Managing
the
National Economy

AS Economics
Unit Two

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Economics Online

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What is macro-economics?

Introduction to macro-economic theory

*Managing the economy* introduces macro-economic concepts, models, and theories, and explains how macro-economic problems are analysed, and policies evaluated.

Macro-economic theory

Macro-economics is traditionally broken down into macro-economic *theory* and macro-economic *policy*. Macro-economic theory involves the construction and use of models of the whole, ‘macro’, economy. Economists build these models so that they can explain the structure of an economy, and the role and significance of the parts that make up this structure. Macro-economic models also help the economist understand how the separate components of the macro-economy are related.

Macro-economic models are also used to help economists and policy makers make predictions, or forecasts, about the economy, and about the effect of changes in one economic variable, such as exchange rates, on other variables, such as prices and output.

Macro-economic policy objectives

Macro-economic policy refers to how governments and other policy makers compensate for market failures in order to improve economic performance and well-being. Improvements in performance begin with the setting of policy objectives, which include the achievement of sustainable economic growth and development, stable prices and full employment. Some of the objectives set are potentially in conflict with each other, which means that, in attempting to achieve one objective, another one is ‘sacrificed’. For example, in attempting to achieve full employment in the short-term price inflation may occur in the longer term.

Policy targets

In order to achieve policy objectives, policy makers will set targets to aim for. Targets are often fixed, and widely known, such as the UK inflation target of 2%, but they may also be flexible and less widely known, such as exchange rate and employment targets.

Policy instruments

Once policy objectives and targets are established, policy makers need to choose between alternative policy tools, or instruments. These instruments are the levers of control of the macro-economy, and include *monetary* instruments such as interest rates, and *fiscal* instruments, such as tax rates and government spending and borrowing.

Policy disagreements

Policy disagreements occur for a number of reasons. Macro-economic policy is often shaped by long held normative beliefs about what is essential, and this influences the choice of model, objective, target, and instrument. For example, some economists put the eradication of poverty above the maximisation of corporate profits, and this will strongly influence their belief about how the tax system should be used. In addition, different economists may use different economic models and forecasting techniques, and this may lead them to disagree about the need for, size of, or timing of policy changes.
Measuring economic performance

The performance of an economy is usually assessed in terms of the achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term, such as the stabilisation of the economy in response to sudden and unpredictable events, called economic shocks.

Economic indicators

To know how well an economy is performing against these objectives economists employ a wide range of economic indicators. Economic indicators measure macro-economic variables that directly or indirectly enable economists to judge whether economic performance has improved or deteriorated. Tracking these indicators is especially valuable to policy makers, both in terms of assessing whether to intervene and whether the intervention has worked or not.

Real national income, spending, and output

National income, output and spending are three key variables that indicate whether an economy is growing, or in recession. Like many other indicators, income, output, and spending can also be measured in per capita (per head) terms.

Economic development

Economic development refers to the extent to which individuals are able to benefit from economic activity, including good health and a long life, literacy, and participation in economic activity. Such indicators are included in indices of development, such as the Human Development Index (HDI).

Investment and savings

The level of capital investment by firms, and the level of savings by households are important indicators of future changes in income spending and output.

Prices

Ensuring that prices are stable is an important macro-economic objective, and economists closely monitor changes in average prices through indices like the Consumer Price Index (CPI).

Work and pay

A number of performance indicators relate to work and pay, including employment and unemployment rates, levels of wages and earnings, and the distribution of income and levels of poverty.

Indebtedness

Until the emergence of commercial banking in the 17th Century, government spending was funded out of taxation, but the heavy cost of war in the 1700s forced the UK government to borrow from the banking sector. During the 20th Century, two world wars greatly added to the UK national debt. Today, the PSND (Public Sector Net Debt) is regarded as a key indicator of government performance and efficiency.

Competitiveness of exports and trade performance

How competitive a country's exports are in the global marketplace is an important indicator of its overall economic wellbeing. There are a number of separate indicators associated with trade and competitiveness, including a country's terms of trade, its balance of trade, and the purchasing power of a country's currency.
Indicators of human poverty and inequality

Human poverty can be assessed in a number of ways, including the Human Poverty Index (HPI). Measures of inequality are also used by economists to assess how economic wellbeing is distributed amongst the population.

National income

National income is the total value a country's final output of new goods and services produced in one year. Understanding how national income is created is the starting point for macroeconomics.

The national income identity

This relationship is expressed in the national income identity, where the amount received as national income is identical to the amount spent as national expenditure, which is also identical to what is produced as national output. Throughout macroeconomics the terms income, output and expenditure are interchangeable.

National income accounts

Since the 1940s, the UK government has gathered very detailed records of national income, though the collection of basic data started in the 17th Century. The published national income accounts for the UK, called the ‘Blue Book’, measure all the economic activities that ‘add value’ to the economy.

Adding value

National output, income and expenditure, are generated when there is an exchange involving a monetary transaction. However, for an individual economic transaction to be included in aggregate national income it must involve the purchase of newly produced goods or services. In other words, it must create a genuine addition to the ‘value’ of the scarce resources. For example, a transaction that involves selling a second-hand good, and which was new two years ago does not add to national income, though the original production and purchase does. Transactions which do not add value are called transfers, and include second-hand sales, gifts and welfare transfers paid by the government, such as disability allowance and state pensions.

The creation of national income

The simplest way to think about national income is to consider what happens when one product is manufactured and sold. Typically, goods are produced in a number of ‘stages’, where raw materials are converted by firms at one stage, then sold to firms at the next stage. Value is added at each, intermediate, stage, and, at the final stage, the product is given a retail selling price. The retail price reflects the value added in terms of all the resources used in all the previous stages of production.

Final output

In accounting terms, only the value of final output is recorded. To avoid the problem of double counting, only the value of the final stage, the retail price, is included, and not the value added in all the intermediate stages - the costs of production, plus profits. In short, national income is the value of all the final output of goods and services produced in one year.

Example

For example, consider the production of a motor car which has a retail price of £25,000. This price includes £21,000 for all the costs of production (£6,000 for components, £10,000 for assembly and £5,000 for marketing) plus £4,000 for profit. To avoid double-counting, the national income accounts
only record the value of the final stage, which in this case is the selling price of £25,000.

When goods are bought second-hand, the transaction does not add new value and will not be included in national output. If second-hand goods are included, double-counting will occur, and this would falsely inflate the value of national income.

For example, if the car in question is sold in two year’s time for £15,000 it would provide the owner with money, but the sale will not add to national income. If it were included in national income, it would make the value of the car £35,000 - the initial £25,000 plus the second-hand value of £15,000. This is clearly not the case, so any future second-hand sales are not included when valuing national income. Such second-hand transactions are called transfers.

**Calculating national income**

Any transaction which adds value involves three elements – expenditure by purchasers, income received by sellers, and the value of the goods traded. For example, if a student purchases a textbook for £30, spending = £30, income to the bookseller = £30, and the value of the book = £30. All of the transactions in an economy can be looked at in this way, giving us three ways to measure national income.

1. **The income method**, which adds up all incomes received by the factors of production generated in the economy during a year. This includes wages from employment and self-employment, profits to firms, interest to lenders of capital and rents to owners of land.

2. **The output method**, which is the combined value of the new and final output produced in all sectors of the economy, including manufacturing, financial services, transport, leisure and agriculture.

3. **The expenditure method**, which is the combined value of all spending on new and final goods and services by households and firms.

In terms of output, services dominate the UK economy, with manufacturing a distant second. However, this is a typical profile for a developed economy – the more developed the economy the more that income is allocated towards purchasing services rather than manufactured goods.

In terms of spending, UK households account for around 50% of all expenditure, with foreign households and firms contributing around 20%. Spending on capital goods by firms, and spending on public goods, merit goods, and transfers by government accounts for the rest.

**Gross Domestic Product - GDP**

Gross Domestic Product (GDP) is the most important aggregate of national income for accounting purposes, and for economic analysis. In the UK, GDP is the gross value added of all UK industries over one year, using the ‘output’ method.
Current and constant prices

As the level of economic activity between households and firms increases, output is also likely to increase. However, under certain circumstances the price level may also be driven up. The *nominal* value of national income, or any other aggregate, is the value of national output at the prices existing in the year that national income is measured - that is, at current prices. In simple terms the nominal value of national income can be found by multiplying the quantity of output by the retail (market) price of this output.

The effect of inflation

If demand increases at an unsustainable rate, resources become increasingly scarce, and firms will raise prices. Similarly, wages are likely to rise as the labour market clears and unemployment falls. The more that workers are needed the higher the wage rate. This will act as an incentive for workers to enter this industry. The combined effect of higher wages and prices is that the *nominal* value of national output may be driven up, rather than its *real* value. To find the real value of changes in output under inflationary conditions, the effects of any general price increase (price inflation) must be taken into account. This is done by holding prices constant from a starting measure, called the *base year*.

Example

For example, if, in a hypothetical economy, 100 pens are produced and sold for £1 each in year 1, the nominal value of these transactions is £100. If, in year 2, inflation pushes prices up to £1.20p per pen, but, as in year 1, only 100 pens are sold, the nominal value at current (year 2) prices will rise to £120. However, the nominal value has only risen because of inflation, so to adjust the nominal value to find the ‘real’ value we take the constant price of £1 – which is the price of pens at the start of our measurement in the ‘base year’, year 1. However, if in year 3, 110 pens are sold at £1.20, the nominal value at current prices will be £132 (an increase of 32%), but the real value at constant (year 1) prices will be only £110 (a real increase of only 10%). Therefore, to arrive at real values the economist must take out the effects of price inflation by holding prices constant in terms of the prices existing in the base year.

Recent UK national income

After 16 years of sustained economic growth the UK entered as recession in the third quarter of 2008. It emerged from this recession in the fourth quarter of 2009, only to slip back into negative growth in the fourth quarter of 2010 – though not technically a recession.

The UK’s average ‘trend’ rate of growth of national income is around 2.2% per year, or roughly 0.5% per quarter. A recession is officially defined as a period of at least two consecutive quarters of negative output growth.
Questions

1. What is meant by 'value added' when defining national income?

2. Distinguish between nominal and real national income.

3. Define GDP per capita.

4. Calculate the real growth rate for a country, as an annual %, if in a given year the value of nominal income rises from $800b to $850, and the index of inflation rises to 104 during that year - assume it started the year at 100.

5. Look at the following data:

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal GDP (bn)</th>
<th>Index of Inflation</th>
<th>Population (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>750</td>
<td>97</td>
<td>40</td>
</tr>
<tr>
<td>2007</td>
<td>790</td>
<td>100</td>
<td>41</td>
</tr>
<tr>
<td>2008</td>
<td>870</td>
<td>107</td>
<td>42</td>
</tr>
<tr>
<td>2009</td>
<td>940</td>
<td>118</td>
<td>43</td>
</tr>
</tbody>
</table>

a. What is the base year?

b. What was the value of Y in real terms in 2009 compared with the base year?

c. Calculate real Y per head in 2007.

d. Describe and comment on the state of the economy in 2009 in comparison with 2007.
The circular flow of income

National income, output, and expenditure are generated by the activities of the two most vital parts of an economy, its households and firms, as they engage in mutually beneficial exchange.

Households

The primary economic function of households is to supply domestic firms with needed factors of production - land, human capital, real capital, and enterprise. The factors are supplied by factor owners in return for a reward. Land is supplied by landowners, human capital by labour, real capital by capital owners (capitalists) and enterprise is provided by entrepreneurs. Entrepreneurs combine the other three factors, and bear the risks associated with production.

Firms

The function of firms is to supply private goods and services to domestic households and firms, and to households and firms abroad. To do this they use factors and pay for their services.

Factor incomes

Factors of production earn an income which contributes to national income. Land receives rent, human capital receives a wage, real capital receives a rate of return, and enterprise receives a profit.

Household spending and factor incomes

Members of households pay for goods and services they consume with the income they receive from selling their factor in the relevant market.

Production function

The simple production function states that output (Q) is a function (f) of: (is determined by) the factor inputs, land (L), labour (La), and capital (K), i.e.

\[ Q = f(L, La, K) \]

The circular flow of income Income (Y) in an economy flows from one part to another whenever a trans-
action takes place. New spending (C) generates new income (Y), which generates further new spending (C), and further new income (Y), and so on. Spending and income continue to circulate around the macro economy in what is referred to as the circular flow of income.

The circular flow of income forms the basis for all models of the macro-economy, and understanding the circular flow process is key to explaining how national income, output and expenditure is created over time.

**Injections and withdrawals**

The circular flow will adjust following new injections into it or new withdrawals from it. An injection of new spending will increase the flow. A net injection relates to the overall effect of injections in relation to withdrawals following a change in an economic variable.

**Savings and investment**

The simple circular flow is, therefore, adjusted to take into account withdrawals and injections. Households may choose to save (S) some of their income (Y) rather than spend it (C), and this reduces the circular flow of income. Marginal decisions to save reduce the flow of income in the economy because saving is a withdrawal out of the circular flow. However, firms also purchase capital goods, such as machinery, from other firms, and this spending is an injection into the circular flow. This process, called investment (I), occurs because existing machinery wears out and because firms may wish to increase their capacity to produce.

**The public sector**

In a mixed economy with a government, the simple model also must be adjusted to include the public sector. Therefore, as well as save, households are also likely to pay taxes (T) to the government (G), and further income is withdrawn out of the circular flow of income.

However, government will also inject income back into the economy by spending (G) on public and merit goods like defence and policing, education and healthcare and on support for the poor and those unable to work.
The international sector

Finally, the model must be adjusted to include international trade. Countries that trade are referred to as ‘open’ economies, and the households of an open economy will spend some of their income on goods from abroad, called imports (M), and this is withdrawn from the circular flow.

The Circular Flow of Income

Foreign consumers and firms will also, however, wish to buy domestic products, called exports (X), which is an injection into the circular flow.
Questions

1. Explain how households and firms are connected in the macro-economy.

2. Use the concepts of injections and withdrawals to explain how national income is created.
Income, wealth and liquidity

National income is an official measure of the flow of new goods and services produced in a country during a year. A country’s wealth is the value of the stock of assets created over a period, and which last into the future, and beyond a single year. Income is converted into wealth when assets are purchased. For example, a new house built and sold in a given year forms part of that year’s national income, but it also becomes part of national wealth, as the house will last for many years.

Types of wealth

Wealth is held in many forms, including:

Personal wealth

Personal wealth includes assets like houses, land, motor cars, computers, antiques, saving from previous income, share holdings, and cash in the bank.

Corporate wealth

Corporate wealth includes physical assets like buildings, equipment, machinery, and a wide variety of financial assets. Financial assets include holdings of bonds and shares in other firms, cash in the bank, foreign currencies, repayments on loans due from debtors, and the value of unsold stocks. Businesses tend to differentiate current assets, which exist for one year or less, and long-term assets, which last several years.

Wealth effects

A **wealth effect** refers to changes in household or corporate spending that can occur as a response to changes in the value of wealth. Wealth effects can be positive and negative. They are most commonly associated with changes in house prices, share and bond prices.

Annual changes in household wealth levels, 1980 - 2008

While the average level of household wealth in the UK has risen over time, it is volatile, and the house price crashes of 1990 - 1993, and 2008 - 2009, led to a steep falls in wealth levels. Household spending is affected by changes in household wealth through a process called equity withdrawal, and changes in confidence levels.

Liquid and illiquid assets

Wealth may also be looked at in terms of liquidity, which is the ease with which an asset can be converted into cash. Cash is considered to be ‘perfectly liquid’ whereas fixed assets like machinery and premises are very illiquid.

The macro-economic system needs considerable liquidity to facilitate the circular flow of income. The recent credit crunch, like previous economic disturbances, was triggered by sudden changes in the availability of liquidity. As banks, firms and households look to reduce their risks they often reallocate...
Managing the national economy

their wealth from illiquid forms to liquid forms. However, as they increase and protect their own liquidity, less liquidity is made available to others.

In a sense, people hoard liquidity which perversely reduces liquidity in the whole macro-economic system. For example, banks may call in loans or make fewer loans, and in turn, firms may hold fewer stocks and prefer to hold cash. To compound matters, anxious households may save more of their income, and hold more cash, which reduces spending on consumer goods, and further reduces liquidity.
Aggregate demand

The components of Aggregate Demand

Economists use a variety of models to explain how national income is determined, including the aggregate demand - aggregate supply (AD - AS) model. This model is derived from the basic circular flow concept, which is used to explain how income flows between households and firms.

Aggregate demand (AD) is the total demand by domestic and foreign households and firms for an economy's scarce resources, less the demand by domestic households and firms for resources from abroad.

Aggregate demand

Aggregate demand consists of the amount households plan to spend on goods (C), plus planned spending on capital investment (I) + government spending (G) + exports (X) minus imports (M) from abroad. The standard equation is:

$$AD = C + I + G + (X - M)$$

Prices and output

The AD - AS model shows how changes in the level of AD and AS affect an economy's national output (income) and its price level.

<table>
<thead>
<tr>
<th>Price level</th>
<th>C</th>
<th>I</th>
<th>G</th>
<th>X</th>
<th>M</th>
<th>AD</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>300</td>
<td>50</td>
<td>100</td>
<td>50</td>
<td>450</td>
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<td>70</td>
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<td>130</td>
<td>140</td>
<td>450</td>
<td>250</td>
<td>930</td>
</tr>
</tbody>
</table>

Example of aggregate demand

AD is found by adding-up the value of all the individual components at various average price levels.

Aggregate demand and the price level

Apart from imports, the components of AD are inversely related to prices. Each component responds differently to changes in prices, in other words they have different elasticities with respect to the price level. For example, we can assume that overseas demand is elastic with respect to price because overseas consumers can choose from many global suppliers. This makes them highly sensitive to changes in the prices of imported products.

The aggregate demand curve

The AD curve shows the relationship between AD and the price level. It is assumed that the AD curve will slope down from left to right. This is because all the components of AD, except imports, are in-
versely related to the price level.

For convenience, the AD curve is normally drawn as a straight line, though it can be argued that it is more likely to be non-linear, many suggesting it has a rectangular hyperbola shape.

It is also claimed that the downward slope of the AD curve reflects ‘normal’ macro-economic conditions, and that in a deep recession, the AD curve could become vertical.

**Trade, liquidity and wealth effects**

The AD curve slopes down because the components of AD are inversely related to the price level. Price changes have a number of important affects on aggregate behaviour of households and firms.

*There are three main effects to consider.*

**The price level and international trade – the ‘trade’ effect**

The first effect, on overseas trade, is perhaps the most obvious one. A rise in domestic prices makes exports less competitive and imports more competitive; hence exports (X) are likely to fall and imports (M) are likely to rise. Both of these reactions combine to create a *trade effect*, with lower aggregate demand at the higher price level.

**The price level and liquidity – the ‘liquidity/interest rate’ effect**

When the price level increases, households and firms need to spend more money to continue to consume the scarce resources they need. This makes them more ‘short of cash’ than they were at the lower price level. The liquidity of an asset refers to how easily it is converted to cash, with cash itself being ‘perfectly liquid’. The loss of liquidity associated with a rise in the price level forces some households and firms to borrow from banks, which reduces the liquidity of banks. In response, banks are likely to raise interest rates as compensation for this lost liquidity. The banks need to keep a certain amount of their reserves in a highly liquid form to meet any unexpected increase in demand for cash.

As a result of the lost liquidity, interest rates are forced to rise, and both household and corporate spending may fall. Hence, aggregate demand is lower at the higher price level.

**The price level and the value of wealth – the ‘wealth’ effect**

Given that interest rates will rise as financial markets readjust to the higher price level, there are likely to be further ‘knock on’ effects on household (and corporate) wealth. Higher rates may lead to a fall in house prices, or at least slow-down house price inflation, and create a negative wealth effect. The same may be true for those households and firms that rely on income from shares. Rising interest rates tend to reduce corporate profits and reduce share values - again creating a negative wealth effect. A lower price level will, of course, have the reverse effect, that is to create a positive wealth effect on AD. The combined effect of these wealth effects is to alter consumer and corporate spending, and hence alter the level of AD.

When combined, the above effects explain why AD responds inversely to changes in the price level. These effects should not be confused with other *exogenous* affects, which will shift the whole position.
of the AD curve.
Questions

1. Identify the new AD curve in the following scenarios, assuming an original AD curve of ‘AD’.

   a. There is an increase in the money supply through quantitative easing.
   b. There is a rise in interest rates.
   c. There is a reduction in savings.
   d. Imports rise above exports.
   e. There is an increase in income tax.
   f. Unemployment rises.

2. Why does the AD curve slope downwards?

3. Find X if G = 50, M = 60, I = 90, C = 120, AD = 300

4. Carefully explain how a change in interest rates is transmitted to the real economy.

5. Carefully explain how a fall in the value of Sterling is transmitted to the real economy.
Household spending

Household spending, also known as family spending, is the most important part of aggregate demand. It can be broken down into a number of categories, covering major spending items like food, electricity, holidays, and clothing. As the table indicates, spending on housing, transport, recreation and culture, and restaurants and hotels accounted for nearly half of the £850 billion spent.

The pattern of spending

The pattern of household spending will change over time because of changes in a number of other variables, including:

- **Household income** – some goods are normal goods while others are inferior, so increases in income encourage households to shift spending from goods with a low income elasticity of demand, like food, to those with high income elasticity of demand, like holidays.

- **Tastes and fashions** – over time spending on certain items that are ‘in fashion’ increase relative to those that go out of fashion.

- **Taxes and subsidies** – as indirect taxes and subsidies rise and fall, households will be encouraged or discouraged from spending.

- **Relative prices** – as the prices of certain goods and services rise in relation to others, household spending will adjust.

The determinants of spending

The level of spending is determined by a number of factors, including:

The current level of national income.

Some extra spending is ‘induced’ by changes in the current level of national income. As income rise, consumers tend to increase their spending on higher income elastic goods and services, such as luxuries, holidays, and leisure goods. When income falls, households may postpone spending on these luxuries until incomes rise again.
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The level of savings
Spending and saving are mutually exclusive, which means that if income is fixed, any change in household savings will inversely affect spending. Many of the determinants of consumption have an inverse effect on saving.

Expectations
If households are confident, and have ‘positive’ expectations about the future, current spending is likely to rise. This can lead to economic growth, and re-enforce the positive expectations.

Unemployment
Unemployment has two potential effects on household spending. Firstly, the unemployed spend less because of their lower personal income, and secondly, unemployment causes negative expectations, even for those employed, and this can act as a curb on spending and a stimulus to saving.

Rates of income tax
Changes in tax rates can clearly affect disposable, ‘post-tax’ income, and hence affect household spending.

Interest rates
Interest rates can have a powerful affect on household spending in four basic ways:

- By altering the level of savings because a rise in interest rates will stimulate more savings, and less is available for spending.
- By altering the cost of funding existing debts, such as mortgages and bank loans. For example, a rise in interest rates will divert household funds towards the higher loan payments and away from general spending.
- By altering the cost of new credit, and thus encouraging or discouraging household borrowing. For example, a rise in interest rates will deter new borrowers, who may postpone borrowing until rate fall back.
- By altering expectations and confidence. For example, rising in interest rates will subdue confidence and create a ‘wait and see’ attitude by households, who may postpone certain spending until expectations improve.
Questions

1. Assess the importance of household spending in the UK economy.

2. How important are interest rates in determining the level of household spending.

3. Explain how household spending is likely to be affected by:
   a. A rise in asset prices
   b. A fall in unemployment
Savings

Households dispose of their post-tax income by spending or saving. Saving is a withdrawal from the circular flow of income and has a pivotal role in determining changes in national income over time.

The determinants of saving

Decisions to save are affected by:

Income
In general, saving is a positive function of income – the greater the income the greater the likelihood of saving.

Expectations
Expectations about the state of the economy affect household decisions to save and spend. In general, positive expectations would tend to reduce savings and increase spending whereas negative expectations would increase savings and reduce spending.

Unemployment
Fear of unemployment will act in the same way as negative expectations, making saving more likely and spending less likely.

Interest rates
Given that interest rates provide a reward to saving, a rise in interest rates will provide an incentive to save. However, when mortgage rates rise, homeowners may be forced to increase their monthly repayments, and this leaves less income available for saving.

Asset prices
Changes in asset prices, such as houses and shares, can affect confidence and generate wealth effects. In response, households may change their savings. For example, a rise in house prices would tend to encourage spending and discourage saving because higher house prices lead to positive equity for homeowners, and less need to save for the future.

Savings schemes
Finally, saving may be encouraged by the availability of tax efficient savings schemes, such as the UK’s ISAs (Individual Savings Accounts).

The savings ratio

The household savings ratio shows the proportion of household income that is saved. In the UK, this ratio varies typically between 12% and 4%, and is volatile from year to year.

If the savings ratio is too high, there may be insufficient spending in the economy. This will be beneficial if the economy is growing too quickly, but is problematic if the economy is growing slowly, or is in recession. A low savings ratio means that consumer spending may be too high and there may be insufficient funds for investment. In the short run, low savings will increase standards of living, but in the long run a low savings ratio will mean that fewer funds are available for investment and economic growth may suffer.

Sudden changes in the savings ratio are an indicator of future changes in spending and aggregate demand, and can be a prelude to inflation, or deflation. A rise in the savings ratio indicates a fall in...
consumer confidence, whereas a fall in the savings ratio indicates a rise in confidence and spending, which can trigger a rise in the price level.

**UK savings ratio**

Between 2004 and 2005 the UK savings ratio rose from 4% to 6%, then fell to an historic low of less than 1% in the first quarter of 2008. Since then it has risen, to average around 5% between 2009 and 2011, though it remains volatile.
Questions

1. How important are expectations in determining the level of savings in an economy?

2. Assess the likely effect of a fall in interest rates on the level of savings in an economy?
**Investment**

Investment spending is an injection into the circular flow of income. Firms invest for two primary reasons:

- Firstly, investment may be required to replace worn out, or failing machinery, equipment, or buildings. This is referred to as *capital consumption*, and arises from the continuous depreciation of fixed capital assets.

- Secondly, investment may be undertaken to purchase new machinery, equipment, or buildings in order to increase productive capacity. This will reduce long-term costs, increase competitiveness, and raise profits.

Gross investment includes both types of investment spending, but net investment only measures *new* assets rather than *replacement* assets. This relationship is expressed in the following equation:

**Net investment = gross investment – depreciation**

For example, if an airline replaces five worn out aircraft with identical new aircraft, and purchases two more in order to be able to fly to more destinations, then gross investment is seven, replacement investment is five, and net investment is two.

In economic theory, net investment carries more significance, as it provides the basis for economic growth.

**The determinants of investment**

The level of investment in an economy tends to vary by a greater extent than other components of aggregate demand. This is because the underlying determinants also have a tendency to change.

The main determinants of investment are:

**The expected return on the investment**

Investment is a sacrifice, which involves taking risks. This means that businesses, entrepreneurs, and capital owners will require a return on their investment in order to cover this risk, and earn a reward. In terms of the whole economy, the amount of business profits is a good indication of the potential reward for investment.

**Business confidence**

Similarly, changes in business confidence can have a major affect on investment decisions. Uncertainty about the future can reduce confidence, and means that firms may postpone their investment decisions until confidence returns.

**Changes in national income**

Changes in national income can create an *accelerator* effect (see below). Economic theory suggests that, at the macro-economic level, small changes in national income can trigger much larger changes in investment levels.

**Interest rates**

Investment is inversely related to interest rates, which are the cost of borrowing and the reward to lending. Investment is inversely related to interest rates for two main reasons.

1. Firstly, if interest rates rise, the opportunity cost of investment rises. This means that
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A rise in interest rates increases the return on funds deposited in an interest-bearing account, or from making a loan, which reduces the attractiveness of investment relative to lending. Hence, investment decisions may be postponed until interest rates return to lower levels.

2. Secondly, if interest rates rise, firms may anticipate that consumers will reduce their spending, and the benefit of investing will be lost. Investing to expand requires that consumers at least maintain their current spending. Therefore, a predicted fall is likely to discourage firms from investing and force them to postpone their investment decisions.

General expectations

Because investment is a high-risk activity, general expectations about the future will influence a firm’s investment appraisal and eventual decision-making. Any indication of a downturn in the economy, a possible change of government, war or a rise in oil or other commodity prices may reduce the expected benefit or increase the expected cost of investment.

Corporation tax

Firms pay corporation tax on their profits, so a reduction in tax increases the profits they retain after tax is paid, and this acts as an incentive to invest. In 2009, the rate for small businesses was 21%, and the main rate for profits over £1.5m was 28%.

The level of savings

Household and corporate savings provides a flow of funds into the financial sector, which means that funds are available for investment. Increased saving may reduce interest rates, which may also stimulate corporate borrowing and investment.

The accelerator effect

Small changes in household income and spending can trigger much larger changes in investment. This is because firms often expect new sales and orders to be sustained into the long run, and purchase larger quantities of capital goods than they need in the short run.

In addition, machinery is generally indivisible which means it cannot be broken into small amounts and bought separately. Even small increases in demand can trigger the need to buy complete new machines or build completely new factories and premises, even though the increase in demand may be relatively small.

The combined effect of these two principles creates what is called the accelerator effect. For example, if in a given year national income rises by £20b, and investment rises by £40b, the value of the accelerator is 2.
Questions

1. Gather data on investment spending and national income from the UK, or another major economy, over the last 20 years, and then plot the % changes on a graph. To what extent does the data:
   a. Indicate that investment spending and national income are positively related?
   b. Confirm the existence of an accelerator effect?

2. Assess the importance of business confidence in determining the level of investment in the macro-economy.
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The public sector

**Government spending**

New government spending is an injection into the circular flow of income, and, like all injections, it will have a multiplier effect on national income, which means that the final change in income is greater than the initial injection.

**Reasons for government spending**

Governments spend money for three main reasons:

**To compensate for market failures**

Most government spending is to compensate for market failures, such as providing public goods like street-lighting, policing and defence. Public goods are usually funded by government because they are not likely to be funded through the private sector. Merit goods, such as education and healthcare are also provided by governments. Merit goods are partly funded by the government because the private sector is unlikely to allocate sufficient resources to establish an effective infrastructure for their supply: a situation referred to as an incomplete market.

**To provide benefits**

Government also provides welfare benefits that help ensure a minimum standard of living. The private sector is unlikely to provide a guarantee of work for everyone, or to guarantee that those who cannot work are provided for. Welfare benefits in the UK include unemployment benefit, known as Job Seeker’s Allowance (JSA), minimum income guarantees, child allowances, and pensions.

**To help manage the macro-economy**

Government may also deliberately manipulate the macro-economy through fiscal policy. Spending is an injection of demand into the economy and governments can spend more to compensate for a decline in the other components of national income. For example, if consumer or investment spending by the private sector falls, then aggregate demand can be boosted by an additional injection of public spending.

**Government revenue**

Central and local government must raise revenue in order to meet its spending commitments. Revenue is raised from a number of sources including:

**Taxation**

Direct taxes, such as income tax and corporation tax, and indirect taxes, such as Value Added Tax (VAT), are the main sources of revenue to the UK Treasury.

**Charges**

Both central and local government can charge for using resources under their control, such as parking charges, prescription charges, and TV licences.

**Privatisation**

The sale of state-owned assets, such as public utilities like gas, water, and electricity, has, in the past, provided ‘windfall’ revenue to the UK government. The sale of property rights provides a similar source of revenue, such as selling licences to broadcasters and to mobile phone companies for the right to use the public ‘airwaves’.
Borrowing

Borrowing - if a government does not have enough revenue to fund its spending plans it may borrow from the commercial banks, from the public, or from overseas lenders, such as the International Monetary Fund. Both central and local government may need to borrow from time to time to fund spending commitments.

The international sector

The international sector includes exports (X), which are an injection and add to aggregate demand, and imports (M), which are a withdrawal and reduce aggregate demand. The more trade a country undertakes the more open it is said to be.

The UK is an important trading economy, with 50% of its trade being with the EU area, North American and Japan.

Exchange rates and equilibrium

Changes in exchange rates affect both imports and exports through its affect on import and export prices. A rise in the exchange rate will make exports more expensive and imports cheaper, and a fall in the exchange rate will reduce export prices, but increase import prices. Changes in exchange rates will encourage households and firms, at home and abroad, to alter their behaviour, as they would whenever price changes.

The Classical view is that if exports and imports get out of balance, changes in the exchange rate will bring the international sector back into balance. For example, a temporary deficit, where imports are greater than exports, would lead to a relative fall in the value of the domestic currency. This is because the demand for that currency falls relative to the supply, making exports cheaper and imports more expensive. This should help to stimulate exports and constrain imports, and help the economy move back towards equilibrium.
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Aggregate supply

Aggregate supply (AS) is defined as the total amount of goods and services produced and supplied by an economy’s firms over a period of time. It includes the supply of a number of types of goods and services including private consumer goods, capital goods, public and merit goods and goods for overseas markets.

An example of aggregate supply:

<table>
<thead>
<tr>
<th>Price level</th>
<th>Consumer goods</th>
<th>Capital goods</th>
<th>Public and merit goods</th>
<th>Goods for export</th>
<th>AS</th>
</tr>
</thead>
<tbody>
<tr>
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<td>70</td>
<td>50</td>
<td>78</td>
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<td>0</td>
<td>0</td>
<td>10</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

Components of AS

The total output produced and supplied by an economy can be broken down into a number of components, including:

**Consumer goods**

Private consumer goods and services, such as motor vehicles, computers, clothes and entertainment, are supplied by the ‘private sector’, through markets, and consumed by households. For an advanced economy, this is the single largest component of aggregate supply.

**Capital goods**

Capital goods, such as machinery, equipment, and plant, are supplied to other firms. These investment goods are significant in that their use adds to capacity, and increases the economy’s ability to supply private consumer goods in the future.

**Public and merit goods**

Goods and services produced by private firms for use by central or local government, such as education and healthcare, are also a significant component of aggregate supply. Many private firms, such as those in construction, IT, and pharmaceuticals, rely for their income on contracts to supply to the public sector.

**Goods for export**

Goods and services for export, such as chemicals, entertainment, and financial services are also a key component of aggregate supply.

**Aggregate supply and the price level**

At higher prices, firms are likely to supply more in the short run, subject to the availability of scarce resources. While the output of consumer and capital goods is positively related to the price level in the short run, the supply of public and merit goods is largely unaffected by the price level given that plan-
ning takes place over many years. However, the output of exports is inversely related to the price level because higher domestic prices relative to overseas prices would encourage firms to supply for the domestic market rather than for exports.

Overall, in the short run aggregate supply increases as the price level rises.

**The short run aggregate supply curve**

A short run aggregate supply curve, SRAS, be derived from an AS schedule, as shown above. This shows more clearly the relationship between aggregate supply and the price level in the short run.

The SRAS curve will slope up from left to right, but the gradient will not be uniform. The slope of the SRAS can range from horizontal with no gradient, to vertical. A horizontal AS curve is perfectly elastic, and vertical one is perfectly inelastic.

For convenience, the short run aggregate supply curve may be referred to AS rather than SRAS.

There are at least three explanations of the upward sloping AS curve:

**Wages are ‘sticky’**

This theory suggests that a firm’s main cost, its wage costs, are slow to adjust because most nominal wages are fixed for a period of time, so that this year’s nominal wages are based on last year’s prices. Lower prices mean a rise in real wages because nominal wages do not adjust downwards, so firms hire fewer workers and produce less output. A rise in prices means a fall in real wages and a fall in costs, so more output can be produced.

**Prices are ‘sticky’**

This theory suggests that it is often too costly for firms to keep changing price, with additional costs including the cost of printing new brochures and price lists. Hence, a fall in the general price level is not automatically met by a fall in individual prices. This means that many firms’ prices are ‘too high’ and, as a result, they build up stocks and cut back their output. Unexpected increases in the price level will have the opposite effect, so that some firm’s prices are ‘too low’ and sales rise, leading to increased output.

**Wrong perceptions**

This explanation focuses on the view that firms may believe that falling prices are affecting their own firm rather than the rest of the economy. They, wrongly, believe that their prices are falling relative to other firms, and because of this, they reduce production. If prices rise in general, firms may believe that prices in their own market are rising and this encourages them to increase output.

**The shape of the short run aggregate supply curve**

The shape of the short run AS curve is assumed to be non-linear. This is because, at low levels of output, more output can be produced without inflationary pressure on prices. The economy has ‘slack’ in it, with unused resources waiting to be used. The AS curve will be horizontal at first, but, as more resources are used, factor prices will start to rise, and less output is possible. This process accelerates
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up to full employment, where after no more output is possible. Beyond this point AS becomes perfectly inelastic.

The long run aggregate supply curve

In the long run, the economy is not limited to its current stocks of scarce resources. Output is not determined by the price level, and the long run AS curve will be vertical. This means that short run changes in the price level do not alter an economy’s long-term output. This is equivalent to being on the edge of a country’s production possibility frontier. LRAS can shift if the economy’s productivity changes.

Determinants of long run aggregate supply

Long run aggregate supply (LRAS) is determined by a number of factors, including:

- The level of spending on technology, which reduces costs and increases output. The application of new technology means that an economy can produce in greater volume, even with the same quantity of scarce resources.

- Long-term inward investment from abroad, which enables increased production. Inward investment, like domestic investment, increases an economy’s productive capacity.

- Migration and population growth, which increases the quantity of human capital.

- Education and training, which increases the quality of human capital.

- Competition in product and labour markets, which improves efficiency and productivity.

- Effective supply-side policy, which creates the right environment for households to supply factors of production and for firms to produce output.

- It is sometimes useful to show short and long run supply on the same graph. The short run AS curve continues to slope upwards – beyond the LRAS. This is because, in the short run, factors of production can be used above their average full-employment level.

For example, workers might be prepared to work at weekends for a temporary period, to complete a particular job, or to help meet orders.
Questions

Assume the economy’s aggregate supply curve is ‘AS’. Identify the new AS curve given the following information:

1. There is inward migration of workers from Eastern Europe which puts downward pressure on wages.
2. The exchange rate of Sterling appreciates.
3. There are a series of bad harvests for key commodities.
4. Oil prices fall.
5. Trade unions in public sector successfully push for higher wages.
Equilibrium

An economy will be in equilibrium, that is it will be in a stable state, when planned withdrawals equal planned injections; hence $S + T + M = I + G + X$. This is also consistent with planned aggregate demand equalling planned aggregate supply.

<table>
<thead>
<tr>
<th>Price level</th>
<th>Aggregate demand</th>
<th>Aggregate supply</th>
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</thead>
<tbody>
<tr>
<td>200</td>
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<td>600</td>
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<tr>
<td>80</td>
<td>710</td>
<td>100</td>
</tr>
</tbody>
</table>

Equilibrium can be shown using the AD-AS diagram, and will occur at the price level where both AS and AD equate. In our hypothetical example, equilibrium will be where the average price level is £100 and the value of output is £600b.

Proving equilibrium

It is essential to explain why is equilibrium is achieved when $AS = AD$. In the example, at a price level higher than 100, such as 140, SRAS is greater than AD. Firms are producing more goods than the economy wants and needs.

AD is effectively too low because at this high price level there are negative trade, liquidity and wealth effects, causing planned AD to contract to £380b.

At a price lower than 100, such as 80, there is much less incentive to produce, and AS contracts to £100b. However, AD extends to £710b because lower prices stimulate positive trade, liquidity, and wealth effects.

Stocks quickly run down, and firms will raise their prices. The price level eventually rises back to a stable state at 100!
Movements along the aggregate supply curve

A movement along the AS curve will occur if the AD curve shifts to the left or right. For example, if the AD curve shifts to the right, AS will expand up along the curve, in response.

Showing an output gap

An output gap occurs when there is a difference between the potential level of output and the actual short run level of output, as indicated on the graph below.

Output gaps may be negative, which occurs when actual output is less than potential output, or positive, when actual output is greater than potential output. An output gap can be illustrated using AD-AS analysis.

If an economy has a negative output gap then it means it is capable of producing more output, without having to create or employ new factors of production. Current output is at Y, and full capacity is at Yf.

Such an output gap means there is likely to be unemployment, and possibly a recession.
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Injections and withdrawals and equilibrium

When total injections equal total withdrawals, the level of national income will remain constant, and the economy will be in general equilibrium. The level of economic activity will change following a change in either injections or withdrawals. An economy will grow if the value of injections is greater than the value of withdrawals, or shrink if the value of withdrawals is greater than injections.

For an economy to be in general equilibrium it is only necessary that:

\[ \text{Total injections} = \text{total withdrawals} \]

Perspectives on equilibrium

The extent to which an economy moves naturally towards equilibrium without the interference of government, is the subject of intense debate in economics and has been so since its origins. Although there are many different views, these are often classified as the Classical, Neo-Classical, and Keynesian perspectives.

The Neo-classical view

The neo-Classical era of economics sits between two great periods of economic theory, the Classical era (1770’s – 1870’s) and the Keynesian era (1940’s – 1970’s). Neo-Classical economics can be summarised as the general belief that a market economy will automatically adjust towards equilibrium and there is no need for government intervention. In short, markets are said to work effectively, both at the micro and macro-economic level.

Each sector is brought into equilibrium through automatic adjustments in product, labour and financial markets. All the markets clear because of the effectiveness of the price mechanism. The neo-Classical economists argued that any problem with markets not clearing is the result, of government failure of some sort, or the activities of interest groups and other third parties not directly involved in market transactions. For example, economists from the Classical tradition would tend to argue that unemployment exists because government welfare payments are too generous and artificially distort the effectiveness of labour markets.

If the price mechanism is free to work, the economy will always be moving towards equilibrium such that full employment will occur. The Neo-Classical line of argument is that wages will adjust to ensure that the labour *market clears*; so if an economy experiences a downturn in the business cycle, wages would fall, and the same number of workers would be employed, but at a lower wage rate.

Classical economists also argued that, in the financial market for loans, savings would always equate with investment because interest rates will naturally adjust to bring them into balance. If savings are greater than investment at the current interest rate then the rate will fall, as financial institutions have excess funds, and this will encourage investment and deter savings. In the next time period, savings will fall and investment rise.

Similarly, imports and exports will always move towards equilibrium through adjustments in the exchange rate. If imports are greater than exports, the supply of currency will increase, and the exchange rate will fall. In the next time period, exports will increase, because the lower currency makes exports more price competitive, and imports will fall, because they are less price competitive.

The new Classical view

Classical economics became influential again during the 1980s with the work of ‘New-classical’ economists like Robert Lucas, who revived interest in Classical macro-economic theory.
The Keynesian View

The alternative view – that markets do not always self correct - is based largely on the ideas and work of British economist, John Maynard Keynes. Keynes’s work culminated in the publication of *The General Theory of Employment, Interest and Money (1936)*, commonly known as *The General Theory*, which became the most influential text on economics of the 20th Century. Keynes argued that a market economy is not always effective at creating full employment equilibrium, and there are likely to be times when governments should compensate for the failure of free markets. Full employment equilibrium is simply a ‘special case’ of equilibrium, and not a ‘general’ case.

In particular, Keynes argued that savings and investment would not always respond to changes in interest rates in the way the neo-Classical economists assumed. This is because the connection between savings and investment is weak. Savings are more directly affected by national income than interest rates.

Keynes was also critical of the Classical assumption that wages and prices are flexible downwards as well as upwards. According to Keynes, the inflexibility of wages downwards created the possibility of unemployment.

At a deeper level, Keynes also saw that ‘self interest’, regarded as the key driver for market interaction, was potentially harmful. From Adam Smith onwards, the orthodox view was that the economic welfare of everyone is best maximised when individuals pursue self-interest. In his ‘paradox of saving’ Keynes was able to demonstrate that the self interest associated with increased saving could be harmful to others because saving would lead to a fall in spending, and to a fall in other people’s income. Eventually, even the saver suffers as economic activity in the economy collapses.

The Classical and Keynesian perspectives represent two opposing views of how and whether equilibrium is established.
Questions

1. What will be the new equilibrium position for national income, assuming the following demand side changes, and that the economy starts at point X?

   a. Unemployment rises
   b. Interest rates fall
   c. The money supply contracts
   d. Income tax rates rise

2. What will be the new equilibrium position for national income, assuming the following supply side changes, and that the economy starts at point X?

   a. Indirect taxes, such as VAT, are increased.
   b. The Chancellor reduces corporation tax.
   c. Direct taxes such as income tax fall, assuming a positive incentive effect, which attracts workers out of unemployment.

3. In each of the following questions, assume that the economy is in equilibrium at X. Identify the new equilibrium following the changes given below:

   a. Consumer confidence rises.
   b. There is better use of new technology leading to cost efficiencies by UK firms.
   c. There is a downturn in UK exports to Europe.
   d. There is a rise in household savings.
   e. Interest rates fall.
   f. Consumer confidence falls triggering a fall in business confidence.
   g. Oil prices rise, and at the same time, unemployment falls.
   h. There is a general rise in business taxes and a rise in imports relative to exports.
   i. Government spending on education rises.
   j. Banks reduce their lending to households and firms reduce their investment in new technology.

Demand-side shocks and multiplier effects

The equilibrium position of national income will change, ceteris paribus, following an economic shock.
Economic shocks either arise from the demand side or the supply side.

**Exogenous and endogenous demand side shocks**

An exogenous demand side shock is one caused by a sudden change in a variable outside the aggregate demand (AD) model, in contrast to an ‘endogenous’ shock, which arises from a sudden change in a variable within the model. For example, a sudden change in investment is an endogenous shock, because ‘I’ is in the AD equation, whereas a sudden change in the exchange rate is an exogenous shock because exchange rates are not directly included in the AD equation.

A number of demand side shocks can directly affect planned spending in the economy. These include:

- Shocks affecting household or corporate spending, such as changes in unemployment, savings, confidence, wages, and profits.
- Shocks associated with changes in liquidity and the availability of consumer and business credit, as in the recent ‘credit crunch’.
- Changes in spending associated with changes in house prices, share and bond prices, called wealth effects.
- Shocks affecting investment spending, including changes in bankruptcies, business confidence, and profit levels.
- Changes in government finances, brought about by wars, and changes in unemployment.
- Shocks directly affecting exports or imports, such as the economic collapse of a trading partner.

Other demand side shocks affect planned spending indirectly, such as changes in:

- Interest rates, which affect both consumer and investment spending.
- Tax rates, which also affect consumer and investment spending.
- Exchange rates, which affect exports and imports.

Changes in any of the above will shift the position of the AD curve.

**Shifts in aggregate demand**

An increase in aggregate demand, such as that caused by an increase in household spending, is shown by a rightward shift in the whole AD curve.

The shift in demand will have an effect on the price level and national output, but the effects may not be uniform because aggregate supply (AS) may not be linear. The nonlinearity of AS reflects variation in the elasticity of aggregate supply.
Full employment

If an economy is already near to full employment with only a small output gap, an increase in AD will result in average price rises, but little increase in output.

This is clearly an economic problem, as the economy cannot cope with this extra demand.

The multiplier effect

Every time there is an injection of new demand into the circular flow of income there is likely to be a multiplier effect. This is because an injection of extra income leads to more spending, which creates more income, and so on. The multiplier effect refers to the increase in final income arising from any new injection of spending.

The size of the multiplier depends upon household’s marginal decisions to spend, called the marginal propensity to consume (mpc), or to save, called the marginal propensity to save (mps). It is important to remember that when income is spent, this spending becomes someone else’s income, and so on. Marginal propensities show the proportion of extra income allocated to particular activities, such as investment spending by UK firms, saving by households, and spending on imports from abroad. For example, if 80% of all new income in a given period of time is spent on UK products, the marginal propensity to consume would be 80/100, which is 0.8.

The following general formula to calculate the multiplier uses marginal propensities, as follows:

\[ \frac{1}{1 - mpc} \]

Hence, if households spend 0.8 and save 0.2 of every £1 of extra income, the multiplier will be:

\[ \frac{1}{1 - 0.8} = \frac{1}{0.2} = 5 \]

Hence, the multiplier is 5, which means that every £1 of new income generates £5 of extra income.

The multiplier effect in an open economy

As well as calculating the multiplier in terms of how extra income is spent, economists can also measure the multiplier in terms of how much of the extra income goes in savings, and other withdrawals. A full ‘open’ economy has all sectors, and therefore three withdrawals – savings, taxation and imports.

This is indicated by the marginal propensity to save (mps) plus the extra income going to the government - the marginal tax rate (mtr) plus the amount going abroad – the marginal propensity to import (mpm).

By adding up all the withdrawals we get the marginal propensity to withdraw (mpw). The multiplier can now be calculated by the following general equation:

\[ \frac{1}{\text{marginal rate of withdrawal}} \]

Or, more simply:

\[ \frac{1}{mpw} \]

When to refer to a ‘multiplier effect’

The multiplier concept can be used in any situation where there is a new injection into an economy. Examples of such situations include:
• When the government funds the building of a new motorway, or other large capital project

• When there is an increase in exports abroad

• When there is a reduction in interest rates or tax rates, or when the exchange rate falls

The downward or ‘reverse’ multiplier

A withdrawal of income from the circular flow will lead to a downward multiplier effect. Therefore, whenever there is an increased withdrawal, such as a rise in savings, import spending, or taxation, there is a potential downward multiplier effect on the rest of the economy.
Questions

1. What happens to national income if, assuming the mpc is 0.75, firms decide to invest £2b less than previously?

2. Examine the likely impact of the 2012 Games on the UK economy.
Supply-side shocks

The level of national income can change in the short term if there is a supply-side shock. Many factors can bring about a sudden changes in supply, including changes in the following:

- Wage levels, which affect firms’ unit labour costs.
- Other costs of production, such as commodity prices, or which changes in oil prices are significant.
- Indirect taxes, such as VAT.
- Subsidies.
- Productivity of factors which improve efficiency.
- Changes in the use of technology and production methods.
- Direct taxes, such as income tax, via an incentive or disincentive effect.
- The length of the working week.
- Labour migration.

The effect of cost shocks

A cost shock will affect the aggregate supply curve in the short run, and the AS curve will shifts upwards and to the left. Taking the example of a wage shock, the increase in wages will lead to a rise in business costs, which will shift the AS curve shift upwards, causing the price level will rise from P to P1. This will cause a contraction of AD, and equilibrium will fall to Y1, resulting in a fall in real output and a probable loss of jobs.

Therefore, cost shocks can result in serious economic difficulties for the affected country. Increases in oil prices are always a concern because of the general inflationary effects they can create.
Questions

1. Look at the following diagram and identify the new equilibrium, A or B, given the following:

   a. There is a rise in average earnings not related to productivity.

   b. There is a series of industrial disputes, including a strike by train drivers.

   c. There is a general fall in oil prices.

   d. There is a fall in the value of Sterling.

2. Analyse the likely impact on the UK economy of a rise in commodity prices.
Macro-economic policy objectives

What is economic policy?

Economic policy is the deliberate attempt to generate increases in economic welfare. Since the late 1920s, when many advanced economies were on the brink of complete collapse, economists have recognised that there is a role for government and monetary authorities in steering a macro-economy towards increased economic welfare. During the late 1930s and early 1940s, Keynes outlined most of the policy ground rules for his, and later, generations of policy makers.

The general view before Keynes, including those of the Classical and Neo-Classical economists, was that an economy would move naturally towards maximum economic welfare and full employment when its markets1 were allowed to operate freely. However, the model of the macro-economy that Keynes had developed during the 1930s in response to the Great Depression clearly showed that a macro-economy would not always automatically or quickly self-correct. The contrast between the Classical and Keynesian perspective is often expressed in terms of the extent to which Adam Smith’s invisible hand2 works, or fails, to maximise economic welfare. Those on the Classical side of the argument believe it does, while those on the Keynesian side generally believe it does not, and that full employment equilibrium is a special, rather than a general case.

Keynes was able to demonstrate that a market economy could become trapped in a downward spiral of falling economic activity and diminishing economic welfare. Given the recent global financial crisis, and the Euro-debt problem, Keynes’ ideas are as relevant today as in the 1930s.

For Keynes, the key questions were:

- What events could cause a fall consumer or capital spending and trigger a downward spiral of aggregate demand, and economic activity?
- What processes might keep aggregate demand from bouncing back, as the Classical economists had assumed?
- How could governments and monetary authorities generate sustainable increases in aggregate demand?

Policy objectives

Following Keynes, modern policy makers favour the establishment of clear policy goals, or objectives. The main macro-economic objectives agreed by modern policy makers are:

Stable and sustainable economic growth and development

For advanced economies, stable and sustainable development means the desire to see national income grow in real terms in a way that can be sustained in the future, without generating significant economic problems in the long run.

For developing economies, further development is often the primary goal, and this can be summarised as the desire to increase the longevity of the population, increase access to education, and attain a decent standard of living.

Stable prices

Stable prices mean average prices rising by only a small amount, such as at 2% per year. Unstable

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1 Product, capital, money and labour markets
2 The price mechanism
prices can lead to a number of other economic problems, including falling investment and reduced international competitiveness.

**Full employment**

Full employment occurs when the labour force is fully employed in productive work. Achieving high levels of employment has long been a major economic objective.

**A balance of payments with the rest of the world**

Achieving a balance of payments means that a country is able to ‘pay its way’ in the world.

**Care for the environment**

Care for the environment means protecting the environment from misuse and overuse. The environment is increasingly recognised as an important asset that needs to be protected.

**An equitable (fair) distribution of income**

An equitable distribution of income means that the gap between rich and poor is not excessive, but still enough to create incentives to work.

**A sound structure to public finances**

In terms of the role of the public sector, Keynes argued that more government spending could adequately compensate for lower private consumer and capital spending. In short, if an economy was in recession, it did not matter who injected the money - the public sector was just as productive as the private sector. However, as public (sovereign) debt has spiralled over the last decade, the control and reduction of debt levels has become a major policy objective.

Not all economists agree about the order of priority for achieving these objectives. Nor do they agree about which specific instrument should be used to achieve a given objective.
**Sustainable growth**

Economic growth occurs when real output increases over time. Real output is measured by Gross Domestic Product (GDP) at constant prices, so that the effect of price rises on the value of national output is removed.

Sustainable economic growth means a rate of growth that can be maintained without creating other significant economic problems, especially for future generations. There is clearly a trade-off between rapid economic growth today, and growth in the future. Rapid growth today may exhaust resources and create environmental problems for future generations, including the depletion of oil and fish stocks, and global warming. Periods of growth are often triggered by increases in aggregate demand, such as a rise in consumer spending, but sustained growth must involve an increase in output. If output does not increase, any extra demand will push up the price level.

**Growth based on debt**

In terms of sustainability, it may be argued that growth based on short-term public debt, rather than long term productivity, is unsustainable - hence worries about the build-up of sovereign debt in Europe.

**PPFs and economic growth**

For an economy to continue to grow in the future, it needs to increase its ‘capacity’ to grow. An increase in an economy’s productive potential can be shown by an outward shift in its PPF.

**Standards of living**

Gross domestic product per capita is often regarded as the key indicator of the standards of living of the citizens of an economy, and of their economic welfare.

**Measuring growth**

GDP is the official base measure of output used in most economies, including the UK. Gross measurements record the output of all goods and services, including capital goods which have been purchased to replace existing capital goods. Replacing capital is called capital consumption, or depreciation. The alternative to Gross output is Net output, which indicates that depreciation is taken into account and deducted from the gross measurement.

*Domestic product* is the value of all UK goods and services produced, including those produced for export. It does not include *property income* which flows into and out of the UK economy. Property income refers to income from various types of investment abroad, such as profits and dividends. When this is
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added, the measure becomes national product, called Gross National Product, GNP.

Why is stable growth an economic objective?

If growth rises significantly above or below the trend rate, the economy is said to be experiencing excessive growth or low growth. If the rate becomes negative for at least 2 quarters in succession, the economy is in recession.

The trade cycle

Changes in real national income tend to be cyclical, but it is desirable that this cycle is stable rather than unstable. Unstable growth is popularly called ‘boom’ and ‘bust’.

Although an economy’s growth is cyclical, the underlying ‘trend’ can be derived from annual growth statistics. Trends can be calculated by using a technique called ‘moving averages’. The UK trend rate over the last 25 years is around 2.5%.

Problems associated with an unstable trade cycle

An unstable trade cycle can cause a number of economic problems.

Excessive growth can lead to:

- Goods and service inflation
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- House price inflation
- Wage inflation
- Labour shortages
- Falling savings
- Excessive credit
- Trade difficulties

**Low or negative growth can lead to:**
- Goods deflation
- House price deflation
- Labour surpluses
- Unemployment
- Excessive debt burden
- Public sector debt

**Predicting turning points**

Changes, or turning points, in the level of national income can be predicted and confirmed using economic indicators. Leading indicators typically monitor changes in interest rates, business confidence and new housing starts-ups - all of which provides clues to the next turning point in an economy's growth cycle. Changes in these indicate that GDP is likely to change in 12 to 18 months time. The OECD's\(^3\) main indicator, the Composite Leading Indicator (CLI), tracks deviations from the long-term trend, which provides an early warning system for policy makers.

A short leading indicator can be used to monitor changes in consumer credit and new car registrations. A lagging indicator monitors changes in unemployment and real investment and confirms that the turning point has occurred. All indicators help policy makers decide when to implement a policy and by what degree.

**The benefits of growth**

Economic growth is associated with a number of material benefits which increase economic welfare. These include the following:

**Higher GDP per capita**

A rise in real national income means that wages and profits are likely to rise. Assuming a stable population, this will raise GDP per capita.

**More public and merit goods**

A growing economy means that the public sector can receive more tax revenue and more resources can be allocated to public and merit goods, such as more roads, hospitals and schools.

\(^3\) Organisation for Economic Co-operation and Development

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Positive externalities
Public and merit goods generate considerable external benefits. More hospitals and schools mean a healthier and better-educated population, which generates other economic benefits in terms of the effectiveness of the labour force, and increases in long-term aggregate supply.

More employment
Growth is clearly likely to stimulate demand for labour, and it is likely that more people will be employed and fewer unemployed.

The costs of economic growth
Economic growth also brings some costs, including:

Negative externalities
As production and consumption increase, negative externalities, such as pollution and congestion, are likely to arise. There is also the likelihood of increased depletion of non-renewable resources, such as fossil fuels.

Inflation and balance of payments difficulties
Too rapid a rate of growth can also lead to two significant economic problems: inflationary pressure and a balance of payments deficit, as imports rise to satisfy an increasingly active household sector.

Widening income gap
Growth can also widen the distribution of income, because some groups may benefit much more than others may. Certainly, in the UK the relative income gap has widened during the growth years between 1992 to 2008.

GDP per capita
GDP per capita can be used to compare living standards in two ways.

1. Over time, such as between 1990 and 2010.

2. Between two or more countries, such as between the UK and USA. Clearly, GDP per capita is a more useful statistic than total GDP. However, the use of crude GDP statistics as an indicator of comparative living standards can be criticised on a number of grounds.

Limitations of using GDP per capita over time
There are a number of general limitations of using GDP statistics for comparing changes in economic wellbeing over time, including:

Changes in the distribution of income
Average GDP per capita may rise over time, but the distribution of income may widen. For example, a rise in the mean average income per head can be misleading because the average may rise because just a few of the population increase their personal income. Indeed, the mean average can rise, but the ‘median’, the mid-point in a range of numbers, can fall.

Differences in hours worked
People may be working longer hours, in which case some of the ‘growth’ may be through increased work, rather than through increased efficiency.
Unpaid work is not recorded
People may undertake unpaid work, and this may not be officially recorded.

Price changes
Prices are unlikely to remain constant over time, so GDP figures must be converted to ‘at constant’ prices and measured from a base year. This process is called ‘indexing’ and is required to avoid the distorting effects of inflation.

Negative externalities
The quality of life may suffer as GDP increases, although this is not included in GDP statistics. For example, more driving raises GDP, but also adds to CO\(^2\) emissions, which can reduce the quality of life.

Changes in the quality of products
Over time, the quality of products tends to increase, so a given amount of income per capita in 2010 may purchase a higher quality product than it did in 2000. This is certainly true with high-technology consumer products, like PCs, laptops and mobile phones.

Limitations of using GDP for international comparisons
Limitations of using GDP statistics for international comparisons include:

Differences in the distribution of income
Although two countries may have similar GDP per capita figures, the distribution of income in each country may be very different.

Differences in hours worked
As when comparing a country over time, the number of hours worked to generate a given level of income may be quite different. For example, workers in the UK tend to work longer hours than those in France, and this would falsely inflate the GDP figures in the UK relative to France.

International price differences
International prices will also vary. This is significant because an individual's purchasing power is based on price in relation to income. To solve this problem, GDP statistics can be re-calculated in terms of purchasing power. The purchasing power of a currency refers to the quantity of the currency needed to purchase a given unit of a good, or common basket of goods and services. Purchasing power is clearly determined by the relative cost of living and inflation rates in different countries. Achieving purchasing power parity means equalising the purchasing power of two currencies by taking into account cost of living and inflation differences.

For example, if we simply convert GDP in Japan to US dollars using market exchange rates, relative purchasing power is not taken into account, and the validity of the comparison is weakened. By adjusting rates to take into account local purchasing power differences, known as PPP adjusted exchange rates, international comparisons are more valid.

Difficulty of assessing true values
The true value of public goods and merit goods, such as defence, education and transport infrastructure is largely unknown. This means that it is difficult to compare two countries with very different levels of spending on these goods and assets.
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Hidden economies

Similarly, the existence of a large unofficial economy may make comparisons based on official GDP very misleading. For example, comparing the official GDP of the UK and Russia may be misleading because of the size of Russia's unofficial economy. While all countries have unofficial economies, their size and significance can vary considerably.

Currency conversion

GDP figures for different countries must be converted to a common currency, such as the US dollar, and this may give misleading figures. For some countries, exchange rates against the US dollar may be unrepresentative of the true value of the currency, especially where international trade is relatively small. In such cases, converting to US dollars may significantly under-value national output. This explains why conversion to purchasing power parity is often preferred to conversion to US dollars.

Measure of Economic Welfare (MEW)

During the late 1960s, many economists began to question the over-reliance of governments and agencies on narrow, exclusively GDP-based measures of economic welfare. It was at this time that the negative environmental effects of uncontrolled economic growth began to be considered, prompting the search for a wider measure of welfare, not exclusively based on raw GDP figures.

Nordhaus and Tobin

In 1972, Yale economists William Nordhaus and James Tobin introduced their Measure of Economic Welfare (MEW) as an alternative to crude GDP. MEW took national output as a starting point, but adjusted it to include an assessment of the value of leisure time and the amount of unpaid work in an economy, hence increasing the welfare value of GDP. They also included the value of the environment damage caused by industrial production and consumption, which reduced the welfare value of GDP. MEW can be seen as the forerunner of later attempts to create a sophisticated index of sustainable development.

Measure of economic welfare (MEW)

\[
\text{MEW} = \text{Value of GDP} + \text{Value of leisure time} + \text{Value of unpaid work} - \text{Value of environmental damage}
\]

The Index of Sustainable Economic Welfare (ISEW)

The Index of Sustainable Economic Welfare (ISEW), develops MEW by adjusting GDP further by taking into account a wider range of harmful effects of economic growth, and by excluding the value of public expenditure on defence.

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Questions

1. How useful are national income statistics in assessing the performance of an economy:
   a. Over time
   b. In comparison with other economies.
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Long term development

Economic development is a broader concept than economic growth, and reflects social as well as economic progress. Growth is an important and necessary condition for development, but it is not a sufficient condition. Growth alone cannot guarantee development.

One of the most compelling definitions of development is that given by Amartya Sen. According to Sen, development is about creating freedom for people, and removing obstacles to greater freedom. Greater freedom enables people to choose their own destiny. Obstacles to freedom, and hence to development, include poverty, lack of economic opportunities, corruption, poor governance, lack of education and lack of health.

Indicators of development

A variety of economic and social indicators may be used to identify differences between developed and developing countries, including:

- GDP per capita.
- Unemployment and underemployment.
- Life expectancy at birth.
- Population growth.
- Level of educational achievement.
- Enrolment in education.
- Energy consumption per head.
- Levels of absolute and relative poverty.
- Employment patterns, such as the proportion of the population working on the land and the country’s dependency on primary products.

- Structural change, such as a rise in the relative importance of service sector, or a rise in the proportion of GDP accounted for by trade.

The Human Development Index (HDI)

The HDI was introduced in 1990 as part of the United Nations Development Programme (UNDP) to provide a means of measuring economic development in three broad areas - per capita income, health, and education. The HDI is used to track changes in the global position of specific countries over time.

Each year the UNDP produces a development report providing an update of changes during the year, along with a report on a special theme, such as global warming and development, and migration and development.

The introduction of the index was an explicit acceptance that ‘development’ is a considerably broader concept than ‘growth’ and should include a range of social and economic factors.

The HDI has two main features:

A scale from 0 (no development) to 1 (complete development).

A composite index based on three equally weighted components:

- Longevity, measured by life expectancy at birth
- Knowledge, measured by adult literacy and number of years children are enrolled at school
- Standard of living, measured by real GDP per capita at purchasing power parity

What the figures mean:

- An index of 0 – 0.6 means low development - for example, in 2010 the African state of Chad had an index number of 0.32.
- An index of 0.61 – 0.85 means medium development – for example, in 2010 Russia had an index of 0.75.
- An index of greater than 0.90 means high development - for example, the HDI for Sweden in 2010 was 0.94.

The HDI is a very useful means of comparing the level of development of countries. GDP per capita alone is clearly too narrow an indicator of economic growth, and fails to indicate other aspects of development, such as enrolment in school and longevity. Hence, the HDI is a broader and more encompassing indicator of development than GDP, though GDP still provides one third of the index.
HDI figures for selected countries

HDI for elected countries
2011, Source: HDR
Life expectancy

A variety of factors may contribute to differences in life expectancy, such as the stability of food supplies, war and the incidence of disease and natural disasters.

According to World Bank figures, between 1980 and 1998 average life expectancy rose from 61 to 67 years, with the largest increases occurring in low and middle income countries. However, the changes are not evenly distributed, and in many countries in sub-Saharan Africa, life expectancy is falling due to the AIDS epidemic.

Adult literacy

Adult literacy is usually defined as the percentage of people aged 15 and over who are able to read and write a short, simple statement about their everyday life. More extensive definitions of literacy include those based on the International Adult Literacy Survey. This survey tests the ability to understand text, interpret documents, and perform simple arithmetic.

GDP per capita

GDP per capita is the commonest indicator of material standards of living, and hence is included in the index of development. GDP per capita is found by measuring Gross Domestic Product in a year, and dividing it by the population.

Evaluation of the HDI

Despite the widespread use of the HDI, there are a number of criticisms that are often made. These include:

- The HDI index is for a single country, and as such does not distinguish between different rates of development within a country, such as between urban and traditional rural communities.

- Critics argue that the equal weighting between the three main components is rather arbitrary.

- Development is ultimately about freedom, and there is nothing in the index that directly measures this. For example, access to the internet might be regarded by many as a freedom that improves the quality of individual's lives.

- As with GDP per capita, the more narrow measure of living standards, there is no indication of the distribution of income.

- In addition, the HDI excludes many aspects of economic and social life that could be regarded as contributing to or constraining development, such as crime, corruption, poverty, deprivation, and negative externalities.

- GDP is calculated in terms of purchasing power parity, and this value can frequently change.

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6 Source: www.worldbank.org/depweb/
Question

Evaluate the HDI as an indicator of economic development.
Stable prices

Price stability exists when average prices are constant over time, or when they are rising at a very low and predictable rate. Price inflation occurs when average prices are rising above this low and predictable rate, and price deflation occurs when average prices are falling.

In both cases, the effects are potentially extremely harmful to a country’s economic performance and to the welfare of its citizens. For this reason, price stability is commonly regarded as the single most important macro-economic objective.

The costs of inflation

Price inflation is regarded as a serious economic problem because it causes a number of significant costs to an economy, including the following:

It erodes the value of money and assets

A rise in the price level means, ceteris paribus, that money can buy fewer goods. If assets are stored in a monetary form, inflation means that asset values fall. This explains why, during inflationary periods, individuals often choose to put their wealth into physical assets, like property, rather than keep it in a monetary form in a bank account.

It redistributes income from lenders to borrowers

Borrowers do better at times of rising prices because the real value of their repayments are reduced over time. Lenders need to charge a higher interest rate to compensate for the falling value of the repayments to them, and for the loss of liquidity suffered as the value of repayments fall.

It is bad for the balance of payments

The balance of payments may deteriorate because domestic inflation stimulates import spending, given that imports appear relatively cheaper, and dampens export sales, as exports appear more expensive abroad.

It causes uncertainty and falling investment

Firms respond unfavourably to inflation for several reasons. Firstly, inflation dampens consumer confidence and spending, and reduces aggregate demand. Secondly, inflation increases costs and reduces competitiveness, which can lead to falling demand. Finally, firms may anticipate that interest rates will have to rise to deal with inflation, and this undermines business confidence. Falling confidence is likely to force firms to postpone capital investment.

It creates ‘shoe leather’ and ‘menu’ costs

Shoe leather costs can be incurred during times of inflation when households and firms make an additional effort to seek out the best deals. These costs are also called search costs, reflecting the increased time spent attempting to find the lowest available prices. The Internet, and the growth of price comparison sites, has considerably reduced the problem of search costs, making information freely and quickly available. Menu costs are associated with having to regularly re-price products to bring them in line with general inflation.

It can create unemployment

Inflation can lead to a loss of jobs through its effect on costs. As costs rise firms may substitute labour with other factors, such as new technology.
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It distorts the price mechanism
When average prices rise, the price mechanism cannot effectively fulfil its role as a resource allocating mechanism. Markets work best when prices go up and down, but if average prices rise continuously, resource allocation is distorted. The effect is significant when the rate of inflation is excessive.

It creates ‘money illusion’
Money illusion, also called inflation illusion, is a phenomenon that may arise when rising prices lead people to make irrational decisions. For example, if wages rise, workers may decide to work longer hours, but if inflation erodes the value of the wage rise they have been ‘fooled’ into working longer.

The costs of deflation
Price deflation, which means falling average prices, can also cause severe economic problems, including the following.

Consumers may delay consumption
Consumers may wait for prices to fall even further, and this can have a negative impact on AD, output and incomes.

Real interest rates are pushed up
Given that nominal interest rates cannot fall below zero, falling prices cause real rates to rise. For example, if nominal interest rates are currently 5% and inflation is 1%, real interest rates are 4% (which is 5% – 1% = 4%). However, if the price level falls by 2%, real interest rates (5% – [-2%]) rise to 7%. Of course, nominal rates can be reduced, but deflation tends to put upward pressure on real rates.

Deflation causes a rise in debt burdens and deters further borrowing
Deflation will cause debt burdens to rise for households that have borrowed in the past. Many consumer and corporate debts are fixed, including fixed mortgages and personal loans, and repayments do not fall as prices fall, making the real price of the debt rise. For firms, falling prices also create a debt burden because, although revenues fall, debt repayments may remain at the old level, increasing the real debt burden.

Deflation can lead to long term endemic recession
Deflation can significantly reduce economic confidence, and households and firms may be encouraged to save rather than spend, despite falling interest rates. As non-essential spending falls, economic activity will fall, creating a deepening recession that even near zero interest rates may not budge. Long-term recession, following a period of deflation is often referred to as the Japanese disease, given that, for a long period during the 1990s, Japan seemed trapped in a deflationary spiral.

Measuring price changes
Measuring changes in average price levels requires the use of a device called an index. It is impossible to keep an accurate record of every price change for every good and service in the economy at all times. Using an index allows a general picture to develop to show the average price change for a sample of goods and services, measured at monthly intervals.

The UK uses a number of indices to track price changes, including the Consumer Price Index (CPI), which was introduced in 2003, and the much older Retail Price Index (RPI). The CPI is based on the European Harmonised Index of Consumer Prices (HICP), and its introduction in the UK allows for better inflation comparisons between the UK and Europe, as well as being a more accurate index.
Indices

All indices, like the CPI and RPI, have certain key features in common, including:

- The use of a sample of typical goods and services bought by ‘average’ households.
- The use of a sample of different retail outlets, such as corner shops, supermarkets, and specialist stores, taken from across the country.
- The tracking of changes in prices from a given starting point, a base year.
- The allocation of different types of good with different ‘weights’ to reflect their varying importance in the consumer’s shopping basket.
- Changes are expressed in terms of the number 100. An index of 110 means 10% inflation since the base year, and an index of 92 means 8% deflation since the base year.

Example of a price index

<table>
<thead>
<tr>
<th>Goods</th>
<th>% of Income spent</th>
<th>Price change %</th>
<th>Index of individual price changes</th>
<th>Weights</th>
<th>Weighted index (individual index x weights)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40</td>
<td>+10</td>
<td>110</td>
<td>4</td>
<td>440</td>
</tr>
<tr>
<td>B</td>
<td>30</td>
<td>+15</td>
<td>115</td>
<td>3</td>
<td>345</td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>0</td>
<td>100</td>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>D</td>
<td>10</td>
<td>-8</td>
<td>92</td>
<td>1</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1077/10 = 107.7</td>
</tr>
</tbody>
</table>

The CPI

The Consumer Price Index (CPI) is calculated by tracking the price movements of 650 items, which represents a basket of goods and services typically bought by the ‘average’ UK household. The basket is updated annually to keep it as representative as possible, and prices are checked on a monthly basis by recording prices at outlets across the UK. Goods and services are put into one of 12 categories, as shown below:
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CPI Weights

<table>
<thead>
<tr>
<th>Category</th>
<th>Overall weight (%)</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and non-alcoholic beverages</td>
<td>11.8</td>
<td>22</td>
</tr>
<tr>
<td>Alcohol and tobacco</td>
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</tr>
<tr>
<td>Clothing and footwear</td>
<td>5.7</td>
<td>11</td>
</tr>
<tr>
<td>Housing and household services</td>
<td>12.6</td>
<td>5</td>
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<tr>
<td>Furniture and household goods</td>
<td>6.6</td>
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<tr>
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<td>2.2</td>
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</tr>
<tr>
<td>Transport</td>
<td>15.1</td>
<td>6</td>
</tr>
<tr>
<td>Communication</td>
<td>2.3</td>
<td>1</td>
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<tr>
<td>Recreation and culture</td>
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<tr>
<td>Education</td>
<td>2.1</td>
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<tr>
<td>Restaurants and hotels</td>
<td>12.8</td>
<td>8</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>9.9</td>
<td>11</td>
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</tbody>
</table>

Source: Office for National Statistics

RPIx and RPlY

Until 2003, the RPI was the main indicator of price changes and provided what was called the ‘headline rate’ of inflation. The RPI was then adjusted to include or exclude particular items, including the RPIx and RPlY adjustments. The RPI is a broader measure of inflation than the CPI because it includes costs associated with housing, which the RPI does not.

RPIx is the headline RPI index, minus changes in mortgage interest payments. Taking out mortgage repayments is considered a useful adjustment because the UK housing market plays a significant role in the wider macro-economy. Given that over 60% of householders are owner-occupiers, many of whom are repaying mortgages, changes in interest rates, and mortgage rates, can have a considerable impact on spending and the rest of the economy.

Interest rates, which affect mortgage rates, are part of anti-inflationary policy, so it is argued there is a good reason to exclude mortgage costs. A rise in interest rates, designed to reduce inflationary pressure, would push up the RPI, but not the RPIx, so the effects of the policy can be better monitored by looking at RPIx. Hence, monitoring changes in the RPIx allows policy makers to see the underlying trend in inflation. RPlY is the RPIx minus changes in indirect taxes, such as VAT. Changes in VAT distort inflation data, and make the index less accurate in terms of measuring underlying inflationary pressure, hence it may be useful, at times of increasing VAT rates, to exclude the effects of these changes on retail prices.

The RPIx and RPlY are measures of inflation still recorded and used in the UK, despite the introduction of the CPI in 2003. A large number of wage negotiations are based on the RPI, rather than CPI, which is one reason why the RPI is likely to be used in the future.

Comparing the CPI and RPI

Comparing the Retail Price Index (RPI) and the Consumer Price Index (CPI) raises the following issues:

Mathematical technique of calculation

The RPI uses an arithmetic average of price changes whereas the CPI uses a geometric average, which makes the CPI mathematically more precise. This is because it can continually capture the effects of changes in consumer spending patterns in response to inflation or deflation.
Adjustment

A potential problem with price indices is that they may not adjust quickly enough to reflect changes in spending. Indices are based on a sample of goods and services which are weighted according to how important the good is to the consumer. The importance of a good is based on how much of household income is spent on a product. For example, a typical household may spend 10% of their income on holidays, and therefore holidays will be given 10% of the weighting. But what happens if the cost of a holiday rises by 20%, as a result of a fall in Sterling? Consumers are likely to respond, and reduce their holiday spending. If they now spend only 5% of their income on holidays, the weighting used in the CPI index can be quickly adjusted to 5%. However, the older RPI could not be adjusted so quickly, and could not resolve the problem of changing spending patterns.

Because of this, and because the CPI does not include housing costs, or council taxes, the RPI gives a slightly higher rate than does the CPI. The CPI gives a higher weighting to energy costs, so changes in oil prices have a bigger impact on the CPI inflation rate.

This means that the Bank of England, using the CPI, can set a target of 2% inflation, and not 2.5%. Despite this, the UK authorities and other organisations still track the RPIx and RPIy.

Evaluation of indices

In general terms all indices can be criticised for a number of reasons, including:

Are the samples representative?

If we look at specific types of household, we can get quite different measures of inflation to the general index. For example, if in a given year, the prices of textbooks and rented accommodation for students rise above the average inflation rate, a household made up of students may face a relatively high inflation rate compared with a more typical household. In addition, there is likely to be a regional variation from the average. Therefore, it is quite possible that a married doctor in Manchester experiences a personal inflation rate of 2% whereas a single bus driver living in London, experiences a personal inflation rate of 7%.

Do goods stay the same over time?

A motor vehicle may have risen in price by 20% over a five-year period, but is this price inflation of 20%? The vehicle may be faster, more efficient on petrol, more comfortable, and safer, so much of the price increase is due to improvements in the quality of the vehicle and not to inflation.

When products are fairly standardised, like a litre of milk, or a loaf of bread, quality changes will be small, and the price index will give a more accurate reading of genuine price inflation. With non-standardised products, indices are far less useful.

How up-to-date is the basket?

Indices are usually out of date because the basket used does not always change quickly enough to reflect current fashions and spending trends. Improvements have been made in terms of adding new goods to the basket, but it still takes up to three years to include new products. Given that new technology products are initially sold at premium prices, the implication is that the current basket always understates true inflation because of the time lag in introducing new technology products.

Why not measure capital goods prices?

Only consumer goods tend to be considered in price indices because the focus of inflation measurement is on households, and not on firms. There is an argument that capital goods prices should be included in a general inflation index.
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The two speed economy

One index may not be good enough if two different sectors of the economy are inflating at different rates. In the UK goods sector, inflation has fallen steadily over the last 15 years, with many goods actually deflating in price. In contrast, service sector inflation has continued at around 4% to 6% per year. An index will average out these two sectors, and it is this average rate that forms the basis of policy-making decisions. This certainly creates a dilemma for policy makers; should they be more conscious of service sector inflation or of goods sector deflation?

Targeting inflation

It is generally recognised that a small amount of inflation is acceptable, with the objective of monetary policy being low and predictable inflation rates. Certainly, given a choice between mild inflation and mild deflation, mild inflation would be the chosen option. Between 1997, when the Bank of England was made independent, and 2004 the (RPI) target rate for inflation was 2.5%, which was an acknowledgement that a little inflation was acceptable.

The CPI target

Since 2003, with the adoption of the CPI, the target has been 2%. The Bank of England must act by increasing or reducing interest rates to achieve this target.

CPI and RPI 2008 - 2011

It can be seen that the CPI and RPI give a broadly similar picture of retail inflation, the rate of which fell between 2008 and 2009 as a result of recession, but increased between 2009 and 2011, following rising commodity prices and the effects of the VAT increase in April 2011.

However, the RPI typically gives a higher value for inflation and it is more volatile. This is largely down to the different significance of housing and housing costs in the two indices. The RPI is a broader measure than the CPI, and, unlike the CPI, includes a number of housing costs, such as council tax, mortgage repayments, and buildings insurance. A higher and more volatile RPI can be explained because many housing costs, such as council tax and buildings insurance, have risen consistently over the last 15 years. In addition, the volatility of interest rates has had a significant impact on those households with variable rate mortgages.
Causes of inflation and deflation

Inflation and deflation arise from changes in either the demand side or supply side of the macro-economy.

Demand pull inflation

Demand pull inflation usually occurs when there is an increase in aggregate monetary demand caused by an increase in one or more of the components of aggregate demand (AD), but where aggregate supply (AS) is slow to adjust.

The commonest causes of demand shocks are:

- Earnings rising above factor productivity.
- Cheaper credit, following a reduction in interest rates.
- Excessive public sector borrowing to fund a budget deficit.
- A housing boom creating equity withdrawal and a positive wealth effect.
- A fall in the savings ratio.

The savings ratio

The savings ratio indicates the percentage of disposable GDP (national income) which is saved, rather than spent. Sudden changes in the savings ratio are an indicator of future changes in spending and AD, and can be a prelude to inflation or deflation. A rise in the savings ratio indicates a decline in consumer confidence, whereas a fall in the savings ratio indicates a rise in confidence and spending, which can trigger an increase in the price level.

Cost-push inflation

Cost-push inflation occurs when an economy experiences a negative cost shock. Diagrammatically, the aggregate supply curve shifts upward and to the left, causing the price level to rise, and aggregate demand to contract.

The commonest causes are:

- Oil price shocks, caused by wars or decisions by OPEC to restrict output.
- Increases in farm prices, following a series of poor harvests.
- Rapidly rising wage costs.
- A fall in the exchange rate, which increases the price of all imports.
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- Imported cost push inflation

**A fall in the exchange rate**

A reduction in the exchange rate will mean that more Sterling is required to purchase a given quantity of imports; in other words, the price of imports will rise. After a time-lag, this will feed its way into retail prices. For example, a motor vehicle imported from Germany for €50,000 would cost £25,000 at an exchange rate of £1 - €2. If Sterling falls in value, to £1 = €1.90, then the Sterling price would rise to £26,316.

Given that approximately 35% of the CPI basket of consumer goods and services are imports, the effect of a fall in the exchange rate is to raise the CPI. In addition, imported raw materials are also more expensive so costs of production will rise for those firms that source their inputs from abroad. Therefore, while a low exchange rate may be beneficial for exports, it has as a potentially inflationary effect on costs and prices.

**Causes of deflation**

Deflation tends to occur when the economy's capacity, as indicated by the position of the aggregate supply curve, grows at a faster rate than aggregate demand. Firms have to cut prices in order to stimulate sales and get rid of stocks.

As business and consumer confidence in the economy declines, aggregate demand is likely to fall, resulting in recession.
Questions

1. Why are inflation and deflation considered to be economic problems?

2. Examine the likely impact of a rise in global commodity prices on the UK price level.
Managing the national economy

Employment and unemployment

Employment

The Labour Force Survey (LFS) defines an employed person as anyone aged 16, or over, who has completed at least one hour of work in the period being measured, or are temporarily away from his or her job, such as being on holiday. The number of people in employment is not the same as the number of jobs given that some people have more than one job.

Categories of employment

The LFS uses four categories of employment in the UK, which are:

- Employees
- The self-employed
- Unpaid family workers
- Participants in government-funded training schemes

The employment rate

The LFS defines the working age employment rate as the proportion of the working-age population who are in employment. The working age population includes men aged 16-64 and women aged 16-59.

Employment trends

The adult employment rate rose throughout the 1990s, and 2000s, peaking at 74.8 in early 2007. However, with the onset of the global recession during 2008, the rate fell, and continued falling during 2009, to reach a low point of 72.6 by the middle of 2009.

Unemployment

The International Labour Organisation (ILO) defines the unemployed as those aged 16 or over who are:

- Out of work, want a job, have actively sought work in the last four weeks and are available to start work in the next two weeks, or:

- Out of work, have found a job and are waiting to start it in the next two weeks

The unemployment rate

The ILO defines the unemployment rate as the proportion of the economically active people who are unemployed. The economically active are people who are either in employment or unemployed.

Full employment

The full employment of labour has been a key economic objective ever since the mass unemployment experienced in the 1930s. Clearly, it is not possible to give a simple numerical definition of full employment, other than to say the unemployment rate should be as low as is achievable, and the employment rate as high as is achievable. In 2008, the UK Department for Work and Pensions (DWP) set the long-term target rate for working age employment of 80%.
Recent unemployment figures

Unemployment - measurement and costs

The unemployed are those individuals of working age who are capable of work, and are actively looking for work, but who are not employed. If labour is employed, but not effectively used, the situation is called underemployment.

Measuring unemployment

Measuring unemployment accurately is made difficult because of imperfect knowledge. Not all instances of unemployment are recorded, and some records of unemployment may not be accurate. Because the unemployed are eligible for benefits, some individuals may work, but not disclose it, and claim benefit. Conversely, many unemployed may not bother to inform the authorities, and this unemployment goes unrecorded.
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The Claimant Count

The Claimant Count records those claiming unemployment benefit through the Job Seekers Allowance, JSA, and can prove they are actively looking for work. It excludes housewives and those on training schemes.

How useful is the Claimant Count?

The Claimant Count may not reflect the true level of unemployment in the UK economy, given that not all the unemployed will bother to claim, and some are deterred because they cannot prove they are looking for work. This is especially true of part-time employees who are much less likely to register as unemployed compared with full-time workers. While some individuals may fraudulently claim, it is generally recognised that the Claimant Count under-estimates actual unemployment levels.

The International Labour Organisation (ILO)

The labour force survey is undertaken by the International Labour Organisation (ILO) and is a more direct assessment of unemployment, rather than those who claim benefit. It is based on an interview of a sample of 60,000 households (approximately 100,000 people) and tries to measure unemployment as a whole, rather than record those simply claiming benefits. To be considered as unemployed individuals must:

- Have been out of work for 4 weeks.
- Be able to start work in the next 2 weeks, so they must be readily available for work.
- Be available for work for at least one hour per week. This means that part-time unemployment is included in the measurement, though these workers are unlikely to claim unemployment benefit. This tends to make ILO unemployment higher than the Claimant Count.

How useful is the ILO survey?

Since 2003 it has become the government's official measure of unemployment, but it probably ‘over-estimates’ true unemployment by including people only looking for a few hours part-time work. As a sample, it can be subject to sampling error, which reduced its accuracy.

Both measures show that, between the recessions of the early 1990s and 2008-2009, UK unemployment fell to a record low.

The costs of unemployment

Opportunity cost.

Unemployment represents an opportunity cost because there is a loss of output that workers could have produced had they been employed. The government also spends more on unemployment benefit; hence there is another opportunity cost. The money going on unemployment benefit could be spent on hospitals and schools.

Waste of resources.

Resources not employed are left idle, and this is a waste to an economy. Education and training costs are squandered when individuals who have benefited from this do not work.

The Chancellor loses revenue.

The unemployed do not pay income tax, and pay less indirect tax because they spend less.
**Erosion of human capital.**

Many skills are acquired at work, and being unemployed means can mean fewer new skills are acquired, and existing skills are lost.

**Lower incomes.**

The unemployed have lower personal incomes and lower standards of living. In addition, the unemployed also experience relatively poor physical and mental health.

**Externalities.**

There are further external costs associated with unemployment, such as increased crime, alcoholism, and vandalism.
Unemployment – causes

There are several types of unemployment, each one defined in terms of cause and severity.

Cyclical unemployment

Cyclical unemployment exists when individuals lose their jobs as a result of a downturn in aggregate demand (AD). If the decline in aggregate demand is persistent, and the unemployment long-term, it is called either demand deficient, general, or Keynesian unemployment. For example, unemployment levels of 3 million were reached in the UK in the last two recessions, between 1980 and 1982, and between 1990 and 1992. In the most recent recession of 2008-2010, unemployment levels rose to 2.5m7.

Structural unemployment

Structural unemployment occurs when certain industries decline because of long term changes in market conditions. For example, over the last 20 years UK motor vehicle production has declined while car production in the Far East has increased, creating structurally unemployed car workers. Globalisation is an increasingly significant cause of structural unemployment in many countries.

Regional unemployment

When structural unemployment affects local areas of an economy, it is called ‘regional’ unemployment. For example, unemployed coal miners in South Wales and ship workers in the North East add to regional unemployment in these areas.

Classical unemployment

Classical unemployment is caused when wages are ‘too’ high. This explanation of unemployment dominated economic theory before the 1930s, when workers themselves were blamed for not accepting lower wages, or for asking for too high wages. Classical unemployment is also called ‘real wage’ unemployment.

Seasonal unemployment

Seasonal unemployment exists because certain industries only produce or distribute their products at certain times of the year. Industries where seasonal unemployment is common include farming, tourism, and construction.

Frictional unemployment

Frictional unemployment, also called search unemployment, occurs when workers lose their current job and are in the process of finding another one. There may be little that can be done to reduce this type of unemployment, other than provide better information to reduce the search time. This suggests that full employment is impossible at any one time because some workers will always be in the process of changing jobs.

Voluntary unemployment

Voluntary unemployment is defined as a situation when workers choose not to work at the current equilibrium wage rate. For one reason or another, workers may elect not to participate in the labour market. Reasons suggested for the existence of voluntary unemployment include: excessively generous welfare benefits, high rates of income tax and that the equilibrium wage rate is below the wage necessary to encourage individuals to supply their labour.

7 2.5m by August 2011
The ‘natural’ rate of unemployment

The ‘natural’ rate of unemployment is a term associated with new Classical and ‘monetarist’ economists. It is defined as the rate of unemployment that still exists when the labour market is in equilibrium, and includes seasonal, frictional and voluntary unemployment. The US economist Milton Friedman first used the concept in the late 1960s to help explain the connection between unemployment and inflation. Friedman argued that if unemployment fell below the ‘natural’ rate there would be an increase in the rate of inflation.

Structural unemployment and labour immobility

Labour immobility is likely to increase structural unemployment. This is because those industries that are growing and need labour, often called ‘sunrise’ industries, are not necessarily able to employ the same workers who have been displaced in the declining, ‘sunset’, industries.

There are three main types of labour immobility.

Geographical immobility

Geographical immobility occurs when workers are not willing or able to move from region to region, or town to town. Geographical mobility is made worse by immense house price variation between regions. It may be extremely difficult for workers in Yorkshire to sell their home and buy an equivalent one in London. Other factors also contribute to geographical immobility, such as strong social and family ties, and parents being unwilling to disrupt their children’s education by changing schools. The stresses of moving home can also be a deterrent to mobility for some.

Industrial immobility

Industrial immobility exists when workers are not willing or able to move between industries, such as from engineering to broadcasting. This may be because different skills are required in different industries, or because there are no incentives to re-train and move from one to the other.

Occupational immobility

Occupational immobility exists when workers find it difficult to change jobs within an industry. Again, a lack of skills or knowledge can deter individuals from re-training.

Labour market or government failure?

New Classical economists tend to see structural unemployment as an example of government failure. Labour markets do not clear, they argue, because wages are not allowed to adjust downwards, and the price mechanism is distorted. By removing distortions and imperfections in the labour market, workers would move more quickly from job to job.

For example, by keeping welfare benefits to a minimum there is an incentive to retrain and look for paid work. Welfare benefits can ‘trap’ individuals into a life of unemployment because of the effects of moral hazard and the disincentive effect it creates. This increases labour immobility, and hence contributes to structural unemployment.

However, labour immobility can also be addressed from the perspective of labour market failure. Training and re-training are regarded as merit goods, where individuals under-perceive the long term benefit to themselves. They also fail to appreciate the positive externalities that training and re-training generate for the wider community. This means that there is a significant role for the state in providing free or subsidised training and retraining programmes.

In addition, there is the potential situation of labour market poaching. Why should a firm in the boom-
Managing the national economy

ing service sector provide free training to a displaced worker from the manufacturing sector if the worker will leave for another job shortly after training? Why should firms do any training at all if they believe that workers will be poached by higher wages? The poacher can, of course, afford to pay higher wages because of savings in training costs.
Questions

1. Why is unemployment an economic problem?

2. What are the major causes of structural unemployment?
Balance of payments

To maintain a balance of payments with the rest of the world is a macro-economic objective. In simple terms, if the balance of payments balances, then the combined receipts from selling goods and services abroad, and from the return on investments abroad, equals the combined expenditure on imports of goods and services, and investment income going abroad. The balance of payments is also an official account of international payments, published in a document called the Pink Book. Statistics on UK imports and exports have been gathered in the UK since 1687.

As an official record, the balance of payments is broken down into two accounts - the current account and the capital and financial account.

The current account

The current account is composed of the following payments:

Trade in goods

These items include the import and export of finished goods, such as cars, and computers; semi-finished goods, such as parts and components for assembly, and commodities, such as oil, tea and coffee.

Trade in services

Trade services include financial services, tourism, and consultancy.

Investment income

Investment income, which includes overseas profits, such as those from business activities of subsidiaries located abroad; interest received from UK financial investment and loans abroad and; dividends from owning shares in overseas firms

Transfers

Transfers in items such as gifts, donations to charity and overseas aid
UK Balance of Payments

UK Balance of payments (2010)

**UK Accounts (£m)**

**Current Account**
- Trade in goods -98462
- Trade in services 58778
- Total trade -39684

**Income**
- Compensation of employees -389
- Investment income 23428
- Total income 23039

**Current transfers**
- General government -14887
- Other sectors -5194
- Total current transfers -20081

**Current balance** -36726

**Capital balance** 3708

**Financial account**
- Direct investment 21804
- Portfolio investment 10434
- Financial derivatives 32490
- Other investment -17141
- Reserve assets -6070

**Net financial transactions** 41517

**Net errors and omissions** -8499

### The Capital and Financial Account

The Capital and Financial Account records the flows of capital and finance between the UK and the rest of the world. Types of flow include:

- **Real foreign direct investment** (FDI), such as a UK firm establishing a manufacturing facility in China. Direct investment refers to investment in an enterprise where the owners or shareholders have some element of control of the business.

- **Portfolio investment**, such as a UK investor buying shares in an existing business abroad. With portfolio investment, the investor has no control over the enterprise.
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- **Financial derivatives** are any financial instrument whose underlying value is based on another asset, such as a foreign currency, interest rates, commodities or indices.

- **Reserve assets** are foreign financial assets that are controlled by monetary authorities - namely the Bank of England. These assets are used to finance deficits and deal with imbalances. Reserve assets include gold, Special Drawing Rights, and foreign exchange held by the Bank of England. This process is often called *official financing*.

**Financing deficits and surpluses**

**The ‘financing’ of a deficit is achieved by:**

- Selling gold or holdings of foreign exchange, such as US Dollars, Japanese Yen or European Euros, or:

- Borrowing from other Central Banks or the International Monetary Fund (IMF).

**A surplus will be disposed of by:**

- Buying gold or currencies.

- Paying back debts.

**Net errors and omissions**

In theory, the Capital and Financial Account balance should be equal and ‘opposite’ to the Current Account balance so that the overall Account balances, but in practice this is only achieved by the use of a balancing item called net errors and omissions. This device compensates for various errors and omissions in the balance of payments data, and which brings the final balance of payments account to zero.

**UK trade performance**

Apart from 1997, every year since 1987 has seen a deficit on UK trade in goods and services. The deficit reached a peak of £50billion in 2007. The deficit tends to follow a cyclical pattern, as shown in the chart.

![UK Current Account 1990 - 2010, £b](source: Pink Book)

**A deficit can be a problem if:**

- It is persistent.
• It forms a large share of GDP.
• There are no compensating inflows of investment income or inward capital account flows.
• The Central Bank has low reserves.
• The economy has a poor record of repaying debt.

**Economic growth and trade**

In the UK, there is a strong connection between a growing economy and trade deficits. Soon after the economy went into recession in 1990, the trade deficit began to fall quickly. However, as the economy came out of recession and into a period of strong growth from 1993, the trade deficit began to rise quickly, and continued to rise through the next 15 years. Similarly, the most recent recession, which started in 2008, caused the deficit to shrink between 2008 and 2009.

**Causes of a current account deficit**

There are a number of possible causes of a persistent current account deficit, including the following:

**Excessive growth**

If the economy grows too quickly, and rises above the 'trend rate' for an economy, which in the UK is around 2.5%, then domestic output (AS) cannot cope with domestic aggregate demand.

**High export prices**

High export prices will occur if a country's inflation rate is higher than that of its competitors, or if its currency is over-valued which will reduce its price competitiveness.

**Non-price factors**

Non-price factors can discourage exports, such as poorly designed products, poor marketing or a worsening reputation for reliability.

**Poor productivity**

An economy might not be producing enough from its scarce factors of production. Labour productivity, which is defined as output per worker, plays an important role in a country's competitiveness and trade performance, and the UK has suffered from poor productivity. The *productivity gap* is the gap between the UK’s relatively poor productivity performance and that of the UK’s major competitors.

**Low levels of investment in real capital**

This could be caused by excessive long-term interest rates, or low levels of research and development.

**Low levels of investment in human capital**

This involves a lack of investment in education and training, which reduce skill levels relative to competitor countries and force countries to produce low value exports.
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Questions

1. Which account will the following transactions be entered into?
   
   a. The sale of £2b worth of UK motor vehicles to Australia.
   
   b. Australian tourists spending £200m in the UK.
   
   c. The import of £1b computer products from the USA.
   
   d. The import of £250m worth of coffee beans from Brazil.
   
   e. The purchase of shares by a UK citizen, worth £10m, in a Brazilian firm.
   
   f. The payment of dividends to a German citizen who owns shares in a UK firm.

2. What are the likely causes of a deterioration in the UK current account?

3. Should UK citizens be concerned about an increase in the current account deficit?
Inequality and equity

Equity means fairness or evenness, and achieving it is considered to be an economic objective. Despite the general recognition of the desirability of fairness, it is often regarded as too *normative* a concept given that it is difficult to define and measure. However, for most economists, equity relates to how fairly income and opportunity are distributed between different groups in society.

The opposite of equity is inequality, and this can arise in two main ways:

**Inequality of outcome**

Inequality of outcome from economic transactions occurs when some individuals gain much more than others from an economic transaction. For example, individuals who sell their labour to a single buyer, a monopsonist, may receive a much lower wage than those who sell their labour to a firm in a very competitive market. Differences in income are an important type of inequality of outcome.

**Inequality of opportunity**

Inequality of opportunity occurs when individuals are denied access to institutions or employment, which limits their ability to benefit from living in a market economy. For example, children from poor homes may be denied access to high quality education, which limits their ability to achieve high levels of income in the future.

**Does inequality serve a purpose?**

Market economies rely on the price mechanism to allocate resources. This means that economic resources are allocated prices that reflect demand and supply, which operate via incentives. For example, rising wages act as an incentive to labour to become more employable, and provide a reward for those that do. Inequality, therefore, acts as an incentive to improve and specialise in producing those goods, services, and resources that command the highest reward.

However, critics of unregulated market economies raise doubts about the need for such vast differences in income that exist in the UK, and many other economies, and that significantly smaller differences would create a sufficient incentive to reward effort, ability, and wealth creation. For example, an average wage of £5,000 per week for a professional footballer would be more than sufficient to encourage gifted young footballers to want to become a professional player. This compares with wages of over £100,000 per week for the best players.
Measuring inequality of income

The two main methods for measuring inequality are the Lorenz curve and the Gini index.

The Lorenz curve

A Lorenz curve shows the % of income earned by given % of the population. A ‘perfect’ income distribution would be one where each % received the same % of income.

Perfect equality would, for example, be where 60% of the population gain 60% of national income. In the Lorenz curve shown, 60% of population gain only 20% of the income; hence, the curve diverges from the line of perfect equality of income.

The further the Lorenz curve is from the 45° line, the less equal is the distribution of income.

In the second example, the curve for 2009 is further away from the line of equal distribution than the curve in 1990, implying a wider distribution of income.

The Gini coefficient and index

The Gini coefficient or index is a mathematical device used to compare income distributions over time and between economies. The Gini coefficient can be used in conjunction with the Lorenz curve. It is calculated by comparing the area under the Lorenz curve and the area from the 45° line to the right hand and ‘x’ axis. In terms of the Gini index, the closer the number is to 100 the greater the degree of inequality.

Equity and efficiency

When markets are free from imperfections, such as information failure and externalities, resources will be allocated in such a way that efficiency will be achieved. In attempting to achieve equity, governments may intervene and distort the workings of the market so that while equity is gained, efficiency is lost. For example, welfare payments help narrow the gap between rich and poor, but they may create moral hazard and produce a disincentive effect, so that welfare recipients remain dependent on welfare payments into the long run. This is known as the equity-efficiency trade-off.

Causes of inequality of income

There are a number of possible reasons for the widening gap between rich and poor in the UK, including:

- The increased labour market participation of married females, greatly adding to the incomes of married couples, households.
• Single parents, who constitute a large share of the lowest quintile, have done proportionately badly as benefits have not kept pace with earnings - benefits are linked to inflation, not to average earnings.

• The same is true for the increasing numbers of low paid pensioners.

• The wages of skilled workers have risen in comparison with unskilled.

• Trade union power has been eroded which, along with the abolition of Wage Councils in 1993, has meant that protection for low paid has decreased.

• The rise of the ‘unofficial labour market’ means that there appears to be a growing number of low paid immigrant workers, who work for cash and are paid much less than the national minimum wage.

• A reduction in the level of progressiveness of the tax and benefits system, which occurred from the early 1980s. Prior to this, top marginal tax rates had a considerable re-distributive effect.

• A rise of share ownership, and increasingly profitable performance of the stock market, which has increased incomes for shareholders.

• Given that the general trend is for house prices and shares prices to be greater than the general price level, owners of property and financial assets, such as shares, have generally done much better than non-owners. Rising house and share prices have increased personal wealth which can be translated into spending via equity withdrawal.

• A rapid increase in executive pay, often referred to as elite compensation. However, it can be argued that high pay levels are necessary to avoid a Lemons Problem. Those subscribing to this view argue that unless executive pay rates are set above the market rate, the recruitment process would be clogged-up with poor quality applicants.

• An increasingly flexible labour market, with more workers being employed part-time, as opposed to full time, would help increase income inequalities.

Income gaps

An income gap is a gap in income between one group and another. Looked at in terms of the whole economy, the commonest income gap is that between ‘rich’ and ‘poor’, with the ‘rich’ usually being defined at the top 20% of income earners (the top quintile), and the poor the bottom 20% (bottom quintile.) However, it is possible to look at the income gap between many groups, such as males and females, urban and rural dwellers, and between people living in different regions of a country.

Absolute income gap

An absolute income gap refers to the difference between different groups in terms of actual income.

In terms of the UK, though income going to all groups is rising, it is clear that the richest 20% have increased their income by a much greater amount than the poorest 20%.

The gap between rich and poor in 1997, expressed as a ratio was roughly 3/1 (£21,000 compared with £7,000.) By 2006, this ratio had increased to around 5.5/1. (£55,000 compared with £10,000).
Relative income gap

A relative income gap refers to the difference between groups in terms of the share of total income going to different groups. The relative position of the middle three quintiles remained constant between 1977 and 2006, while the position of the poorest 20% worsened. The only group to have increased their share of total income was the top 20%.
Questions

1. Explain how inequality is measured.

2. Draw a Lorenz curve to indicate the likely effect of a rise in the minimum wage on the distribution of national income in the UK.

3. Distinguish between an absolute and a relative income gap.
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Poverty

The alleviation of poverty is increasingly seen as a fundamental economic objective. Poverty creates many economic costs in terms of opportunity cost of lost output, the cost of welfare provision, and the private and external costs associated with exclusion from normal economic activity, such as the costs of unemployment, crime, and poor health. In addition, the poor have little disposable income, and so cannot spend and generate income for firms and jobs for other individuals.

Absolute poverty

Absolute poverty is poverty that is unrelated to a particular economic or social context. In other words, it is a general definition that is valid at all times and for all economies. Agreeing such a definition is clearly extremely hard to do.

One straightforward definition of absolute poverty is ‘...being unable to subsist...’ that is, unable to eat, drink, have shelter and clothing. A common ‘monetary’ measure is ‘...receiving less than $1 a day...’.

Relative poverty

It can be argued that poverty is best understood in a relative way – what is poor in New York is not the same as in Mumbai. One approach is to look at ‘deprivation’, the poor being defined as those who are deprived from the benefits of a modern economy, such as clean water and education.

The Human Poverty Index - HPI

The Human Poverty Index (HPI), which was introduced in 1997, is a composite index, which assesses three elements of deprivation in a country - longevity, knowledge and a decent standard of living.

There are two indices; the HPI-1, which measures poverty in developing countries, and the HPI-2, which measures poverty in OCED developed economies.

HPI-1 (for developing countries)

- The first element of the HPI-1 is longevity, which is defined as the probability of not surviving to the age of 40.
- The second element is knowledge, which is assessed by looking at the adult literacy rate.
- The third element is to have a ‘decent’ standard of living. Failure to achieve this is identified by the percentage of the population not using an improved water source and the percentage of children under-weight for their age.

As a region of the world, Sub-Saharan Africa has the highest level of poverty as a proportion of total population, at over 60%. The second poorest region is Latin America, with 35% living in poverty.

HPI-2 (for developed - OECD countries)

The indicators of deprivation are adjusted for advanced economies in the following ways:

- Longevity, which for developed countries is considered as the probability at birth of not surviving to the age of 60.
- Knowledge is assessed in terms of the percentage of adults lacking functional literacy skills, and;
A decent standard of living is measured by the percentage of the population living below the poverty line, which is defined as those below 50% of median household disposable income, and social exclusion, which is indicated by the long-term unemployment rate.
Questions

1. Distinguish between absolute and relative poverty.

2. Evaluate the HPI as an indicator of poverty.
Policy instruments

Policy makers

Economic policy in a modern economy is designed and implemented by government and its designated agents or institutions. The main economic policy-making departments in the UK are; the *Treasury*, headed by The Chancellor of the Exchequer; the *Department for Work and Pensions (DWP)*, the *Department for Children Schools and Families (DCFS)*, and the *Department for Business Innovation and Skills (BIS)*.

The Treasury, the Chancellor, and the Prime Minister

The Treasury is the UK government’s main economic policymaking department. In practice, the Chancellor of the Exchequer is the head of the Treasury, though his or her official title, ‘The Second Lord of The Treasury’, indicates that historically and constitutionally the Prime Minister is the official head. The Prime Minister is the ‘First Lord of the Treasury’.

The Budget

Each year the Chancellor creates a budget, which sets out planned government spending and taxation and other revenue sources. The budget also details expected central and local government borrowing. It also provides forecasts for the economy, such as forecasts for growth, inflation, unemployment, and trade balances.

The budget is delivered in two parts, with the first part being the ‘autumn statement’ which details expected spending and is made in November each year. The second part is the ‘budget statement’, which is announced in April and details the tax changes for the coming financial (fiscal) year. The budget statement also contains the government’s view on the likely impact of fiscal policy for the coming year in terms of whether the effects are likely to be expansionary, contractionary or neutral.

The Bank of England

The central bank of the UK is the Bank of England, located in London’s famous Threadneedle Street. Since 1997, when it was made independent of government, it has been solely responsible for determining UK monetary policy. The nine-member Monetary Policy Committee (MPC) of the Bank is headed by the Governor of the Bank of England and is the main decision making committee of the Bank.

The inflation report

The Bank of England produces a quarterly Inflation Report which has two purposes - to shape the work of the MPC and to provide information to the general public and specific interested parties. The Inflation Report, which has been produced by the Bank of England since 1993, usually covers the following areas:

- Money and asset prices
- Demand conditions
- Supply and output conditions
- Costs and prices
- The prospects for inflation in the coming period of time

Demand and supply-side policy

To help achieve policy objectives, policy-making authorities have at their disposal a number of policy...
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tools, or instruments. These are:

Demand-side policies
Demand-side policies attempt to control the level of aggregate demand in the economy, and include:

- Fiscal policy, which involves changes in taxation or government spending.
- Monetary policy, which involves changes in interest rates or the supply of money.
- Exchange rate policy, which involves changes in the level of Sterling.

Supply-side policies
Supply-side policies attempt increase factor productivity in the economy, and include:

- Improving competition and efficiency in product markets.
- Improving competition and productivity in factor markets, especially labour markets.
- Providing incentives for households to work or save.
- Providing incentives for firms to produce and invest.
Fiscal policy

Fiscal policy is the deliberate alteration of government spending or taxation to help achieve desirable macro-economic objectives by changing the level and composition of aggregate demand (AD).

Types of fiscal policy

There are two types of fiscal policy, discretionary and automatic.

Discretionary

Discretionary policy refers to policies, which are decided, and implemented, by one-off policy changes.

Automatic

Automatic stabilisation, where the economy can be stabilised by processes called fiscal drag and fiscal boost.

Fiscal drag

If direct tax rates are progressive, which means that the % of income, then a rapid increase in national income will be slowed down automatically.

Fiscal drag means that, as incomes rise, the impact of rising incomes for the better off is reduced as they pay proportionately higher taxes, and the impact of rising incomes on the poor and unemployed is reduced as they come off benefits, and start to pay tax. The effect is that the increase in disposable income is moderated.

Since 1997, the number of ‘top rate’ taxpayers has increased, increasing fiscal drag.

Fiscal boost

Similarly, a potentially rapid and deep decrease in national income would be prevented by fiscal boost. Fiscal boost means as incomes fall in a recession the impact of falling incomes for the better off is ‘softened’ as they pay proportionately lower taxes, and retain more post-tax income.

The impact of falling income is to increase unemployment, but rather than experience a complete collapse in personal income, the unemployed, and the poor, receive benefits, and spend more than they would have without such benefits. Hence, a downturn in the economy is also ‘moderated’.

Government expenditure

Central and local government spends money for a variety of reasons, including:

- To supply goods and services that the private sector would fail to do, such as public goods, including defence, roads and bridges; merit goods, such as hospitals and schools; and welfare payments and benefits, including unemployment and disability benefit.

- To achieve supply-side improvements in the macro-economy, such as spending on education and training to improve labour productivity.

- To inject extra spending into the macro-economy, to achieve increases in aggregate demand and economic activity.

- To reduce the negative effects of externalities, such as setting pollution limits.
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- To subsidise industries that may need financial support which would not be available from the private sector.
- To help redistribute income and achieve more equity.

Local government is very important in terms of the administration of spending. For example, spending on the NHS and education are administered locally, though ‘local authorities’.

**Spending**

The main areas of UK government spending in 2009, which totalled £671b, were welfare and pensions (social ‘protection’), health, education, public order and safety, and defence.

**Central government borrowing**

If revenue is insufficient to pay for expenditure, there will be a fiscal deficit. In this situation, government must borrow by selling long-term bonds or short-term bills. Bonds are long-term securities that pay a fixed rate of return over a long period until maturity, such as 10 years after they are originally issued, and are bought by financial institutions looking for a safe return. Government can also sell Treasury Bills, which are issued into the money markets to help raise short-term cash. Bills have a life of 90 days only, whereupon they are repaid.

In 2009, UK government borrowing totalled £175b, which was the equivalent of 25% of total spending.

**Local government borrowing**

Local authorities can also borrow if their combined revenue from the Council Tax and central government support is insufficient to meet local spending.

If the borrowing requirements of both central and local government are combined, the amount of borrowing is called the *public sector net cash requirement* (PSNCR). Fiscal deficits vary with the business cycle.

During periods of economic growth, tax yields rise, and spending on welfare payments fall, pushing the public finances towards a surplus. During periods of economic slowdown, tax yields fall and welfare payments rise, pushing the economy towards a fiscal deficit.

**Fiscal Rules**

The first fiscal rule, the *golden rule* for borrowing, was established in 1997 by Chancellor Gordon Brown, was that the government should balance its books over a trade cycle, and only to borrow to fund capital projects, such as road building. The second rule was the *sustainable investment* rule which stated that the ratio of net investment to GDP should not exceed 40%. These rules were relaxed in 2008 by Chancellor Alistair Darling, to enable planned spending brought forward in an attempt to inject spending into the ailing UK economy.

The coalition government, which came to power in 2010, abandoned these fiscal rules as it became clear that they possessed little credibility at a time of accelerating public debt. In an attempt to return some order to public finances, the co-alition government launched the Office of Budget Responsibility (OBR).

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8 With the debt ratio rising to 80% by 2011 - Source: IMF
Public sector spending

Using public spending to stimulate economic activity has been a key option for successive governments since Keynes argued that public spending should be increased at times of recession to compensate for falling private spending. There are two types of spending:

- Current spending, which is expenditure on wages and raw materials. Current spending is short term, and has to be renewed each year.

- Capital spending, which is spending on physical assets like roads, bridges, hospital buildings, and equipment. Capital spending is long term, as it does not have to be renewed each year - it is also called spending on ‘social capital’.

Evaluation of public spending

The advantages

- Public spending can have a considerable impact on the level of aggregate demand, and compensate for failings in other components of aggregate demand, such as a fall in household spending on consumer goods and firms spending on capital goods.

- If the spending is on capital items, then infrastructure can be improved, and this can help improve economic growth.

- Spending on infrastructure also provides an external benefit to the rest of the economy.

- Public spending can be targeted to achieve a wide range of economic objectives, such as reducing unemployment, achieving more equity, road building, action against poverty, and re-building city centres.

The disadvantages

- There may be a considerable time-lag between spending and the benefits of spending. For example, a decision to increase spending on education will take months to implement, and years and decades to see the full benefits. Indeed, the full benefits may never be seen because of information failure.

- In trying to promote growth or reduce unemployment government spending can be inflationary, especially if the government has to borrow from the financial markets or if the spending is too fast, such as with an increase in current spending on wages.

- There is a potential ‘trade off’ between unemployment and inflation, first analysed by A.W. Phillips. If the aim of an increase in public spending is to create jobs there is the strong possibility that inflation will be created, and growth in jobs may only be temporary as the economy readjusts to the previous level of unemployment.

- A major constraint to government spending across the EU is a country’s membership of the Stability and Growth Pact. This pact limits government borrowing to no more than 3% of national income in any one year, and to no more than an accumulated public debt of 60% of the value of national income. The purpose of the Stability Pact was to stop Euro area countries weakening the value of the Euro by ‘printing money’, which occurs when governments borrow from the money markets. However, the financial crisis of 2008 - 2010 and the subsequent global recession forced many countries to break the pact (and their own fiscal rules), as they borrowed substantial amounts to help stimulate their domestic economies. Perhaps the worst case of sovereign debt to emerge was
that of Greece, whose annual deficit exceeded 12% of GDP in 2009 (four times the pact limit), and whose accumulated deficit is predicted to reach 135% of GDP by 2011 (twice the agreed limit). The situation for Greece is made especially worse given the size of its hidden economy, estimated at over 30% of GDP.

Revenue and tax policy

Central and local government must raise revenue in order to meet its spending commitments. Revenue is raised from a number of sources including:

Taxation

Direct taxes, such as income tax and corporation tax, and indirect taxes, such as Value Added Tax (VAT), are the main sources of revenue to the UK Treasury.

National insurance

National insurance is a compulsory contribution from both employer and employee to provide workers with a minimum welfare payment during periods of unemployment.

Charges

Both central and local government can charge for using resources under their control, such as parking charges, prescription charges, and TV licences.

Privatisation

The sale of state-owned assets, such as public utilities like gas, water, and electricity, has in the past provided ‘windfall’ revenue to the UK government. The sale of property rights provides a similar source of revenue, such as selling licences to broadcasters and to mobile phone companies for the right to use the public ‘airwaves’.

Borrowing

Borrowing has become an increasingly significant source of funding for many governments. If a government does not have enough revenue to fund its spending plans, it may borrow from the commercial banks or the public by selling short term securities, called bills, and long term securities, called bonds. Both central and local government may need to borrow heavily from time to time to fund spending commitments.

Local government revenue

Local authorities in the UK have the power to raise revenue via a local tax called the Council Tax. However, council taxes do not cover all local spending, and local authorities are usually subsidised by central government through a grant. Reform of local authority finances has been proposed, with the following options being considered:

- A local income tax
- A local sales tax, or specific local charges, such as the London Congestion Charge

Changing tax rates

Taxes can be raised or lowered to control or expand household spending, and AD. Income tax can be adjusted in a number of ways, such as by changing:

9 Sources: The Guardian and The Telegraph
The ‘tax free allowance’ – all income earners are allowed to earn an amount of income before they start to pay tax. For example, the personal tax free allowance in the UK in 2009 was £6,475. Therefore, to stimulate demand, this could be increased to give households more disposable income.

The basic tax rate - in 2010 this was 20%. ‘Basic rate’ means the rate that affects most income earners.

The number of tax bands – for example, in 2010 there were three bands: 0 - £2320 of taxable income from savings is taxed at 10%; £0 – £34,800, taxed at 20% tax, and taxable income over £34,800 is taxed at 40%. A new top rate tax band of 50% was added in 2010. By adding new ‘lower’ or ‘higher’ bands the level of consumption and the distribution of income can be altered.

The range of income in each band – each band could be widened or narrowed by increasing or reducing the range of income in each band.

Evaluation of tax policy

The advantages

- Indirect taxes can be targeted very specifically at altering behaviour, such as ‘polluter pays’ taxes, and taxes on demerit goods.
- Taxation can stabilise the macro-economy automatically, through fiscal drag and boost.
- Discretionary changes in direct taxes can help regulate aggregate demand.
- Taxes and welfare spending can also be used to help reduce the income gap between rich and poor, reduce poverty, and to help to promote equity.

The disadvantages

- Changing tax rates, allowances and bands, is a highly complex business, especially in comparison with changing interest rates. Because of this changes are relatively infrequent, with only small adjustments being made each year in the annual budget.
- Households may increase or reduce their savings following tax changes, so the effect on household spending of an increase or decrease in taxes may be weak.
- There may be considerable time-lags between changing taxes and changes in household spending.
- Higher taxes may have a disincentive effect on work and enterprise, as some individuals alter their perception of the relative costs and benefits of work, in comparison with leisure.
Questions

1. Assuming the economy is in an initial equilibrium at X, identify where the new equilibrium will be if:
   a. There is a rise in public sector borrowing
   b. There is a rise in government subsidies to the motor industry
   c. The government spends less on defence
   d. The basic rate of income tax is raised
   e. The VAT rate is cut from 20% to 15%.

2. Analyse the likely impact on the UK economy of an increase in government spending on higher education.

3. What are the main disadvantages of an increase in income tax, assuming the economy has an output gap?

4. What are the main disadvantages of an increase in government spending not matched by an increase in taxation?

5. Distinguish between automatic and discretionary fiscal policy.

6. How will the recent financial crisis affect the UK’s national debt?

7. Why is fiscal policy more dominant than monetary policy during the current economic recession?

8. Give three advantages and three disadvantages of using government spending to regulate aggregate demand in the UK economy.

The Phillips Curve

The Phillips curve shows the relationship between unemployment and inflation in an economy. Since its ‘discovery’ by British economist AW Phillips, it has become an essential tool to analyse macro-economic policy.

The Phillips curve and fiscal policy

Background

Fiscal demand management became the general tool for managing the trade cycle after 1945. The consensus was that policy makers should stimulate aggregate demand (AD) when faced with recession and unemployment, and constrain it when experiencing inflation. It was also generally believed that economies faced either inflation or unemployment, but not together - and whichever existed would dictate which macro-economic policy objective to pursue at any given time. In addition, the accepted wisdom was that it was possible to target one objective, without having a negative effect on the other. However, following publication of Phillips’s research in 1958, both of these assumptions were called into question.

Phillips analysed annual wage inflation and unemployment rates in the UK for the period 1860 – 1958, and then plotted them on a scatter diagram. The data appeared to demonstrate an inverse and stable relationship between wage inflation and unemployment. Later economists substituted price inflation for wage inflation and the Phillips curve was born. When economists from other countries undertook similar research, they also found very similar curves for their own economies.

Explaining the Phillips curve

The curve suggested that changes in the level of unemployment have a direct and predictable effect on the level of price inflation. The accepted explanation during the 1960’s was that a fiscal stimulus, and increase in AD, would trigger the following sequence of responses:

- An increase in the demand for labour, as government spending generates growth.
- The pool of unemployed will fall.
- Firms must compete for fewer workers by raising nominal wages.
- Workers have greater bargaining power to seek out increases in nominal wages.
- Wage costs will rise.
Faced with rising wage costs, firms pass on these cost increases in higher prices.

The breakdown of the Phillips curve

By the mid 1970s, it appeared that the Phillips Curve trade off no longer existed - there no longer seemed a stable pattern.

American economists Friedman and Phelps offered one explanation. There is not one Phillips curve, but a series of short run Phillips Curves and a long run Phillips Curve, which exists at the natural rate of unemployment (NRU). Indeed, in the long-run, there is no trade-off between unemployment and inflation.

Using AD/AS to demonstrate the Phillips Curve effect

This process can also be explained through AD-AS analysis. Assume the economy is at a stable equilibrium, at Y. An increase in government spending will shift AD from AD to AD1, leading to a rise in income to Y1, and a fall in unemployment, in the short term.

However, households will successfully predict the higher price level, and build these expectations into their wage bargaining.

As a result, wage costs rise and the AS curve shifts up to AS1 and the economy now moves back to Y, but with a higher price level of P2.

Does the trade-off still exist?

Between 1993 and 2008, unemployment fell to record lows, but inflation did not rise, as predicted by the Phillips curve. Many economists explain this by pointing to the successful supply-side policies that have been pursued over the last 20 years. The effectiveness of such policies has meant that the economy can continue to expand without inflation. Indeed, many argue that the long run Phillips Curve still exists, but that for the UK it has shifted to the left.

Recent UK Inflation and Unemployment

Recent statistics support the view that the extreme trade off between unemployment and inflation that occurred in the past no longer exists.

Effective supply side reforms have meant that the UK can expand without experiencing inflation. The improvements in labour market flexibility have helped, along with increased labour immigration – both of which have eased pressure in the labour market at times of growth.

The independence of the Bank and England has also played a role in ‘reducing expectations’ of inflation and weakening the link between current and future inflation. However, this does not necessarily mean...
that a Phillips Curve no longer exists. During the period 2007 to 2009 the Phillips Curve relationship appears to have re-established itself, with unemployment rising and inflation falling. However, since 2010, high rates of unemployment and inflation have occurred together.
Questions

1. Explain the Phillips curve.

2. How relevant is the Phillips curve today?
Monetary policy

Monetary policy involves altering base interest rates, which ultimately determine all other interest rates in the economy, or altering the quantity of money in the economy. Many economists argue that altering exchange rates is a form of monetary policy, given that interest rates and exchange rates are closely related.

The Monetary Policy Committee

The Bank of England’s Monetary Policy Committee (MPC) has responsibility for monetary policy in the UK. The MPC has nine members, four of whom are appointed by the Chancellor. The MPC has one goal – to hit its inflation target of 2%. The inflation target is ‘symmetrical’ because a rate of inflation below the target is considered as damaging as a rate of inflation above target.

Changing official ‘base’ interest rates is the most ‘visible’ tool used by the MPC, whose team of economists meet each month to discuss current and future monetary policy options.

The ‘official’ rate

The rate that the MPC fixes is called the official rate, or repo rate, which is the rate that the Bank of England will charge for short-term loans to other banks or financial institutions. Other rates of interest in the economy, such as mortgage and credit card rates, will adjust in line with changes to the official rate.

How does interest rate policy work?

Interest rates are set so that the inflation target can be met in the future. It takes up to two years for a rate change to affect inflation, so the Bank of England must try to predict the state of the economy two years in advance.

Interest rate transmission mechanism

Interest rates transmit their way to aggregate demand in the following ways:

- Household demand is affected because changes in interest rates affect savings, which indirectly affect spending.

- For households or firms with existing debt, such as a mortgage or credit card debt, a change in rates affects repayments, and hence individuals have more (or less) cash after servicing their debts. Changes in rates affect the cash-flow of firms and households.

- In the case of new debt to fund spending, borrowing is also encouraged (or discouraged) following interest rate changes.

- Interest rates also affect consumer and business confidence, which in turn affects household and corporate spending.

- Asset values are also affected by interest rates. A fall in rates will tend to increase the profitability of firms and they may pay higher dividends to shareholders. This can trig-
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An increase in household spending. Similarly, a rate fall makes savings less attractive and property more attractive, increasing the value of property and household wealth.

- Finally, interest rates may affect the exchange rate, which can also influence export demand. For example, a rise in interest rates may raise the exchange rate, pushing up export prices and reducing overseas demand. Changes in the exchange rate also affect the price of imports, which also affect the inflation rate.

**Summary of the transmission mechanism of monetary policy:**

![Diagram of the transmission mechanism]

**Recent UK interest rates**

In recent years, interest rates have been adjusted to reflect changing inflationary pressure, and general macro-economic conditions.

![Graph of UK interest rates]

*Source: Bank of England*
Timeline

1999 – 2000
Rates were relatively high at 6% to restrict demand.

2000 – 2003
In order to stimulate demand, between 2000 and 2003 rates were pushed down to what was then their lowest level for 25 years.

2003 - 2007
Rates were pushed up into a ‘neutral’ zone at around 5%, and edged towards the ‘restrictive’ zone by the middle of 2007.

2008 - 2011
Rates were pushed down to a record low of 0.5% to stimulate household spending in the wake of the ‘credit crunch’ and recession.

The effect of a reduction in interest rates

If we assume the economy has an output gap, then a reduction in interest rates by the Bank of England will increase aggregate demand because saving is discouraged, new borrowing and spending is encouraged, and confidence and investment will increase. The effect of the increase in aggregate demand on real output and the price level depends upon the elasticity of aggregate supply.

Assuming the economy is at or very near to full employment, a reduction in interest rates may over-stimulate aggregate demand beyond the capacity of the economy to respond in the short run. In this case, the effect is mainly on the price level rather than output and jobs.

Quantitative easing

Quantitative easing (QE) is a process whereby a Central Bank, such as the Bank of England, purchases existing government bonds (gilts) in order to pump money directly into the financial system. QE is regarded as a last resort to stimulate spending in an economy when interest rates fail to work. This was the situation that faced the Bank of Japan in 2001, when it embarked upon its QE programme - regarded as the first major QE programme by a modern economy.

Reducing short-term interest rates to encourage spending has, of course, long been the favoured policy option of Central Banks when dealing with the threat of deflation and recession. However, if aggregate demand fails to respond to ever-lower rates, another policy must eventually be sought. This is because nominal interest rates cannot fall below zero. As in Japan seven years earlier, by late 2008 nominal rates were heading towards zero in the USA, the Eurozone-17, and the UK, and indeed across much of the global economy. Near-zero rates, together with cash hoarding by individuals, corporations and commercial banks, resulted in liquidity being trapped in the banking system, and contributed to the financial crisis.

To help unlock liquidity (when a liquidity trap exists) and encourage banks to lend, rounds of QE were embarked upon in the US (QE1 was started in December 2008, and QE2 in June 2011) and the UK (QE1 was started in March 2009, with QE2 launched this very week.)

How does QE work?

Essentially, QE works by raising asset prices, starting with government bonds, and then spreading out through the wider economy - this gives a boost to bank assets and current bank lending and creates a
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positive wealth effect for asset holders.

Although regarded widely as printing money, purists argue that printing money is more associated with funding government debt, rather than QE, which is directly pumping money into the financial system to stimulate spending.

Quantitative easing by the Bank of England involves the following steps, and results in a number of interconnected effects. Firstly, the Bank of England purchases existing corporate and government bonds held by banks and corporations with an injection of electronic money. These funds are credited to the investors' accounts, which immediately improve their liquidity.

However, the most significant effect of the asset purchase is that prices of existing assets (gilts) increase, while yields - effectively, the interest on them - are pushed down. This encourages banks and other investors to look to rebalance their portfolios by investing in other assets with a higher yield, such as corporate bonds and equities. As new investment occurs, the new liquidity is re-directed towards sellers of bonds and equities. This creates a wealth effect, with holders of assets experiencing an increase in their wealth, raising confidence and stimulating spending, which can spread out to the real economy.

The hope is that Bank lending starts to flow again, stimulating corporate and household spending and business investment, and enabling the economy to return to growth. The Japanese experience tells us that its own QE was too little and too late, and led to its ‘lost decade’.

Evaluation of interest rate policy

The advantages

- Evidence shows that, in normal conditions, interest rates have a direct and powerful effect on household spending, which suggests that UK consumers are highly interest rate elastic.

- The Bank of England's Monetary Policy Committee is independent from government and can make decisions free from political interference.

- Interest rates can be adjusted on a monthly basis, which contrasts with discretionary fiscal policy which cannot be adjusted at such regular intervals.

- While the ‘full’ effects of interest changes may not be experienced for up to a year, there is often an immediate effect on confidence. The time-lag on output is estimated to be around one year, and on the price level, around two years.

The disadvantages

- There are still time lags to see the full effects, and there are some negative effects.

- Raising interest rates can negatively effect on investment spending and the housing market, and the exchange rate and hence the balance of payments.

- There is also the problem of the ‘two speed’ economy - are high rates set for the booming service sector, or low rates for the depressed manufacturing and export sector?

- Interest rates may fall to very low levels during a deep recession, and while the demand for credit may rise, the supply may become trapped in the system, known as the liquidity trap. Hence the need for quantitative easing.
The Bank of England

The Bank of England was founded in 1694 and nationalised in 1948. It was made independent in 1997, and has a number of roles, including:

Deciding interest rates

In order to keep UK inflation at a specific rate of 2% (+/- 1%), the Bank of England has sole responsibility for deciding the level of base interest rates. The Bank produces its own statistics and undertakes detailed monetary analysis to help it create financial stability.

The actual rate that is manipulated is the repo rate, which is short for repurchase agreement rate, is the rate at which the Bank of England buys back securities it has previously sold in the money markets. The money markets include banks, building societies, and specialist securities dealers. Altering the repo rate affects short-term liquidity in the monetary system, which soon has an effect on all other rates.

Overseeing the money supply

The Bank of England oversees the supply of money in the economy to ensure that there is just sufficient liquidity in the economy.

Managing foreign reserves

The Bank of England also manages the UK foreign exchange reserves to ensure that the country settles its international debts.

Providing banking facilities

The Bank also provides banking facilities to the high street banks, and all credit banks in the UK must keep an account with the Bank of England. The Bank also provides facilities to the UK government, which keeps its accounts with the Bank.

Regulating the UK banking system

An increasingly controversial feature of the Bank of England's role is the regulation of the UK banking system. The current regulatory structure in the UK involves three separate organisations, the Bank of England, the UK Treasury, and the Financial Service Authority (FSA). However, the recent banking crisis has raised serious questions about the effectiveness of banking regulation, and the role of the Bank in this process.

Lender of last resort

The Bank also acts as lender of last resort, which means that, given a liquidity shortage in the banking system the Bank of England will provide funds ‘as a last resort’.

Issuing notes and coins

Finally, the Bank is responsible for controlling the issue of new notes and coins.
Questions

1. Why is the UK’s inflation target not zero?

2. Explain how changes in interest rates affect aggregate demand.

3. For the UK economy, what is the approximate ‘neutral zone’ for interest rates?

4. What is the estimated time lag between change of interest rates and a change in the price level?

5. Why is it generally considered beneficial for interest rates to be changed by a small amount at a time?

6. Explain the problem of the ‘dual economy’ and how it affects interest rate decisions.

7. What is the ‘liquidity trap’?

8. Do changes in interest rates primarily affect the supply of money or the demand for money? Explain your answer.

9. Explain how quantitative easing works.

10. Evaluate quantitative easing as a means of increasing aggregate demand.
European monetary policy

The main features of European Economic and Monetary Union (EMU) include:

**A single European currency**

The Euro (€) was first introduced in 2000, and national currencies were finally scrapped in 2002. The framework of rules for entry into the Eurozone was laid down in the Maastricht Treaty in 1992. This treaty also created the rules for membership of the European Union (EU) in general.

**The euro-system**

The euro-system has two elements - the European Central Bank (ECB), which is responsible for all monetary policy in the eurozone (euro area), and the National Central Banks (CBs) of the 16 member countries. Other European countries are free to join the euro area if they meet the criteria laid down in various treaties. The two most important criteria for entry are that the applicant country has demonstrated price stability, and that its public finances are well managed. Hence the deep concerns about the sovereign debt levels of Greece, Ireland and Italy.

**Co-ordination of macro-economic policies**

Co-ordination of policy was designed to enable the original 12 economies of the euro area to converge. A key feature of this was the Stability Pact, which involved members agreeing to keep their economies stable, and keeping their budget deficits under control. The agreed limit for a deficit was that it must be no more than 3% of GDP. This restriction was designed to prevent any unnecessary fiscal stimulus which might de-stabilise the economy, even in the face of high unemployment. However, several countries, including Germany, France, and most notably, Greece, have broken this rule, and this has cast serious doubts about the ability of the euro area to maintain this rule.

**Single interest rate**

The ECB sets interest rates across the whole Eurozone-17, and no single National Central Bank has the ability to alter interest rates itself.

**Asymmetric inflation target**

The ECB sets an asymmetric target rate for inflation of 2% - in other words, the inflation target is not symmetrical, as in the UK, where intervention should occur at rates 1% above and 1% below the target rate.

**The ECB**

The European Central Bank (ECB) was formed in 1998 and works with EU member’s national central banks to oversee and co-ordinate EU monetary policy.

**Activities of the ECB**

- The primary objective of the ECB is to ensure price stability, by keeping the European price index below 2% but also close to 2% to avoid the danger of deflation.

- To help achieve price stability the ECB manages short-term EU interest rates and the money supply.

- Like the Bank of England, the ECB also provides liquidity to the European system when needed.
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Long run neutrality of money

The underlying economic philosophy of the ECB is that, in the long run, real income and the level of employment is not determined by the money supply. The main objective of monetary policy is to achieve short term price stability as this is seen as the way to provide an economic framework for supply side growth.
Exchange rate policy

The exchange rate of an economy affects aggregate demand through its affect on export and import prices, and policy makers may exploit this connection.

For example, if £1 exchanges for $1.50 on the foreign exchange market, a UK product selling for £10 in the UK will sell for $15 in New York. If the exchange rate now appreciates, so that £1 buys $1.60, the UK product in New York will now sell for $16. Which is good news for UK exporters, if demand in New York is price inelastic, because revenue in US$s will rise. However, if demand is elastic in New York, the effect of the appreciation of the Pound would be damaging to UK exporters.

If the UK also imports goods from the USA, the rise in the exchange rate would mean that a $10 US product is now cheaper in London, falling from £6.67p to £6.25p. Importers do relatively well from the appreciation of the pound, in that the cost of imported raw materials or finished goods falls.

Therefore, whenever the exchange rate changes there will be a double effect, on both import and export prices. Changes in import and export prices will lead to changes in import and export volumes, causing changes in import spending and export revenue.

Exchange rates can be manipulated so that they deviate from their natural equilibrium rate. To stimulate exports, rates would be held down, and to reduce inflationary pressure rates would be kept up. While the Bank of England does not specifically target the exchange rate, the Monetary Policy Committee (MPC) will take exchange rates into account. Clearly, the MPC would prefer a relatively high rate, as this reduces the price of imports and works against inflationary pressure. However, the MPC must keep an eye on export competitiveness, and, if rates rise excessively, UK exports will become uncompetitive.

How exchange rates are manipulated

Exchange rates can be manipulated by buying or selling currencies on the foreign exchange market. To raise the value of the pound the Bank of England buys pounds, and to lower the value, it sells pounds. Rates can also be manipulated through interest rates, which affect the demand and supply of Sterling via their effect on inflows of hot money. Altering exchange rates is commonly regarded as a type of monetary policy.
Effects of a reduction in the pound

Assuming the economy has an output gap, a reduction in Sterling will reduce export prices, and assuming demand is elastic, will raise export revenue.

It will also raise import prices, and assuming elasticity of demand, will reduce import spending. The combined effect is an increase in aggregate demand and an improvement in the UK balance of payments.

However, the fall in Sterling will increase import prices and may create cost-push inflation, so the combined effect of an increased demand for UK exports and rising imported costs may be particularly inflationary.

Evaluation of exchange rate policy

The main advantage of manipulating exchange rates is that, because a large share of UK output is traded internationally, changes in exchange rates will have a powerful effect on aggregate demand. For example, lowering exchange rates, called devaluation, can:

- Raise aggregate demand
- Increase national output (GDP)
- Create jobs, amplified through the multiplier effect
- And, assuming the demand for imports and exports are price sensitive (price elastic), will lead to an improvement in the balance of payments, though this can also lead to inflation

Alternatively, raising exchange rates (revaluation) can:

- Help reduce excessive aggregate demand
- Keep inflation down
- Although the export sector may suffer and jobs might be lost

On balance, UK policy makers in recent years have preferred to allow the financial markets to determine exchange rates, rather than manipulate them for policy objectives. The last time exchange rates were directly targeted was between 1985 and 1992, when the UK shadowed movements in the Deutschmark, and then, from 1990 to 1992, when the UK became a member of the exchange rate fixing Exchange Rate Mechanism (ERM).
Questions

1. Using diagrams, explain what would happen to Sterling, other things being equal, if:
   a. There are more tourists into the UK.
   b. Foreign speculators sell Sterling.
   c. UK interest rates rise relative to those of the UK’s trading partners.

2. Analyse one likely effect of a fall in the value of Sterling on a particular market in the UK micro-economy. You will need a diagram to support this answer.
Supply side policy

Supply side policy includes any policy that improves an economy’s productive potential and its ability to produce. There are several individual actions that a government can take to improve supply-side performance.

Improving productivity of factors

Measures to improve factor productivity, which is the marginal output generated by factors inputs, include the following:

Reducing direct taxes

Using the tax system to provide incentives to help stimulate factor output, rather than to alter demand, is often seen as central to supply-side policy. This commonly means reducing direct tax rates, including income and corporation tax. Lower income tax will act as an incentive for unemployed workers to join the labour market, or for existing workers to work harder. Lower corporation tax provides an incentive for entrepreneurs to start and so increase national output.

Greater competition in the labour market

Other supply-side policies include: greater competition in labour markets, through the removal of restrictive practices, and labour market rigidities, such as the protection of employment. For example, as part of supply-side reforms in the 1980s, trade union powers were greatly reduced by a series of measures including limiting worker’s ability to call a strike, and by enforcing secret ballots of union members prior to strike action.

Better labour mobility

Measures to improve labour mobility will also have a positive benefit on labour productivity, and on supply-side performance.

Better education and training

Better education and training to improve skills, flexibility, and mobility – also called human capital development. Spending on education and training is likely to improve labour productivity and is an essential supply-side policy option, and one favoured by recent UK governments. A government may spend money directly, or provide incentives for private suppliers to enter the market. Government may also set and monitor standards of teaching, and force schools to include a skills component in their curriculum.

Performance related pay

The adoption of performance-related pay in the public sector is also seen as an option for government to help improve overall productivity.

Localised pay

Government can encourage local rather than central pay bargaining. National pay rates rarely reflect local conditions, and reduces labour mobility. For example, national pay rates for Postmen do not reflect the fact that in some areas they may be in short supply, while in other areas there may be surpluses. Having different rates would enable labour to move to where it is needed most.

Improving the performance of firms

Measures to improve competition and efficiency in product markets, especially in global markets, are also a significant part of supply-side policy. Examples of measures include:
Technology policy

Government may also help to improve supply-side performance by giving assistance to firms to encourage them to use new technology, and to undertake innovation. This can be done through grants, or through the tax system.

De-regulation and competition policy

Deregulation of product markets may be implemented to bring down barriers to entry, encourage new and dynamic market entrants, and improve overall supply-side performance. The effect of this would be to make markets more competitive and increase efficiency. Promoting competition is called competition policy.

Privatisation

Privatisation of state industry was a central part of supply-side policy during the 1980s and 1990s, and helped contribute to the spread of an enterprise culture. As long as privatisation is accompanied by measures to promote competition, there are likely to be efficiency gains for the firm, and productivity gains for the employees.

Incentives for new firms

Supply side performance can also be improved if there is a constant supply of new firms. Small businesses are often innovative and flexible, and can be helped in a number of ways, including start-up loans and tax breaks.

The effects of supply-side policy

Successful supply-side policy will shift the aggregate supply curve to the right.

Evaluation

The advantages

- Supply-side policies can help reduce inflationary pressure in the long term because of efficiency and productivity gains in the product and labour markets.

- They can also help create real jobs and sustainable growth through their positive effect on labour productivity and competitiveness. Increases in competitiveness will also help improve the balance of payments.

The disadvantages

- However, supply-side policy can take a long time to work its way through the economy. For example, improving the quality of human capital through education and training is unlikely to yield quick results. The benefits of de-regulation can only be seen after new firms have entered the market, and this may also take a long time.

- Also, supply-side policy is very costly to implement. For example, the provision of education and training is highly labour intensive and extremely costly, certainly in comparison

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with changes in interest rates.

- In addition, some specific types of supply-side policy may be strongly resisted as they may reduce the power of various interest groups. For example, in product markets, profits may suffer as a result of competition policy, and in labour markets the interests of trade unions may be threatened by labour market reforms.

- Finally, there is the issue of equity. Many supply-side measures have a negative effect on the distribution of income, at least in the short-term. For example, lower taxes rates, reduced union power, and privatisation have all contributed to a widening of the gap between rich and poor.
Questions

1. How important are low direct tax rates to achieving supply side improvements?

2. Should government give financial assistance to firms to develop new production technologies?

3. How has the widespread use of the internet affected the supply side of the UK economy?
Policies to reduce inequality and poverty

Reducing inequality and poverty, and promoting equity, are important macro-economic objectives. The widening income gap between the rich and poor has highlighted the need to understand the causes of relative inequality and poverty, and to construct suitable policies to reduce poverty and narrow the income gap.

The principles of horizontal and vertical equity

Policy towards inequality and poverty is influenced by the desire to achieve both horizontal and vertical equity. Horizontal equity means that, as a guideline for tax and benefits policy, individuals in the same financial circumstances have the same fundamental ability to pay taxes, and, therefore, should be taxed at the same rate. The principle of vertical equity suggests that, when individuals are in different circumstances and have different abilities to pay, they should not be taxed at the same rate.

The UK tax system, like many, tries to achieve both horizontal and vertical equity. Income tax is calculated as a % of earnings, so as income rises the tax take rises, meaning that Individuals earning the same income will be taxed at the same rate, and those earning more or less will pay more or less tax.

The system also has bands of tax, with a tax-free allowance, so that at very low income, no tax is paid, and at very high income the upper tax band will apply. Horizontal equality is achieved because everyone pays in the same tax band pays the same tax. This means that a high earning individual will get the same tax-free allowance as the low paid, and will pay tax at the same rate as others over the different bands of income.

The tax and benefits system

Governments can intervene to promote equity, and reduce inequality and poverty, through the tax and benefits system. This means employing a progressive tax and benefits system which takes proportionately more tax from those on higher levels of income, and redistributes welfare benefits to those on lower incomes.

Stages of redistribution

Original income can be adjusted in a number of ways to either increase or decrease ‘post-tax’ income.

Cash benefits

Cash benefits are designed to help those on very low or zero original income, and include contributory and non-contributory benefits.

Contributory benefits, such as pensions and job-seekers’ allowance, are those where individuals or employers make a contribution into the National Insurance Fund.

Non-contributory benefits, such as housing benefit, income support, carer’s benefit and child support,
do not require a previous contribution to have been made. Generally, there are tests to see if individuals actually need these benefits, called means tests, though child benefit is not means tested and is a universal benefit available to all families with children.

**Direct taxes**
Income tax in the UK is mildly progressive and helps to redistribute income. This is because:

- Individuals on very low incomes pay no income tax. Everyone can earn up to £7,475 before they pay income tax (2011).
- A low tax band of 10% exists for those earning between £7,475 and just over £9,000.
- ‘Middle’ income earners pay tax on some of their income at the ‘basic rate’, which is currently 22%.
- Those on ‘higher incomes’ pay tax on some of their income at a higher tax rate, such as 40%.
- A higher rate of 50% for those earning over, which came into effect in April 2010.
- These tax ‘bands’ help narrow the income gap and so help reduce inequality.

**Indirect taxes**
In contrast, indirect taxes are regressive meaning that, as a percentage of income, the proportion of tax paid declines at higher income levels, and, as such, the burden of the tax is largely on the poor. This means that, as a rule, indirect taxes widen the income gap.

The progressive effects of direct tax, and regressive effects of indirect tax generally cancel each other out.

**Benefits in kind**
Benefits in-kind are those services, such as healthcare and education, which are provided free or heavily discounted at the point of consumption. These benefits can make a considerable impact on final income, increasing it considerably for the poorest, and narrowing the gap between rich and poor.

**Criticisms of progressive taxes and benefits**
Taxes and benefits clearly compensate for the failure of labour markets to provide sufficient original income for all citizens. However, such intervention can be criticised because:

- It may create a disincentive effect, which occurs when individuals are discouraged from working hard, because they pay more taxes.
- It may create moral hazard, where some individuals may not make an effort to find ways to improve their own position because the state provides an insurance against poverty, unemployment, and disability.

**The National Minimum Wage**
The long-term aim of a minimum wage is to remove the problem of poverty pay, which exists when the earnings from paid work do not result in a living wage and fail to push people out of poverty.
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Policies to reduce unemployment

Unemployment is a major cause of poverty and inequality. Unemployment can be reduced by:

- Government sponsored job creation schemes.
- A monetary or fiscal stimulus to aggregate demand.
- Active labour market policies to increase employability, such as re-training schemes.
- *Welfare-to-work* schemes which encourage labour market participation.
Questions

1. Distinguish between horizontal and vertical equity.

2. Examine how the tax and benefit system can be used to redistribute income.
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Policy conflicts

Conflicts of policy objectives occur when, in attempting to achieve one objective, another objective is sacrificed. There are numerous potential policy conflicts, including:

Full employment vs low inflation

The conflict between employment and prices is the most widely studied in economics. If policy makers attempt to undertake job creation by injecting demand into the economy, by expansionary fiscal or monetary policy, there is a danger that prices will be driven up. This conflict is best explained by reference to the Phillips Curve. It is likely that the trade-off still exists, despite the UK economy approaching full employment and prices still remaining stable in recent years.

Economic growth vs stable prices

This conflict is similar to the employment/inflation trade-off, and can be understood through the Phillips Curve and the AD/AS model. Using the AD/AS model, if an economy grows too quickly, through a fiscal or monetary stimulus of aggregate demand, then aggregate supply may not be able to respond and prices are driven up.

Economic growth vs a balance of payments

As an economy grows, import spending is stimulated relative to export revenue. Policy makers have to be aware that a ‘dash for growth’ could lead to balance of payments problems.

Economic growth vs negative externalities

Economic growth can generate both consumption and production externalities.

Flexibility vs equity

In attempting to achieve a flexible economy, which is one that copes with globalisation, the distribution of income may widen. For example, a flexible economy can be partly achieved by having a flexible labour market, and to achieve this there may be an increase in part-time employment and a reduction in worker protection and job security.

However, it can also be argued that, in the long term, the reduction in unemployment associated with flexibility more than compensates for the rise in part-time work and job insecurity.

Crowding-out – public sector vs private sector

Crowding-out is another widely studied conflict. The belief in the existence of crowding-out has greatly shaped economic policy over the last 20 years. Crowding-out is essentially a conflict between the public and private sector. For example, public sector borrowing to compensate for market failures and provide public and merit goods, might drive up long term interest rates and crowd-out private sector investment. Therefore, the desire to achieve short-term stability might put at risk the prospects for long-term growth.

Globalisation and policy conflicts

The rise of globalisation has meant that economic shocks from one part of the world can quickly spread around the global economy. The recent financial crisis is a case in point. The interconnectedness of the global economy creates problems for domestic policy makers, as the source of inflation or unemployment may be the global economy, and outside of the control of domestic governments.
Many argue that automatic shock absorbers, including flexible labour markets, progressive taxes and benefits, and a floating exchange rate, are critical for the success of a country actively participating in the global economy.
Question

Essay – Why are certain economic policy objectives in conflict with other ones?
Applying the AD-AS model

Step one - identify the relevant variables

In most macro-economic exams at AS level, you will be given a macro-economic variable from the list below (synonyms in brackets) and then asked questions about it.

**Demand-side variables**

- Household spending (C) (consumer spending)
- An injection (J) of new spending, such as:
  - Investment (capital spending)
  - Government spending (public sector spending)
  - Export (overseas) spending
- A withdrawal (W) of spending:
  - Savings (savings ratio)
  - Taxation (direct taxes)
  - Imports (import spending)
- A monetary variable:
  - Interest rates (the cost of borrowing)
  - Exchange rates
  - The money supply
- A change in wealth:
  - House prices
  - Share prices
- Expectations:
  - Optimism (more confidence)
  - Pessimism (less confidence)

**Supply-side variables**

- A change in costs, such as:
  - Wages
  - Raw materials
  - Rents
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- A change in labour productivity

**Step two - identify the effect**

Examiners can be very helpful, and tell you specifically what effect you have to write about, or they can be unhelpful and leave it up to you to interpret.

You need to know the likely effects of a change in an economic variable on:

- *The price level (P)*
- *National income (output) (Y)*
  - Both of these are shown directly on the AD/AS diagram.
- *The level of employment*
- *The level of unemployment*
- *Public finances, (the balance between government spending and taxation)*
- *The Current Account balance, (the balance between exports and imports)*
- The answer you get will depend upon:
  - *The ‘current state’ of the economy - is the economy near to full employment, or is there ‘slack’ in the economy.*
  - *How big the initial change is.*
  - *The time period being considered.*
  - *How ‘elastic’ are the responses to the change being considered.*

**Step three - find the transmission mechanism**

You need to fully explain both the:

- *Transmission mechanism – how the initial change in a variable works its way towards the ‘final’ effect, and*
- *The ‘final’ effect itself.*

You need explain the steps involved, from the initial change to the final effect, and to distinguish between shifts (caused by demand or supply-side shocks) and movements.

**Step four – evaluate the effects**

You can evaluate in different ways, including:

- *Is the effect ‘good’ or ‘bad’?*
- *Will a ‘good’ effect also lead to a ‘bad’ effect, a ‘conflict’ or ‘trade-off’?*
- *Is the effect ‘big or small’, significant or insignificant?*
- *How reliable are the statistics on which the analysis is based?*
• What does the effect depend upon? Ceteris Paribus - 'other variables remaining constant'.

• Are other factors likely to change - making the Ceteris Paribus rule unrealistic.

• Are other assumptions realistic? For example, will consumers respond elastically to the change in interest rates? If not, the effect of interest rate policy will be reduced.

• How quickly do the effects work? Are there time lags?