of the labour force and getting a job
    - net migration where overseas workers move to the UK and get a job
- an improvement i*n the quality of resources* through staff training, adapting improved technology, better management of resources or increasing enterprise and *technological advances* that improve productivity

Define net investment Production results in capital consumption or depreciation: machines become worn out and obsolescent. When gross investment more than replaces one at

machinery, making good depreciation, then net investment occurs. Net investment increases the productive capacity of the economy.

Give a formula for net investment. Net investment = gross investment – depreciation. Net investment raises a nations' stock of capital, increasing potential GDP and productive capacity

Distinguish between production and productivity. Production refers to total output, as measured by real GDP. Productivity is output per unit of input. For example labour productivity refers to output per worker or per worker hour.

Can GDP rise if productivity falls? It is possible for an economy to increase GDP even though output per worker is falling, if workers work sufficient longer hours to compensate for lost productivity. For example the UK has a higher standard of living than France, even though it has a lower levels of productivity, because British workers work for much longer each week

What are the benefits of economic growth? Economic growth can improve economic welfare:

- More products are available to satisfy more wants & needs. Choice improves
- Higher employment means higher wages reducing poverty
- Bigger government tax receipts allow more government spending on eg health care

What are the drawbacks of economic growth? Potential disadvantages of growth include:

- *Environmental damage* eg increased pollution from increased economic activity
- *Sustainability issues*: the loss of land and depletion of non renewable natural resources may be unsustainable and threaten the well being of future generations
- *Equity issues*: the benefits of growth may be unevenly spread eg to just high income individual and prosperous regions with the least well off and deprived areas unaffected
- *Lost leisure* and *increased stress* because staff are working harder and longer hours

Define sustainable development. "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The Brundtland Report

What are the conditions for sustainable economic growth? There are two dimensions:

- Real GDP rises over time with economic stability. This occurs when aggregate demand and aggregate supply grow at the same rate and output gaps are avoided ie Non-Inflationary Continuous Expansion (NICE). Actual growth matches trend growth.
- Sustainable development means economic growth does not threaten future generations' economic welfare. This occurs when current economic growth is achieved without unacceptability depleting non-renewable natural resources, or degrading the environment and ecosystems.

How can globalisation affect growth in a national economy? Globalisation means economies are interdependent. Eg external shocks that cause a downturn in the world economy lower UK exports and growth rates.

Economic stability

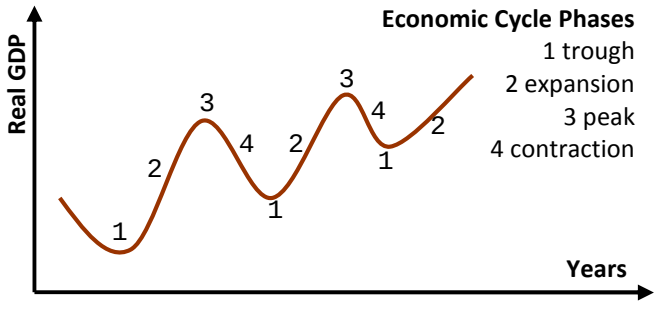
What is economic stability? Economic stability is the absence of large fluctuations in the macro economy. An unstable economy has large swings in economic activity, high inflation, and excessive volatility in exchange rates and financial markets.

How does economic stability affect economic agents? Economic stability means avoiding *boom and bust economic cycles* where the economy experiences large swings in output, and the *consequences of inflation and unemployment*. Economic agents have confidence about expected future inflation, interest and exchange rates and so can plan ahead.

Why is the stability of the economy important? Stable interest, inflation and exchange rates reduce risk and uncertainty, improves confidence and encourages long term investment which is a source of economic growth and increasing standards of living.

What is the economic cycle? The economic cycle is periodic rise and falls in real GDP over time

Illustrate the business cycle Over time economies tend to move in a four-phase cycle of "booms and slumps" in the level of economic activity as measured by real GDP



Trough: the low point of a business cycle,

Expansion where the pace of economic activity speeds up

Peak the high point of a business cycle

Contraction where the pace of economic activity slows

These cycles are irregular and uncertain

What is a recession? An economy is in recession if there are two or more consecutive falls in quarterly GDP ie economic activity has slowed over six months

What is a depression? A depression is a long lasting and severe recession

Is this the economic cycle predictable and regular like a pendulum swing? No. The duration and magnitude of the economic cycle is uncertain and can last from three to ten years.

Is the economic cycle a problem? Each stage of the economic cycle present challenges to the government's macroeconomic objectives:

- In booms, demand may exceed supply in various markets creating inflationary pressure. Higher incomes means more imports weakening the balance of payments
- In slumps, supply exceeds demand resulting in a) layoffs & unemployment b) falling government tax revenues & c) increased benefit payments (G>T). However inflationary pressure falls and the current account improves.

What is the impact of the economic cycle? The impact of the economic cycle will vary by:

- *The length and depth of the recession*: eg a short six-month recession with a 0.1% fall in GDP has minimal impact. A 10 year depression with GDP falling by 30% has severe implications
- *Sector*: It is possible for manufacturing to be in recession and the service sector booming. The impact on the public and private sectors can vary
- *Industry*: firms producing luxury goods with a high income elasticity of demand are more affected by the economic cycle than firms producing essentials
- *Region*: the impact of a recession will be different in the South East with a strong service sector than the midlands north with large manufacturing

Balance of Payments

What is the Balance of Payments? The Balance of Payments (BoP) records economic transactions between residents of a country and the rest of the world. There are two sections:

- *Current Account* records money flows between UK & overseas residents arising from *trade in goods & services, income* from owning overseas assets and overseas *transfers*
- *Capital & Financial* Account records money flows between UK & overseas residents from the purchase of fixed or financial assets eg factories or shares, and bank deposits & loans
- *Net errors and omissions* to take account of discrepancies that arise in recording international transactions. By definition the balance of payments must balance and =0

Outline the components of the current account

- *Balance of trade in goods* (visible trade) the difference between exports and imports of tangible products eg oil, manufactures and components between UK residents and non-residents.
- *Balance of trade in services* (invisible trade) the difference between exports and imports of intangible products eg banking, insurance, royalties & tourism between UK residents and non-residents.
- *Current Income*: the difference between income earned by UK residents from owning overseas assets and income paid out to overseas residents owning UK assets.
- *Current transfers* are mainly transfer payments are made by government eg receipts from and payments to the European Union.

Assess the UK's current account Money entering the country to pay for imports, or wages interest & profits earned overseas, are credit items and have a positive sign in the BoP accounts.

UK Current Account 2008	£ million Balance
Goods	-93,446
Services	56,210
Balance of Trade	**-37,236**
Current income	27,340
Current transfers	-13,728
Balance on current account	**-23,624**

Money flowing out of the country are debit items and have a negative sign

The UK runs a £93.4bn deficit on trade in goods and a £56.2 bn surplus on trade in services giving an overall Balance of trade deficit of £37.2Bn

The UK earned £27.3 Bb net income from owing assets overseas while the paying out a net £13.7Bn overseas eg in aid and EU payments.

The 2008 Balance of Payment deficit on the current account was -£23.6Bn

What causes such a large trade in goods deficit? Reasons include:

- *Lack of competitiveness*
  - Price: UK workers and capital have a lower productivity than EU & USA rivals so overseas products are cheaper
  - Non price the UK may also be uncompetitive in terms of quality, design, reliability and after-sales service.
- *Loss of UK comparative advantage* developing countries are acquiring a comparative advantage in traditional manufacturing
- Sterling is overvalued resulting in relatively expensive UK exports in terms of foreign currency, whilst imports into the UK are relatively cheap.

Is a current account deficit a problem? It depends on the size, duration & cause of the deficit A current deficit is less challenging when**:**

- the deficit is a small percentage of GDP
- caused by the import of capital goods and technology that enable economic growth and develop comparative advantage
- A boom in the economic cycle causes an increase in imports of raw materials & components

What is the impact of outward UK direct and portfolio investment? In the short term, overseas investment sees money leaving the country and so worsens the current account. In the long term income earned from these UK owned overseas is a credit item in the income section of the current account. As a result of past overseas investment, the current account improves.

Exchange rates

What is an exchange rate? An exchange rate is the price of one currency in terms of another currency or currencies.

What is a bilateral exchange rate? A bilateral exchange rate is the exchange rate between two currencies, eg the pound relative to the US dollar

Give an example of a bilateral exchange rate. There are many exchange rates eg the £ against the US$, euro, yen, etc. For the UK, the dollar exchange rate means the number of dollars ($) one pound (£) can buy and is determined by the supply and demand for sterling (pounds). If the exchange rate is, say, $2 then one £ buys two $. A buyer gives up $2 for every £1 required.

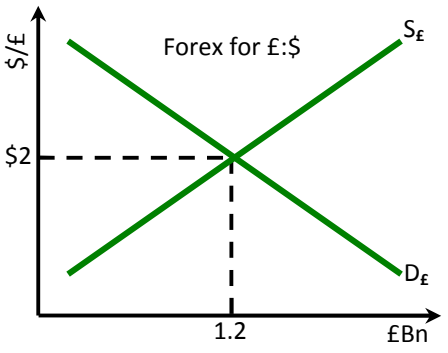
What is the value of sterling? The pound is also known as sterling. The value of the pound is measured in terms of the amount of foreign currency it can buy. A strong pound suggests a historically high exchange rate eg $2:£1.

Define an effective exchange rate. An effective exchange rate is an index value based on a basket of currencies of the UK's main trading partners, weighted according to the importance of each one to a country's trade.

Given an example of an effective exchange rate. In the UK the Bank of England's *sterling effective exchange rate index* (Sterling ERI) is used as the official measure of the trade-weighted exchange value of sterling against a basket of currencies.

Interpret movements of Sterling ERI. In the base year, the value of Sterling ERI = 100. An increase in the index value to say 110 means sterling has, on average, appreciated against currencies included in the index. The pound has become stronger. A fall in sterling ERI means a depreciation of the pound against the currencies of trading nations in the index.

How is the value of the pound determined? The value of sterling is set by the market forces of supply and demand. Currency trading takes place in the Foreign Exchange Market (*ForEx or FX*).



Demand for £s: the demand curve for sterling D£ shows the amount of pounds demanded at each and every exchange rate. Economic agents want to exchange dollars for pounds to buy UK products (exports X) or buy UK assets (inward investment) or put deposits in UK banks.

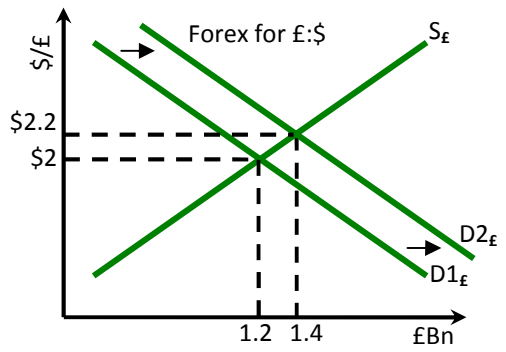
Supply of £s: the supply curve for sterling S£ shows the number of pounds supplied at each and every exchange rate. Holders want to exchange pounds for dollars to buy US made products (imports M) or buy US assets (outward investment) or put deposits in US banks.

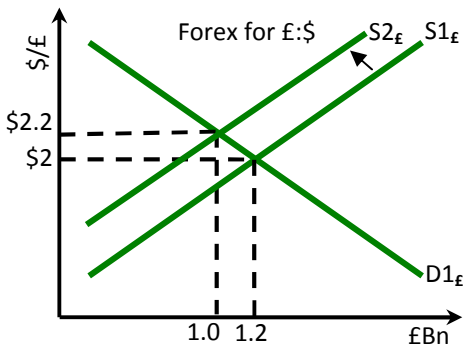
Define currency appreciation. Appreciation means an increase in the price or value of an asset. A rise in the exchange rate is it called a currency appreciation and means one unit of domestic currency buys more units of another currency or currencies.

Given an example of sterling appreciation. An increase in the $/£ exchange rate from $1.40/£ to $1.50/£ means each pound now buys one and a half dollars instead of $1.4

What is a depreciation of sterling? A fall in the value of the pound means one pound buys less foreign currency. Eg a fall from $2/£ to$1.5/£, means each pound buys half a dollar less than before the fall in the exchange rate.

Drag diagrams to show the effect of an increase in the demand for sterling and a decrease in supply of the pound in the $:£ , foreign exchange market





Reasons include: economic agents holding dollars want to buy more pounds, because they want to buy more UK made products ie UK exports have increased. Alternatively foreigners want pounds because they are buying UK factories, shares or moving their funds into UK banks	Reasons include UK citizens want to buy fewer US made products. Fewer imports mean less pounds being offered in exchange for dollars. Events in America may make some UK economic agents less willing to invest in the USA or to move their money into American banks. Eg a fall USA interest rates.

Why are exchange rate movements important? The exchange rate affects of the price of imports and exports and so influences price competitiveness of UK products.

Use a worked example to show how an appreciation of the pound can affect the price of imports and exports. Assume two rival firms based in the UK & USA sell teddy bears in their domestic market and export overseas. The exchange rate affects price competitiveness eg if sterling appreciates against the US dollar, the UK exporter must now double its US price to $20 if it wants to continue to earn £10 for every bear sold, while its US competitor can now halve its UK price to £10 and still earn $20.

UK firm exporting teddy bears to USA		
UK Price	$ price to earn £10 given1$:£	$ price to earn £10 given2$:£
£10	$10	$20

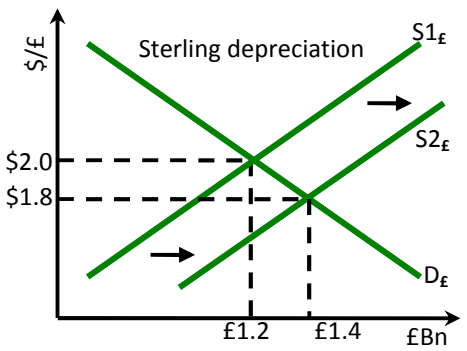
USA firm importing teddy bears to UK		
US Price	£ price to earn $20 given1$:£	£ price to earn $20 given2$:£
$20	£20	£10

What factors affect exchange rates? The exchange rate is determined by the interaction of supply & demand for a currency:

- *Demand factors*: competitiveness (current account) and the merits of inward investment or loans in to the UK (capital account)
- *Supply factors*: competitiveness in terms of price and quality of overseas products (current account) and the relative merits of outward investment or loans overseas (capital account)

What are hot money flows? In economics, hot money refers to funds that move around the world in search of the highest short term interest rates possible.

How are interest rates and the exchange rates interlinked?



A fall in UK interest rates reduces the return of deposits held in UK financial institutions.

If economic agents opt to move their funds out of the UK to overseas banks paying a higher rate of return, the supply of sterling increases. In the diagram, increase in the supply of sterling causes the exchange rate against the dollar to fall to $1.8 to the pound.

The interest rates may also have reduced the demand for sterling shifting the demand curve to the left, putting downward pressure on the pound

How does a change in exchange rates affect the economy? Movements in the exchange rate affect the current account, domestic inflation, interest rates and GDP.

Identify the main factors influencing the supply and demand of a currency.

- *International competitiveness* in terms of *price* and *quality* of UK products compared with overseas made alternatives. A fall in the price, or improvement in the quality, of UK made products increases their competitiveness. UK consumers switch away from imports while overseas economic agents start buying more UK made items. The supply sterling on Forex market falls; the demand for the pound rises; sterling appreciates.
- *Overseas national income*, especially the GDP of major trading partners. For example, a recession in the USA reduces the demand for UK exports. Less sterling is demanded
- *Domestic GDP*. An increase in UK national income means an increase in the demand for imports. The result is an increase in the supply of pounds to convert into say dollars to pay for extra imports pushes the price of the pound down.
- *Foreign direct investment (FDI) factors*. Where the UK is seen by overseas firms as a place to build new factories or offices, the demand for sterling rises to pay for land and buildings. Similarly if UK firms are attracted by the lower cost of basing operations overseas, then the supply sterling rises and downward pressure is placed on the pound
- *Interest rates.* An increase in UK interest rates attracts hot money inflows putting upward pressure on the value of sterling.
- *Speculation*. $1.36 trillion is traded everyday on the London ForEx. The vast majority of transactions are speculative where buyers and sellers buy or sell now are hoping to make a profit on future currency movements. Where market sentiment turns against a currency speculation causes further falls in the value of the currency. Such speculation damages economic stability

How does a depreciation of the pound affect import and export revenues? Usually a sterling depreciation reduces the price of UK exports while increasing the price of UK imports.

However this assumes:

- Importers pass on increased costs in the form of higher prices. They may opt to absorb higher import prices by cutting their profit margins. Import prices remain constant
- UK exporters may opt to keep current overseas prices and enjoy higher profit margins.

Even if import prices rise and export prices fall the overall impact on net exports is uncertain

- Import revenue has a price and quantity element. A 10% increase in import prices increases the revenue earned from every sale. However rising prices cause a contraction in demand which lowers sales income. Overall *spending on imports falls only if the demand for imports is price elastic* ie there is a bigger percentage fall in the volume of imports than the percentage increase in price.
- Similarly the depreciation allows UK firms to lower the price of their exports. This means less revenue on every unit sold. However the quantity of sales increases. The overall impact on export earnings depends on the price elasticity demand for exports. If demand is price elastic, export revenue rises because of the fall in the value of sterling

How can exchange rate changes affect the macro economy? Assume a reduction in the exchange rate and at the demand of imports and exports is price elastic. Depreciation generally

- Benefits domestic producers as the price of export falls while the price of imports rises, boosting exports and reducing imports. *Net exports [X-M] improve* shifting the aggregate demand curve to the right. Overall impact on the economy depends upon current capacity utilisation, the size of the changing exports, and the size of the multiplier

- *Generates inflationary pressure*. The cost of imported raw materials, components and finished products rises. If cost increases are passed on to consumers in the form of higher prices, cost push inflation follows.

Do all UK firms benefit from a depreciation of sterling? No. UK firms where imported raw materials or components form a significant part of total costs face higher costs of production

Macroeconomic policy

Macroeconomic policy objectives

List major macroeconomic policy objectives. low and stable inflation; low unemployment; high and sustainable economic growth; a satisfactory balance of payments; economic stability; an acceptable distribution of income.

What is the major macroeconomic policy objective? Emphasis on an objective change according to the stage in the economic cycle and current economic theories. For example the credit crunch has seen a focus on reducing unemployment using fiscal stimulus. Previously the focus was on containing inflation using monetary policy

How can government deliver its objectives? Macroeconomic policies eg adjusting tax rates, interest rates or competition laws, are designed to address and correct the causes of a given economic problem and so enable the government to achieve its objectives

What is a policy? A policy is a course of action designed to achieve a stated objective

State the two main categories of macro policy. There are two main types of macro policy:

- *Demand side policies* concerned with the management of aggregate demand eg fiscal policy
- *Supply side polices* to raise potential GDP over time and improve the flexibility of markets

Why does government need macro economic policies? Economies are bombarded by supply and demand supply shocks which cause actual and potential GDP to diverge. Macro policy instruments allow the government to manipulate the demand or supply side of the economy to meet macroeconomic objectives faster than if markets are left to their own devices.

Distinguish between policy instruments, policy measures, and policy tools. These terms have identical meaning and refer to methods used by government to influence economic activity

What is the Treasury? The Treasury is a major government department that coordinates government economic policy and is managed by the Chancellor of the Exchequer.

List the main types of macroeconomic policy? Government can use

- *Fiscal policy*: the use of government expenditure, benefit payments and taxation to manipulate the level and makeup of aggregate demand
- *Monetary policy*: influences interest rates which affect components of aggregate demand (C, I & [X-M] via the transmissions mechanism.
- *Supply side policies* measures designed to raise productive capacity and so increase aggregate supply by making labour and product markets work better.

Explain demand management. Demand management occurs when the government intervenes in the economy to change the level of aggregate demand (AD).

State the main types of demand management policy:

- *Reflationary policies* stimulate aggregate demand eg lower interest rates and taxes
- *Deflationary policies* act to lower total spending eg higher interest rates and taxes

Fiscal policy

Define fiscal policy. Fiscal policy is the use of government spending and taxation to influence economic activity. Government spending is also called public expenditure.

List the main types of fiscal policy instruments. The two main instruments of fiscal policy instruments are government spending and taxation

- *Taxes (T):* government can adjust the types, rates, and coverage ie who pays
- *Government spending (G):* on services infrastructure and benefits

Taxation and government spending

Why do governments collect tax? Governments raise taxes to:

- finance *public expenditure*: eg education, health and defence
- finance *transfer payments* eg unemployment benefit
- Discourage purchases of harmful demerit goods such as alcohol and cigarettes
- Influence the level of aggregate demand as part of *fiscal policy*
- Achieve a greater equality in income & wealth through *progressive income tax*
- correct for market failure eg a *polluter pays taxes* on air travel
- reduce imports to improve the balance of payments or protect infant industries with *tariffs*

What are the main categories of tax? *Direct taxes* are taxes on income and wealth. *Indirect taxes* are taxes on spending.

List the main types of direct tax

- *Income tax* including national insurance contributions on earnings.
- *Corporation tax* on company profits
- *Capital Gains Tax* when assets such as shares are sold at a large profit

List the main types of indirect tax

- *Value Added Tax* (VAT) 15% is added onto the selling price of most products
- *Duties* a fixed amount is added to the selling price of items such as petrol and alcohol

Explain progressive proportional & regressive taxes. As income rises a:

- *Progressive tax* takes a higher percentage in tax
- *Proportional tax* takes the same percentage in tax
- *Regressive tax* takes a smaller percentage in tax eg TV Licence & VED

What is public expenditure? Public expenditure refers to government spending.

What is the difference between government spending, public spending, and public expenditure? These terms have identical meaning

List the main types of government spending:

- *current spending* on maintaining public services eg teachers pay
- *capital expenditure* on infrastructure (social capital) eg schools hospitals and roads
- *transfer payments* from taxpayers to benefit receivers eg pensioners
- *debt interest payments* to holders of government debt eg bondholders

State factors affecting the level of government spending. Current spending and capital expenditure are discretionary (optional). Many transfer payments linked to the level of economic activity eg unemployment benefit. Debt interest payments depend upon past government decisions about spending and taxes determining the level of national debt

Government budgets

What is the Comprehensive Spending Review? Government spending proposals for the next three years are set out in a Comprehensive Spending Review. Spending by departments reflects government's priorities.

What is the budget The budget is the government's annual financial statement summarising the country's economic situation and announcing specific measures the government intends to introduce to raise money to finance its spending eg through taxation or borrowing

Explain the budget position? The *budget position* is the relationship between government spending and tax revenues. There are three potential positions:

- *Balanced budget*: government revenue equals government expenditure ie G=T
- *Budget surplus*: government revenue is greater than government expenditure ie G>T
- *Budget deficit* government revenue is less than government expenditure ie G<T

How are budget deficits financed? If the government spends more than its tax receipts then the budget is in deficit. The deficit is funded by borrowing and added to the national debt.

What is the national debt? The national debt is total amount owed by the government.

How does national debt arise? The state builds up debt over time by running a budget deficit.

What determines the size of the national debt? National debt is the sum of previous budget deficits. The larger previous deficits, the larger the current national debt.

What is the cost of the national debt? The national debt incurs interest charges. The opportunity cost of interest payments is the investment in infrastructure or public services forgone.

When is the national debt the problem? If the national debt is an excessive proportion of GDP, then the burden of interest payments has a severe impact on the level of public services. An upper limit of the national debt not exceeding 40% of GDP was a government targets until 2008. The national debt is forecast to rise to some 80% of GDP by 2013

What is the difference between a budget deficit and current account deficits? The budget deficit crisis occurs when government spending exceeds tax revenues. Current account deficits are caused by a country's spending on imports exceeding revenue from its exports.

Fiscal policy

How does fiscal policy affect the level of economic activity?

- Government spending (G) is a component of aggregate demand (AD). A change in the level of G shifts the AD curve moving the economy to a new equilibrium level of national income
- Income Tax and benefit rates affect the level of disposable income, hence consumption (C)

What is discretionary fiscal policy? The government deliberately adjusts its spending and taxation to influence the overall level of economic activity

What is a government's fiscal stance? Fiscal stance refers to the intended impact of government spending & taxation plans on the level of future economic activity and can be:

- *Neutral*: fiscal policy aims to have no impact on the future levels of aggregate demand (AD)
- *Reflationary or expansionary*: fiscal policy aims to increase the future level of AD
- *Deflationary or contractionary*: fiscal policy aims to lower the future level of AD

What is deflationary fiscal policy? Cuts in state spending or increases in taxation calculated to lower aggregate demand are called deflationary, contractionary or fiscal tightening policies

What is reflationary fiscal policy? Higher state spending or lower taxes calculated to boost aggregate demand are called reflationary, expansionary or fiscal loosening policies

Does the government have full control over the level of its spending and tax revenues? The amount of tax raised and job-related benefits depends on the level of national income.

What are automatic stabilisers? Automatic stabilisers are changes in taxes and government spending beyond the control of government and brought about by the economic cycle.

Give an example of automatic stabilisers in action. Automatic stabilisers work by triggering changes in aggregate demand that counter the economic cycle. Eg a recession means less economic activity; income, output and employment fall; unemployment rises. This means:

- Less tax revenues from income tax as staff work less overtime or lose jobs; lower corporation tax on falling profits; and less VAT receipts without any change in tax rates
- More state spending on unemployment benefits without any change in the benefit rate

Can governments use automatic stabilisers in their fiscal policy? The government can

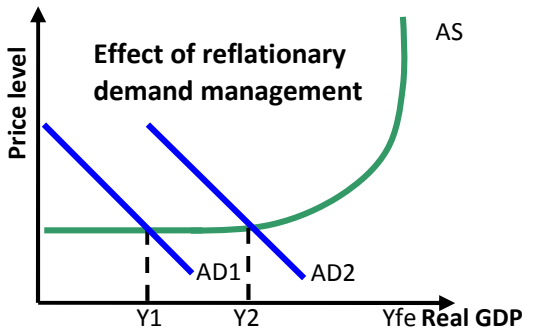
- Simply allow automatic stabilisers to work and take no action
- Use discretionary fiscal policy to change its overall expenditure (G) and/or taxes

Explain counter cyclical policies. As the economy moves over the economic cycle there are swings in private sector spending (C+I+X). In order to counteract the swings and achieve greater economic stability, the government increases its own expenditure in times of recession and cuts back public spending in times of a boom.

Can fiscal policy measures be targeted? A major advantage of fiscal policy over monetary policy is the ability to target changes at specific households, firms and regions. Eg tax cuts for single parent families; new schools in deprived areas or aid for the film industry.

How can fiscal policy influence unemployment? Cyclical unemployment is caused by a lack of aggregate demand. The government can use fiscal policy to boost aggregate demand causing firms to hire unemployed workers to increase output. Eg

- Higher government spending means more workers are required, eg to build new schools
- The initial increase in government spending has a subsequent multiplier effect
- Income tax cuts raise disposable income which be spent on consumption, imports or saved
- Lower Corporation & Capital Gains Taxes raises rewards, encouraging investment
- Consumer confidence and business expectations affect the response to tax cuts



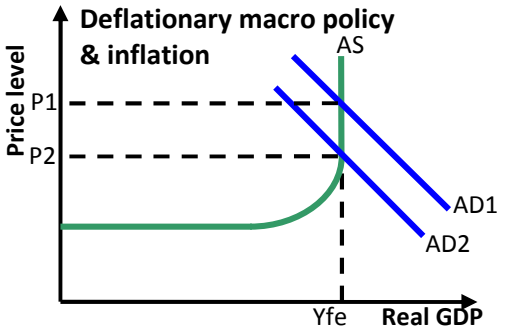
Use AD & AS analysis to illustrate the effect of reflationary fiscal policy on the economy. Keynesian economists argue it is quite possible for an economy to be in long run macroeconomic equilibrium at Y1, below the full employment level of Yfe, causing cyclical unemployment.

Reflationary fiscal policies use increases in government spending or lower taxes to raise aggregate demand, shifting AD1 to AD2. The new level of national income is Y2, with more output & employment and lower cyclical unemployment.

The impact on the price level depends on the slope of the AS curve. An increase in AD beyond AD2 generates an increase in both general prices, and income, output and employment.

How can fiscal policies affect economic growth? Sustained economic growth requires an increase in long run aggregate supply. Specific types of spending and tax cuts can boost growth:

- Increased government spending on education and training increases productivity
- Income tax cuts increase the reward of working. This encourages economically inactive people to join the labour force; and workers to do more overtime.
- Lower corporation taxes and capital gains taxes increases the rewards of enterprise



How can fiscal policy affect inflation?
Deflationary fiscal policy can be used to reduce the level of aggregate demand and lower demand pull inflationary pressure.

Lower government spending and higher taxes shifts AD1 to AD2. There is a fall in the price level from P1 to P2 with not impact on output and employment which remains at the full employment level of Yfe.

How can fiscal policies improve the balance of payments? A current account deficit can be reduced or even eliminated if government action reduces domestic spending on imports while increasing exports. Two fiscal measures can be taken:

- *Expenditure reducing* policies lowers domestic aggregate demand hence the demand for import eg raising income tax and cutting government spending reduces domestic expenditure on all products, including imports.
- *Expenditure switching.* Expenditure switching policies change the relative prices of imports and exports. A tariff raises the price of imports while subsidies to domestic producers increase exports. UK membership of the EU and WTO and retaliation limits use.

What factors limit the effectiveness of fiscal policy? Demand management using fiscal policy needs the right amount of G-T at the right time with the right time lags. This has proved problematic in practice.

- *Inaccurate economic data.* Governments take action on the basis of economic data. Eg if the ONS announces a recession, the government responds by stimulating aggregate demand by reducing taxes and increasing its spending. If six months later the ONS revises its estimate and states there was no recession, fine tuning has generated inflationary pressure
- *Inaccurate economic forecasts*. It is difficult to predict future levels of income and tax receipts. Even if T is known, government departments do not always spend their allocated budgets. This makes it doubly difficult to get G-T exactly right. Forecasts are not facts.
- *Delayed multiplier process*. It takes time for the multiplier process of spending giving rise to more income hence more spending, to work its way through the economy.
- *Tax changes affect incentives* Increasing income and corporation tax rates diminishes the incentive to work, and so reduce aggregate supply. Fiscal policy affects supply side policy.
- *Fiscal policy is inflexible.* Budgets occur annually. Monthly budgets to change tax rates would confuse households and firms – uncertainty reduces investment
- *Contractionary fiscal policy* involves politically unpopular spending cuts and tax increases.

Monetary Policy

Define monetary policy. Monetary policy is the use of the money supply, credit, and interest rates to influence the level of aggregate demand.

What are monetary policy instruments? Monetary policy instruments are the tools used to influence the money supply, credit conditions and interest rates.

What is money? Money is anything generally acceptable to others as a method of payment eg notes & coins or bank deposits.

What are the main types of money? In the UK two types of money are used as payment:

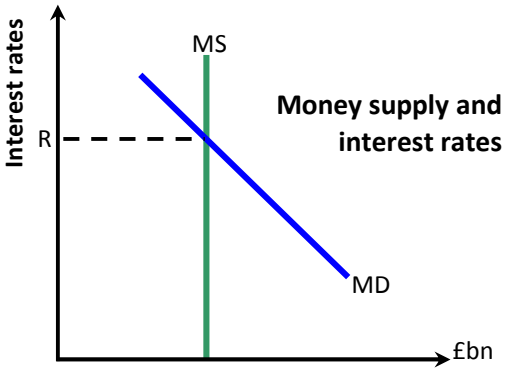
- *Cash* ie notes & coins issued by the Bank of England are used to settle small debts
- *Bank deposits* are transferred by debit card or cheque to settle large transactions

Define the Money Supply. The total amount of cash and bank deposits in circulation.

What are the two main measures of the money supply?

- **M0** (**narrow money**): notes, coin & commercial banks' deposits at the Bank of England
- **M4 (broad money):** M0 plus all deposits held in bank accounts

Define interest rates. An interest rate is the price of money, the cost of borrowing and the reward for lending and saving.

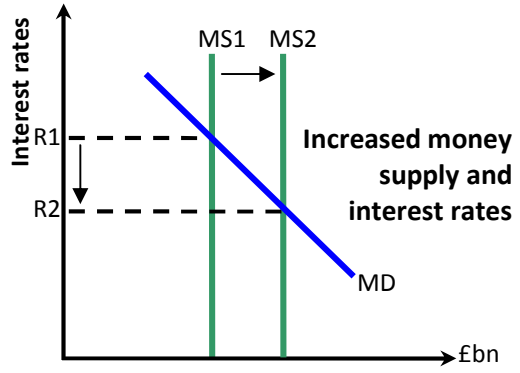


How are interest rates determined? Interest rates are set in the money market by the interaction of supply and demand.

MD is the demand for money curve and MS is the money supply curve. R is the equilibrium rate of interest.

What is the base rate? The base rate is interest rate set by the Bank of England. Commercial banks set their own interest rates for mortgages and loans around this base rate.

Is there more than one interest rate? There are many different interest rates in the economy eg the official rate or base rate the Bank of England charges retail banks such as Barclays; London Interbank Offered Rate (LIBOR) at which commercial banks lend to each other



How can the money supply be used to influence interest rates? An increase in the money supply from M1 to MS2 lowers interest rates from R1 to R2.

What is a central bank? A country's main bank, which: issues currency; enacts monetary policy; is banker to the government & commercial banks; manage the nation's foreign exchange reserves. The Bank of England is the UK's central bank.

Who carries out UK monetary policy? In 1997, the government gave the Bank of England (BOE) operational independence to set interest rates.

What is the Monetary Policy Committee (MPC)? The Monetary Policy Committee MPC is a Bank of England group that meets monthly to set an interest rate to influence aggregate demand and achieve the government's target of 2% inflation.

How do interest rates affect the economy? Interest rates affect components of aggregate demand. Eg lower interest rates increase aggregate demand because they affect

- *Consumption*: lowers the reward for saving and the cost of borrowing. Households with variable interest loans eg mortgages have more money available to spend. C rises.
- *Investment*: reduces costs for firms with existing loans and encourages new investment. Firms expect increased sales as households are encouraged to increase spending. I rises.
- *Net exports*. Sees hot money leave the UK, causing a depreciation of sterling. Lower exchange rates lower the price of exports and increase the prices of imports. [X-M] increases

What is the transmissions mechanism? The transmissions mechanism is the process by which a change in interest rates affects economic activity and inflation.

What factors determine the impact of an interest rate change? The impact of interest rate changes depends on the size of the change, and overall consumer & business confidence.

How effective is monetary policy? Most nations now use monetary policy as the main means of influencing the level of aggregate demand to achieve a macro objective. Interest rates are:

- *Highly flexible* eg rates are set monthly by the MPC
- Have a *faster impact* on aggregate demand than fiscal policy measures eg new hospitals
- *Blunt instrument*. Eg higher interest rates to dampen demand in a booming house market have an adverse impact on firms struggling to compete on price in overseas markets. Savers benefit while borrowers with variable rate loans face higher interest payments.
- Subject to *time lags*. Interest rate changes takes around a year to affect the output and a further 12 months to impact to on the price level - the '1+1' rule.
- *Affects other variables* in the economy eg hot money flows impact on the exchange rate
- Depends on *consumer and business confidence*. Cutting interest rates to stimulate aggregate demand is ineffective if low confidence means economic agents postpone spending plans

Supply side policy

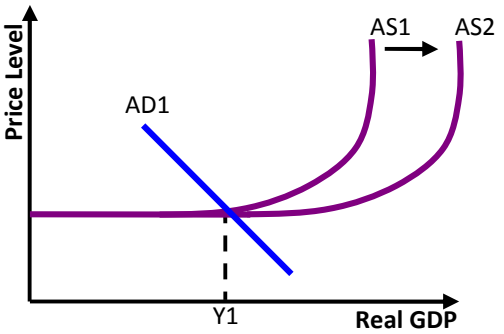
What is supply side policy? Supply side policies are measures designed to increase potential output.

What is the supply side of the economy? Supply side refers to economic agents involved in production e.g. workers seeking employment and firms creating products for sale.

Distinguish between capacity and capacity utilisation. Capacity is maximum GDP from current inputs. Capacity utilisation is the extent to which current resources are used. It is possible to increase actual GDP by hiring the unemployed while leaving the level of potential GDP unaffected.

What is the impact of successful supply side policy? Successful supply side policy increases potential GDP and so shifts the long run aggregate supply curves to the right. Given matching increases in aggregate demand, sustained non inflationary growth is possible.

Why can supply side policies increase productive capacity? Government measures which raise the quantity of resources, or efficiency of inputs, increase the level of potential GDP.



Use aggregate supply and demand analysis to show ineffective supply-side policy.

Given AD1 and AS1, the economy is in equilibrium at Y1. Successful supply-side policies now shift the AS curve to AS2.

However if AD remains unaltered, actual GDP is unaffected. GDP remains at Y1

List the main types of supply side policy

- Improving education and training
- Improving productivity
- Privatisation
- Deregulation
- Cutting the marginal rate of direct taxes
- Reducing benefits
- Encouraging enterprise
- Reducing trade union power

How does education and training affect the supply side of the economy? Education and training can improve

- skills and so raise labour productivity allowing more output from given inputs
- the occupational mobility of labour so reducing labour and product market inefficiencies

Effective training increases productivity; improves the occupational mobility of labour and gives workers the skill levels needed for new high-tech, high value added jobs.

What is privatisation? Privatisation is where state owned firms are sold to the private sector.

Why can privatisation increase potential output? State run firms may be productivity inefficient. The profit motive gives privatised firms the incentive to increase output from given inputs ie increase the productivity of labour. Productive capacity rises.

Why do governments regulate firms? Unregulated production can endanger workers and generate negative externalities eg pollution. Monopolies can exploit their market power. Firms incur higher costs in ensuring government laws, rules and regulations are observed.

What is deregulation? Deregulation occurs when government removes or simplifies 'unnecessary' restrictions on the operations of an industry or a firm.

Why do governments deregulate? Deregulation can reduce costs and increase competition.

What is the impact of deregulation on competition? Deregulation opens up markets to new firms resulting in an increase in supply, lower prices and more choice for consumers. Existing firms strive to reduce costs and maintain competitive prices to retain their customers

Give an example of how deregulation can increase competition. The Royal Mail has a legal monopoly over the deliver of certain types of post. Allowing other firms to offer postal services removes a barrier to entry and encourages competition.

How can deregulation increase the supply of labour? Visa controls restrict the ability of skilled labour to enter the UK. Relaxing Visa control allows inward migration of skilled workers

How do tax rates affect the supply side? Tax affects disposable incomes and the rewards of economic activity. Cutting high rates of marginal tax gives individuals more incentive to work extra hours, accept higher paid jobs & responsibility or risk personal capital in hope of profit.

Can tax cuts increase productive capacity? There are two opposing arguments:

- *Cutting income tax rates* encourages the economically inactive to join the labour force and the unemployed to take jobs. Workers are more willing to undertake overtime
- Workers may have target income and use higher disposable incomes brought about by tax cuts to work fewer hours
- *Cutting capital gains taxes* encourages entrepreneurs to risk capital and organise more production. Owners who sell on their successful business keep more of any capital gain
- *Cutting corporation tax* leaves firms with more profit to invest in research & development, new plant buildings & machinery, or distribute to shareholders to reward their risk taking.

What is the unemployment trap? The unemployment trap occurs when workers calculate that lost benefits and extra tax mean they are no better off working than if remain unemployed. Income from benefits is higher than from working, paying tax and losing benefits.

Do can benefit cuts increase productive capacity? Cutting unemployment benefits can encourage the jobless in the labour force to seek work. If successful, better use is made of the existing labour force and actual GDP moves towards potential GDP.

Tighter eligibility rules reduce the numbers able to claim benefits. Eg paying benefits for only a fixed period of time; requiring attendance at training schemes or community projects. The government is about to tighten rules for receiving long term sickness benefits

However cutting benefits can reduce aggregate demand causing a lower equilibrium level of GDP. Firms cut back on output by using less labour. Producing other benefits received by the economically inactive

How does enterprise affect productive capacity? Enterprise is the willingness and ability to risk production. Profit is the reward risk-taking; losses penalise unsuccessful businesses. An increase in successful enterprise increases the number of firms in the economy

How can trade unions restrict markets? Trade unions may use their labour market power to:

- Force wages above their equilibrium
- Resist new working practices that improve productivity or insist on over manning

How can trade union reform increase productive potential?

- Firms that are unable to hire and fire are reluctant to take on new staff. Laws which reduce minimum redundancy payments and make it easier for firms to dismiss unwanted workers make labour markets more flexible but at a significant social cost
- Labour market imperfections prevent economies moving to long run macroeconomic equilibrium. Trade union reform that reduce the ability of workers to strike to protect wages means short run aggregate supply can adjust quickly and fully to economic shocks.

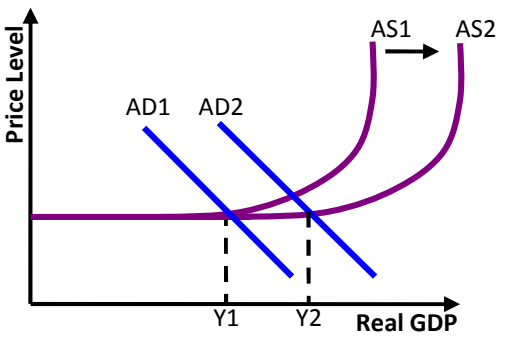
How can government grants affect the supply-side? *Grants* to encourage foreign direct investment or to support the development of *infant industries* help establish new firms. *Regional policy* eg aid for relocating firms can help regenerate depressed areas. Regional aid also generates a local multiplier effect. Some economists argue that government subsidies that enable firms to retain staff during a recession maintain long-term productive capacity

What is the link between fiscal & supply side policy? Income tax and income related benefits affect take home pay and the incentive to work or remain unemployed. Cutting taxes to stimulate aggregate demand also increases incentives. Extra workers boost aggregate supply.

How can supply side polices reduce the unemployment trap? Supply side polices such as Families Working Tax Credit & Sure Start minimise the loss of benefits from taking a job

How effective is supply side policy?

- *Time lags.* It can take years for education and training to generate higher productivity
- *Unexpected responses*. Eg companies may use corporation tax cuts to raise dividends, not investment. Workers may use tax cuts to work less hours and maintain the same income
- Privatisation does not necessarily increase productive efficiency. Extra education spending may fail to raise standards or equip workers with relevant skills



What is the link between demand management and supply side policy?

Successful supply side policies shift the aggregate supply curve AS to the right. However if aggregate demand remains unchanged at AD1, equilibrium output remains at Y1.

A rise in aggregate demand to AD2 is required to move the economy to a higher level of GDP.

Reducing unemployment

How can government reduce unemployment? Government can opt for policy instruments designed to tackle the causes of unemployment. Potential measures include:

- *Fictional unemployment* arises through normal labour turnover and the resultant delays in applying for interviewing & accepting jobs. Job searches take time. Policies: improve job information, eg better job centres. Reduce amount & duration of unemployment benefits
- *Structural unemployment* arises from dynamic and challenging markets where evolving consumer tastes and new technologies can cause joblessness through the immobility of labour. Policies: Offer retaining to improve occupational immobility and relocation grants to improve geographical immobility
- *Demand deficient* or *cyclical unemployment* occurs when the economy is operating below potential GDP. Expansionary demand management, by say, increasing government spending, cutting taxes and interest rates, stimulates aggregate demand

Controlling inflation

How can government control inflation? The policies adopted depend upon the cause of price instability. Potential measures include:

- Cost push inflation requires government action to lower costs. For example the state can restrict wage increases (incomes policy); cap council tax increases; or encourage an appreciation of sterling to reduce the price of imports.
- Demand pull inflation requires contractionary demand management. The state can raise income tax; lower its own spending or increase interest rates.
- Inflation targeting where an independent central bank can use monetary policy to keep inflation target rate eg 2.5%. Inflation expectations are lowered

Promoting growth

How can government promote economic growth? The government adopts mainly supply-side policies aimed at improving the quantity and quality of resources

Achieving a satisfactory balance of payments

How can a government correct balance of payments difficulties? Policies focus on the cause of balance of payments disequilibrium. With respect to current account imbalances. Policy measures to increase export earnings and reduce import expenditure include:

- *deflationary demand management* to lower spending on imports
- *import restrictions* such as tariffs and quotas providing these allowed by the EU or World Trade Organisation
- *exchange rate adjustment*. For example a depreciation of sterling lowers the price of exports while increasing the price of imports improving UK price competitiveness
- *supply-side measures* to increase productivity and improve the quality of UK products causing an increase in UK competitiveness

Conflicting macroeconomic objectives

Can macro objectives conflict? Yes. Eg government policies to boost growth may generate demand pull inflation and a deterioration of the balance of payments. Suppressing domestic demand to reduce imports may improve the Balance of Payments, but cause cyclical unemployment

Can all macro objectives be met, simultaneously? Meeting all objectives simultaneously is highly unlikely eg once high levels of employment have been reached, output cannot be increased any further without inflation and the BoP is likely to deteriorate as consumers increase their sending on imports. A trade-off is usually required between macroeconomic objectives

Give examples of potential conflicts of policy objectives

- *Economic growth v low inflation:* If an economy grows too quickly, due to excessive consumer spending then aggregate demand outstrips aggregate supply and demand pull inflation follows. Use relatively high interest rates to subdue inflation can restrict growth via reduced consumer spending and investment. Objectives conflict.
- *Economic growth v Balance of Payments*: Buoyant growth draws in more imports causing the balance of trade to worsen.
- *Low unemployment v low inflation*: As demonstrated by the Philips Curve inflation and unemployment have an inverse relationship. If a government tries to reduce unemployment through reflationary demand management the resulting reduction in unemployment will push wages, and then prices, higher. If a government tries to control high inflation with higher interest rates and reduced spending, the resulting reduced consumer spending and lower investment will result in job losses
- *Economic growth v the environment & sustainability*. Faster growth means more production. More production generates more pollution and also depletes non renewable resources such as farming land, threatening future generations' economic welfare
- *Economic growth v equity* if the benefits of economic growth are kept by ruling elites the distribution of income becomes even more unequal

What factors determine the effectiveness of government policies?

- *Reliability of data*. Policy decisions are based on economic data which may be inaccurate. Eg if ONS data underestimates current GDP, an inappropriate tax change may be made.
- *Time delays*. It takes time for a given policy change to impact on the economy. Eg extra spending on new hospitals can be delayed by planning inquiries and building delays.
- *Multiplier effect*: extra spending generates a stream of incomes and expenditures over time
- *Unexpected responses*: economic agents may fail to respond to a policy change as expected
- *Subsequent economic shocks*: a policy change to boost demand may falter if the world economy later moves into recession
- *Restrictions:* membership of the EU and World Trade Organisation limits economic policy eg new tariffs may break WTO rules; state support of domestic banks may break EU rules

International Trade

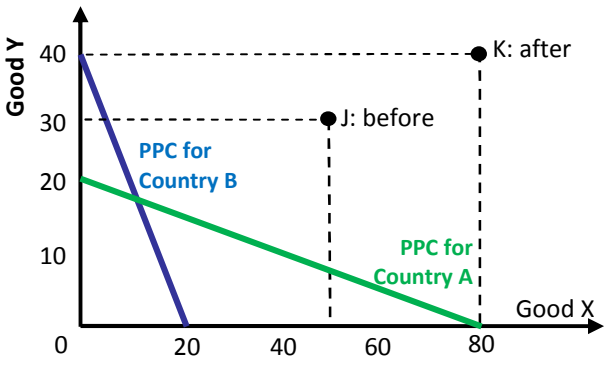
Benefits of international trade

Define internal and external trade. Trade is the exchange of goods and services. *Internal* or *domestic trade* is the exchange of goods and services within national borders. *External* or *international trade* is the exchange of goods and services across national borders.

What types of products are traded? *Trade in goods* includes exports and imports of tangible products eg oil, manufactures and components. *Trade in services* includes the exports and imports of intangible products eg banking, insurance, & tourism

Why do regions and countries trade? Different countries trade because they have different factor endowments eg climate, skilled labour force, and natural resources vary between nations. This means some countries are better placed in the production of certain products than others ie they have a comparative advantage. Trade encourages technological progress and innovation

Use production possibility curves to show the potential gains from international trade



The diagram shows production possibility curves (PPCs) for two countries, A and B, mapping combinations of good X and good Y that can be produced when all resources are used. The slope at each PPC reflects the pattern of opportunity cost for each country

For simplicity assume each country devotes half its resources to producing each product. Total world output is given by point J. 30Y and 50X is made.

Assume now complete specialisation. Country A produces 80 of good X. Country B makes 40 Y. total world output moves to point K. Both countries can benefit from specialisation and trade.

List other potential gains from international trade International trade can mean

- competition for domestic firms who must minimise costs & innovate to remain competitive
- Greater consumer choice who can opt rival imports, or new products not currently available
- Trade increase the size of the market offering opportunities for economies of scale

What are main types of goods & services traded? Regions and countries trade to acquire products they cannot easily produce themselves. Countries export products they can produce relatively cheaply and import products they would find relatively expensive to produce – the reason why the UK imports bananas and exports services like insurance.

The destinations of UK exports and the main sources of UK imports?[iii]

- The UK's main export destinations are: US 13.9%, Germany 10.9%, France 10.4%, Ireland 7.1%, Netherlands 6.3%, Belgium 5.2%, Spain 4.5%
- UK imports come mainly from Germany 12.8%, US 8.9%, France 6.9%, Netherlands 6.6%, China 5.3%, Norway 4.9%, Belgium 4.5%

Describe the broad impact of EU membership on the pattern of UK international trade. The European Union (EU) is made up of 27 countries with 419m citizens. The EU has evolved from a customs union to a single market with monetary union for 11 members in the euro zone.

- The single European market came into force in 1993, removing barriers to trade such as tariffs and quota and establishing the free movement of goods, people, services and capital.

- Membership of the EU means the UK is becoming part of an integrated Europe. Economic integration involves freeing trade by abolishing tariffs, quotas and the removal of non-trade barriers.
- The consequence of integration is a blurring of national boundaries and the benefits of increased specialisation and trade based on comparative advantage

Explain the gains from international trade in general terms. Trade allows

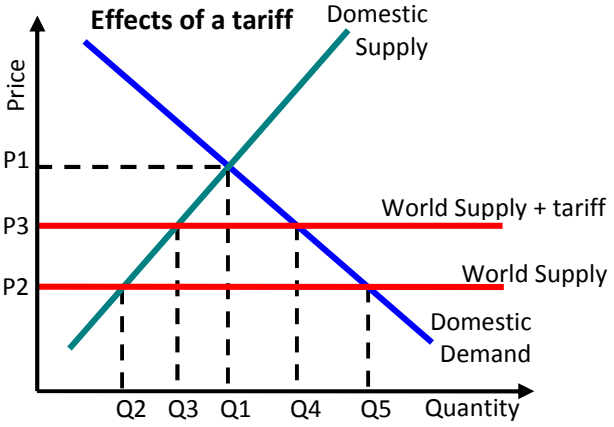
- Specialisation that increases total output thereby increasing economic welfare. See the theory of comparative advantage.
- Firms greater scope for economies of scale. Trade opens up foreign markets and allows firms to increase production. Resultant lower unit costs reduce prices and benefit consumers.
- Improves consumer choice. Domestic consumers have access to overseas goods
- Increased competition reduces the power of domestic monopolies and encourages firms to become world-class and adopt best practice product and process innovations to reduce unit costs.

What is free trade? Free trade occurs when a county abolishes any controls or restrictions on international trade such as tariffs or quotas.

How can government restrict international trade? There are two main methods of limiting imports and exports

- Tariffs: imposing a tax on imports
- Non tariff: imposing regulations on trade eg foreign-exchange restrictions

Explain tariffs using relevant diagrams. A tariff is a tax on imports and can be used to restrict imports and raise revenue for the government.



In a closed economy with no international trade, price is P1 with Q1 exchanged. In an open economy with no protectionism the country is a price taker for the imported good ie it can import all it likes at price P2.

The total sold is Q5 of which: domestic firms supply Q2 – a reduction of (Q1-Q2); foreign firms supply Q5-Q2

Adding a tariff to the world supply curve raises price to P3. Domestic firms supply Q3 – an increase of (Q3-Q2) Foreign firms supply Q4 – a reduction of (Q5-Q4)

Tariffs raise price and reduce consumption and prevent consumers from enjoying the full benefits of international trade.

What is protectionism? Protectionism is measures taken by the government to shield domestic firms from foreign rivals eg tariffs, quotas and regulation

Apart from tariffs how else can a government restrict international trade?

- *Foreign-exchange controls* can be introduced to limit the availability of foreign currency to pay for imports
- an embargo is when the state forbids the import or export of a product
- *Bureaucracy*: Customs officials can insist on complex documentation which raises the cost of imports
- *Regulations* set higher standards for imports than for domestically made products
- the government can *give preference to domestic producers*

Why restrict imports? Economic rationale for import controls include:

- *Infant industry argument.* Newly developing industries need short run protection from lower cost overseas rivals until they become fully established and able to compete in terms of price and quality. A comparative advantage is acquired
- *Improving the Balance of Trade*. Import controls reduce the volume and value of imports improving the current account
- *Counter dumping* where importers are charging 'unfair' low prices
- *Enable restructuring*. Declining domestic industries need short term protection ie time to restructure (eg invest in new capital or training) to improve long term productivity and regain comparative advantage
- *Raise revenue.* Tariffs on luxuries generate taxes to pay for essential services eg basic health care and improve equity
- *Encourage import substitution* to boost domestic industry by replacing imports with domestically produced goods

What are the arguments against protectionism?

- Trade barriers distort domestic markets, pushing up prices and insulating inefficient sectors from competition. They encourage the inefficient allocation of resources
- Using tariffs & quotas to restrict imports limits the potential gain from specialisation and trade. World output falls and less wants and needs are satisfied.

Glossary

Absolute advantage: when a country can make more of a given product using fewer resources than another nation. Unit cost of production is lower.
Active demand management: government use of fiscal or monetary policy to change levels of aggregate demand
Actual GDP: the level of real GDP produced by a country in, say, one year
Actual economic growth: an increase in real GDP from using more of an economy's existing resources. Short run economic growth
Aggregate demand: total spending on domestic output at a given price level, over a given time period, usually one year
Aggregate supply: shows the total output domestic producers are willing and able to produce at a given price level, over a given time period, usually one year
Anticipated inflation: the expected rate of inflation for the near future.
Appreciation: an increase in the value of an asset or the exchange rate
Automatic stabilisers: changes in taxes and government spending beyond the control of government and brought about by the economic cycle
Average propensity to consume: the proportion of household income spent on products
Balance of Payments: a record of economic transactions between residents of a country and the rest of the world, over a period of time, usually one year.
Balanced budget: government revenue equals government expenditure
Bank: a financial institution that accepts deposits from savers and makes loans to borrowers
Base rate: the interest rate set by the Bank of England. Commercial banks set their own interest rates for mortgages and loans around this base rate
Borrowing: gaining credit from a lender to be repaid, with interest, within a defined time period
Budget: expected annual government income & expenditure
Budget deficit: government revenue is less than government expenditure
Budget surplus: government revenue is greater than government expenditure
Capital & Finance Account: a record of money flows between UK & overseas residents from the purchase of fixed or financial assets eg factories shares and loans
Central bank: a country's main bank, which issues currency, enacts monetary policy, and is banker to the government & commercial banks
Circular flow of income: the movement of spending and income across an economy
Comparative advantage: the ability to produce a product at a relatively lower opportunity cost than other countries, regions or individuals
Comprehensive Spending Review: government spending plans for the medium term eg next three years
Consumption: domestic household spending on consumer products
Cost push inflation: inflation caused by increasing prices of inputs eg wage rise, increased import price (imported inflation) or higher indirect taxation.
Current Account: a record of money flows between UK & overseas residents arising from trade in goods & services and investment income from owning overseas assets
Cyclical unemployment: the number of jobless as a result of insufficient aggregate demand compared to aggregate supply.
Deflation: a sustained decrease in the general price level
Deflationary policies : government measures to lower total aggregate demand and spending eg higher interest rates and taxes
Demand management: government intervention in the economy to change the level of aggregate demand
Demand pull inflation: inflation resulting from increases in aggregate demand unaccompanied by an increase in aggregate supply: "too much money chasing too few goods"
Depreciation: a fall in the value of an asset or an exchange rate.
Discretionary fiscal policy: the government deliberately adjusts its spending and taxation to influence the overall level of economic activity

Disposable income : income left after deducting direct taxes, and adding state benefits
Discretionary income: income left after deducting direct taxes, adding state benefits and paying for essentials such as food and shelter
Dumping: when exports are priced below unit cost, or at a lower price than in the exporter's home market
Economic inactivity: people of working age who are not seeking a job because of early retirement, family, long-term sickness or full-time study
Economic agents : a term used in model building to categorise groups of individuals or organisations eg : consumers, firms, the government and international
Economic cycle: fluctuations in the level of real GDP over time over four stages: recession, recovery, boom and slowdown
Economic growth : an increase in the capacity of the economy to produce goods and services, over time. An increase in productive potential is usually means a rise in GDP
Economic indicator: Any economic *metric* (statistic) that measures economic activity eg GDP, economic growth, inflation or unemployment rate, or current account
Economic performance: how well a country uses it scarce resources.
Economic shocks: unanticipated events that affect aggregate demand or supply
Euro zone: the 11 EU countries that have adopted a common currency, the euro
European Union: an association between 27 European member states seeking economic and political co-operation and integration.
Expenditure reducing: policies lowers domestic aggregate demand hence the demand for imports
Expenditure switching: policies that encourage economic agents to substitute domestic for overseas made products.
Exports: spending by overseas residents on domestically made products
External economic shocks: a significant unexpected economic event occurring outside the economy eg recession in the USA
Factor endowment: the quantity and quality of land, labour, capital and enterprise a country possesses
Fine tuning: government use of fiscal, monetary or exchange rate policy to change levels of aggregate demand
Fiscal policy: the use of government expenditure, benefit payments and taxation to manipulate the level and makeup of aggregate demand
Fiscal stance: the intended impact of government spending & taxation plans on the level of future economic activity
Foreign Exchange Market: the place where currencies are traded (FOREX)
Foreign currency reserves : official international reserves (deposits) of overseas currencies of $, €, ¥ etc held by the government at the Central Bank.
Free trade: a county has no government controls or restrictions, such as tariffs or quotas, to limit international trade
Frictional unemployment: the jobless have appropriate skills for vacancies are jobless but need time to find new employment
Full employment : all workers seeking jobs can find employment at the going wage rate. There is no cyclical unemployment
Gini coefficient: measures the degree of income inequality between different households The lower its value, the more equally household income is distributed
Globalisation: the process of ever closer links between national economies
Golden rule: over the economic cycle the government borrows only to invest and not to fund current expenditure
Government: the body that passes and enforces laws, collects taxes to finance public expenditure, and intervenes in the free market to change behaviour
Gross Domestic Product (GDP): the total value of goods & services produced within a country's borders in a given time period eg a year. The sum of all economic activity in UK territory
Gross National Income: the total income earned by the citizens of a country in one year from economic activity, during a given period, usually one year

Gross National Product: measures economic activity a *nation's citizens* where ever they are in the world
Hot money flows: highly liquid funds that move around the world in search of the highest short term rate of return from expected interest rates and exchange rate changes
Human capital: the skill knowledge and expertise of the labour force acquired through experience education and training
Imports: spending by domestic residents on goods and services produced overseas
Income distribution : the extent to which total income is shared out between households
Infant industry : industries with a potential comparative advantage that need short run protection from lower cost overseas rivals while they establish themselves
Inflation: a sustained rise in the price level
Inflation rate: The percentage increase in the price level over a given period of time
Infrastructure: the stock of capital used to support the economic system
Injection: Additions of extra expenditure into the circular flow of income generated by investment, government spending, or exports
Integration: when economic activity in separate regions or countries become increasingly interlinked and interdependent eg the European Union.
Interdependent: when economic agents are interlinked eg trading partners become mutually dependent on one another for products
Interest: the charge made for the use of borrowed money for a period of time; the reward for lending; the price of money
Interest rate: the sum charged for borrowing money, expressed as a percentage.
International competitiveness: the ability of firms in an economy to match the price and quality of other nation's output.
International trade: the exchange of goods and services across national borders.
International sector: the importing and exporting of products between one or more countries
Investment: spending by domestic firms on capital goods
Keynesian school: economists influenced by the work of J M Keynes who believe that markets often fail to clear requiring government intervention.
Labour force: the total number of people *employed* and those registered as *unemployed*. B400
Labour Force Survey : a measure of unemployment which totals all those who have looked for work in the past month and are able to start employment in the next two weeks.
Labour intensive: the use of a high proportion of labour in production relative to other resources
Leakage: household withdrawals of potential spending from the circular flow of income through saving taxes or imports
Lending: extending credit to a borrower to be repaid, with interest, within a defined time period
Long run economic growth: an increase in the economy's capacity to produce goods and services. Potential economic growth
Macroeconomic equilibrium: when aggregate demand equal aggregate supply with no tendency for output or the price level to change
Macroeconomic objectives: a whole economy aim of the government eg low unemployment
Market economy: an economic system where the market forces of supply & demand are used to allocate scarce resources between alternative uses
Mixed economy: an economic system that uses both market forces and state control to allocate scarce resources between alternative uses
Model: a simplified view of complex relationships and processes, used to make predictions
Monetary policy: the use of interest rates to affect aggregate demand via the transmissions mechanism.
Monetary Policy Committee: a Bank of England group that meets monthly to set an interest rate to influence aggregate demand and achieve the government's inflation target

Multiplier effect: the process by which a change in an injection or leakage in the circular flow of income brings about a greater change in GDP
National debt: the total amount owed by the government. The sum of previous budget deficits
Nationalisation: the transfer of ownership of a firm from the private to public sector
Negative output gap: actual GDP is less than potential GDP causing cyclical unemployment
Net exports: the difference between a country's exports earnings [X] and its total spending on imports [M] ie [X-M]
Net investment: investment after such depreciation of fixed assets is taken into account. Net investment = gross investment - depreciation
New Classical school: economists who argue that free markets are self regulating and always clear quickly so that wages & prices adjust rapidly to changes without state action.
Nominal GDP: GDP valued at current prices eg 2008 output valued at 2008 prices
Non-renewable resources: natural resources such as oil which cannot be replaced and so can only be used once
Opportunity cost: the best alternative sacrificed when an economic choice is made. The opportunity cost of more leisure time is the lost wages sacrificed.
Output gap: the difference between an economy's potential and actual GDP
Performance indicators: the measures used to judge the success of an organisation eg prices, profits or productivity
Planned economy: an economic system where the state decides what to produce, how to produce it, and for whom to produce goods & services.
Positive output gap: actual GDP exceed potential GDP, generating inflationary pressure
Potential economic growth: an increase in the economy's capacity to produce goods and services. Long run economic growth
Potential output: highest level of output a country can produce with current resources that delivers both full employment and stable inflation
Price level: the average of the prices of all the goods and services produced in the economy
Price stability: no or minimal changes in the price level
Primary sector: The part of the economy that extracts natural resources eg farming, fishing, quarrying and mining.
Privatisation: the transfer of ownership of a firm from the public to private sector
Productive capacity: the maximum possible GDP of an economy given its current stock of resources ie labour and capital. Potential output
Protectionism: measures taken by the government to shield domestic firms from foreign rivals eg tariffs, quotas and regulation
Public expenditure: government spending
Public sector: that part of the economy made up central government local government, and public corporations
Public sector net cash requirement : the difference between the revenue of general government and its spending
Purchasing power: The amount of products a unit of currency, eg one pound, can buy
Purchasing power parity: The exchange rate at which one unit of currency will purchase the same amount of products in the USA and another country
Quaternary sector: The part of the economy that creates intellectual and information processing services eg scientific research, R&D, education, and IT.
Quota: the legal limit on the amount of a product that can be imported
Rate of inflation: the percentage increase in the general price level, during a given period, usually one year
Real GDP: nominal GDP adjusted for inflation ie current output valued at constant (base year) prices.
Recession: two or more consecutive falls in quarterly GDP
Reflationary policies : government measures to stimulate aggregate demand eg lower interest rates and taxes
Rules based policy: governments adjust macroeconomic policies to ensure

published rules are kept eg the national debt must not exceed 40% of GDP
Saving: For households, savings is that part of disposable income which is not spent
Secondary sector : The part of the economy that manufactures goods eg, cars, construction & energy utilities
Short run economic growth: an increase in real GDP from using more of an economy's existing resources. Actual economic growth
Social exclusion: low income groups are denied access to products
Stagflation: an economy experiencing both inflation and unemployment
Standard of living: the average amount of GDP for each person in a country ie *per capita GDP*.
Strong pound: the value of sterling is appreciating relative to other currencies
Structural change : a change in the relative importance of the primary, secondary and tertiary sectors of an economy over time
Structural unemployment : the jobless have inappropriate skills for vacancies
Supply side policy: measures designed to raise productive capacity and so increase aggregate supply by making labour and product markets work better
Sustainability: meeting the needs of the present without compromising the ability of future generations to meet their own needs
Sustainable growth: an increase in GDP that does not compromise the ability of future generations to meet their own needs
Sustainable investment rule: the national debt, as a percentage of GDP is held at a stable and prudent level of no more than 40% of real GDP.
Tariff: a tax on imports and can be used to restrict imports and raise revenue for the government.
Taxes: compulsory charges imposed by government on individuals & firms
Terms of trade: the ratio of export prices to import prices expressed as an index value
Tertiary sector : the part of the economy that creates services eg transport, tourism, banking, insurance and retail
Trade barriers : barriers and restrictions on the import or export of products
Trade in goods: exports and imports of tangible products eg oil, manufactures and components.
Trade in services : exports and imports of intangible products eg banking, insurance, & tourism
Trade deficit: The value of exports is less than the value of imports ie net exports is negative lowering aggregate demand
Trade surplus: The value of exports is greater than the value of imports, ie, net exports is positive boosting aggregate demand
Transaction: the act of buying or selling (exchanging) a product
Transfer payments: unearned benefits paid out to households by the government e.g. unemployment, disability and child allowances
Transition economies: countries moving from a planned to market economic system.
Transmissions mechanism: the process by which a change in interest rates affects economic activity and inflation
Treasury: the government department responsible for the UK's economic policy.
Trend growth: the average rate of economic growth in a given period of time – usually the course of the economic cycle
Unanticipated inflation: The failure of economic agents to estimate the future rate of inflation, accurately
Unemployment: people who are willing and able to work are unable to find a paying job
Unemployment rate: the proportion of the labour force registered as unemployed. Given by the equation: *total unemployed/ number in the labour force x 100*
Unemployment trap: lost benefits and extra tax mean employees earn less income from working than if they remain unemployed
Weak pound: the value of sterling is depreciating relative to other currencies
Wealth: the current value of an individual's assets eg house and shares
Wealth distribution: the extent to which total wealth is shared out between households

Working age population: in the UK, the total number of men aged 16 to 64 and women aged 16 to 59

[i] What Was the U.K. GDP Then? http://www.measuringworth.org/datasets/ukgdp/result.php
[ii] Source: ONS National accounts: GDP: expenditure chained volume measures at market prices. http://www.statistics.gov.uk/STATBASE/tsdataset.asp?vlnk=215&More=Y
[iii] CIA World Fact Book 2008 https://www.cia.gov/library/publications/the-world-factbook/geos/uk.html#Econ