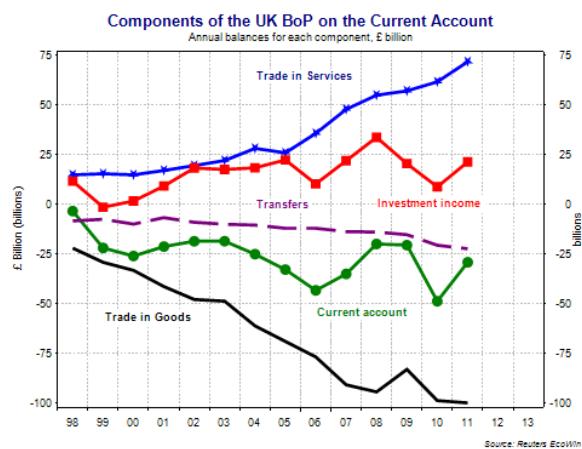


# A Level Economics Theme 2

## The UK economy – Performance and policies 2018-19

Course companion 1



## Macroeconomic objectives, circular flow of income, consumer spending and investment

Name: \_\_\_\_\_ Tutor Group: \_\_\_\_\_

Teacher: \_\_\_\_\_

## **Contents**

Introduction to macroeconomics	Page 3
Economic trends in the UK economy	Page 3
Important events in the last 10 years	Page 4
A brief history of macroeconomics	Page 6
Introduction to the current government macroeconomic objectives	Page 8
1. Economic growth	Page 9
2. Inflation	Page 12
3. Unemployment	Page 13
4. Balance of payments	Page 15
5. Government borrowing	Page 16
6. Income equality	Page 20
7. Protection of the environment	Page 23
Income and wealth	Page 24
The circular flow of income model	Page 25
Aggregate demand	Page 30
Consumer spending and saving	Page 33
Investment	Page 45

## Introduction to macroeconomics

Macroeconomics is concerned with the study of the economy as a whole e.g. macroeconomics considers the total quantity produced of goods and services in an economy, the price level of the whole economy, and total levels of employment/unemployment. It is concerned with the Trade Balance that a country has with the rest of the world, whether a country is better off in a trading block (like the EU) and Globalisation - a process by which national and regional economies, societies, and cultures have become integrated through the global network of trade, communication, immigration and transportation.



## Economic trends in UK economy

You are expected to know about economic trends in the UK economy over the last 10-15 years, this information will be required throughout the exam, and particularly when writing essays.

It is therefore very important to follow the economic news by reading a good quality newspaper, reading the economist or other quality magazine or online.

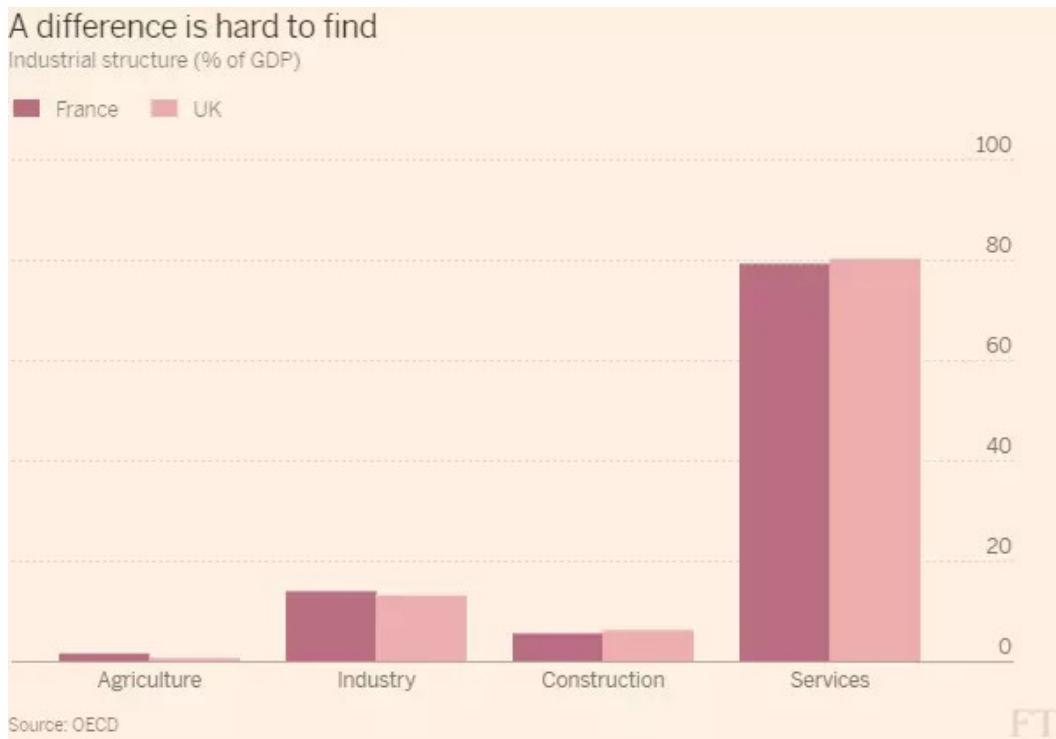
### Size of the UK economy (Value of GDP in \$trillions)

Country	Value (in trillions)
1 United States	20.4
2 China	14
3 Japan	5.1
4 Germany	4.2
5 United Kingdom	2.94
6 France	2.93
7 India	2.85
8 Italy	2.18
9 Brazil	2.14
10 Canada	1.8

Comments:

Source: IMF

There is some debate about ranking as it depends on the value of currencies which change daily. The UK and French economies are very similar, both in their size and in terms of the structure of the economies (different sectors). This is illustrated in the table below.



Comments:

## Important events in the last 10 years

### The Banking Crisis (2007/8)

Introductory Questions:

1. What is a recession?
  
  
  
  
  
2. How does a recession affect unemployment?

Watch the video clip animation and take notes on the causes of the banking crisis:

<http://www.youtube.com/watch?v=Q0zEXdDO5JU&feature=channel>

You may find some details of the story complicated, make a note of anything you do not understand, to clarify during the class discussion.

The story of the downturn in 8 pictures (BBC News April 2013)  
<http://www.bbc.co.uk/news/business-22283940>

2007: The run on Northern Rock - the first on a British bank in more than a century - started in September as customers flocked to withdraw their money. The bank had a funding crisis because the credit crunch meant it could not secure the short-term funds it needed.

2008: The US's largest investment bank, Lehman Brothers, collapsed, sparking an unprecedented crisis in the global financial system. Stock markets tumbled across the world as the scale of the problems facing all banks became clear. In the UK, RBS, Lloyds and HBOS had to be rescued with taxpayers' money.

2009: In his April Budget, Chancellor Alistair Darling forecast the biggest deficit in UK financial history - £175bn - the difference between the government's annual income and its outgoings. The IFS warned of "two parliaments of pain" following "breathtaking" damage to the economy from the financial crisis.

2010: The crisis in the eurozone, the UK's biggest trading partner, deepened as Greece and Ireland received bailouts. After a spell of growth in the UK, GDP declined in the final quarter of the year. This was blamed on heavy snow in the week before Christmas. Without the bad weather, growth would have been flat.

2011: There was growth in the first three quarters, but the economy contracted again at the end of the year. Unemployment peaked at 2.6 million, the highest since 1996. The squeeze on household spending intensified as inflation topped 5%. High Street chains such as Barratts, Habitat and TJ Hughes collapsed.

2012: The Bank of England predicted a slow and uncertain path to growth, zig-zagging between small rises and falls. A one-off boost from sales of Olympic Games tickets broke that pattern temporarily. The government announced big welfare changes and said its austerity programme would last longer than thought.

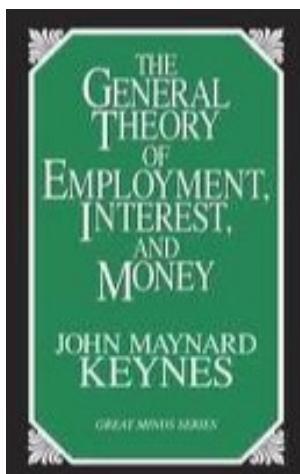
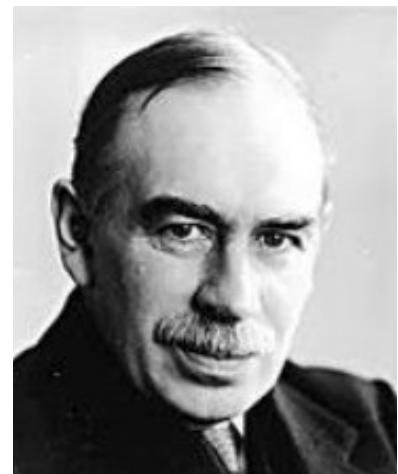
2013: The year began with a blow for Chancellor George Osborne when the UK lost its AAA credit rating. Moody's warned growth would be sluggish for years, making paying off the deficit harder. The economy grew 0.3% in the first quarter, avoiding a triple-dip recession. It has been broadly flat now for 18 months.

**2016: On the 23<sup>rd</sup> June 2016, the UK voted to leave EU, starting a period of change and uncertainty in the UK economy.**

The UK economy is currently facing many challenges due to the vote to leave the European Union. The debate and arguments about this decision often have political, social and personal undertones and it is important for us, as economists, to try to get to grips with the economic implications.

## A brief history of macroeconomics

- Until the 1930s macroeconomics did not really exist. Classical economics did not distinguish between the economics of individual markets and the economics of a whole economy.
- Before the First World War there was little government intervention in the economy other than to raise tax to finance wars.
- The recessions & high unemployment of the 1920's/1930's led to new thinking on the role of government, led by **John Maynard Keynes** who published the '**General Theory of Employment, Interest and Money**' in 1936.
- Keynes challenged the Classical view that a market economy tends to naturally restore itself to full employment after periods of recession, e.g. through lower wages.
- Keynes believed government intervention was needed to increase spending in the economy and create jobs.



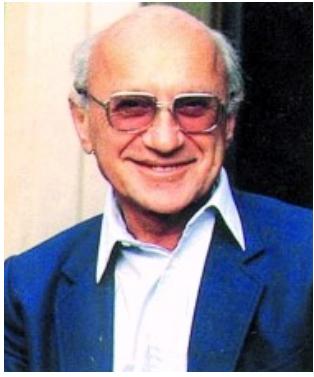
### Keynesian Economics and the Great Depression

[http://www.youtube.com/watch?v=W\\_pmsRP311c&feature=related](http://www.youtube.com/watch?v=W_pmsRP311c&feature=related)

1. How did Roosevelt apply Keynesian economics in his policy of intervention in the economy? Note examples of programmes introduced.

2. To what extent were Keynesian policies successful?

There is still much debate in macroeconomics about how much governments should intervene. Free market economists, such as Milton Friedman and Friedrich Hayek, believed the government should NOT intervene much in the economy. Many argued that Keynesian policies were unsuccessful in the 1970's leading to high inflation (rising prices). The 2008 recession saw a revival of interest in Keynesian economics.



Milton Friedman



Friedrich Hayek

Anderton: p106, p207-208: 'The Global Financial Crisis of 2008'



P Smith, p112-116, Measures of economic performance

Sloman, ninth edition, p400-401: Foundations of Macroeconomics, The National Economy

## Introduction to the current government macroeconomic objectives

Subject content	What students need to learn:
2.6.1 Possible macroeconomic objectives	Economic growth Low and stable rate of inflation Low unemployment Balance of payments equilibrium on current account Balanced government budget Protection of the environment Greater income equality

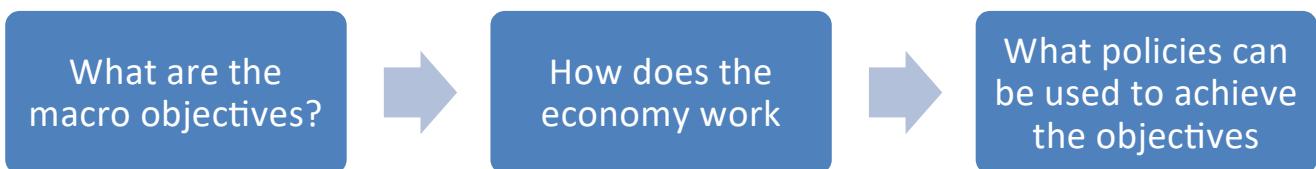
### Possible exam questions

Many essay questions concern the extent to which government macro-economic policies might achieve these objectives, and the extent to which the objectives might conflict.

You should be aware of trends in macro-economic measures over time, and the changing priority given to the different objectives.

Comments:

In Theme 2 we will study the objectives, how the economy works and then policies that could be used to achieve the objectives.



## Objective 1: Economic growth

### Gross Domestic Product:

You need to understand how economists measure the size of the economy before you look at economic growth.

- Gross Domestic Product (GDP) measures the total value of all output in the economy over a period of time.
- Nominal (or Money) Gross Domestic Product (GDP) is the monetary value of all goods and services produced within the UK. If a manufacturing company produces £50m of output, this is what is added to nominal / money GDP.
- Real GDP is Nominal GDP adjusted for inflation, valued at constant prices. Real GDP is used to measure economic growth as it shows the **quantity** of goods and services being produced in the economy and it is this figure, rather than Nominal GDP, that is important.

For example, if the value of GDP rose by 4% this means that the value has risen by 4% but we do not know what has happened to the actual amount of goods and services available in the economy. If inflation rose by 3% then the amount of goods and services will only have risen by (roughly) 1%.

### Economic growth

This is a measure of the increase in the value of the goods and services produced by an economy over a period of time. It is measured as the percentage rate of increase in real GDP and is usually measured on a quarterly basis. In the first quarter of 2018 GDP rose by 0.1%

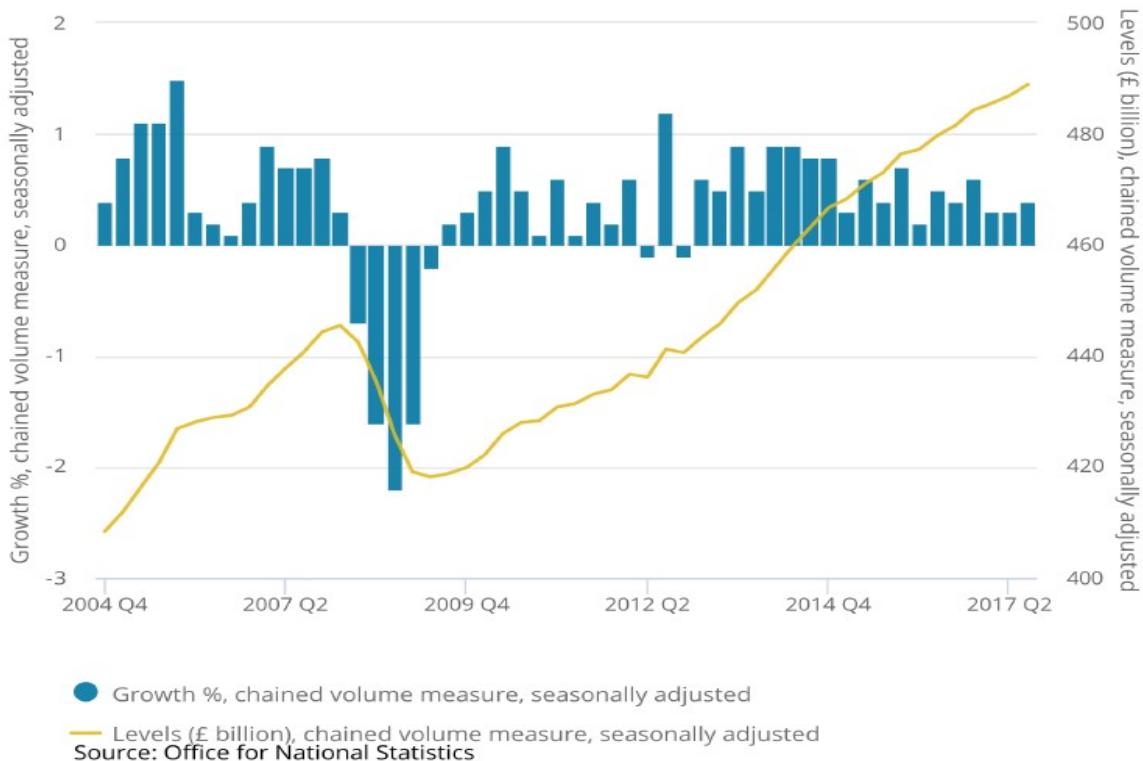


Comments:

The figure below shows the pattern of real GDP from 2004-2017. It shows the quarterly rate of change of Real GDP as well as real GDP.

Figure 1: Quarterly growth and levels of GDP for the UK, Table A2

Quarter 4 (Oct to Dec) 2004 to Quarter 3 (July to Sept) 2017



Comments:

If you see data that says

- GDP in constant prices
- GDP in 2010 prices

then you know that you are looking at "real GDP" i.e. it has been adjusted for the price changes over time.

To calculate Real GDP in any year (say 2016) IN 2013 FIGURES you use the formula:

$$\text{Real Value (2016)} = \frac{\text{Nominal Value in 2016}}{\text{Price Index (2016)}} \times 100 \text{ (Price index 2013)}$$

## Worked Example

Suppose you had the following data.

Year	Nominal GDP £m)	Price Index
2013	1,500	100
2014	1,650	102
2015	1,800	103
2016	2,000	105

The real value of GDP for 2016 in 2013 prices would be

$$£2,000m \times 100/105 = £1905$$

Real GDP in 2015 in 2013 prices was  
 $£1,800 \times 100 / 103$ .

**TASK:** Work out Real GDP for 2014:

If Nominal GDP rose by 3% in 2017 and the price index by 1%, what would be the value of Real GDP?

### Using index numbers

An index number is simply a way of comparing economic data over time or even by comparing different countries. It enables you to see what has happened to the data with reference to some specific year in the past or against some specific country. It does this by setting some data as the base year.

Example:

The index number is set at 2009 = 100 by dividing by 1675.2 and so you need to adjust all other data in the same way e.g. for 2007 take 1747.5 and divide by 1675.2 = 104.3

Complete the rest of this table in the same way. The answer is below, together with the same data for real GDP so that a comparison can be made easily.

	Real GDP	Index number 2009 = 100
2007	1747.5	
2008	1742.4	
2009	1675.2	100.0
2010	1684.2	
2011	1703.9	
2012	1721.6	
2013	1741.4	
2014	1785.0	
2015	1824.7	
2016	1849.1	

Other index numbers:

## Objective 2: Stable prices, or a low and stable rate of inflation

- Inflation: is a sustained rise in the average level of prices.
- Disinflation: A fall in the rate of inflation which means that the rate of increase is lower BUT prices are still rising and so the cost of living of the typical household is rising less quickly. It does not mean falling prices (which is known as deflation).
- Deflation: A fall in the average level of prices i.e. prices are actually falling.

Consumer Price Index (CPI): a measure of the price level used in all European Union countries and used by the Bank of England to measure inflation against its target.

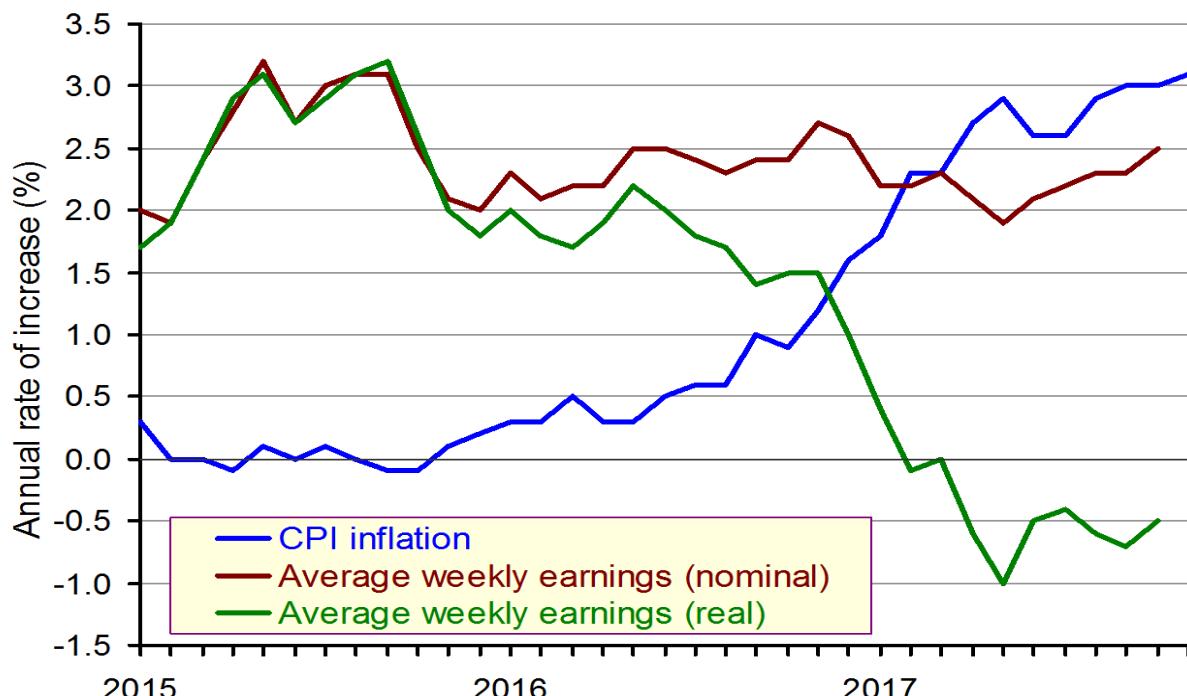
The inflation rate is calculated as the percentage change in the consumer price index. This is calculated relative to a base year set equal to 100.

**Target:** The government has a specific target for inflation which is that it should 2% plus or minus 1% as measured by the Consumer Price Index.

You can see from the graph below that it has gone above its target range recently.



Another problem at the moment in the UK economy is that the inflation rate has recently been above average earnings and so workers are experiencing a real CUT in their incomes.



Source: Series D7G7 and KAC3, ONS

### UK CPI inflation and growth in average weekly earnings

Q: What does that mean for workers?

Q: How might it affect the economy?

## Objective 3: Low unemployment

### The measure of unemployment

The UK government now only use the Labour Force Survey to measure the number of people unemployed. Up until March 2017 they had also included the "Claimant Count" those claiming unemployment and other work related benefits" but these became more inaccurate following changes to the benefits system.

Everybody aged 16 or over is either employed, unemployed or economically inactive. The employment estimates include all people in paid work including those working part-time. People not working are classed as unemployed if they have been looking for work within the last four weeks and are able to start work within the next two weeks.

Jobless people who have not been looking for work within the last four weeks or who are unable to start work within the next two weeks are classed as economically inactive. Examples of economically inactive people include people not looking for work because they are students, looking after the family or home, because of illness or disability or because they have retired.

**Table 1: Summary of UK labour market statistics for August to October 2017, seasonally adjusted**

	Number (thousands)	Change on Aug to Oct 2016	Headline Rate (%)
Employed	32,080	325	
Aged 16 to 64	30,904	364	
Aged 65 and over	1,176	-39	
Unemployed	1,429	-182	
Aged 16 to 64	1,407	-188	
Aged 65 and over	23	6	
Inactive	19,333	177	
Aged 16 to 64	8,858	-56	21.5
Aged 65 and over	10,474	232	
Total aged 16 - 64	41,169		
Total 65 and over	11,673		

Source: Office for National Statistics

### Unemployment rate % of adult workforce



Source: ONS/Bloomberg. 13 Dec 2017

The unemployment rate has tumbled over the past four years from eight per cent in January 2013 to a 40-year low of 4.3 per cent. But the pace of decline has slowed.

## Tasks

Calculate the Employment Rate which is defined as those employed (16 – 64) as a proportion of the total aged 16 – 64.

Calculate the unemployment rate for 16 – 64 year olds

Comment on the recent trend for unemployment (see chart on the right)

## Objective 4: Balance of payments equilibrium on current account

### Definitions:

The Current account of the balance of payments: a record of a country's trade of exports, imports, investment income and current transfers with the rest of the world.

Flows of money into the country are given a positive (+) sign on the accounts. Flows of money out of the country are given a negative (-) sign.

Exports: Spending by residents of other countries on goods/services made in the UK

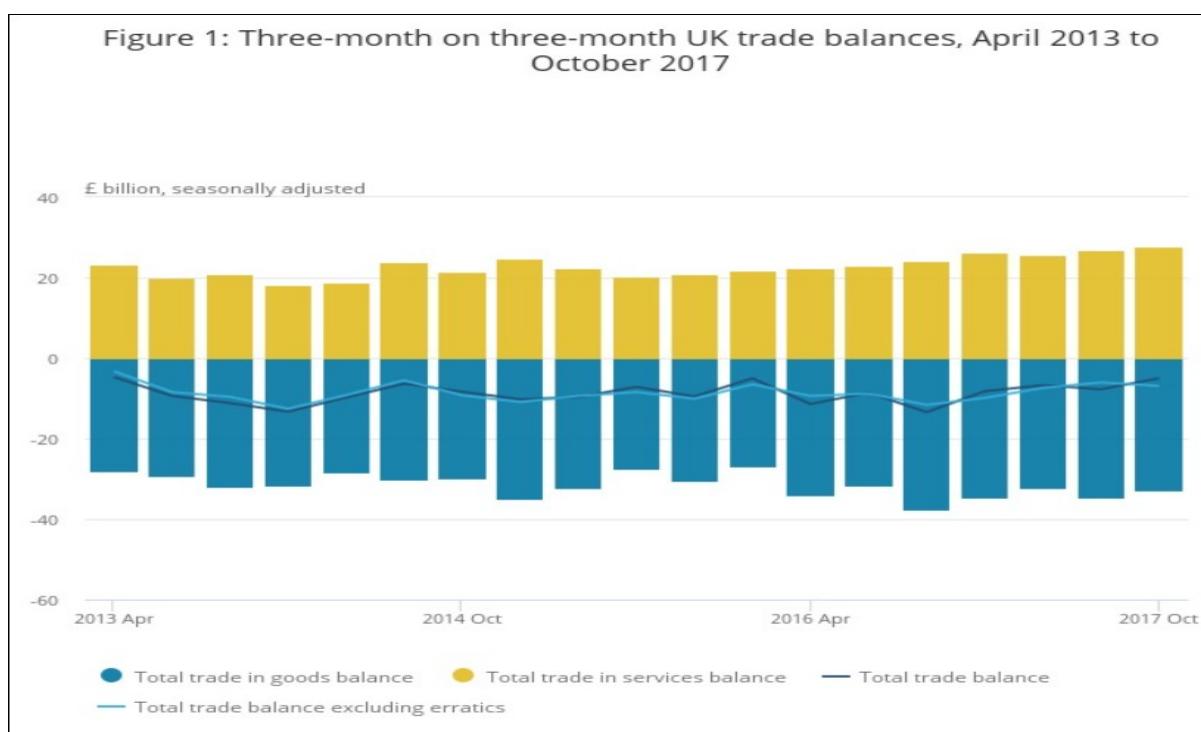
Imports: Spending by UK residents (households/ firms/ government) on goods/services from abroad.

Balance of trade = value of exports – value of imports

A balance of trade deficit arises when the value of imports is greater than the value of exports

A balance of trade surplus arises when the value of exports is greater than the value of imports

Figure 1: Three-month on three-month UK trade balances, April 2013 to October 2017



Using the chart:

1. Comment on the trade in goods balance for the UK
2. Comment on the trade in services balance for the UK
3. Comment on the overall trade balance for the UK

Why could it be undesirable to have a trade deficit?

## **Objective 5: Balanced government budget**

The **government budget** is the difference between annual tax revenue and government spending. If more is spent in one year than tax revenue is raised (**budget deficit**) the government must borrow. This borrowing adds to the total outstanding **national debt**. The **national debt** is the total stock of debt yet to be repaid by the government. If the government gains more revenue in one year than it spends it will have a budget surplus. This will enable the government to repay some of the national debt.

**Video clip: The UK's debt and deficit explained** (BBC news March 2013)

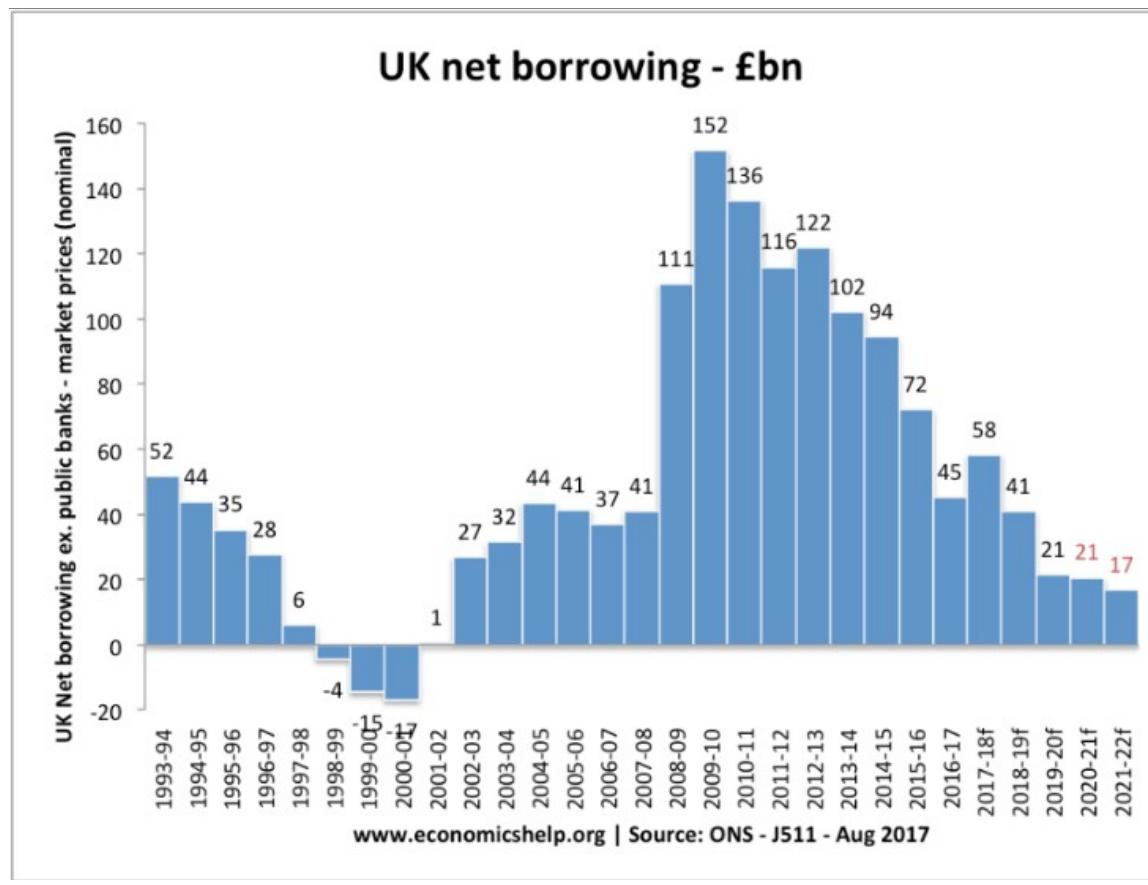
<http://www.bbc.co.uk/news/business-21846044>

### Questions

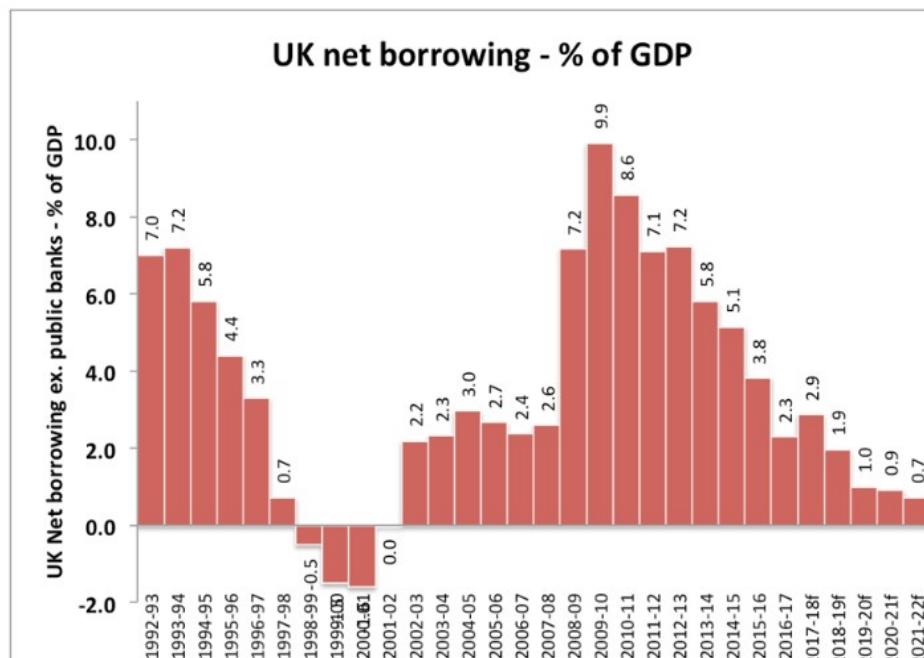
1. Explain what is meant by the UK national debt
2. How much was the UK national debt?
3. How much was the national debt per household?
4. Give examples of government spending
5. What is the interest per year on the national debt?
6. Explain what is meant by the budget deficit
7. How much was the budget deficit?
8. How much was the deficit per household?
9. List problems of not reducing the deficit
10. What are the two ways of decreasing the budget deficit?

## Recent data on the budget deficit

The following graphs show the UK government borrowing and you can see that the UK government has been borrowing over most of the last 25 years (in fact it has done so for most of the last century). It is better to view this as a percentage of GDP as it helps to show how significant it is in terms of the size of the whole economy.



UK net borrowing as % of GDP

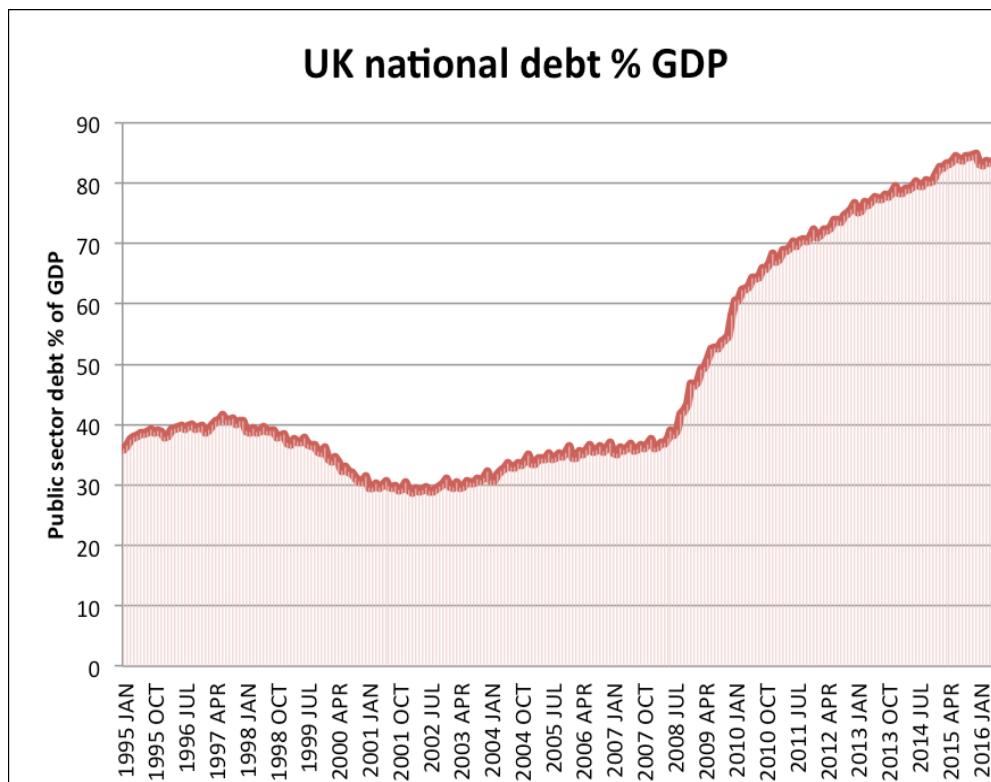


## Questions

What can the government do to reduce the deficit?

Why is the deficit measured as a % of GDP?

## Recent data on the national debt



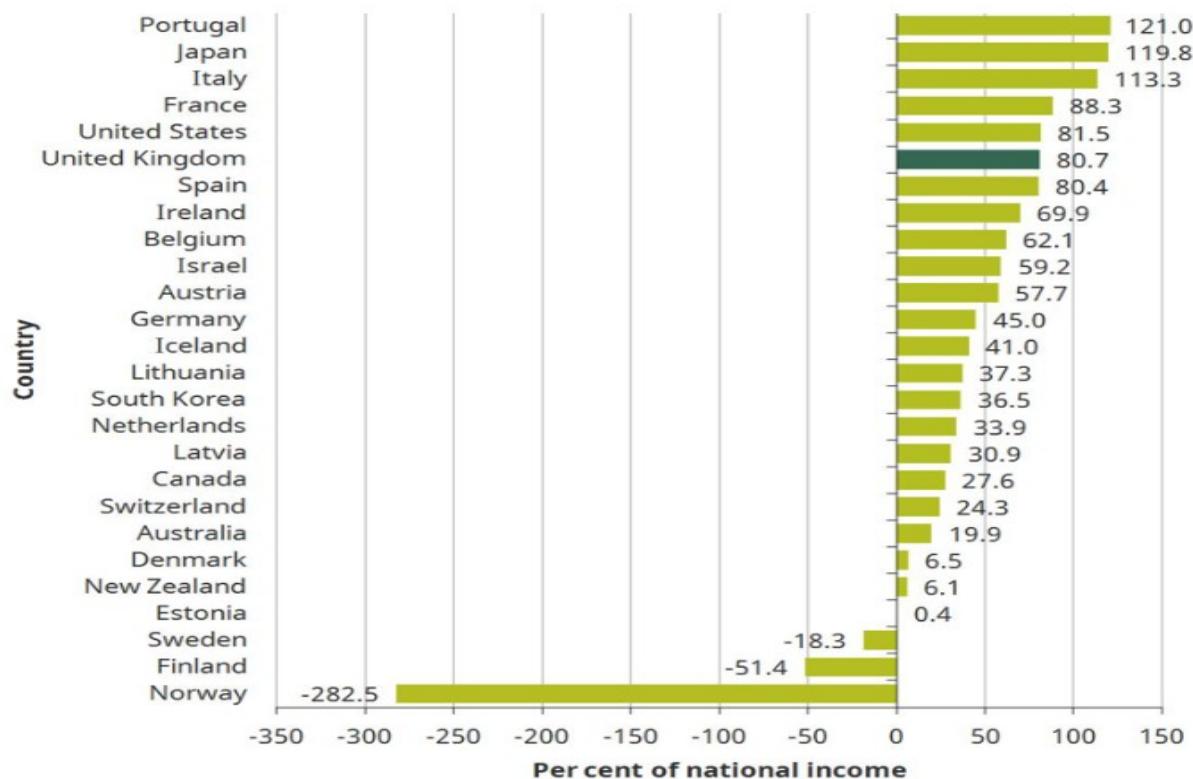
### Questions

Using the chart above comment on the national debt for the UK as a % of GDP for the period shown

Do you think it is a problem for the UK to have a large national debt? Justify your answer

**The UK has the sixth-largest government debt out of 26 advanced economies**

**Figure 7. General government net debt, 2016**



Comment on UK debt compared to other countries for 2016

## Objective 6: Greater income equality

**Income Distribution** is the pattern of incomes in the economy. It can be measured by looking at the percentage of national income earned by different groups within the population.

The following article was published in the Guardian newspaper on 4<sup>th</sup> January 2017

Bosses of top British companies will have made more money by lunchtime on Thursday than the average UK worker will earn in the entire year, according to an independent analysis of the vast gap in pay between chief executives and everyone else.

The chief executives of FTSE 100 companies are paid a median average of £3.45m a year, which works out at 120 times the £28,758 collected by full-time UK workers on average.

On an hourly basis the bosses will have earned more in less than three working days than the average employee will pick up this year, leading campaigners to dub the day “Fat Cat Thursday”.

The gap in pay between men and women will take 100 years to close, a campaign group has warned.

Campaigners highlight 10 November as the point in 2017 when a woman on an average wage stops being paid relative to their male counterparts.

But in some parts of the UK, the gender pay gap is so wide, it is as though women work unpaid from September.

Other articles suggest that there is inequality when it comes to women's wages:

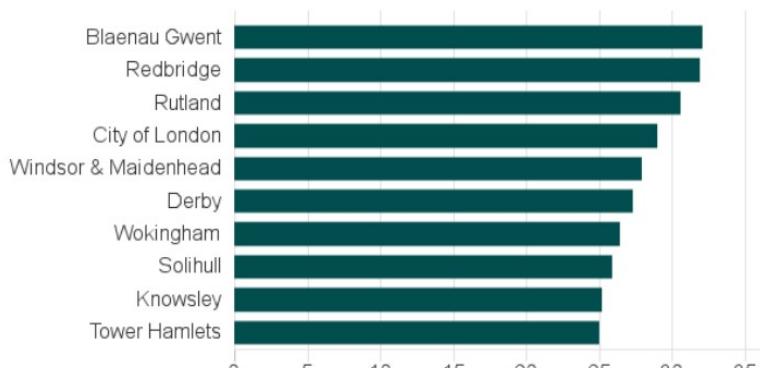
Question

Why do you think this might be?

Taking into account all workers, both full and part time, the median average gap has risen slightly from 18.2% in 2016 to 18.4% this year.

### Areas with the highest gender pay gap

% difference between male and female hourly full time pay



## Measurement of income inequality:

The statistics here tend to use the median value of any data. The median is worked out by putting all the data in rank order and then taking the middle value

Quite often, economists also work out “quintiles” or “deciles”. This is when the data is put into order by size but split into groupings e.g. when using quintiles it is split into 5 equal groups e.g. the top 20% of workers by income. If we use deciles then we split the data into 10 equal groups and we look at the top 10% of workers or bottom 10% by pay.

The proportion of all households who live on an income below an official ‘poverty line’.

For the UK and other European Union countries, the current poverty line is an annual income of less than 60% of median income.

### Who Earns What In the Economy?

1. **Median income** = £21,400
2. **Mean income** = £30,100
3. Average income for top 1% of UK income distribution = £150,000
4. Average income for **poorest 1%** in the UK = £8,430
5. The **richest 10%** of taxpayers receive 1/3<sup>rd</sup> of income
6. The bottom 40% of households get almost half of their income from state welfare benefits
7. The UK is one of world's most unequal rich countries: the poorest 10th get 1% of total income; richest 10th, 31%

### Question

Read the extract below and explain why the mean is \$278,038 whilst the median is \$102,641

However, the collapse in the value of the pound since the Brexit vote meant the total number of dollar millionaires in the UK fell by 34,000 to 2.19 million. Just over half of the UK's 51 million adults have wealth in excess of \$100,000. The mean average wealth of a UK adult is \$278,038, but the median is \$102,641.

Sometimes you even get data that looks at the top 0.1% of people. These articles are taken from the Global Inequality Report December 2017



© The Monaco Yacht Show. The richest 1% of the global population captured 27% of the world's wealth growth between 1980 and 2016. Photograph: Bloomberg via Getty Images

The richest 0.1% of the world's population have increased their combined wealth by as much as the poorest 50% - or 3.8 billion people - since 1980, according to a report detailing the widening gap between the very rich and poor.

### Questions

How can such inequality be reduced?

Should **all** inequality be removed?

Consider these video about income inequality and why it is getting worse. This is based on the USA economy but has important lessons for us all

<http://money.cnn.com/video/news/economy/2015/05/15/we-the-economy-income-inequality.cnnmoney/index.html>

<http://www.tutor2u.net/blog/index.php/economics/comments/explaining-inequality-in-the-uks>

Watch the video clip in which CEP Director, John Van Reenen, explains recent changes in inequality in the UK. Take notes on:

Reasons for increasing inequality

Possible solutions

Discuss ways in which this might be achieved.

### **Objective 7: Protection of the environment**

Reduce damage to environment. This damage could be measured in various ways e.g. tonnes of waste sent to landfill, or CO<sub>2</sub> emissions.



- a) Why is protection of the environment important?
  
- b) Given the current state of the UK economy, which macro-economic objectives would you prioritise? Select 3 objectives which you think are most important today, giving reasons.

### **Macroeconomic policies**

The government uses the following macroeconomic policies to attempt to achieve their macroeconomic objectives:

**Supply-side policies** are government policies designed to promote market forces in order to increase economic growth. They are policies which are aiming to shift the PPF for the economy outwards. Supply-side policies aim to increase productivity and/or competition in product or labour markets.

**Demand-side policies:**

**Fiscal policy** is the manipulation of government spending and taxation to affect total demand in the economy

**Monetary policy**: is the use of changes in the base rate of interest and the money supply to influence the rate of growth of total demand and the rate of price inflation.



Anderton: Unit 22

P Smith, p183-193: Macroeconomic policy objectives

Sloman, 9<sup>th</sup> edition: p401-403: The major macroeconomic issues

Further reading about budget deficit: <http://www.bbc.co.uk/news/business-25944653>

## Income and Wealth

**Income** is a **flow** of money measured over a **period of time** (£ per year)

**Wealth** is a **stock** of assets measured at a point in time.

### Income

Income is a flow of money to households, mainly as a reward to **factors of production**.

- 1) What are the FOUR factors of production?



- 2) Give examples of sources of income for households



### Wealth

- 3) Give examples of assets which a household may own:

- 4) Why might increased household income lead to increased wealth?



What might be the opportunity cost for the household of increasing their stock of assets (wealth)?

**Possible exam questions**

- Explain the difference between income and wealth
- Assess whether increased income might lead to increased wealth

# The circular flow of income model

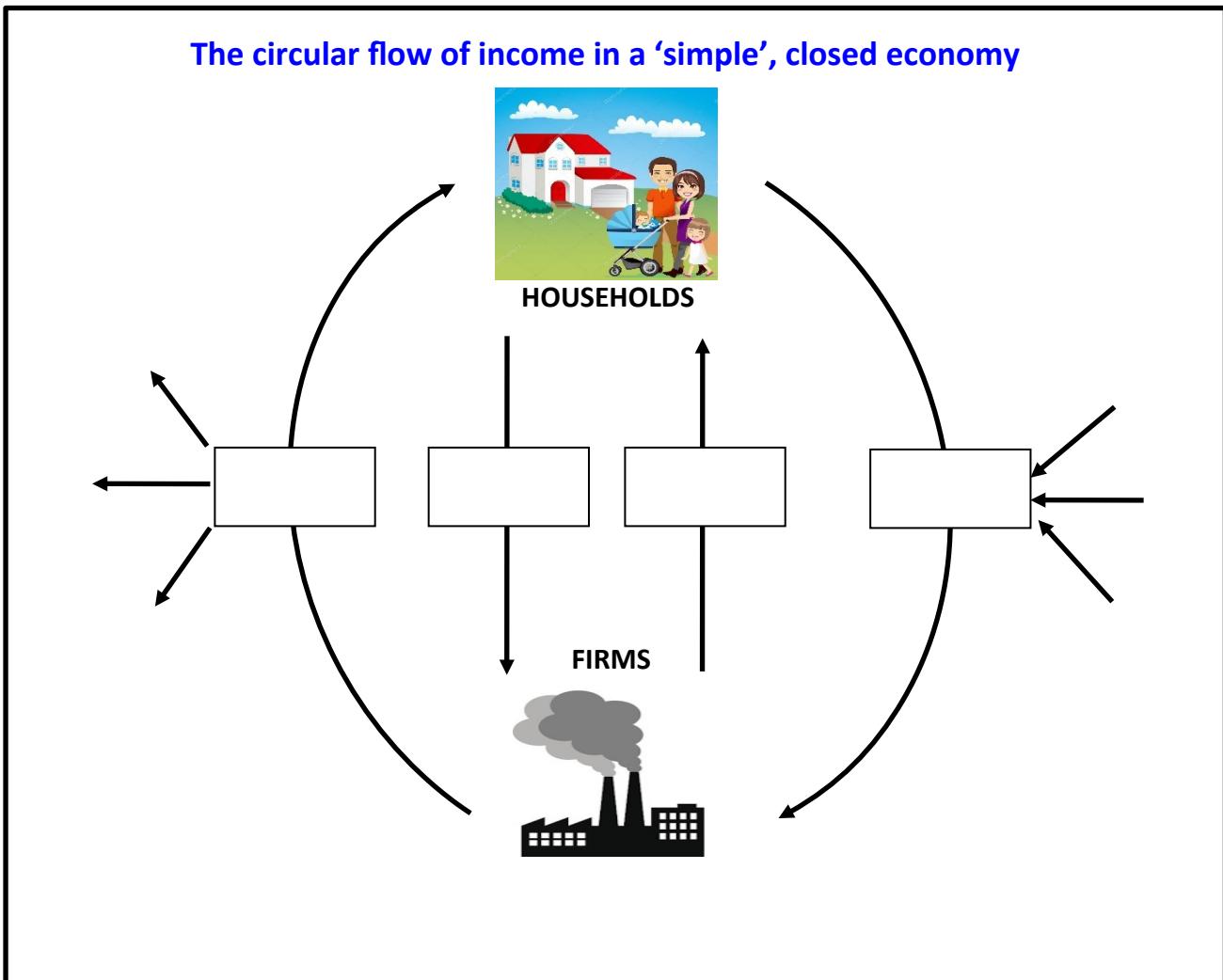
**National income:** the value of the output of an economy over a period of time.

**Circular flow of income:** the flow of goods and services between households and firms and their corresponding payments in money terms.

In a 'simple' (no government, no financial system and hence no ability to save and therefore invest), **closed** (no foreign trade) economy.

There are only **TWO** groups of economic agents:

1. **HOUSEHOLDS:** own the factor inputs ('wealth') of the nation – land, labour, capital and enterprise – which are used to produce goods/services, in exchange for factor rewards ('income') – rent, wages, interest and profit respectively. They then use this money to **buy** goods and services from firms (see below).
2. **FIRMS:** hire the factor inputs from households and use these to **produce** goods and services for sale back to households.



From this model it can be seen that there are **THREE** ways of measuring the level of economic activity (left to right):

- 1) **National income (Y):** This is the value of income paid by firms to households in return for factor inputs ;
- 2) **National output (O):** This is the value of the flow of goods/services from firms to households; or
- 3) **National expenditure (E):** The value of spending by households on goods/services (all domestically produced in this first instance with no foreign trade).

In other words.....

$$Y \equiv O \equiv E$$

...where the  $\equiv$  sign means identical or 'always equal' (not just equal).

This is known as the **national income accounting identity.**

**Possible exam question**

Explain how national income can be shown as a circular flow, using a diagram to aid the explanation.

## Injections (J) and Withdrawals (W)

### a) The impact of injections into, and withdrawals from, the circular flow of income

An **INJECTION (J)** into the circular flow is **spending** which is not generated by **households**, including:

- **Investment (I):** Spending by firms on new capital equipment (e.g. factories, offices, machinery) and stocks of goods used in production process.
- **Government spending (G):** Spending by central and local government.
- **Exports (X):** Spending by residents of other countries on goods/services made in the UK.

A **WITHDRAWAL (W)** or **LEAKAGE** from the circular flow is **spending** which does not flow back to **domestic firms** including:

- **Savings (S):** money not spent by households or firms.
- **Taxes (T):** paid to government from households and firms.
- **Imports (M):** Spending by UK residents (households/firms/government) on goods/services from abroad.

Return to the circular flow diagram on the previous page and complete the two sets of three arrow labels for injections (right-hand side) and withdrawals (left-hand side).

In **equilibrium**, when there is **no tendency to change**, **injections must equal withdrawals**. When this happens, output, expenditure and income flowing around the circular flow remain the same.

However, if **J ≠ W**, then the economy is said to be in **disequilibrium**:

- when  $J > W$ , then national income rises, i.e. economic growth
- when  $J < W$ , then national income falls, i.e. economic contraction

**Impact on national income of a.....**

### .....reduction in the government budget deficit

**Government budget deficit:** The government spends (G) more than it receives in taxation revenue (T) in any one year.

1. What are the two ways of decreasing the budget deficit?

2. What will be the impact on the level of national income?

Use the circular flow of income model to explain.



### Circular flow of income exercise

	<b>Event</b>	<b>State which injection(s)/withdrawals(s) would be affected, whether increased/decreased, giving reasons</b>	<b>Likely effect on the level of national income – expansion or contraction (ceteris paribus)</b>
1	A fall in business confidence among UK manufacturing firms		
2	The exchange rate value of the pound rises, making our exports more expensive for overseas customers to buy		
3	The government employs more nurses in the NHS		
4	Nissan decides to reduce investment at their main Sunderland plant and shift some car production to the Czech Republic		
5	The government announces a fall in the rate of taxation applied to interest paid on savings in bank accounts		
6	The UK reduces the size of an import tariff imposed on imports of Chinese clothing and footwear		
7	The US economy is growing quickly, and the US is a major trading partner for the UK (describe impact on UK circular flow)		
8	The government decides to spend £32bn on high speed rail		
9	Interest rates fall making it cheaper for businesses to borrow money		
10	Ahead of a general election the government decides to cut the basic rate of income tax from 20% to 18%		

## Missing words

For an economy to be in \_\_\_\_\_, injections must be \_\_\_\_\_ to withdrawals. Injections into the circular flow of income are made up of investment, g\_\_\_\_\_ and \_\_\_\_\_, while withdrawals comprise of savings, t\_\_\_\_\_ and \_\_\_\_\_. If injections do not equal withdrawals, then the economy is said to be in disequilibrium. If withdrawals are greater than injections, the economy will suffer declining incomes, output and \_\_\_\_\_. Eventually, lower incomes will reduce the levels of taxation and saving, causing leakages to shrink until they equal injections. If injections are greater than withdrawals, the economy will be expanding (economic growth). When the economy is growing (injections are \_\_\_\_\_ than withdrawals), households and firms will pay \_\_\_\_\_ tax, and are also likely to save more. Households are also likely to buy more goods from \_\_\_\_\_. This will cause the value of leakages to increase, up to the point where they are equal to injections. At this point the economy has returned to equilibrium. **Missing words: expenditure, imports, more, gov't spending, equal, greater, exports, overseas, equilibrium, taxation**

## Multi-choice questions on circular flow of income

(1) In the circular flow of income model, which one of the following equations is correct?

- A Income = Output = Expenditure
- B Income = Output = Injections
- C Output = Expenditure = Withdrawals
- D Expenditure = Income = Injections = Withdrawals

(2) In Singapore, tax revenues exceeded government expenditure by S\$36 billion in the tax year ending 2013. This means that

- A there was a net injection from the government sector in the circular flow of income
- B government expenditure would necessarily increase in the following tax year
- C the value of the multiplier would increase
- D there was a net withdrawal from the government sector in the circular flow of income

Anderton: Unit 28

P Smith, p158-162: The circular flow of income, expenditure & output

**Possible exam question:** Analyse the impact of injections and withdrawals on the circular flow: e.g. current account deficit ( $M>X$ ) or budget deficit ( $G>T$ )

## The characteristics of AD

- a) Components of AD: C+I+G+(X-M)
- b) The relative importance of the components of AD

**Aggregate:** the sum or total

**Aggregate demand (AD):** the total of all spending in the economy at any given price level.

### The components of aggregate demand (AD):

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

- C Consumption:** total expenditure by households on goods and services in the domestic economy over a period of time
- I Investment:** the addition to the capital stock of the country
- G Government spending:** spending by central and local government
- X Exports:** spending by residents of other countries on goods/services made in the UK
- M Imports:** spending by UK residents (households/firms/government) on goods/services from abroad
- (X-M) Net exports:** the difference between the money earned by exports less the money spent on imports

### Recent trends in the components of aggregate demand

The table below shows the annual percentage change in each component of AD.

- (a) Describe the trends in the components of AD following the world financial crisis in 2008/9.
- (b) Suggest possible reasons for the changes in each of the components in 2009.

	<b>C</b>	<b>I</b>	<b>G</b>	<b>X</b>	<b>M</b>
2008	-0.8	-9.4	2.1	1.1	-1.9
2009	-3.5	-19.0	1.1	-8.8	-9.2
2010	0.7	15.7	0.2	5.8	8.2
2011	-0.7	-1.9	0.2	5.8	0.8
2012	1.9	3.9	1.7	0.6	2.9
2013	1.6	5.2	0.3	1.1	3.4
2014	2.1	10.6	2.3	1.5	2.5
2015	2.5	1.9	1.3	6.1	5.5
2016	3.1	-2.7	0.8	1.4	2.5

--

*Source: ONS*

- (c) Which is the most volatile component of AD: C, I, G or (X-M)?
- (d) What does the data suggest about changing consumer and business confidence over the time period shown?

### Short questions on components of AD

(1)

Suppose there is an economy in which the values in Table 11.1 apply.

- a Calculate the level of aggregate demand.
- b Calculate the trade balance.

Table 11.1 Values in an economy (all measured in £ million)

Consumption	75
Profits	60
Investment	30
Government expenditure	25
Exports	50
Private saving	50
Imports	55

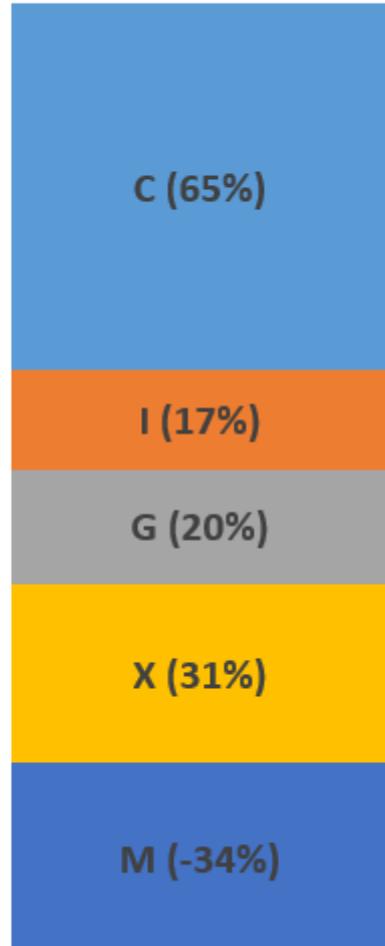
(2) The table below shows values (£billions) for components of aggregate demand (AD) in an economy:

Components of AD	£billion
Consumption	700
Investment	100
Government Spending	320
Exports	?
Imports	60
Aggregate demand	1350

The value of exports is:

- A. 350
- B. 290
- C. 260
- D. 210

Components of UK GDP (2016)  
Source: ONS



### The relative importance of the components of AD in the UK economy

The percentage of AD made up by each component in the UK changes slightly each year – the 2016 proportions are shown in the bar chart

Consumption is by far the largest component of AD in the UK – approximately two-thirds – therefore a 1% increase in consumption will have a much greater effect on AD than a 1% increase in another component.



Anderton: unit 23  
P Smith, p144-145, The components of aggregate demand

in

in

in

32



### Possible exam questions

- Outline the components of aggregate demand.
- Explain the relative importance of the components of AD.
- Explain factors affecting components of AD.

# Consumption (C)

- a) Disposable income and its influence on consumer spending
- b) An understanding of the relationship between savings and consumption
- c) Other influences on consumer spending:
  - interest rates
  - consumer confidence
  - wealth effects



**Consumption:** total spending by households on goods/services in the domestic economy over a period of time, regardless of where these G/S are physically produced – some will be manufactured, wholly or partly, overseas.

(i) **Durable goods:** goods that are consumed over a long period of time.

(ii) **Non-durable goods:** goods that are consumed almost immediately.

**Disposable income (Yd):** household income over a period of time including state benefits less direct taxes (income tax and national insurance contributions).

**Saving:** is what is not spent out of disposable income. This could take the form of increasing the stock of cash, money in bank or stocks/shares.

**Consumption function:** the relationship between the consumption of households and the factors that determine it.

## Factors determining consumption:

### a) Income

#### CONSUMPTION

**Average propensity to consume (APC):** The proportion of income spent on goods and services in the domestic economy or as a formula:

$$APC = C/Yd$$

**Marginal propensity to consume (MPC):** The proportion of a *change* in income which is spent on said goods and services or as a formula:

$$MPC = \Delta C/\Delta Yd$$

#### SAVINGS

**Average propensity to save (APS):** The proportion of income saved.

$$APS = S/Yd$$

**Marginal propensity to save (MPS):** The proportion that is saved out of a *change* in income:

$$MPS = \Delta S/\Delta Yd$$

It is possible to calculate propensities for groups of households or for the whole economy

## Question 1: Real consumption & household disposable income (Source: Anderton)

**Table 1: Real consumption and household disposable income**

Year	Consumption (£bn at 2003 prices)	Disposable income (£bn at 2003 prices)	APC (C/Yd)	MPC ( $\Delta C/\Delta Yd$ )
1965	260.6	268.8		
1966	265.2	275.0		
1975	328.8	347.6		
1976	330.2	346.3		
1985	402.2	425.5		
1986	427.8	443.1		
1995	541.1	588.5		
1996	561.8	602.4		
2005	760.2	775.1		
2006	776.0	783.6		

Source: adapted from *Economic & Labour Market trends*, Office for National Statistics

(a) Using the data, explain the relationship between consumption and disposable income.

(b) (i) Calculate the MPC and the APC for 1966, 1976, 1986, 1996 and 2006 (unshaded).  
(ii) What happened to saving during these years?

## Question 2: Recent trends in real income and consumption

**Nominal values** – where the effects of inflation are still incorporated in the data.

**Real values** – where the effects of inflation have been taken out.

UK real terms wage growth



Office for National Statistics (ONS)

- How might these trends in real wage growth impact on consumption (*ceteris paribus*)?
- In 2015 real wages stopped falling, due to the reduced rate of inflation. How might this affect consumption?

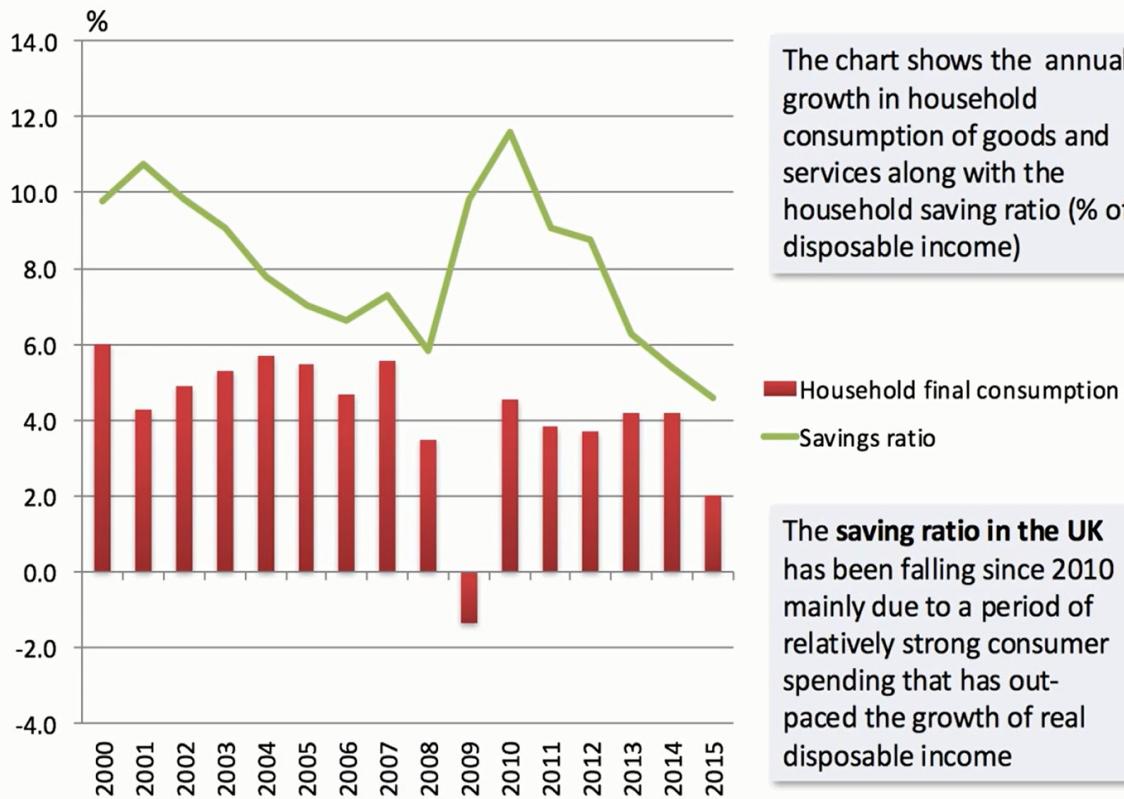
## The savings ratio

**Saving:** what is not spent out of disposable income. This could take the form of increasing the stock of cash, money in bank or company shares.

**Household savings ratio:** the percentage of household disposable income that is saved.

**Total household savings:** household disposable income minus household consumption.

### Household Saving Ratio for the UK Economy



The chart shows the annual growth in household consumption of goods and services along with the household saving ratio (% of disposable income)

■ Household final consumption  
■ Savings ratio

The **saving ratio in the UK** has been falling since 2010 mainly due to a period of relatively strong consumer spending that has outpaced the growth of real disposable income

1. Read back through your notes on consumption and list factors affecting savings.
2. Describe the changes in the household savings ratio from 2000 to 2015. Refer to figures from the graph, including the highest and lowest values.
3. Explain possible reasons for the changes in the savings ratio.
4. Why could a rise in the savings ratio be a problem?

5. What might be the problems for an economy of having a low savings ratio?

6. What might be the problems for an economy of having a high savings ratio?

### **Possible exam questions**

- Explain factors affecting the level of household savings.
- Analyse the impact of a change in the savings ratio.

## b. Interest rates

**Interest rate:** the price of money, i.e. cost to borrowers and the reward to savers

The Bank of England sets the **base interest rate**, which is the rate at which they will lend short-term to the commercial (retail) banks. In theory the commercial (retail) banks such as RBS or HSBC should set the interest rates they charge consumers/businesses to follow changes in the base rate.

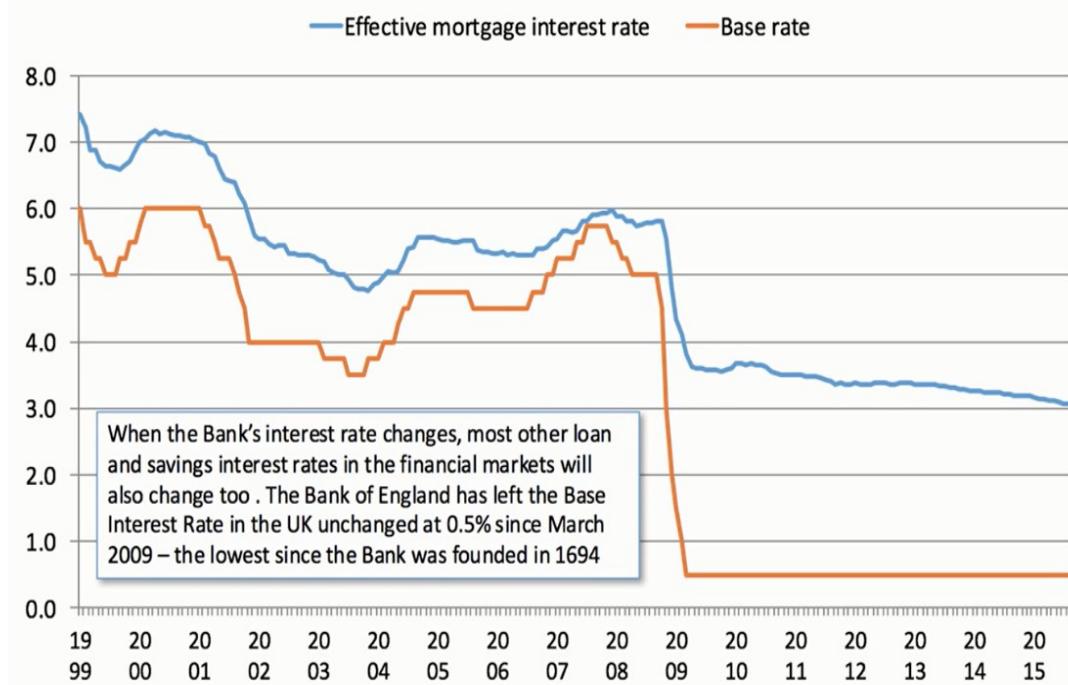


**A decrease in interest rates increases consumption:**

- Cost of buying consumer durables on credit falls
- Mortgage repayments on variable rate mortgages fall, increasing consumers' discretionary income (i.e. after bills)
- House prices and share prices rise (wealth effect)
- Consumers have less incentive to save as the return on savings falls

### Base Interest Rates and Mortgage Rates in the UK

The policy interest rate (base rate) is set each month by the Monetary Policy Committee. The 2% inflation target is set by the government.



(The UK base rate is now 0.75%)

1. By how many percentage points ( $\%_{\text{new}} - \%_{\text{old}}$  [not  $\% \Delta$ ]) → see quantitative techniques booklet did the Bank of England base rate fall between its peak in early 2008 and the end of 2009?
2. By how many percentage points did effective mortgage interest rates fall over the same period?
3. To what extent did mortgage rates follow changes in the Bank of England base rate between 1999 and 2015?

### c. Consumer confidence/expectations

- Expectations of higher future real income increase consumption now, e.g. secure job, expect future pay rises, house prices rising.
- Expectations of harsher economic conditions or lower future income reduces consumption now e.g. fear of unemployment, tax increases, real wage falls, pension cuts.



Source: GfK Consumer Confidence Barometer on behalf of the European Commission (July 2018)

A score below zero indicates overall pessimism. A lower negative score indicates an improvement in confidence.

UK consumer confidence remained in negative territory in July as the summer heatwave failed to thaw sentiment, according to a survey. Research house GfK's consumer confidence index fell one point to minus 10 for the month, its lowest since February.

"Despite the World Cup, Wimbledon and warm weather playing front and centre in the nation's psyche this July, the Barometer again reveals a decline in consumer confidence. The Overall Index Score has now registered at zero or negative since February 2016. Concerns about our personal financial situation, and especially the general economic outlook, have contributed to this long slump." (Source, FT 31.7.2018)

#### Question:

How might Brexit be affecting consumer confidence?

## d. The Wealth Effect – including house prices

### Question 3: Impact of the housing market on consumption levels

The number of mortgages being approved fell to its lowest level for more than nine years in November, sending out a strong signal that house prices are set for further falls. The number of loans is an important indicator for consumer spending. Most economists regard a slowdown in consumer spending as a risk to the UK economy over the next year.

Higher house prices lead directly to more consumer spending because people feel wealthier. But Ben Broadbent at Goldman Sachs, the investment bank, argues that consumer spending is more likely to be affected by a slowdown in house turnover than a decline in house prices.

He said 'When you move house, you have to buy a lot of stuff, such as carpets, curtains and fridges. There is already a trend towards slower retail sales and we expect data over the next weeks that will include the Christmas period to reflect this more strongly'.

Consumer spending is also linked to mortgage equity release, when housebuyers take out a larger mortgage they need to buy a house and then spend the difference. Equally, existing homeowners may remortgage their house, taking on a bigger mortgage and spending the balance. Mortgage equity withdrawal totalled £12.4 bn between July and September, down from £13.0 bn in the previous quarter.

Source: adapted from the *Financial Times*, 5/1/2005



than



Explain three ways in which the housing market can affect consumption levels.

- 1.
- 2.
- 3.

The wealth of households includes:

**Physical wealth:** houses, cars, furniture

**Monetary wealth:** cash, money in bank, stocks & shares, pension

If the wealth of households increases, then consumption will rise.



rights.

**The wealth effect:** The change in consumption following a change in asset prices (e.g. house prices, share prices)

Two important ways in which the wealth of a household can change over a short period of time:

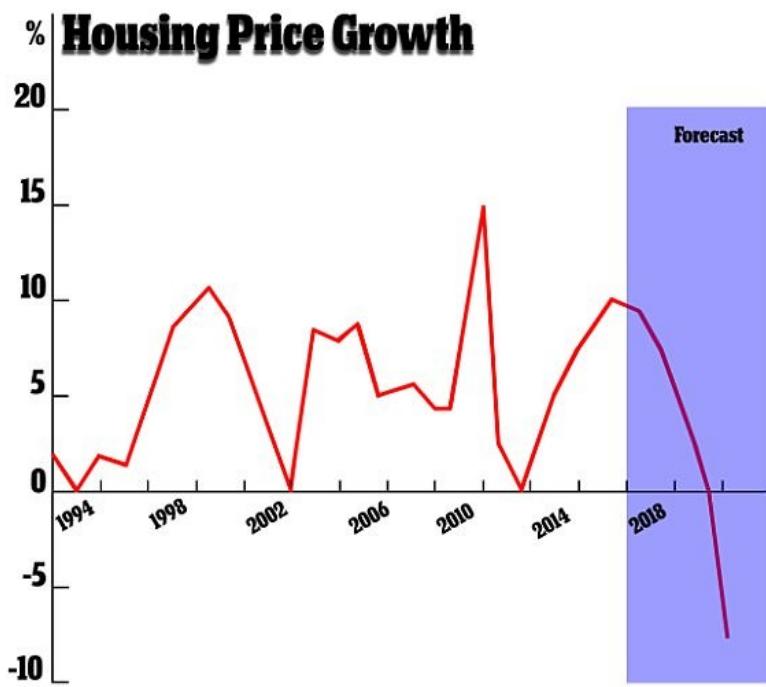
- 1) **House prices:** if real price of houses increases considerably (e.g. 1995-2007) households feel able to increase spending. They do this mainly by borrowing more money secured against the value of their house.
- **Housing equity withdrawal (HEW)** is borrowing that is secured on the housing stock but *not* invested in it. It occurs when homeowners **remortgage** taking out bigger loans to take advantage of rising property values, the money is then used for **consumption**.
- 2) **Value of stocks/shares:** Households react to an increase in the real value of a household's portfolio of securities by selling part of the portfolio and spending the proceeds. When the **rate of interest** falls, the value of stocks increase and therefore consumption is stimulated through the wealth effect by a fall in the rate of interest.

(1) Study the data on recent trends in average UK house prices, what might have been the recent impact of house prices on consumption?

## Monthly UK House Price Statistics

	Monthly % Change Seasonally Adjusted	3 Month on 3 Month % Change	Annual % Change	Average Price
Aug-16	0.7	1.0	5.6	206,145
Sep-16	0.2	1.1	5.3	206,015
Oct-16	0.0	1.2	4.6	205,904
Nov-16	0.1	0.9	4.4	204,947
Dec-16	0.5	0.6	4.5	205,898
Jan-17	0.1	0.5	4.3	205,240
Feb-17	0.5	0.8	4.5	205,846
Mar-17	-0.1	0.8	3.5	207,308
Apr-17	-0.4	0.6	2.6	207,699
May-17	0.0	0.1	2.1	208,711
Jun-17	0.9	0.0	3.1	211,301
Jul-17	0.2	0.4	2.9	211,671
Aug-17	0.0	0.9	2.1	210,495
Sep-17	0.4	0.9	2.3	210,801
Oct-17	0.2	0.8	2.5	211,085
Nov-17	0.1	0.6	2.5	209,988
Dec-17	0.5	0.7	2.6	211,156
Jan-18	0.7	0.9	3.2	211,756
Feb-18	-0.4	1.0	2.2	210,402
Mar-18	-0.2	0.8	2.1	211,625
Apr-18	0.2	0.2	2.6	213,000
May-18	-0.2	-0.2	2.4	213,618
Jun-18	0.5	-0.1	2.0	215,444
Jul-18	0.7	0.4	2.5	217,010
Aug-18	-0.5	0.7	2.0	214,745

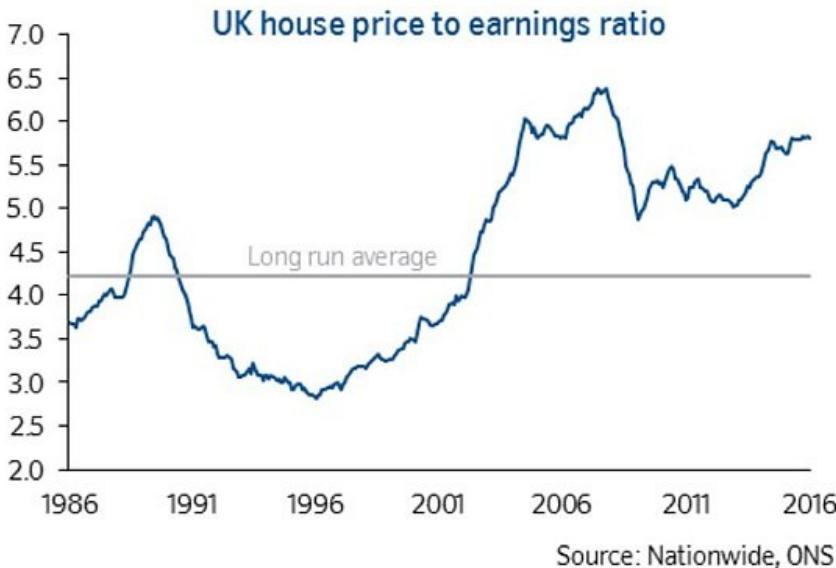
Source: Nationwide

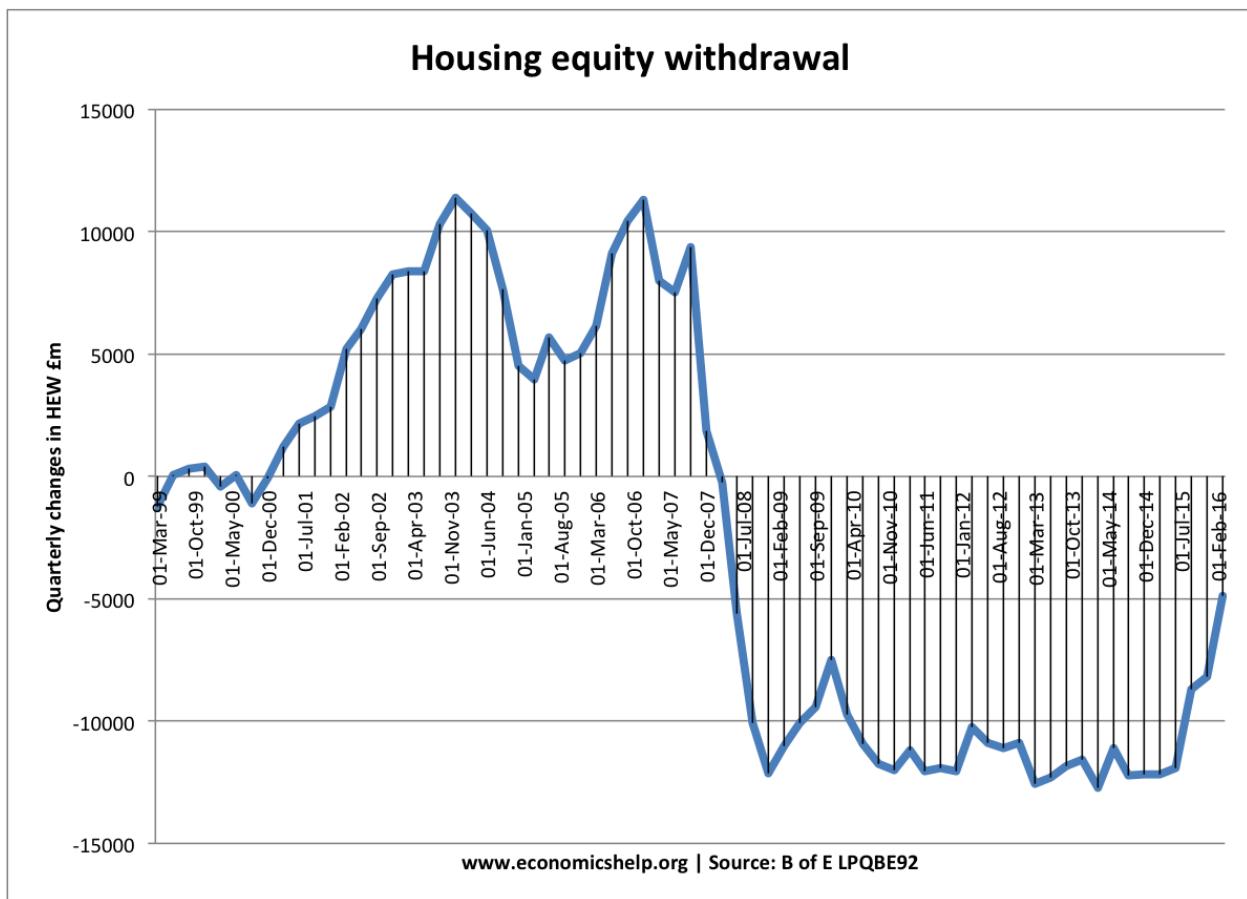


As the graph above shows, UK house prices have increased in most years. Why is there a forecast for UK house prices to fall?

Why might this forecast prove to be incorrect?

- (3) Study the data on Affordability, the UK house price/earnings ratio. Note that this chart shows the ratio of house prices to average earnings. Comment on trends in affordability, and how these trends might have affected first time buyers. If house prices fall more than earnings, how will the ratio be affected?





**Mortgage equity withdrawal (MEW)** – new borrowing secured on dwellings that is not invested in the housing market (e.g. not used for house purchase or home improvements) – **before the financial crisis**

(a) 2003: 27 million households, of which 67% are homeowners. Calculate number of homeowner households.

(b) Add up approx. total housing equity withdrawal in 2003 from graph above

(c) Divide total housing equity withdrawal 2003 by number of home-owning householders to find average per household.

(d) Comment on your findings: Did housing equity withdrawal have a significant impact on consumption during the boom years such as 2003?

- (e) From 2008 onwards, the housing equity withdrawal figures are shown as negative numbers.  
 What do you think this might mean?

### Multi-choice and short answer questions on consumption

**(1)** The average price of a house in the UK rose from £172,127 in September 2013 to £188,374 in September 2014. Taking September 2013 as the base year, calculate the value of the index number for September 2014.

**(2)** The table shows the house price index in different towns and cities in the UK.

City	House price Index 2014 [Nationwide]*	Average house price [£], 2014
Manchester	119	209,196
London	204	458,000
Belfast	116	188,240
Aberdeen	181	269,948
Bristol	135	241,922

\*Base Year= 2008= 100

Which city had the highest average house price in 2008?

- A. Aberdeen
- B. London
- C. Bristol
- D. Manchester

**(3)** The average price level rose by 13.6% from 2010 to 2014. The index of annual nominal earnings over this period rose from 100 in 2010 to 106 in 2014. From this data, we can infer that over this period:

- A. Real wages increased by 7.6%
- B. Nominal wages rose by 13.6%
- C. There was disinflation
- D. Real earnings fell over the time period

**(4)** The average weekly wage for employees, including bonus payments, rose by 1.7% comparing January to March 2014 with the same period a year earlier. If average weekly wages including bonus were £474 in March 2014, what were average wages in March 2013?

- A. £466
- B. £476
- C. £474
- D. £482



Anderton: unit 24

P Smith, p145-147, Consumption

Economic Review, Feb 2014, 'What is the relationship between consumption and income?'

Economics Today March 2010 volume 17, number 4, The Savings Ratio.

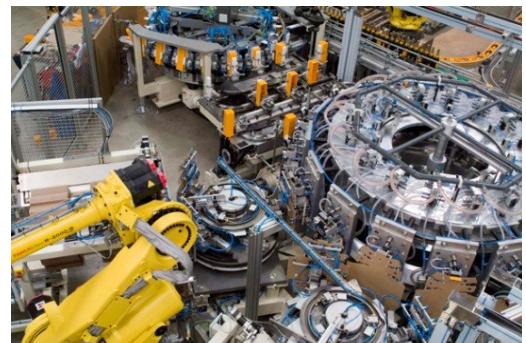
Economics Today, March 2011, Volume 18, No. 4, Does it matter if UK households no longer save?

# Investment (I)

## (a) Distinction between gross and net investment

## (b) Influences on investment:

- o the rate of economic growth
- o business expectations and confidence
- o Keynes and ‘animal spirits’
- o demand for exports
- o interest rates
- o access to credit
- o the influence of government and regulations



**Investment:** the addition to the capital stock of the economy, e.g. factories, machines, offices, stocks of materials used to produce other goods and services.

**Depreciation or capital consumption:** the value of the capital stock used up (i.e. lost to ‘wear & tear’) over time.

**Gross investment:** investment before accounting for depreciation i.e. total

**Net investment:** accounts for the depreciation of capital, i.e. gross investment minus value of depreciation. For the UK in recent years, depreciation has accounted for three quarters of gross investment.

NB: Investment made by the government is politically determined. The analysis here concerns private sector investment.

## Factors affecting private sector investment

### a) Interest rates

**Interest rate:** the price of money, i.e. cost to borrowers & reward to savers

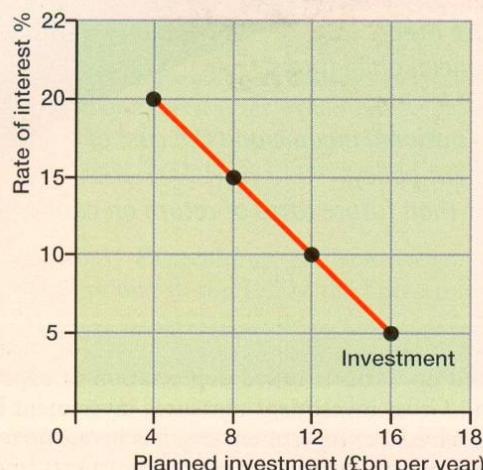
At any time, there are many possible investment projects in an economy, offering different rates of return. Firms will only invest if return exceeds rate of interest because of:

- **Cost of borrowing** for investment
- **Opportunity cost** of using **retained profit** for investment

Therefore **downward sloping planned investment schedule**. i.e. if interest rates high then investment low.

**Figure 1 The planned investment schedule**

A fall in the rate of interest will make more investment projects profitable.  
Planned investment will rise if the rate of interest falls.



Explain the relationship between I and rate of interest:

## Other factors

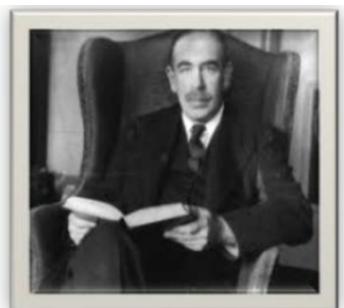
Explain how each of the following might affect investment:

b) **The rate of economic growth:** the economy starts to recover after a recession

c) **Business expectations and confidence:** Business leaders feel more confident about future demand, output, prices/costs and profit.

d) **John Maynard Keynes and 'animal spirits'**

- Keynes used the term 'animal spirits'.
- **Animal spirits** refers to a mix of **confidence, trust, mood and expectations**
- Animal spirits can **fluctuate** very quickly as populations of people change their thinking
- When **animal spirits are strong**, entrepreneurs are **optimistic**, encouraged by rising demand, they are ready to take **risks**, and so **investment is high**
- When **animal spirits are weak**, individuals **save** more, businesses save more too and, because demand and profits are lower than expected, they cut back on production and perhaps postpone or **cancel capital investment projects**.
- Higher savings and reduced investment both have the effect of reducing demand and incomes in the circular flow causing an economic contraction – the 'paradox of thrift'
- These changes in consumer and business sentiment make **AD volatile**



John Maynard Keynes was born in 1883. He was educated at Eton College and at Cambridge University - where he later taught. He died in 1946

e) **Demand for exports:** If demand for UK exports is low or falling, due to low economic growth/recession in the UK's important European export markets, UK investment will fall

f) **Access to credit:** Availability of finance is very limited, i.e. banks are reluctant to lend to businesses

g) **The influence of government and regulation:**

**Corporation tax:** A tax on company profits

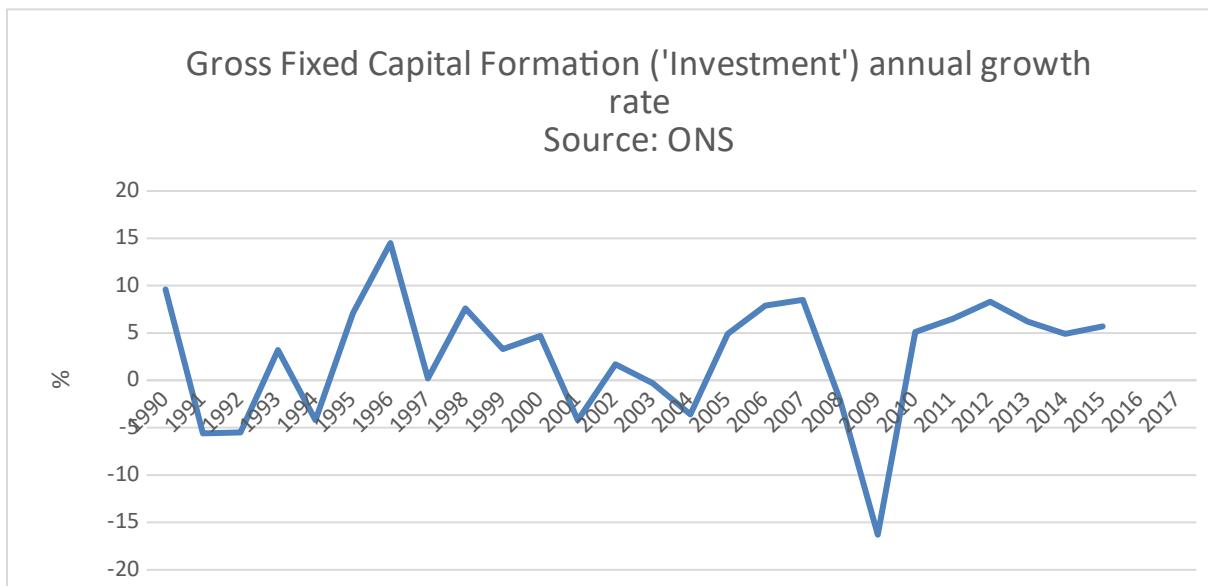
- Government cut rate of corporation tax from 28% to 19%
- Government offers increased subsidies for investment

- Government cuts regulations, i.e. reduces number/complexity of rules businesses must follow e.g. easier to get planning permission for new business premises

<b>Year</b>	<b>UK main corporation tax rate (%)</b>
<b>2010</b>	<b>28</b>
<b>2011</b>	<b>26</b>
<b>2012</b>	<b>24</b>
<b>2013</b>	<b>23</b>
<b>2014</b>	<b>21</b>
<b>2015</b>	<b>20</b>
<b>2016</b>	<b>20</b>
<b>2017</b>	<b>19</b>

Comment:

## Recent trends in UK investment



Referring to the data above, comment on trends in investment from 2002 to 2015

## Extract A

Business investment in the UK continued to stagnate in the year since the EU referendum, according to official figures published on Thursday. The level of business investment in the second quarter of this year was £43.8bn, adjusted for inflation — virtually the same as the three months before last year's EU referendum.

Businesses' capital spending had steadily increased between 2009 and the end of 2015, but has been relatively flat since the third quarter of 2015. The latest figures provide evidence for the argument that Brexit-related uncertainty has led businesses to delay spending decisions.

Earlier this month, Mark Carney, governor of the Bank of England, warned that persistent uncertainty over the UK's future relationship with the EU was holding back business investment. The central bank governor said the unpredictable nature of Brexit was weighing on supply and demand, with some companies already delaying decisions about entering new markets. The BoE now expects investment in the UK economy to be 20 percentage points lower in 2020 than it had forecast before last year's EU referendum (FT August 2017)

## Extract B

With Britain's exit from the European Union due in less than a year and the shape of their future relationship still uncertain, business investment dropped 0.2 percent quarter-on-quarter, its worst performance since mid-2015, the ONS said. BoE Governor Mark Carney has said business investment would normally be growing much more strongly as the world economy prospers and was being held back by uncertainty about Brexit. (Reuters May 2018)

**Question:** Explain why UK businesses might be delaying new investment projects



### Possible exam questions

- Explain how a change in interest rates might affect the level of investment.
- Explain factors affecting investment.

## **Multi-choice questions on investment**

**(1)**

Which one of the following is most likely to lead to a fall in aggregate investment?

- A A reduction in the level of unemployment
- B An increase in spare capacity in the economy
- C A reduction in the average level of interest rates
- D An increase in aggregate demand

**(2)**

Which one of the following is most likely to reduce the level of investment in a particular economy? A fall in

- A the value of a country's currency on the foreign exchange market.
- B aggregate demand in the economy.
- C the level of unemployment.
- D the spare capacity of the economy.

**(3)**

In Greece, total investment as a percentage of GDP fell between 2008 and 2012.

Investment is best defined as

- A the flow of money into the stock of savings from firms
- B spending on capital goods by firms and government
- C the profit retained by firms to finance future expansion
- D an increase in wages paid by firms to employees



Anderton: unit 25  
P Smith, p148-149, Investment  
Economics Today, September 2012, p22-26