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Regular Features

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What are the Implications for the UK Economy of a Cut in Interest Rates?

Tom Allen of Eton College, considers how monetary policy can impact on the economy and indicates the relevance of the credit crunch.



Exam Board	AS	Unit	A2	Unit
AQA	✓	2 (3.2.4)		
Edexcel	✓	2 (2.3.8)		
OCR	✓	F582		
WEJC	✓	2(C)		
CCEA	✓	2		
Int. Bacc.		Standard 3.4		

Introduction

This article examines the role of interest rates in affecting both the demand and supply sides of the UK economy, as well as their influence on asset prices. The article concludes with evidence based on the UK economy over the past decade and a quick examination of how ‘the credit crunch’ has disrupted the usual workings of interest rates.

Monetary policy

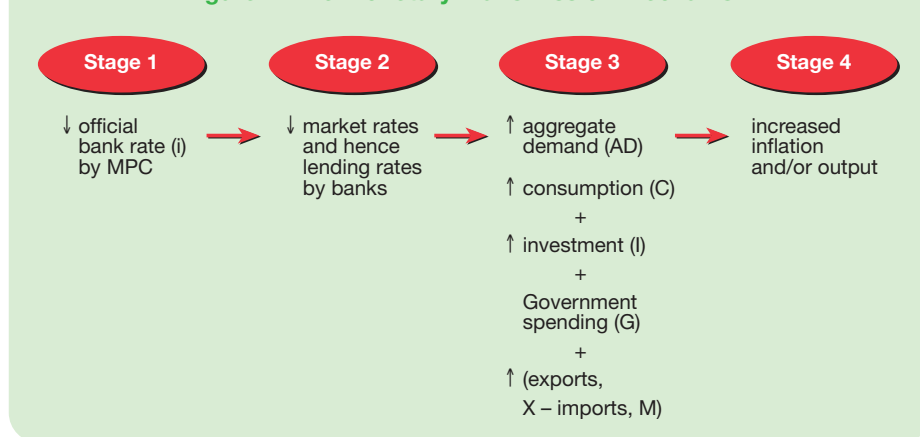
Interest rates are one of the three instruments of **monetary policy**; the other two being the money supply and the exchange rate. Each has been used by UK governments at some stage over the past thirty years in an attempt to keep **inflation** under control. But since 1992 it has been the manipulation of the ‘base’ or ‘Bank’ interest rate, firstly by the Chancellor of the Exchequer, and from 1997 by the Bank of England’s Monetary Policy Committee (MPC), that has been the primary method by which the authorities have attempted to influence UK inflation.

Economists define the rate of interest as “the price of borrowed money”. Few individuals will go throughout life without borrowing: whether it be when taking out a student loan, when purchasing a property, or when buying a car or setting up a business. Naturally, the lender requires a rate of return in exchange for its loan, and this rate of interest varies with the degree of risk associated with that loan. If there is a reasonably high chance of default (for example, on money borrowed on credit cards) then the rate charged will be high – perhaps 20% per annum; if default is less likely and the loan is backed by collateral (for example, on a mortgage, where the lender can repossess the property if the borrower defaults), then the rate charged will be lower. Thus we see a wide range of ‘market’ interest rates on borrowed money in operation in the UK today, from mortgage rates from banks and building societies of just above 5% p.a. to rates on store cards of up to 30% p.a.

The Bank Rate and aggregate demand

But underpinning all of these rates is the single Bank Rate, set monthly by the Monetary Policy Committee. The role of the MPC is to achieve price stability, defined by the Chancellor as “2% as measured by the twelve-month increase in the Consumer Prices Index (CPI)”. A

Figure 1: The Monetary Transmission Mechanism



change in the Bank Rate will gradually feed through to other areas of the economy via a process called the monetary transmission mechanism (MTM), which is outlined in Figure 1 and shows a separation of the MTM into four stages.

► Stage 1

Assume that the MPC anticipates that CPI inflation is heading *below* its 2% target. The 9-person committee votes by simple majority to cut the Bank Rate.

► Stage 2

Commercial banks such as Lloyds TSB, NatWest and Barclays are directly affected by this change as they themselves borrow money at Bank Rate from the Bank of England. A cut in Bank Rate means that, to maintain the same level of profit, they will (often reluctantly) lower their market rates, which are the rates at which they lend money to their customers.

► Stage 3

Lowering market rates will, *ceteris paribus*:

Increase consumer expenditure (C)

Households with variable rate mortgages will benefit from reduced monthly mortgage repayments, leaving them more income for everyday, discretionary spending. They will also be less inclined to save, since a lower interest return can now be gained from savings institutions, and will be more inclined to increase their borrowing (and spending) as such debt will be less expensive to ‘service’ each month.

Increase investment (I)

Most firms borrow to invest. Reduced interest rates increase the quantity of investment projects that will pass the

‘investment test’, i.e. those that can generate a return that is acceptably higher than the interest rate at which the money was borrowed. For those companies seeking to invest which are cash-rich, a lower interest rate might also encourage investment, since that money would now earn a reduced return as savings. The opportunity cost of such investment has thus fallen.

Increase net exports (X-M)

A fall in UK interest rates will make the UK a less attractive haven for international funds. UK government bonds, for example, might now offer a lower yield than their foreign counterparts, and so **hot money** flows out of the UK. In selling UK-based financial assets such as bonds and shares, sterling will be sold on the foreign exchange markets, driving down the UK exchange rate. A weaker pound makes UK exports cheaper abroad and foreign imports into the UK more expensive. This eventually raises the value of export sales and decreases that of import sales, thus improving the UK’s trade position.

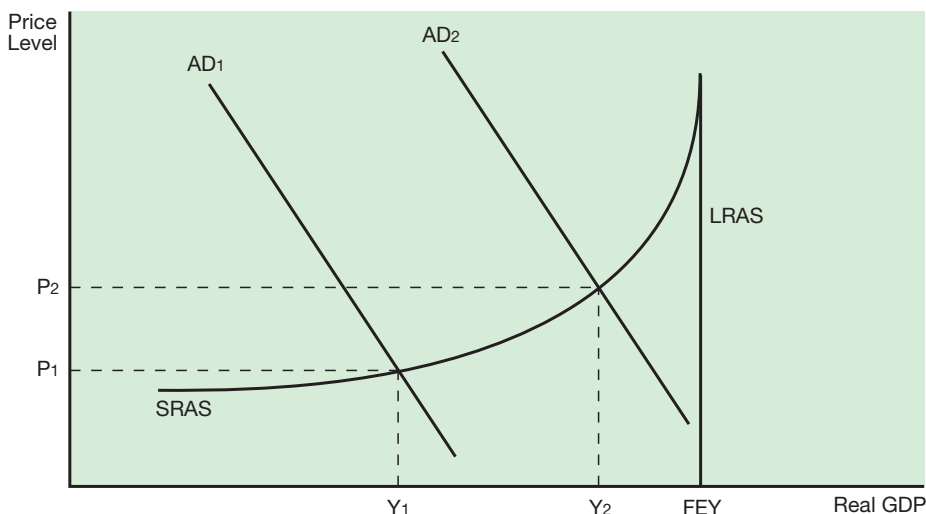
Thus it can be seen that cutting UK base rates will boost UK aggregate demand (AD), where $AD = C + I + G + (X - M)$ and represents the total value of spending on the domestic economy in a given time period.

► Stage 4

The final impact can be seen on output and price levels. This increased spending on UK goods and services is shown in Figure 2 by the shift of AD_1 to AD_2 . This should encourage firms to expand supply in response. The net result is economic growth, as shown by an increase in real GDP from Y_1 to Y_2 . Figure 2 also shows an increase in the UK’s general price level from P_1 to P_2 , resulting from this increase in aggregate



Figure 2: A shift in aggregate demand



demand. As UK output approaches its **full employment** level (FEY), factors of production become scarcer and hence more expensive. To maintain profit levels firms will be forced to raise their prices, resulting in demand-pull inflation. This effect tends to become more pronounced the nearer the economy's output level is to FEY.

The monetary transmission mechanism is generally thought to take between 12 and 24 months to reach completion because economic agents are sometimes slow to react to rate changes. For example, households might be slow to adjust habitual saving patterns or because some households might be unaffected by the rate changes if they are currently borrowing on a fixed-rate contract. In the case of economic agents outside the household, i.e. firms, they may have an export contract stipulated at the old exchange rate. Finally, the multiplier effect of these altered spending patterns takes time to unwind. That is why the MPC, when setting rates today, attempts to anticipate CPI inflation *two years down the line*, knowing that today's rate

decision will only fully impact upon output and prices at that time.

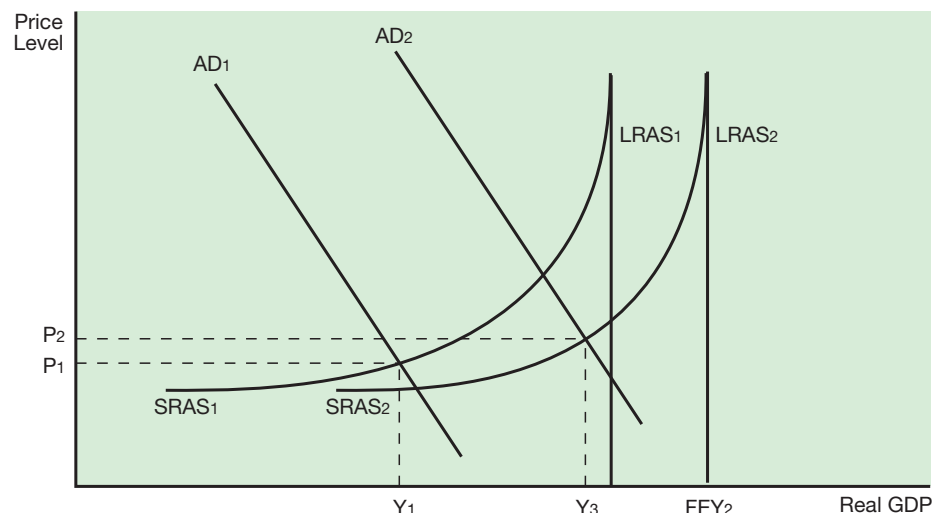
Interest rates and asset prices

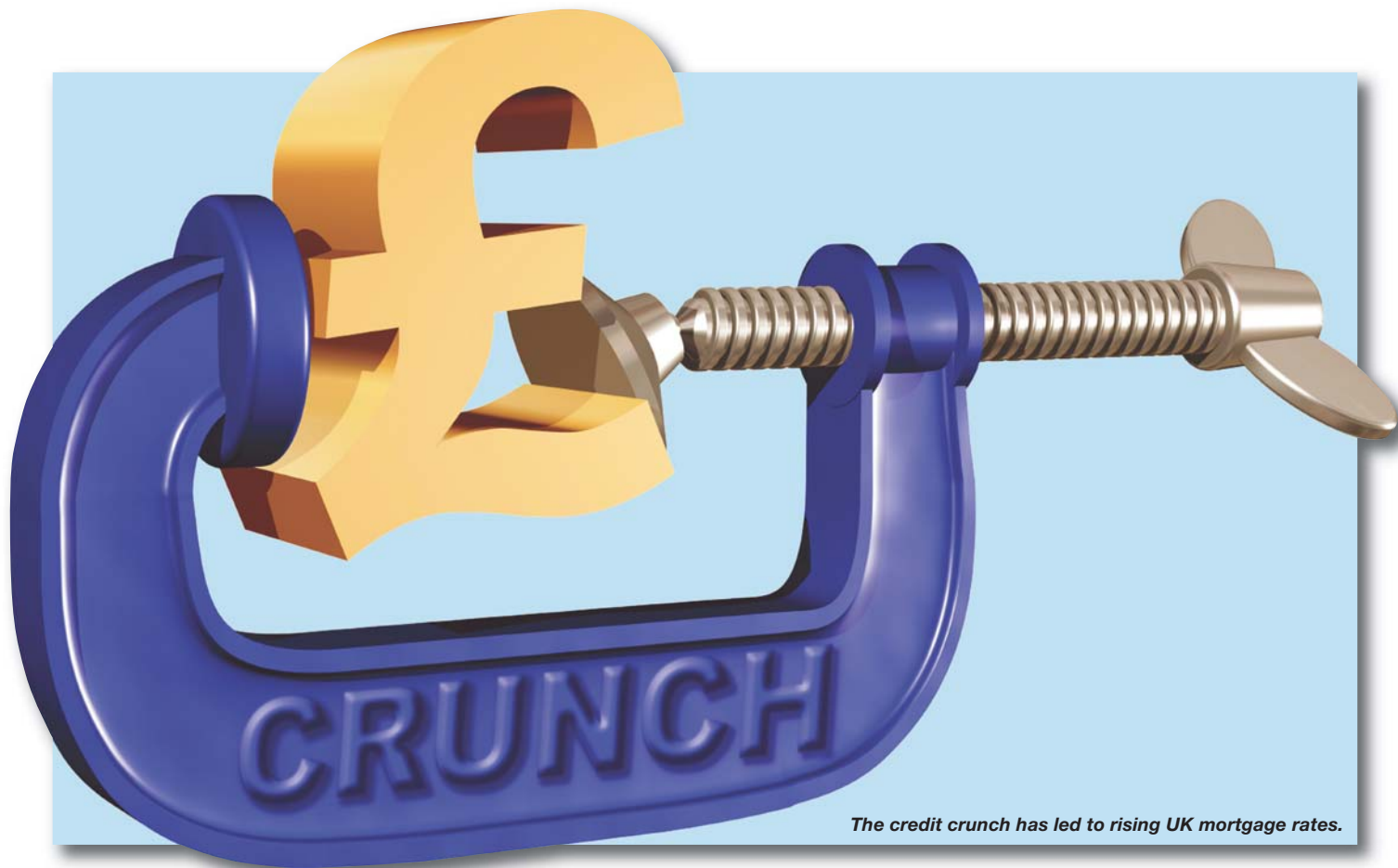
Interest rate changes have a powerful *direct* effect on aggregate demand, via the MTM, but they can also result in an *indirect* or 'second round' effect on an economy's spending levels through their impact on **asset prices**. An asset is a possession and a UK household's most

valuable assets are likely to be property and shares (perhaps in the form of a pension fund), both of which should benefit from lower interest rates. In the case of shares, a cut in UK interest rates often results in rising share prices for two reasons. Firstly, firms are likely to receive more demand for their products as consumption rises. Secondly, firms will be paying less interest on borrowed money, thus reducing their costs. Both effects help to boost profitability, which should translate through to a higher share price. Property prices are also likely to rise following a cut in interest rates. More first-time buyers will now be able to afford monthly interest repayments on a mortgage, and existing property owners might seek to trade up or buy further property. This increases the demand for, and hence price of property.

The increase in asset prices generates a 'wealth' effect: households feel (and indeed are) richer and so are more inclined to spend. Those households possessing appreciated shares can use some of the **capital gain** to fund everyday expenditure; those households enjoying an increase in the value of their property can access this gain through a process known as mortgage equity withdrawal (MEW), where they borrow further from their bank by increasing their mortgage, using the (now more valuable) property as collateral. Indeed, this mortgage equity withdrawal has been a driving force behind strong UK consumption in the past decade as interest rates have fallen well below their long run average. MEW has ranged between £36bn to £56bn in each of the past 5 years, representing a colossal 3-5% of UK GDP per annum! The UK economy will experience a significant

Figure 3: A shift in aggregate supply



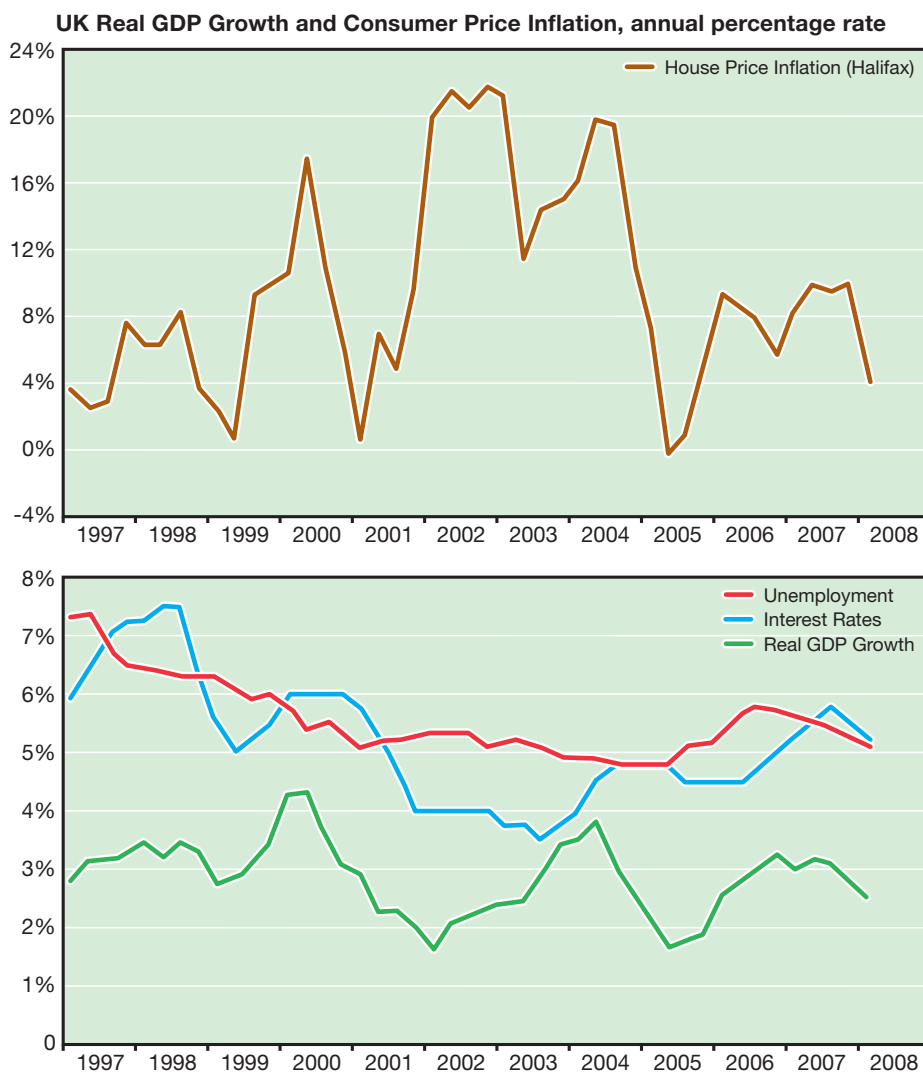


chill if stagnant or falling property prices force MEW to dry up, as occurred during the last housing slowdown in the early-to-mid 1990s.

Interest rates and the supply side

Interest rates are rightly seen as a major influence on AD, but their effect on an economy's aggregate supply level can also be profound, if taking a little longer to reach fruition. A climate of low and stable interest rates is a prerequisite for a growth in spending on capital investment. When firms know that they can borrow cheaply and will not be subject to interest rate volatility, they become far more likely to undertake new capital projects such as the construction of a factory or plant, or the purchase of new transport or machinery. These reduced interest rate payments lower firms' unit costs, shifting the short run aggregate supply curve from $SRAS_1$ to $SRAS_2$ in Figure 3. The increased stock of capital within the economy shifts the long run aggregate supply curve from $LRAS_1$ to $LRAS_2$, increasing the economy's productive capacity to FEY_2 . Now an increase in aggregate demand from AD_1 to AD_2 can be satisfied by this increase in supply, increasing growth further (Y_1 to Y_3), without the inflationary pressures seen earlier in Figure 2.

Figure 4: House prices, interest rates, growth and jobs



Source: Reuters Eco/Win

UK evidence

One would expect, *ceteris paribus*, a cut in interest rates to:

- Boost house price inflation
- Boost economic growth
- Reduce unemployment

So we can see how the latter three variables are influenced in the real world by lower interest rates. Figure 4 plots all four of these variables for the UK from 1997. There is strong evidence of the expected inverse relationship between the base rate and house price inflation: falling base rates in 1998-9 and again in 2000-2003 were soon followed by strong house price inflation. At first glance, one could argue that the relationship between the base rate and the rate of economic growth appears to be direct, rather than inverse, as expected. But a case could be made for an inverse relationship with a *one year lag*, for example falling base rates from 2001-3 were followed by rising economic growth from 2002-4. The link between base rates and unemployment is also far from clear. Labour ministers would probably claim that successful supply-side policies such as increased labour market flexibility and the New Deal training programme have maintained low unemployment even as interest rates have risen.

The credit crunch

This aptly-named phenomenon has, probably temporarily, resulted in a breakdown – principally between Stages 1 and 2 – in the monetary transmission mechanism outlined in Figure 1. See the discussion on the credit crunch in Stephen Romer's article under the 'Current Topics in Economics' heading elsewhere in this issue of *Economics Today*. House prices in the USA fell for much of 2007 and 2008, and many households holding 'sub-prime' mortgages came to the end of low, fixed rate 'teaser' contracts, resulting in major defaults and a wave of repossessions or 'foreclosures'. The banks and financial institutions which had supplied the mortgages, or which had bought them from the initial mortgage supplier (including many UK and European banks), found themselves nursing heavy losses and short of cash. In consequence, they have been hoarding their remaining cash and have been unwilling to lend out new money, either to other banks or to households seeking new mortgages. As such, credit (borrowed

money) has been harder to come by (the 'crunch'), and has become more expensive. So we have seen the unusual situation of rising UK mortgage rates in a period where the official Bank Rate has been cut. Once confidence in the banking sector has been restored, it is likely that the market for credit will loosen, and banks will again lend more freely, but they will be more cautious in their lending and the UK economy will become less interest rate sensitive than it has been in the past decade.

Questions for discussion

1. What other factors, apart from interest rates, influence a household's level of consumption?
2. How sensitive is, (i) your spending, (ii) your parents' spending, to a change in interest rates? Why might there be a difference?
3. Why did the US Federal Reserve rapidly cut American interest rates following 9/11?
4. Why do UK exporters often benefit from a cut in UK interest rates?

Summary of key points

- ▶ The UK Bank Rate is set by the Monetary Policy Committee and is the main instrument of current monetary policy.
- ▶ Changes in the UK Bank Rate have a powerful influence on aggregate demand, both directly, and through its effect on asset prices.
- ▶ Interest rate changes also have supply-side implications, but this can take longer to materialise.
- ▶ The credit crunch has reduced the power of the UK government to stimulate the economy by cutting Bank Rate.



with Chief Examiner,
Robert Nutter

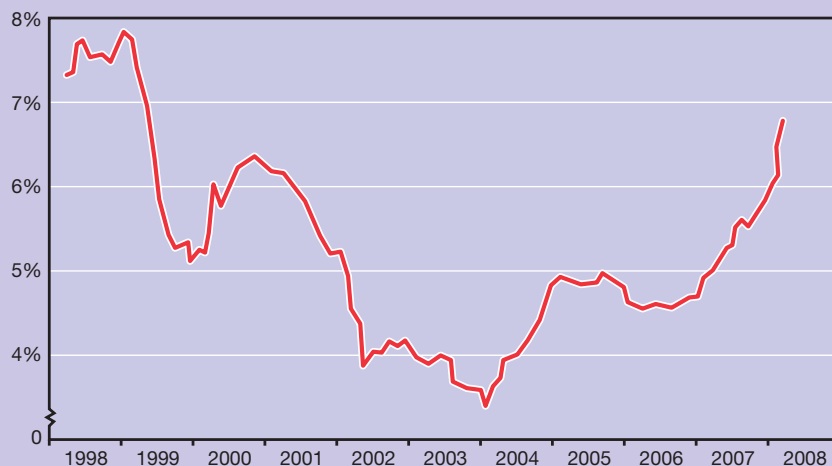
1. Investigate the monetary policy of the European Central Bank and the Federal Reserve Bank.

<http://ecb.int> www.federalreserve.gov

2. Investigate the importance of interest rate elasticity for the Monetary Policy Transmission Mechanism in the UK.

3. Research the London Interbank Offered Rate (LIBOR) and examine the reasons why it has been so high in recent months.

<http://investopedia.com> <http://bba.org.uk>



Source: www.investorintelligence.com

Why does the Supply Curve slope Upwards?



Rachel Cole, teacher at Cheltenham Ladies' College and a Principal Examiner, considers a key concept in microeconomics.



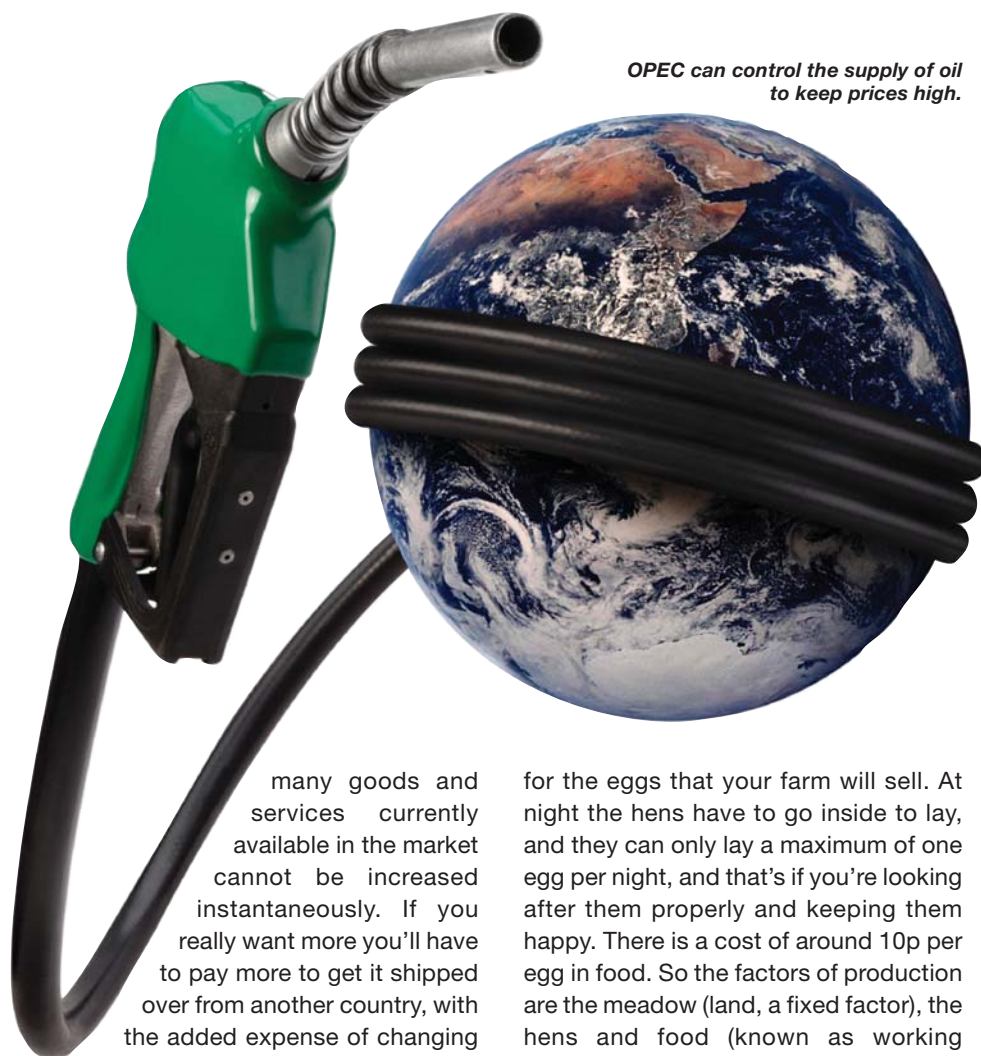
Even if you have only had a week or two of economics lessons you will probably know by now that a demand curve slopes downwards and a supply curve slopes upwards. The demand side seems pretty obvious. If you can get something cheaper then you will want to buy more. Or as the economist would put it, there are diminishing returns as you consume more of something, and so at higher quantities the amount you're prepared to pay for another goes down. But for supply it doesn't seem so obvious. Of course firms would like to make as much money as possible, but why do they only want to supply more when prices are higher? Surely it's cheaper to supply more per unit, and don't firms offer discounts to people who want to buy more? So here is the point of this article – why do most supply curves in textbooks slope upwards?

Before we look at the standard response to this question, let's just use some common sense. Supply is pretty well fixed for many goods and services.

Say you want to go to a sold-out concert on Saturday and you'll pay anything for a ticket. Too bad. The concert promoters would lose their licence if they overfill the seats. Maybe if there is so much demand and people are really prepared to pay anything the promoters will decide to increase supply by offering one more night. But this is with reluctance (the band will lose their day off, perhaps) and it will only happen if prices people are prepared to pay are high enough.

So why is it that costs rise when you produce more? It's true that this is only a short run phenomenon because clearly if the concert promoter knew in advance that you could sell more nights of the concert it probably would be cheaper per night to book two. The whole reason for the shape of the supply curve is based on the fact that some factors are fixed and you can't increase output without incurring extra costs.

Costs of supply tend to go up because some factors of production are restricted in supply in the short run. The amount of



OPEC can control the supply of oil to keep prices high.

many goods and services currently available in the market cannot be increased instantaneously. If you really want more you'll have to pay more to get it shipped over from another country, with the added expense of changing currencies and tariffs if sourced from outside the EU. Or it may mean that people have to work overtime, for which workers will expect higher pay. While this is not true for many mass-produced, processed and storable items, it is true for many other things that we want to buy. Look at eBay and see prices go up as demand rises. If there's more than one person aiming to buy a unique item then prices rise. But if there are many items very similar for sale on eBay then there doesn't seem to be a bidding war, and you can just 'buy it now' for a reasonable price.

So one way to explain why supply curves usually slope upwards is that as the price of the product rises producers will find it more profitable to offer goods and services for sale, *given their existing productive capacity*. This is because any increase in costs incurred by increasing output will be covered by the higher price.

The Law of Diminishing Returns

The key to explaining this is the *law of diminishing returns*, which can also be expressed as the law of increasing costs. For example, imagine you have a farm with some hens in a meadow. Now let's say you want to draw the supply curve

for the eggs that your farm will sell. At night the hens have to go inside to lay, and they can only lay a maximum of one egg per night, and that's if you're looking after them properly and keeping them happy. There is a cost of around 10p per egg in food. So the factors of production are the meadow (land, a fixed factor), the hens and food (known as working capital, variable factors) and the hen house (capital, probably a fixed factor). So what happens as prices rise? You are likely to want to buy some more hens, currently at around £12 each. You bring the hens to your meadow and give them some extra food. Now the market for food is so competitive that even if you have thousands of chickens the price of the chicken food won't change much. So why will costs start to rise as you try to produce more eggs?

The answer lies in the fact that the meadow is a fixed factor. As you try to get more and more hens into one meadow they will find it harder to get good pecking spots, and eventually you'll get to the point where you cannot get any more eggs out of the farm even if you buy more hens. The hens that are there will stop laying even if the newcomers will lay. The number of eggs you can get reaches a ceiling, and total output of eggs will not rise even though your input rises. This is a law of economics, in the sense that logically it must be true: if you keep adding more and more of a variable factor to a fixed factor then the *increase in output* will eventually fall. We call this the law of diminishing returns. You can express exactly the same law in a different way:

as more of a variable factor is applied to a fixed factor, the cost of producing an extra unit of output will rise. The cost of producing an extra output is called the **marginal cost** and so the rule says that 'marginal costs will eventually always rise'.

So if supply curves were the same things as marginal costs curves, the answer is simple. Higher prices mean higher marginal costs so firms will only supply more or new firms will only enter the market as prices rise. Prices have to cover costs so if costs are rising then supply only increases if prices rise too. But of course life is more complicated. It can be true that supply curves are equal to marginal cost curves, as long as the firm is covering its average variable costs, but this only happens in a market structure known as **perfect competition**. In the real world firms and consumers have **market power**, when a firm or consumer can have some control over price, because they can control quantity supplied.

Market power

A firm with monopoly power can restrict supply and thereby charge a lot more for it. Designer brands are a clear example of this. Firms making perfume could probably sell a lot more if prices were lower, but this would mean a fall in their enormous profit margins. Perfume has a low **price elasticity**, which means that if prices fall total revenue falls. It is in the interest of firms to make as much profit as possible. Another law of economics (that is, something which is true by definition) is that if demand has price elasticity below one then the firm will make more money if it raises the price. In the scenario above where markets are perfectly competitive then they can't raise price. If they did then other firms would simply undercut them and sales would fall to zero. But if a firm has any market power at all then it can raise price without losing all of its market. When price elasticity of demand is inelastic the firm makes more money by supplying less at a higher price. Lower supply at a higher price? Sounds like the supply curve is downwards sloping in some cases. So if there is a degree of market or monopoly power, it seems that the supply curve is not always upward sloping. It's very difficult, however, to draw a supply curve in situations like this, because clearly the supply depends on the price elasticity of demand. And because it's not easy to draw you won't

often see this type of supply curve in a textbook. But certainly most supply curves do have some degree of uncertainty about them for the reason that demand is not perfectly elastic, which is why there is the great mystery of why supply curves are always drawn going upwards is a little simplistic.

Another good example to think of is OPEC, the Organisation of Petroleum Exporting Countries, and the way in which it works to keep the price of oil high. It has low oil production costs (less than \$5 a barrel) and has the most spare capacity of all the oil producer outlets. It sells 40% of the world's daily oil supply, and when it has political reasons to take a swipe at its Western buyers of oil it can restrict its supply. The effect of course, owing to price inelastic demand for oil, is that prices zoom up. Why then don't other suppliers enter the market to take advantage of the higher prices? It may be that there just aren't stocks of oil available in other countries, or maybe other countries just enjoy the price hikes because their own income rises. Firms are much happier supplying when prices are high, and certainly don't want to destroy that equilibrium by starting a price war. This enters the field of game theory which you might look at when you study oligopoly at A2 level.

Backward bending supply curves

To make matters even more extreme it also seems that some supply curves are not only impossible to draw owing to market power, but also that some which can be drawn are shown as backward bending. So while the economist happily draws an upward slope it gets to the point as prices rise where the supplier starts to supply less. This happens when the laws governing economics start to break down – you might start to wonder whether they are really best called laws. Let's imagine a situation where supply is fairly inelastic, that is, you can't increase supply easily and price will have to increase a good deal to encourage firms to supply more. Now add to this a so-called 'income effect' meaning that the amount that is supplied depends on the suppliers' real income and the choice between work and leisure. So let's say you are trying to earn a bit of extra money working at the weekends in a restaurant. The wages are notoriously low but you work hard hoping to get some tips, but unfortunately you have to share these with the kitchen staff and the

boss. Now the manager is keen for you to do some extra hours. You're not very keen because it's going to compromise your studies. So the manager says you can keep all the tips. Do you offer to work more hours? Maybe, but maybe the extra pay inducement will keep you on your current hours, and maybe even cut them and still have more than you had before. Seems a bad decision by the manager, but that's how tough it can be for firms when the supply of labour is price inelastic. A pay rise can in some rare cases make people less keen to supply, making the top part of an inelastic supply curve bend backwards to the left. Or in normal English, part of the supply curve is downward sloping.

Back in class your teacher reminds you that supply curves are upwards sloping. Just accept it, you tell yourself. Certainly this makes for easy mechanics of price determination and analysing how changes in demand and supply affect prices and output. But in reality you should always remember that there are some fundamental assumptions behind the upward sloping curve, and that the assumptions underlying it are very high price elasticity of demand and supply (perfectly competitive markets), and that at least one factor is fixed. In the long run the supply curve is quite variable!

Questions for discussion

1. Elasticities tend to rise over time. Why is this?
2. If you draw a supply curve that is very steep but crosses the vertical axis above the origin you will be able to calculate that its elasticity is above one, not price inelastic as you might expect with a steep curve. Can you explain that in common sense terminology?
3. Spare capacity is one reason why costs of production do not rise when demand rises. Does this mean that a country should always aim to have a great deal of idle resources at all times?
4. Marginal costs can begin to rise while average costs are falling. Do you think firms use marginal or average costs when choosing prices – or neither? If they use average costs are they being rational?
5. Market power appears to be the key determinant of prices and output for many goods and services. However, the power is not always on the suppliers' side. Buyers can also have market power. If the government is seen as a powerful buyer of labour in the health service, what do you think is the implication for the wages paid to nurses?

Key terms

- ▶ **Short run** – when at least one factor is fixed. This means that at least one of the factors of production, or resources used to produce all goods and services, can't be changed.
- ▶ **Long run** – all factors are variable.
- ▶ **Law of diminishing returns** – if you keep adding more and more of a variable factor to a fixed factor then the increase in output will eventually fall. It only holds true in the short run which means that at least one factor is fixed.
- ▶ **Law of increasing costs** – as more of a variable factor is applied to a fixed factor, the cost of producing an extra unit of output will rise.
- ▶ **Fixed factor** – when a firm cannot change how much it has. For example the number of A level subjects you can do is determined by the amount of time you have. In the short run it's fixed by the number of hours in the school timetable. In the long run – after you leave school, say, you can take as many extra A levels as you like as your life goes by. Or maybe your brain capacity is fixed too?
- ▶ **Factors of production**, or resources used to produce all goods and services. Economists call them land, labour, capital and enterprise.
- ▶ **Perfect competition** – a market structure where there are many buyers and sellers, none of which have any control over price.
- ▶ **Market power** – a measure of the control a buyer or seller has over price, because they can control quantity supplied.
- ▶ **Price elasticity of demand** – the responsiveness of demand to a change in price.

What Impact might China's rapid Economic Growth have on the Environment?

Ray Powell, Head of Economics, Wimbledon High School and a Chief Examiner, examines the consequences of China achieving the highest sustained growth in recent times.

Exam Board	AS	Unit	A2	Unit
AQA			✓	4 (3.4.3)
Edexcel	✓	2 (2.3.6)		
OCR			✓	F585
WEJC			✓	4(C)
CCEA			✓	4,5
Int. Bacc.		Standard 4.3		

Fifty years ago in 1958, almost all of China's economy, apart from in small regions around cities such as Shanghai on China's Pacific coast, could be classified as traditional or pre-industrial. Some of the main features of such an economy are shown in the top row of Figure 1. In 1958, China began a programme of rapid industrialisation, called the Great Leap Forward, with the hope that China's production could begin to rival that of the US economy by 1988.

But the Great Leap Forward in fact turned out to be a 'Great Leap Backward'. To begin with, industrial output increased, but largely through investment in primitive 'back-yard' smelters that produced low-grade metals that were almost unusable as construction materials or for producing good-quality finished goods. At the same time, there was a disastrous forced movement of people off the land. As a result famine occurred and millions of Chinese peasants died. And although production of manufactured goods, particularly steel, increased, the methods of production used were based on old and extremely inefficient technologies.

The collapse of the Great Leap Forward was followed by the Cultural Revolution, in which, from 1966 to 1976, the so-called 'gang of four', who had grasped control of China's communist party, suppressed all those who had

criticised the Great Leap Forward. Amongst the victims of the gang's purge were the more moderate leading communist party officials). The upheavals of the Cultural Revolution led to slower economic growth and to a decline in the capacity of China's government to deliver goods and services to the rural and urban populations.

In 1978 the end of the Cultural Revolution was followed by the beginning Reform Era which still continues today. The start of the Reform Era marked the beginning of China's rise to become a global economic power. Since embracing economic reform in 1980, the country has had the highest sustained rate of economic growth in the world. The new communist leader, Deng Xiaoping who was a committed moderniser, announced that China would open up to the world economy and develop an internal market to boost economic growth.

To understand the nature of China's recent economic growth and its impact on the environment, it is necessary to appreciate the importance of a number of factors relating to China, its population and its economy. These include China's huge size and the size also of China's population, together with the decisions of China's leaders to use markets and capitalism to deliver the fast economic growth they deem necessary to keep the communist party in power.

In terms of its geography, China is one of the world's largest countries, being almost the exact same size as the USA and smaller than only two countries, Russia and Canada. In terms of population, China is the biggest. By 2006, China's population was over 1.3 billion and growing at around 1 per cent a year (i.e. by about 13 million people a year). And in terms of the economic system that China's leaders have chosen to adopt, the embrace of under-regulated, unfettered capitalism has brought considerable disadvantages. One of these has been the growth of an underclass of impoverished labourers created by millions of people leaving farming and the countryside in a move to urban areas, where they are denied access to social services, rarely given labour contracts and paid very little. To quote Sam Geall of chinadialogue "the muscle behind China's growth is in part a large underclass of poor migrant labourers", www.chinadialogue.net.

China's recent economic growth

In its country brief on China, the World Bank describes China's economy in the following way:

Since initiating the reforms and open policy, China has achieved tremendous success. Growth of about 9.7 per cent per annum since the late 1970s has helped to lift several hundred million people out of absolute poverty.

<http://www.worldbank.org/>

In fact, China's recent economic growth record has exceeded the 9.7 per cent quoted in the World Bank country brief. As Figure 2 shows, annual growth of real GDP increased between 2004 and 2007 from just over 10 per cent to nearly 12 per cent in 2007. Figure 3 shows China's growth in 2008 (estimated by the IMF at 10 per cent), in comparison to the estimated rates of growth for 2008 in a number of other countries.

The environmental cost to China

As well as creating the new urban underclass to which I have already referred, China faces the additional problem of the environmental impact on both its population and economy of the costs of economic growth.

Figure 1: Three stages of economic growth

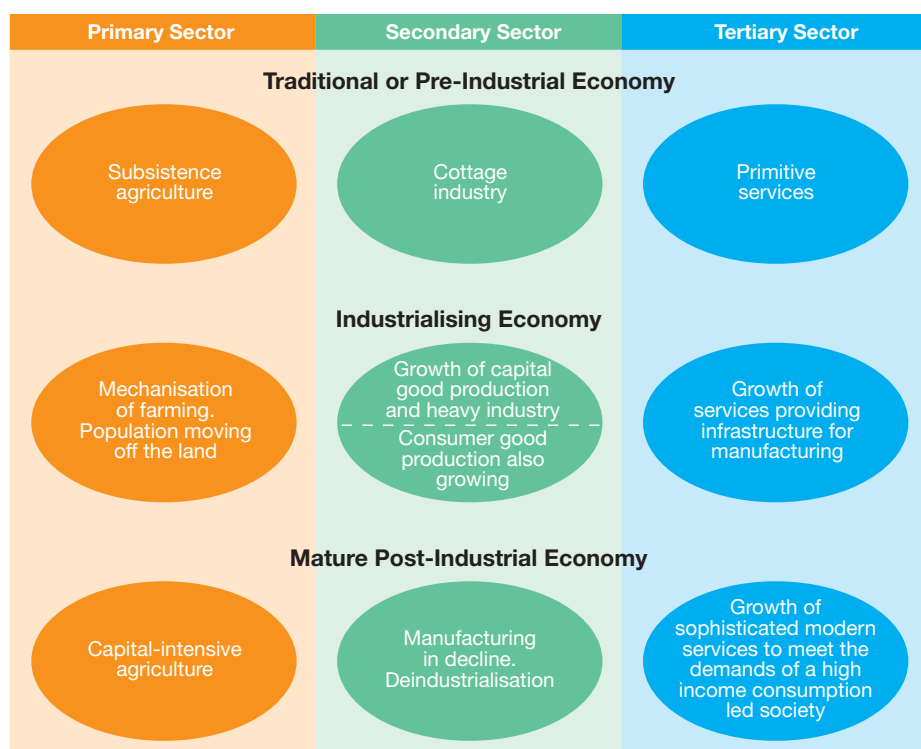


Figure 2: The rate of growth of real GDP, China 2004-2007

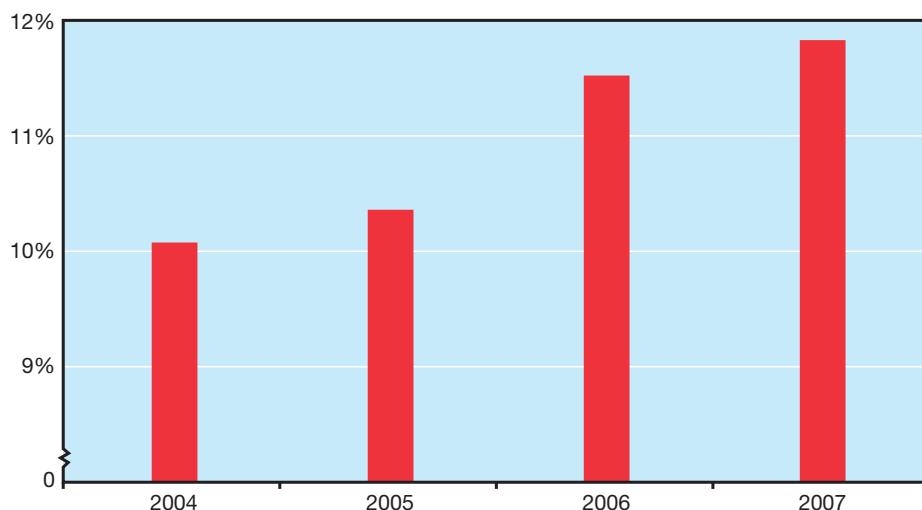
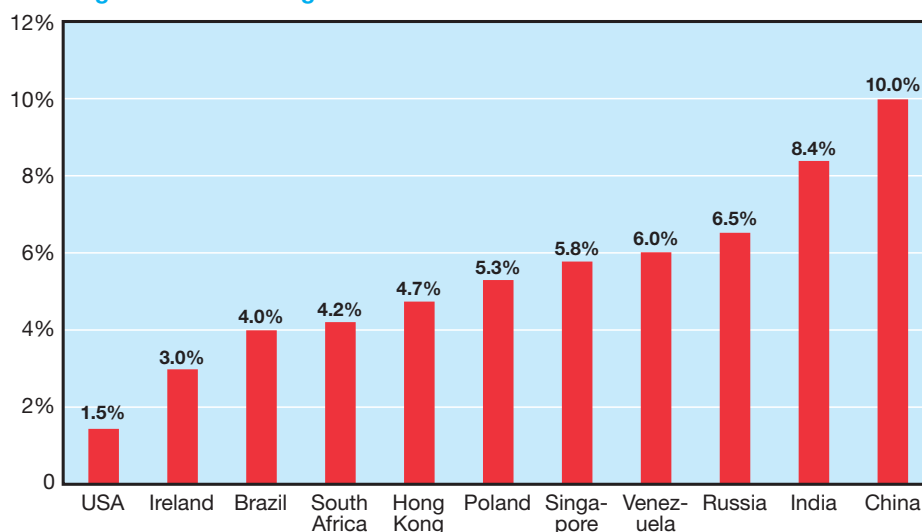


Figure 3: Real GDP growth estimates for 2008 for selected countries



"In a seismic shift for the world, China will overtake the United States as the biggest emitter of greenhouse gases this year, far earlier than thought – and present the problem of tackling climate change in even more difficult terms. The Chinese economy, which is now growing at the unprecedented rate of 11 per cent annually, is sending carbon emissions from China's mushrooming coal-fired power stations beyond those of the whole of the US, the International Energy Agency (IEA) said yesterday. Less than three years ago the Paris-based IEA forecast that China would overtake the US as the world's biggest polluter – but not before 2025. More recently it said that China would be first by 2010. Now, however, the growth of its economy (10 per cent annually for the past three years and now higher) and its underlying

power sector are such, said Fatih Birol, the IEA's chief economist, that the Chinese are expected to overtake the Americans this year.

The IEA estimates that the Chinese, who in 2006 are thought to have emitted about 5,600 million tonnes of carbon dioxide (CO₂) to the Americans' 5,900, will this year emit about 6,020 million tonnes of CO₂ to about 5,910 from the US. (Britain by contrast emits about 550 million tonnes.) It is these emissions from around the world which are causing the atmosphere to warm, with potentially disastrous consequences."¹

Two other observers have also expressed their alarm as follows:

"China is choking on its own success. China's economy is on a historic run, posting a succession of double-digit growth rates. But the growth derives, now more than at any time in the recent past, from a staggering

expansion of heavy industry and urbanisation that requires colossal inputs of energy, almost all from coal, the most readily available, and dirtiest, source.

No country in history has emerged as a major industrial power without creating a legacy of environmental damage that can take decades and big dollops of public wealth to undo.

But just as the speed and scale of China's rise as an economic power have no clear parallel in history, so its pollution problem has shattered all precedents. Environmental degradation is now so severe, with such stark domestic and international repercussions, that pollution poses not only a major long-term burden on the Chinese public but also an acute political challenge to the ruling Communist Party. And it is not clear that China can rein in its own economic juggernaut."²

Here are a few facts relating to the effect of environment deterioration on China's economy and population:

- ▶ Pollution has made cancer China's leading cause of death. Air pollution alone causes hundreds of thousands of deaths each year.
- ▶ 16 of the world's 20 most polluted cities are in China.
- ▶ Nearly 500 million people do not have access to safe drinking water.
- ▶ Only 1 per cent of the country's 560 million city dwellers breathe air considered safe by the European Union. More days than not Chinese cities are wrapped in a toxic grey shroud.
- ▶ China's coastline, rivers and lakes are swamped in summer by algal tides and all year by industrial pollutants which have killed off most forms of marine and fresh water life.
- ▶ China is the country in the world with the largest population living in low level coastal zones. Climate change, to which China's economic growth is now massively contributing, will increase the risk of flooding, as well as causing other environmental damage in coastal areas.
- ▶ Around 42 per cent of China's population, and a considerably larger proportion of China's well-off, live in the coastal Diaspora which is the part of China most vulnerable to devastation wrought by a rising sea level.
- ▶ Poorer people living inland will be

1. M. McCarthy & C. Coonan, 'The great pall of China', *The Independent*, 25 April 2008.

2. J. Kahn & J. Yardley in the *New York Times*, 26 August 2007, see <http://www.nytimes.com>.

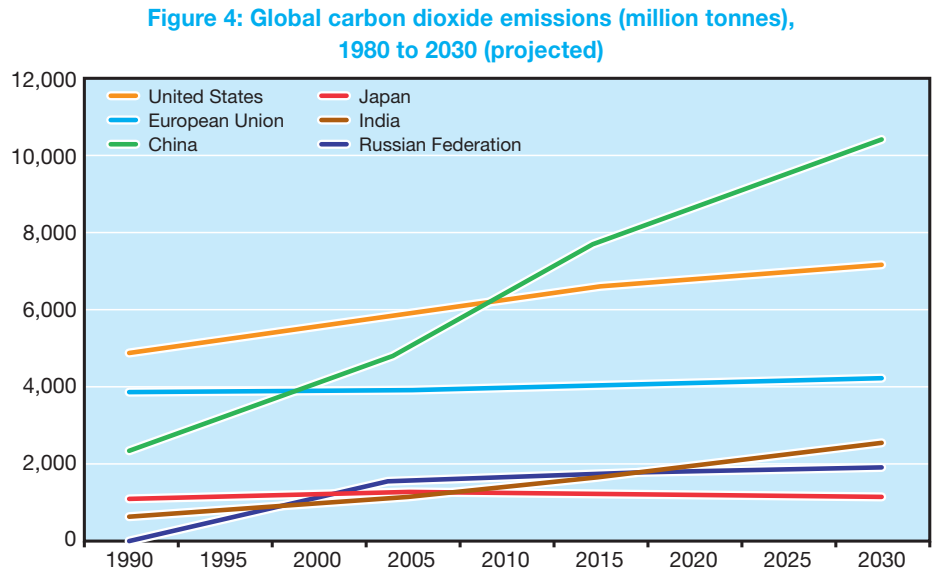
devastated in other ways: by desertification and by rivers drying up in regions already suffering water shortage in the north of China, and by much heavier rainfall and flooding in the south. Nearly one-third of China's landmass has so far been devoured by desertification.

China and the world's environmental problem

China derives 69% of its primary energy and 52% of its electricity from coal. In 2006, China burned more than twice as much coal as any other country, 39% of the global total. China accounted for over 70% of global growth in coal use in 2006, over 60% of the rise in world coal use over the past decade. In 2003, more than half the CO₂ produced by burning coal came from China and the US. By 2025, it is likely that China will produce twice as much as the US, or 40% of the world total.

But the sulphur dioxide and nitrogen oxides discharged into the air by China's coal-fired power plants fall as acid rain on Seoul, South Korea, and Tokyo. Much of the particulate pollution over Los Angeles originates in China, according to the *Journal of Geophysical Research*.

China is now well into the second and most robust stage of its industrial revolution as depicted by the middle row of Figure 1. Although the growth of heavy industries and power stations are characteristic of China's current industrialisation, China's large and rapidly



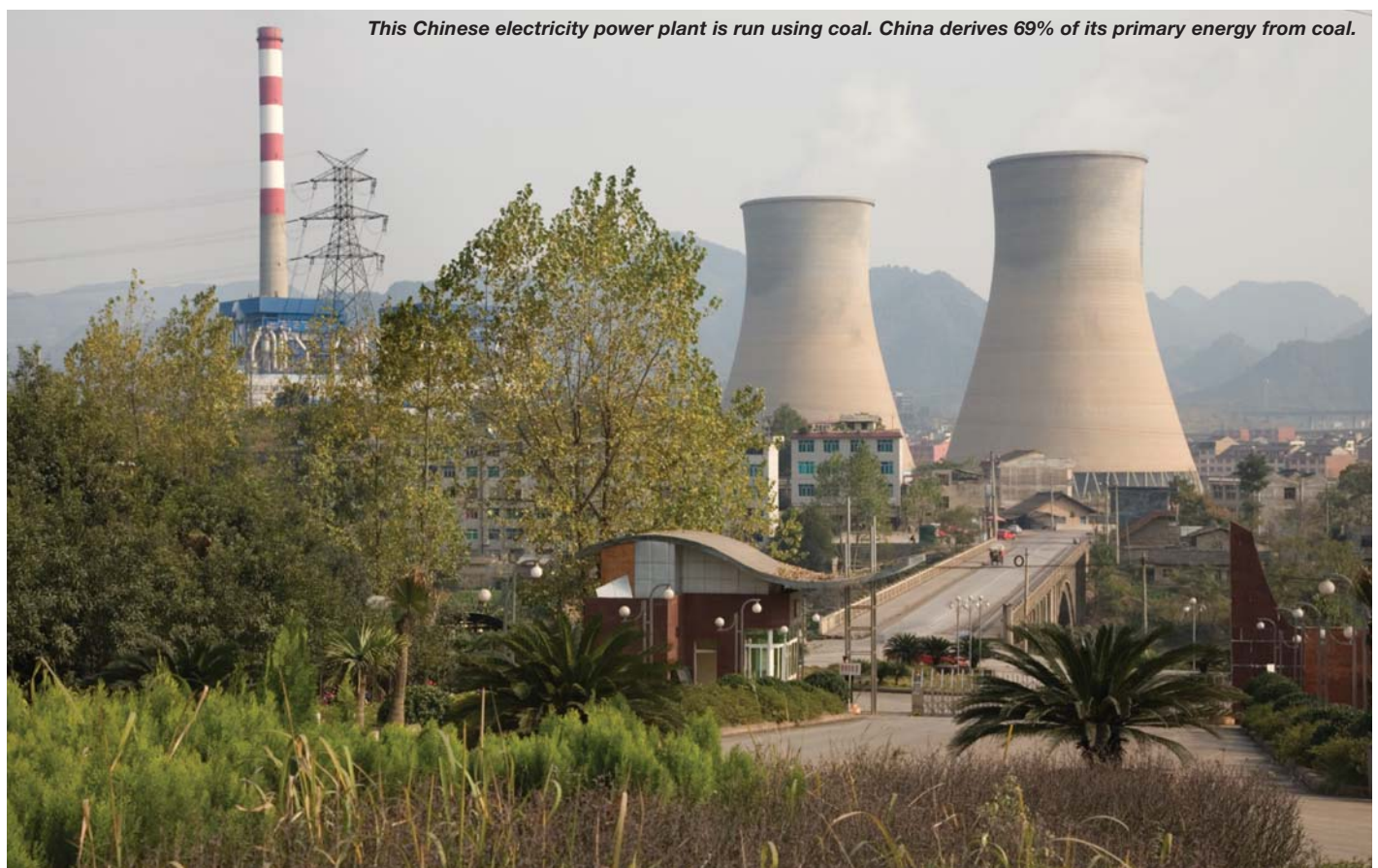
growing middle class are developing a taste for consumer goods. China now has the world's third-largest car market, and most of the cars now bought in China are made in China. The burning of coal and the growth of car use help to explain the upward emissions in China shown in Figure 4, namely that CO₂ emissions are rising faster in China than in any of the world's other major countries and that China is now overtaking the USA as the world's greatest carbon polluter.

So what does the future hold?

Most commentators who write about the impact of China's growth on global warming and pollution are extremely gloomy about the future. They believe

that with China's contribution to climate change and global warming, planet earth is fast reaching a tipping point beyond which it can't recover.

Because China now makes the most of the manufactured goods that are consumed in developed countries like the UK, China itself may never develop into the 'post-industrial' economy depicted in the bottom row of Figure 1. Instead, China will continue to produce manufactured goods that appear to be cheap to British consumers, but which are really much more expensive when environmental costs are factored in. The British have been happy to 'export' polluting industries to China and then to buy China's cheap manufactured goods. However, we then wring our hands and



This Chinese electricity power plant is run using coal. China derives 69% of its primary energy from coal.



Factory in Gansu Province. Chinese goods may be more expensive when environmental costs are factored in.

blame China for the rapid increase in global warming and for the pollution China 'exports' to us. This process will continue until the train runs into the buffers when the global economy collapses.

However, not all experts are this pessimistic. Jonathon Porritt, formerly director of Friends of the Earth, co-chair of the Green Party and currently chairman of the UK Government's Sustainable Development Commission, has written as follows:

"I am interested in the possibility of global leadership coming not from the US but from China. At one level this is, of course, insane. As the entire world and its dog now know, China is building one new coal-powered station a week. China is building more than 20 spanking-new international airports. China is as immodestly in love with the motorcar as are the Americans. And China's environment is quite literally falling to pieces.

All of which means that China has become the default excuse for every procrastinating politician and idle, indifferent citizen who was never going to do anything anyway. "What's the point, mate, with China building one new power station every minute?" Or words to that effect.

I have yet to hear a single politician mention that China is closing down more power stations than it is building, already has enormous amounts of wind power available to it, has the most aggressive expansion programme for renewable sources of energy of any country in the world, and has set some extremely tough targets for improving both energy efficiency and water efficiency.

Unlike our politicians (let alone our citizenry), who really don't understand the immediacy and the seriousness of the impacts of climate change, China's politicians absolutely get it. They are already experiencing those impacts, directly and very painfully, in terms of accelerating desertification, reductions in agricultural yields, saline incursion into key groundwater aquifers near the coast, changing patterns of precipitation, increased incidence of storms and droughts.

A lot of this already translates into real economic costs. Worse yet, from the perspective of the Chinese government, a lot of that pain translates straight through into rapidly rising levels of social dissent, with a significant proportion of the wave of mass disturbances in China today attributable to protests over water, land and pollution.

If 'unsustainable' means anything, what is happening in China is just

that. But unlike our leaders, China's leaders know it. The fact that their sustainability problems go on getting worse doesn't mean they are in denial. What people forget is that China has already started to invest huge amounts of money in a whole host of clean-tech innovations – in wind, solar and hydrogen in particular."³

But was Jonathon Porritt too optimistic? Since last November, China has gone back on a decision to replace conventional ways of measuring economic growth with a new system of green accounting that would take account of the effect of growth on the environment. And while continuing to express their concerns over environmental degradation, action has very often failed to follow words. China's government rarely uses market-oriented incentives to reduce pollution, rejecting proposals to introduce surcharges on electricity and coal to reflect the true cost to the environment. The state still subsidises the cost of driving, and controls the price of oil.

Energy and environmental officials employed in the bureaucracy have little influence. China has no Energy Ministry. The Energy Bureau of the National Development and Reform Commission, the country's central planning agency, has 100 full-time staff members. The Energy Department of the United States has 110,000 employees. The environ-

3. Published by chinadialogue, 13 November 2007, see <http://www.chinadialogue.net>.

mental agency still has only about 200 full-time employees, compared with 18,000 at the Environmental Protection Agency in the United States.

China does have an army of amateur regulators, but a number of them have recently been prosecuted. Several others have received sharp warnings to tone down their criticism of local officials. In the summer of 2008, when this article was written, one reason the authorities cited for maintaining this control was the need for social stability before the 2008 Olympic Games. The Olympics were once viewed as an opportunity for China to improve the environment. By the time you read this article, you will be able to make your own judgement on whether this ambition has been realised, and more importantly, on whether any improvement that was achieved can be continued and built on into the future.

Questions for discussion

1. With reference to Figure 1 try to identify about a dozen countries which are examples of nations moving through the three stages of economic growth.
2. Apart from environmental degradation what are some of the other consequences arising from rapid economic growth?
3. "UK consumers cannot claim environmental degradation in China has nothing to do with them." Discuss.
4. This article was written before the 2008 Olympic Games in August. What has been said in the media about the environment in Beijing in reports of the athletic events?

Summary of key points

- ▶ From the disappointing record of rapid industrialisation after 1958 China has shown a very impressive rate of economic growth since 1980.
- ▶ However this rapid expansion of the Chinese economy has been accompanied by a growth in greenhouse gas emissions to exceed the level emitted by the United States.
- ▶ This environmental degradation is mainly caused by the use of coal-fired power stations.

Some further reading and resources

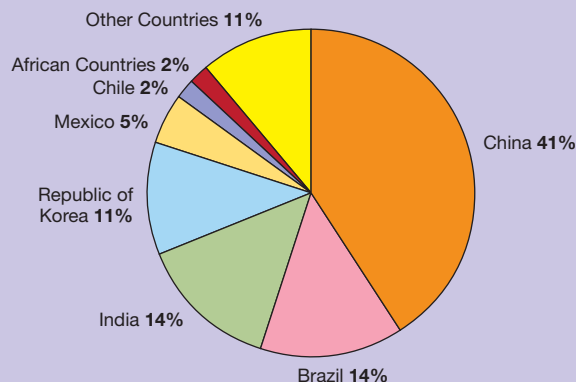
1. China's Economic Growth 1978-2025: What We Know Today about China's Economic Growth Tomorrow, Carsten A. Holz Social Science Division, Hong Kong University of Science & Technology (<http://ihome.ust.hk/~socholz/Growth/Holz-China-Growth-2Nov05-web.pdf>)
2. Choking on Growth – a series of 10 articles in the *New York Times*, including: Part 1: As China Roars, Pollution Reaches Deadly Extremes, by Joseph Kahn and Jim Yardley, 26 August 2007, (<http://www.nytimes.com/2007/08/26/world/asia/26china.html>)
3. The Great Pall of China by Michael McCarthy and Clifford Coonan, *The Independent*, 25 April 2007, (<http://www.independent.co.uk/environment/climate-change/the-great-pall-of-china-446074.html>)
4. Chinadialogue (<http://www.chinadialogue.net/>)
5. Carbon Dioxide Information Analysis Center (<http://cdiac.ornl.gov/>)
6. Sustainable Development Commission (<http://www.sd-commission.org.uk/>)
7. World Bank China country guide (<http://www.chinadialogue.net/>)



with Chief Examiner,
Robert Nutter

1. Investigate the role of the IETA and how China's involvement in the Clean Development Mechanism (CDM).

Distribution of Clean Development Mechanism emissions reductions by country



Source: Wikipedia

www.ieta.org <http://news.bbc.co.uk>

2. Research the role of China in the first Kyoto Protocol first commitment period which ends in 2012.
<http://en.wikipedia.org>
3. Walt Rostow's book 'The Stages of Economic Growth' was first published in 1960. Investigate the extent to which the five stages of growth theory apply to the recent economic expansion of China.
4. Investigate the effect pollution has had on the Beijing Olympics and the measures that were taken by the Chinese government to reduce it.
<http://en.beijing2008.cn>
5. Investigate the importance of China in helping the UK to meet its Kyoto obligations. See www.carboncommentary.com and then use the words China and Kyoto in the search engine (article entitled 'China is keeping the UK within the Kyoto limits').



The UK Trade Deficit

Andrew Reeve, Head of Economics and Business Studies, King's School, Macclesfield, reviews recent movements in the three constituent parts of the UK's Balance of Payments.

The Balance of Payments is one of the UK's main economic statistical series. It measures the economic transactions between the United Kingdom and the rest of the world. It considers the flow of transactions into and out of the nation which include:

- ▶ Exports and imports of goods, such as machinery, agricultural products, IT equipment.
- ▶ Exports and imports of services such as travel, financial and management services.
- ▶ Income flows such as dividends and interest earned by UK residents and businesses investing overseas.
- ▶ Flows of direct investment and investment in shares.

The Balance of Payments tends to be one of these areas of the specification at Advanced level which causes students some difficulties. This was made even worse some years ago when the government tried to simplify the existing two accounts – the current account and the capital account into three new accounts; the current account, the financial account and the capital account. So first we make clear the distinction between these three types of transactions.



Current Account

The current account considers four areas. First, trade in *goods* such as imports of cloth into the UK and exports of IT equipment out of the nation. Second, it considers the trade in *services*, non tangibles, such as the export of financial services and the importation of tourism. The third category is the flows of *investment income* such as profits, dividends and interest receipts into and out of the United Kingdom and finally, *transfers* such as the United Kingdom's financial obligation to the EU budget and aid to other nations.

Capital Account

What is now called the capital account highlights *capital transfers* such as government investment grants and the funds generated from the sale of assets such as patents and trademarks.

The Financial Account

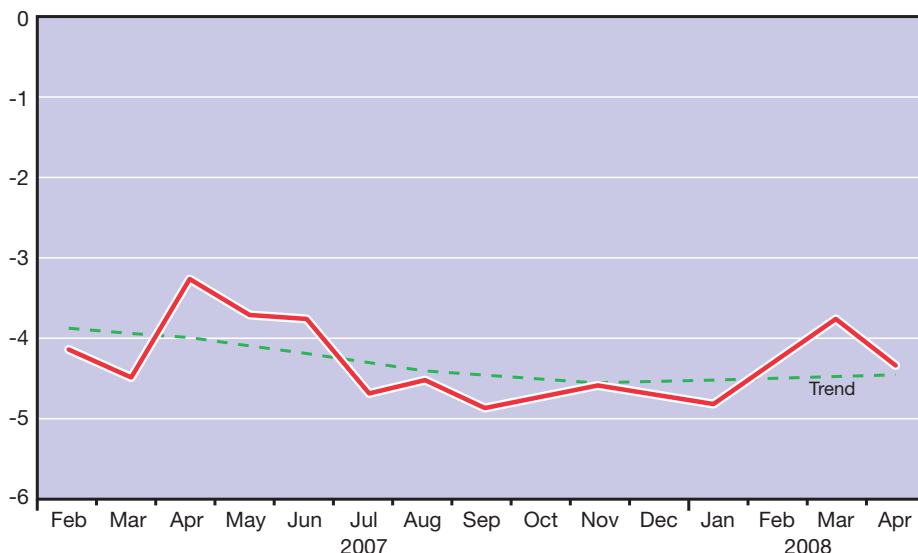
This new account was formerly known as the Capital Account and measures the *flows of investment* funds entering the United Kingdom and also leaving it. These investment flows tend to be for large scale projects such as the purchase of a foreign business by a UK firm. Indeed, there is a growing tendency by foreign firms to invest into the United Kingdom. Figures published in July 2008 suggested that there had been a 23% annual rise in the number of jobs created from foreign direct investment. This percentage increase represents more than 45,000 new job creations whilst a further 58,000 jobs were safeguarded. The single largest source of this investment is the United States, despite the slowdown in their economy. The actual number of investment projects in 2007-2008 rose by 10% to 1570. The trade minister, Lord Digby Jones commented that:

In a year of international uncertainty this impressive performance exemplifies that now, more than ever the UK economy is synonymous with opportunity and global potential.¹

This article will now concentrate attention on the current account, the flows of money into and out of the United Kingdom due to trade in goods and services.

At the time of writing this article in late

Figure 1: The Current Account for the United Kingdom, £bn



Source: www.statistics.gov.uk

June 2008, the Balance of Payments figures had just been published by the Office for National Statistics relating to the first quarter of 2008. But by the time that this article is published in September, the second quarter figures for 2008 will be available and comparing them with the information here is suggested as a good independent learning exercise.

In April 2008, the United Kingdom's trade deficit with the rest of the world worsened as the level of imports increased after a fall in March. This increase in the level of imports coming into the United Kingdom was unexpected, according to *The Financial Times*, and was compounded by the 15 year high in import prices.²

The Office for National Statistics (visit www.statistics.gov.uk for more information) stated that the deficit on goods and services reached £4.3 billion in April, compared to a figure of £3.8 billion in March. This total is made up of the balance of goods and the balance of services. Traditionally, the United Kingdom has maintained a surplus in its balance of services traded with the rest of the world and run a deficit with its trade in goods. In this sense, the figures for April 2008 are no different with the surplus on services standing at £3.3 billion and the deficit on the balance of trade in goods running at £7.6 billion.³ We can see clearly from Figure 1 that the deficit trend line over the past two years has seen a continually worsening trade position for the nation.

The £7.6 billion deficit in goods can be broken down into trade with European Union nations and trade with non EU nations. The deficit with our

European partners in April 2008 stood at £4.2 billion compared to a deficit of £3.8 billion with non EU nations.

Turning our attention to the first quarter figures for 2008, the current account recorded a deficit of £8.4 billion, a figure which equated to 2.4 per cent of Gross Domestic Product. However, this was much lower than the deficit of £12.2 billion in the final quarter of 2007.

We can see from Table 1 that the trade in goods is constantly in deficit whilst the trade in services is always in surplus. The Table also shows the current balance as a percentage of GDP. Looking at the latest quarterly data available at the time of writing, Q1 2008, it is noticeable that the deficit as a percent of GDP was not so marked with a fall to -2.4% compared to -3.5% in Q4 2007 and -5.2% in Q3 2007.

The deficit on trade in goods in the first quarter of 2008 for the United Kingdom stood at £22.7 billion, compared to £24.1 billion in the previous quarter. This slight reduction in the deficit was due to export sales rising by £3.0 billion whilst imports only rose by £1.5 billion.

However, as Figure 5 shows, the balance of trade in services remained in surplus. The first quarter of 2008 registered a £9.2 billion surplus, although this was a decrease of £0.4 billion compared to the previous quarter. In this quarter, exports rose by £0.9 billion to £36.2 billion with significant increases in exports of financial, computer, information and travel services.

1. www.ukinvest.gov.uk and www.bbc.co.uk, 2 July 2008.

2. Delphine Strauss, 'UK trade deficit widens in April', www.ft.com, 11 June 2008.

3. www.statistics.gov.uk, published 11 June 2008.

Figure 2: Quarter by quarter comparison of the UK current account balance, £bn



Source: Office for National Statistics – First Release, Balance of Payments 1st Quarter 2008, 27 June 2008

Table 1: Quarterly balances of the four parts of the UK Current Account, seasonally adjusted, £bn

	Trade in Goods	Trade in Services	Income	Transfers	Current Balance	Current Balance as % of GDP
2006 Q1	-19.3	+7.5	+3.2	-3.2	-11.8	-3.7
Q2	-18.7	+7.3	+3.1	-2.6	-10.9	-3.4
Q3	-19.5	+7.7	-1.0	-2.5	-13.3	-4.0
Q4	-20.1	+8.6	+0.5	-3.7	-14.7	-4.4
2007 Q1	-21.4	+9.2	-1.8	-3.1	-17.2	-5.1
Q2	-20.3	+9.7	+1.5	-3.1	-12.2	-3.5
Q3	-23.6	+9.8	-1.2	-3.0	-18.1	-5.2
Q4	-24.1	+9.6	+6.9	-4.5	-12.2	-3.5
2008 Q1	-22.7	+9.2	+9.0	-3.9	-8.4	-2.4

Source: Office for National Statistics – First Release, Balance of Payments 1st Quarter 2008, 27 June 2008

Expectations for the future?

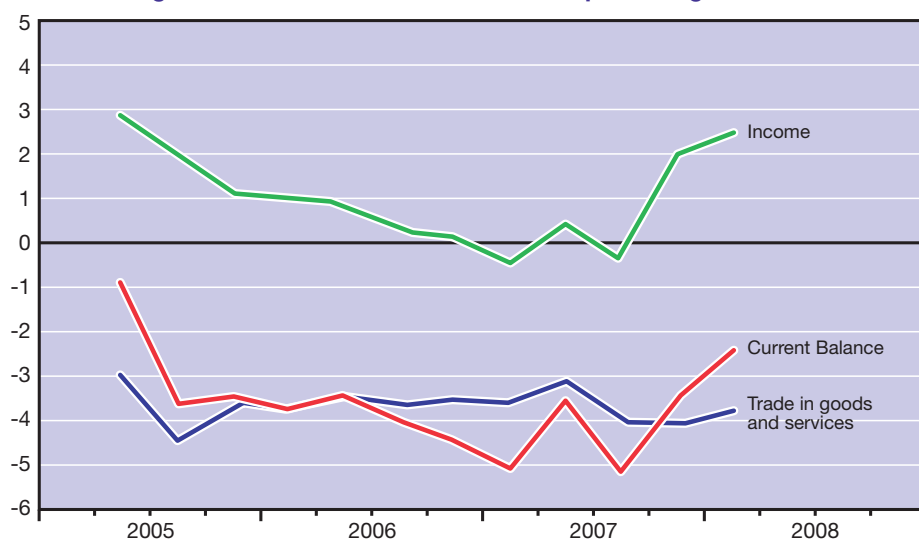
The Bank of England expects that net trade makes more of a contribution to the economy over the next year than it currently does now. The reason for this prediction is that the economy is slowing down and is predicted to continue slowing throughout 2008 and into 2009. The Bank of England's *Inflation Report* for May 2008 states that domestic demand has moderated and the housing market continues to weaken. There have been various predictions by organisations regarding the United Kingdom's GDP growth levels. For example, the IMF have reported that the UK's GDP growth rates will fall to 1.6% in 2008 and 2009, which are significantly below the official Treasury figures for this period. Similarly, the accountants Ernst and Young, have predicted growth rates of only 1.8% for 2008 and 1.5% for 2009. Retail sales are widely predicted to fall, with large FTSE 100 companies, such as Marks and Spencer, losing market capitation value.⁴

It is clear that throughout 2008 there will continue to be a fall in the growth rate of GDP. This is related to the international credit crunch and the slowdown in the global economy spearheaded by the US economy. At the same time, there has been a depreciation in the value of sterling, particularly against the euro. This fall in growth rates has the potential to significantly affect the current account balance. First, a fall in consumer demand in the United Kingdom should have the

A global slowdown spearheaded by the US, will restrict UK economic growth.

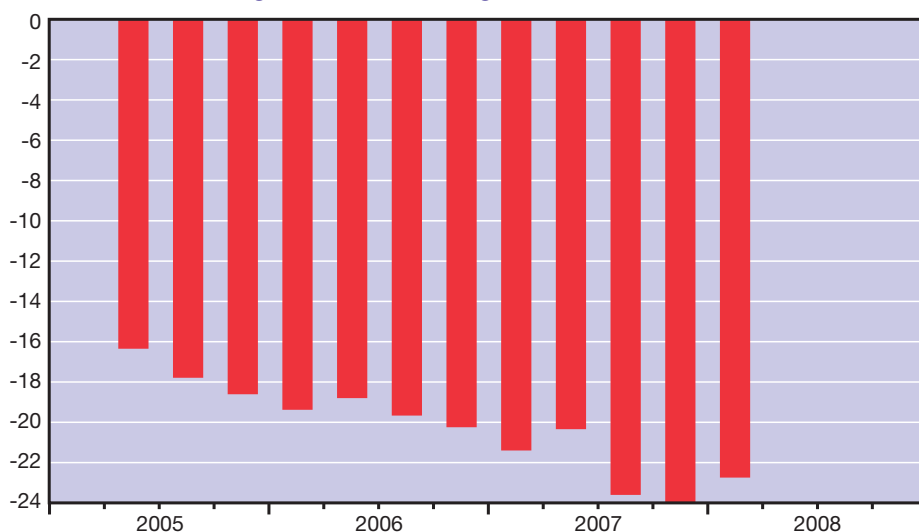


Figure 3: Current Account balances as percentage of GDP



Source: Office for National Statistics – First Release, Balance of Payments 1st Quarter 2008, 27 June 2008

Figure 4: UK trade in goods balance, £bn



Source: Office for National Statistics – First Release, Balance of Payments 1st Quarter 2008, 27 June 2008

effect of reducing the demand for imports, depending on their income elasticity. However, the slowdown in overseas markets will similarly subdue the demand for our exports. The depreciation in the value of sterling ought to boost our trading position, making it more competitive for our exporters and increasing the relative price of imports. Therefore, the Bank of England believes that this will lead to net trade having a greater contribution to our GDP after 2009. However, this does depend on the relative price elasticity of the exports and imports.

The other consideration is the rising price of imports. Many commentators are now proclaiming the end of the era of cheap imports. The Governor of the

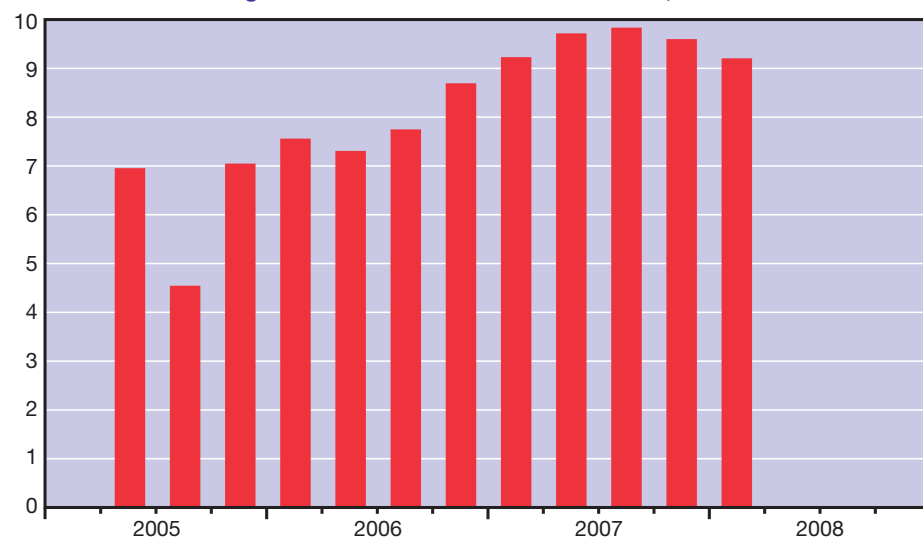
Bank of England, Mervyn King stated earlier in the year that, "Looking forward, import prices are likely to add to inflation"⁵ and in June 2008 the CPI

rate of inflation rose to 3.3% reflecting higher energy and food prices. At the start of July 2008 the price of London Brent crude oil had risen to \$145.75 a barrel, an increase of 100% on the prices one year earlier. The new Russian President, Dmitry Medvedev, predicted just before the G8 leading industrial nations meeting that oil prices would easily climb to above \$150 a barrel. The consequences of significant increases in the price of many foreign imports is to counter the fall in the demand for them caused by the slowdown in domestic demand. But even though the demand for them will contract due to a rise in price, the total import bill will actually rise.⁶

The depreciation in the value of sterling ought to boost our trading position, making it more competitive for our exporters and increasing the relative price of imports.

This article has considered the position of the current account in the United Kingdom for the first quarter of 2008. It is clear that there is no single reason as to why the deficit has recently widened. What is clear is that the topic is a complex one which is affected by changes in the growth of the economy, exchange rate fluctuations and many other economic and political events. Try to use this article as a starting point to research further these relationships and in your teaching groups bring it up to data in the autumn term by considering the second quarter figures.

Figure 5: UK trade in services balance, £bn



Source: Office for National Statistics – First Release, Balance of Payments 1st Quarter 2008, 27 June 2008

4. IMF World Economic Outlook, April 2008.

5. 'Inflation to rise as import prices rebound', *The Times*, March 2008.

6. 'Oil Prices reach new record high', www.bbc.co.uk, 2 July 2008.



In this regular feature Chief Examiner **Robert Nutter** of Watford Girls' Grammar School, looks at AS and A2 questions which in this volume will aim to reflect the order that schools and colleges cover topics from the specifications. There are three AS (1-3) and three A2 (4-6) questions per edition plus explained answers.

Questions

- Which of the following is a normative economic statement?
 - The price of crude oil reached over \$130 a barrel in 2008.
 - The UK national minimum wage is £5.52 per hour for adults.
 - The government should not have abolished the 10p tax rate.
 - The UK's current account trade deficit was £53bn in 2007.

- The relationship between oranges and orange juice can best be described as:
 - joint supply.
 - derived demand.
 - joint demand.
 - composite demand.

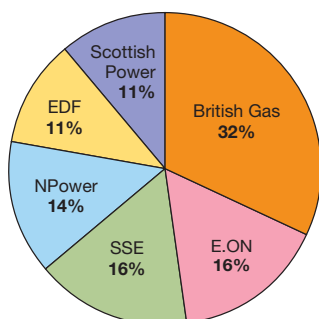
- "Britain has six million unskilled workers today but it is predicted that, on current trends, the country will need just half a million by 2020."

Source: *Qualifications and Curriculum Authority Annual Review 2007.*

The above forecast of an economic problem could be most effectively dealt with by:

- reflationary fiscal policy.
- a depreciation of the exchange rate.
- the implementation of supply-side policies.
- a fall in interest rates.

- Study the data below and then consider statements relating to the chart.



It can be deduced from the above data on the UK energy market that:

- the market is monopolistically competitive.
- there is a four firm concentration ratio of 78%.
- the market is perfectly competitive.
- there is a five firm concentration ratio of 68%.
- the market is a monopoly.

- The Indian multinational company Tata, which is engaged in activities such as tea production, steel, hotels and financial services, recently bought the two vehicle manufacturers Jaguar and Land Rover from Ford Motor Company. This is an example of:

- horizontal integration.
- forward vertical integration.
- conglomerate integration.
- backward vertical integration.
- lateral integration.

- All of the following situations except one will shift both the short run and long run aggregate supply curves. Which is the exception?

- a fall in the natural rate of unemployment.
- an increase in physical and human capital.
- an advance in technical knowledge.
- a change in the expected price level.
- an increase in labour productivity.



What sort of market is the UK energy market in Q4?



Answers

1. A normative statement is an opinion or value judgement which cannot be verified by an appeal to facts. Positive statements can be checked as to whether they are correct or not. Options A, B and D are positive statements because they can be shown to be right or wrong. Whether the 10p starting rate of tax should have been abolished or not is a hotly-disputed matter and is a normative statement, making the answer C.
2. Oranges are the raw material in the making of orange juice. If there is an increase in the demand for orange juice then there will be an increase in the demand for oranges to make it. The increase in demand for oranges is derived from the increased demand for orange juice – hence a derived demand and the answer of B.
3. If the demand for unskilled workers is falling by implication there will be an increase in demand for skilled workers. Hence by 2020 there will be major skill shortages unless there is an increase in training in the UK. A well-trained labour force will increase productivity and the workings of the labour market. Policies which improve skills are called supply-side policies which shift the aggregate supply curve to the right. The answer is thus C.
4. From the above data it can be deduced that the UK energy market is an oligopoly because it is dominated by a few large firms. A four firm concentration ratio measures the share of the market held by the four largest firms. In the UK energy market the four largest firms have 78% of the market with the remaining 22% held by two smaller firms. A horizontal merger between two large firms in this sector would increase the level of market concentration further. The answer is thus B.
5. Tata is already a highly diversified company and by purchasing two motor manufacturing names from Ford they were engaging in further diversification. Such take-overs give the enlarged firm the benefits of economies of scale (financial and risk-bearing in particular). However, there could be some possible managerial diseconomies of scale due to the size of firm. This is an example of conglomerate integration and the answer is C.
6. The long run aggregate supply curve is vertical whereas in the short run it is upward sloping. In the short run a change in the overall price level in an economy will raise or lower the total quantity of goods and services supplied. In the long run an economy's labour, capital and natural resources and technology determine the total quantity supplied whatever the price level. The short run aggregate supply curve shifts position for the same reasons that shift the long run aggregate supply curve except when there is a change in the expected price level. Along each short run aggregate supply curve money wage rates are constant and thus if workers expect prices to rise (thus reducing their real wage) they will negotiate higher wages pushing up costs. This will shift the short run aggregate supply curve to the left with firms supplying less at each price level. The answer is thus D.



An increase in demand for orange juice will lead to an increase in demand for oranges in Q2.

Should the Government Intervene in the Housing Market?

Tom Smith, Head of Economics at Old Swinford Hospital School, appraises the case for state intervention in the market for private accommodation.

My aim and my priority is that we can lead the people in Britain through this economic problem and do so by taking the right decisions to get liquidity to the banks, to make sure that the housing market starts moving again.

Gordon Brown at the IOD annual conference at the Albert Hall, London, 30th April 2008



Introduction

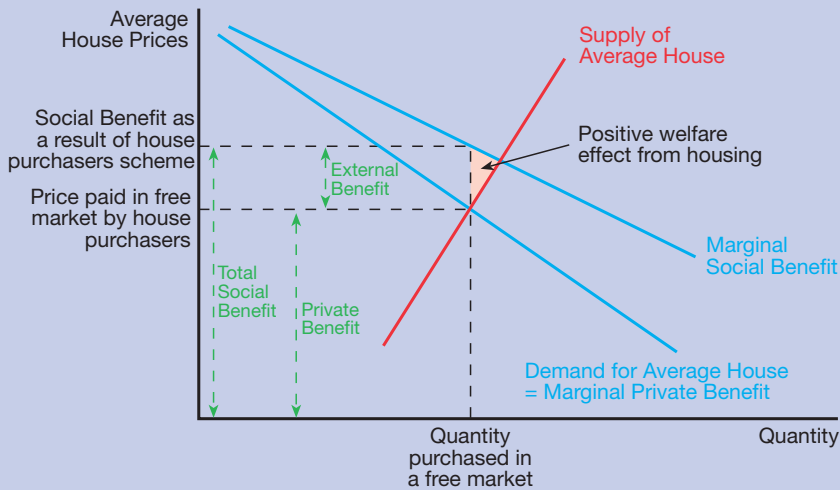
As Prime Minister Gordon Brown has shown that he firmly believes that the housing market does need some form of government intervention. Most economists would agree that when a market fails government intervention can be very effective.

Today in the United Kingdom and the United States of America the housing market is showing signs of troubled times ahead. The sub-prime market, negative equity and demand for mortgages falling by 30% or more, are three major concerns. The housing market has and always will be a market which lends itself to market failure analysis and evaluation. Adam Smith promoted the invisible hand mechanism in his 'Enquiry

into the Nature and Causes of The Wealth of Nations' suggesting that by pursuing one's own interest one will be able to maximise one's own benefit and simultaneously increase the benefit of those around you. He was suggesting that governments should intervene as little as possible. The problems shown below are likely to occur if this approach were adopted in our housing market. This article will focus on the reasons for government intervention in the housing market. We first consider some of the reasons why the housing market fails to reach efficiency. This will be followed by considering the options on how to correct these failures and some conclusions will be drawn.

Exam Board	AS	Unit	A2	Unit
AQA	✓	1 (3.1.2 & 3.1.5)		
Edexcel	✓	1 (1.3.9)		
OCR	✓	F581		
WEJC	✓	1(C)		
CCEA	✓	1		
Int. Bacc.		Standard 2.4		

Figure 1: Housing market demand and supply with merit nature illustrated



As a result of the positive side effects from occupiers becoming more productive society gains. The shaded area illustrates the extra gains society experiences when occupiers gain their private benefits from the housing concerned.

Reasons why the housing market fails

In a free market for housing with no government intervention the following are some of the many problems that are likely to come about:

- Shortages of housing
- Empty housing
- Excessively high prices
- Blight
- Immobility of labour
- Poor access to capital
- Too low or too high interest rates
- Negative equity
- Homelessness
- Poor quality housing
- Equity issues and sustainability issues.

Monopoly power in the hands of dominant housing provider

If an organisation that builds and sells houses has a monopoly, then prices will be set higher and the quantity available fixed at a lower level than that associated with allocative efficiency. In such circumstances the dominant firm will have little incentive to become more productively efficient. Dynamic efficiency is less likely than when there is more competition. Without government intervention housing lends itself to a dominant provider emerging (think of the game monopoly!). In addition to this a monopoly will be more interested in profits than the effects it has on the environment and society. A further effect is social inefficiency.

When governments intervene effectively to encourage competitive behaviour and control negative exter-

nalities then productive, allocative, and social efficiency can improve both in the short and the longer term.

Merit nature of housing

By occupying a house an individual benefits from the comfort it provides. This leads them to being more highly motivated to work and so increases their productivity. As a result society benefits from increased output. So standards of living are likely to be higher when quality and quantity of appropriate housing improves. Figure 1 shows this. The theory is that housing of the right quality is under-consumed when provided by a free market. The argument therefore is that government must provide measures to encourage increased numbers using the desired quality of housing if they wish standards of living to increase.

Two authors have commented that “a large body of research supports the view that good quality housing leads to improved physical and mental health”.¹ The article also adds that poor quality housing leads to declining standards of living, poor motivation to work and reduced output in society as a whole.

Positive externalities from actions of housing provider(s)

Figure 2 illustrates how housing provider(s) can contribute positively to society by their actions. For example: building a housing development in a deprived industrial area. The purpose would be to regenerate economic

activity. This leads to the benefit gained for the builders and the extra society benefit gained from improved infrastructure. This theory suggests that in a free market the amount of gain that this provides a society will be less than that provided if an external body such as the government intervenes to stimulate this process even more. This can be done through subsidies and regional development programmes.

Mackay Consultants have stated “a multiplier of 2.1 is relatively high but can be explained by the strong backward and forward linkages of the house building industry with other sectors”.²

Negative externalities from actions of housing provider(s)

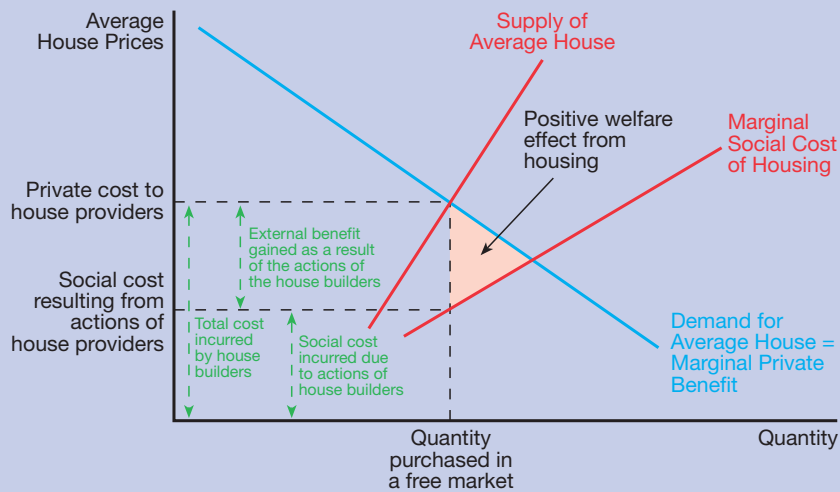
Figure 3 shows that builders can also contribute costs to society: a blight on the landscape; pollution caused by waste; congestion on the roads before and after construction; poor quality and inappropriate housing for area concerned. These are all examples of actions taken by a housing provider which bring additional costs to society over and above those incurred by the firm itself. The argument here is that governments need to try to identify such projects prior to construction. This can be helped in the UK through architects, quantity surveyors and planning authorities. These measures do limit the costs to society but may not eliminate them altogether. They do incur costs too. An article in July 2007 tells us that Ifor Jones, the authority’s head of conservation was unhappy with a hobbit type home in Pembrokeshire because it did not meet the standards required for a sustainable and ‘green’ house.³ Since it was built in an area of natural beauty it

1. J. Gilbertson et al, *Sheffield Decent Housing – Health Impact Assessment*, July 2006, http://www2.warwick.ac.uk/fac/soc/law/research/centres/shhru/sdh_hia_report.pdf

2. Mackay Consultants, *The Economic Value of the House Building Industry in Scotland*, June 2005.

3. M. Leroux, ‘Eco house faces demolition for negative impact on the environment’, *The Times*, 30 July 2007.

Figure 2: Housing market demand and supply with positive external benefits as a result of the producer actions illustrated



When builders provide extra positive side effects on society as a result of their actions so the marginal private costs exceed the social costs because the benefits reduce the overall effect. So the shaded area represents the gains society experiences when builders' through their actions bring about extra benefits.

actually contributed more harm than good.

Negative externalities from actions of house occupier(s)

It is also possible for house occupiers to contribute costs to society as a result of their actions. Figure 4 helps us see this more clearly. For example do-it-yourself extensions or landscaping may please the tenant but may bring dissatisfaction to other house owners in the area. Either the neighbours may find the changes offensive to them, or worse, when they try to sell their houses the value is lower than it might otherwise be. The theory is that with no government intervention such circumstances will happen more often and cause society to suffer more than it needs to. Economists might argue that government regulation through planning permission can protect society from individuals who behave in irrational ways in this market.

When homes are above a certain level

of comfort and wages are above a certain level, labour will eventually substitute their hours of work for hours of leisure. So there is an optimal level of productivity as a result of the quality of housing. Beyond this optimum level of housing quality the productivity of the individual declines. This follows the law of diminishing proportions where the input factor is 'quality of housing' and the output is 'productivity of labour'. For each individual this is likely to differ but there is no doubt that each individual will have this relationship. The point therefore is that in economies where individuals become too comfortable they are likely to become less productive.

A historic perspective – the views from Ricardo

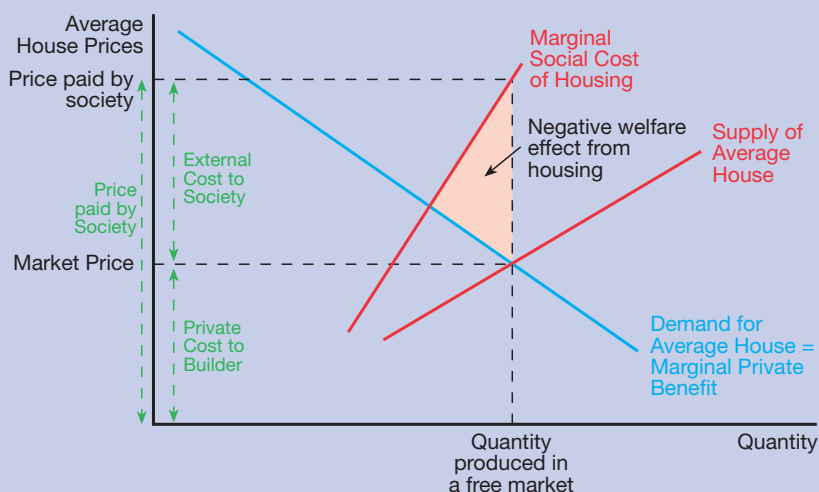
David Ricardo had an instinctive grasp of the free market. He understood that opportunities to make easy money are taken first. He argued that:

“the simple projects on prime sites make large returns, but once the market progresses, and the uncomplicated propositions have been taken up, then you're left with difficult, expensive-to-develop projects”.⁴

At this point, the expected returns diminish due to the increased costs, and the economics of the development move towards a point where costs equal returns. This is the static state which Ricardo predicated. If you don't make a profit, then what's the point of development? Everything grinds to a halt. The bomb site, ruin, or abandoned building is left alone for things to 'improve'.

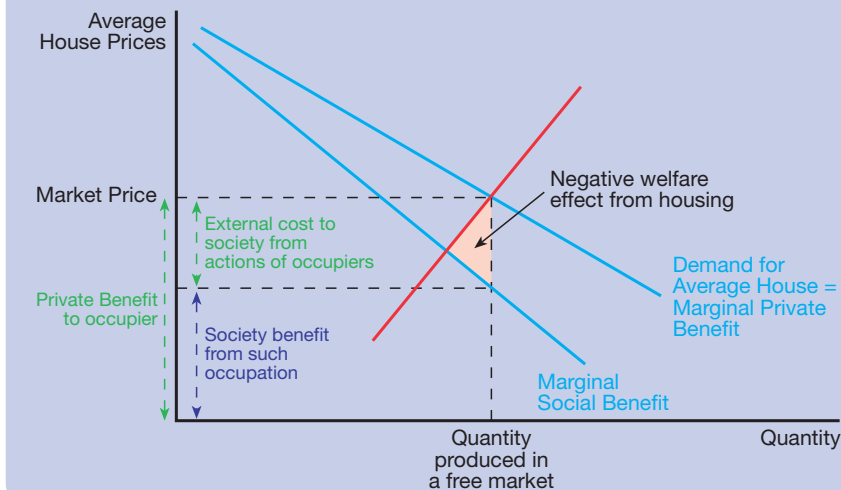
This may be the ultimate outcome for a deteriorating housing market. In an economy where the housing market is in decline such negative externalities are possible as a result of the behaviour of the occupiers, the investors and the government itself.

Figure 3: Housing market demand and supply with negative externalities caused by the actions of the producer



When the actions of builders leads to extra costs to society so society suffers by the amount illustrated by the shaded area.

Figure 4: Housing market demand and supply with negative externalities from actions of occupiers



When occupiers actions bring about undesirable side effects so the society suffers by the amount illustrated by the shaded area.

View from the National Trust

In an article by the National Trust Malcolm Bell, Professor of Surveying and Sustainable Housing at Leeds Metropolitan University, comments:

“If the Government’s low carbon housing targets are to be achieved where it matters, on the ground, we must improve the whole production process and continually check that what we design in theory, is realised in practice. This will require considerable effort not only in design and construction but also in education and training so that the lessons from research are continually fed back to the industry.”⁵

This article began with a quote from the Institute of Directors conference this year. At the same event Dame Fiona Reynolds DBE, Director-General of the National Trust said that the protection of ancient buildings is vital to the wellbeing of our society. By taking pride in our history we are more likely to take pride of the present for our future.

How government can help

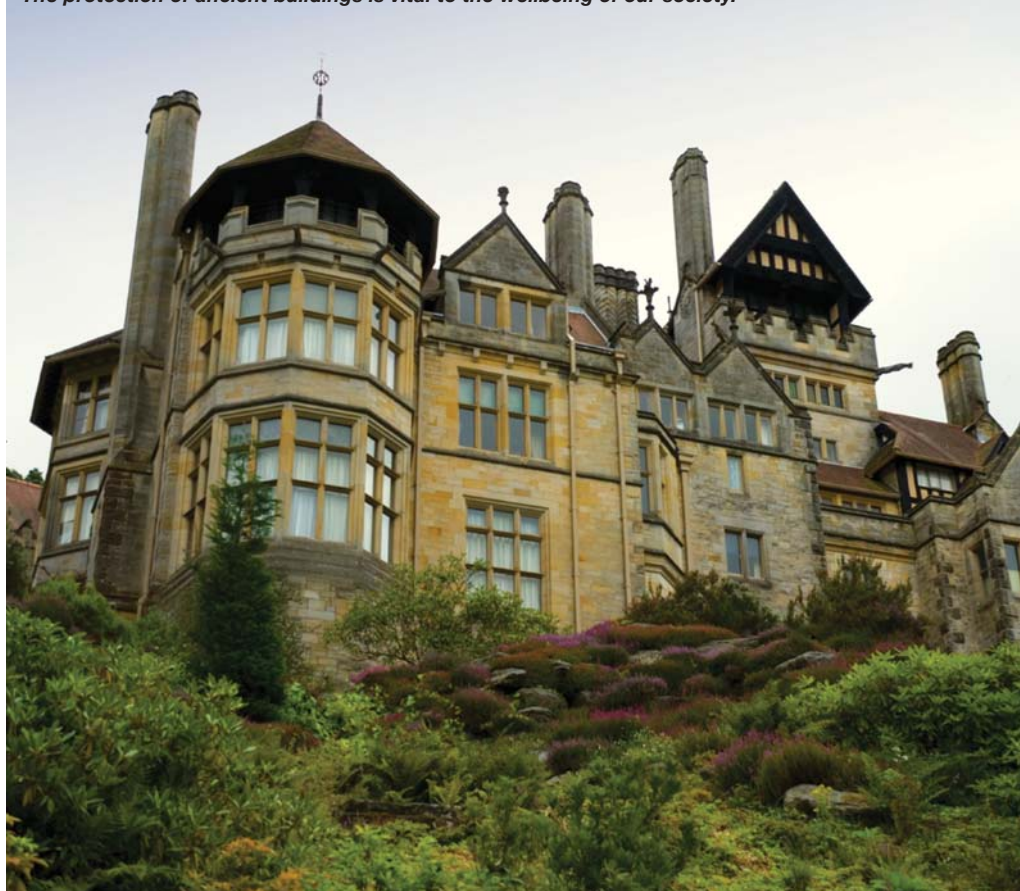
If individuals cannot afford to purchase their own home or pay the rent in the area they are able and willing to work then they simply will move to an area they can afford to live. In such circumstances this may even be where houses are provided cheaply or freely by associations. When this happens individuals are less productive or even a drain on society. If the government were to provide council

houses for such people in areas where they may be more productive then the individuals concerned will gain the private benefit from the house they are provided with and the job satisfaction from their choice of work. This will lead to increased output in society from a more productive work force.

► Governments can control negative externalities caused by the building construction industry through planning controls and regulation. They can also issue fines for pollution caused by the firm. Areas of natural beauty can be protected through laws which state that no buildings are permitted there. Similar measures can be used for the actions of the occupiers.

- For circumstances which lead to positive externalities as a result of producers actions the government can enhance the benefit society gains by providing subsidies, reduced tax incentives or reduced interest rates on commercial mortgages.
- But the government has more difficulties in trying to combat too much switching from work to leisure by those in excessive comfort or receiving ‘fat cat’ wage packages. Firstly it is difficult to gauge who is actively productive and who is living off their wealth and producing little or nothing. However one possible way to increase the productivity of a society as a whole would be to ensure

The protection of ancient buildings is vital to the wellbeing of our society.



4. D. Ricardo, *The Principles of the Political Economy*.
 5. The National Trust, Redrow Homes and Bryant Homes, *Delivering Sustainable Housing*, February 2008.
http://www.nationaltrust.org.uk/main/w-global/w-news/w-news-further_news/w-news-delivering-sustainable_housing.htm

a more progressive tax system. This requires those on high incomes to be taxed at a significantly higher rate to maintain the motivation to work. Whilst this may also help to improve equity it is a political hot potato.

- ▶ In addition labour market policies designed to encourage the unemployed to seek and find jobs will ensure that the productivity levels increase at both ends of the poverty/wealth spectrum.
- ▶ All this assumes that governments are able to collect all the relevant data, process it and make timely decisions. It also assumes that individuals will behave rationally and in a predictable manner. Unfortunately as with most markets the data will be incomplete and become out of date very quickly. Also individuals often do not behave or react in rational and predictable ways. This is particularly relevant in a market as large, diverse and volatile as the housing market. Therefore the actions taken by the government are likely to be a best fit solution with a flexible approach. This is why interest rates and credit controls are often used. Interest rates and credit facilities can be changed at very short notice and the impact is immediate.

Conclusions

This article argues that there is enough evidence here to suggest that government intervention is crucial to help reduce the failings in the housing market. But whilst extreme Keynesian economists might argue that all housing should be provided and maintained by the government, extreme monetarists would argue for intervention only in the money markets. Hence there is a range of views as to the appropriate degree of intervention. What is beyond doubt is that the housing market would fail much more in the UK if the government leaves it entirely to its own devices.

Questions for discussion

1. What does it mean for the housing market to be efficient?
2. How does this market fall short in terms of efficiency?
3. What policies can a government use to make the housing market more efficient?
4. Discuss the view of Dame Fiona Reynolds concerning the preservation of houses owned by the National Trust.

Web links

http://www.uk-houseprices.co.uk/housing_market/market_failure.html
<http://www.tutor2u.net/economics/presentations/housingmarketfailure/default.htm>
http://property.timesonline.co.uk/tol/life_and_style/property/article2163910.ece
http://www.economicshelp.org/essays/the_dismal_science.html
<http://www.londonhousing.gov.uk/doc.asp?doc=14073&cat=1765>
<http://www.london.gov.uk/gla/publications/housing.jsp>
<http://www.scottisharchitecture.com/blog/read/441>
<http://www.archive2.official-documents.co.uk/document/deps/cs/shdg/ch01/index.html>
<http://www.bized.co.uk/learn/economics/housing/demandsupply/index.htm>
<http://www.communities.gov.uk/publications/housing/homesforfuture>

Summary of key points

- ▶ There are several aspects of efficiency in the consideration of how well the housing market performs.
- ▶ Private house occupation can be seen as desirable in terms of the social gains from enhanced productivity.
- ▶ House building does however involve an adverse impact on the environment. House occupiers can also lead to negative externalities.
- ▶ There is no consensus on the degree of appropriate state intervention in the housing market.



with Chief Examiner,
Robert Nutter

Warwickshire County Structure Plan provides strategic guidance on the scale and location of new housing in the county up to 2011. County Councils are required by law to prepare and keep up-to-date a Structure Plan for the County.

Warwickshire District Area	(a) Need 1996-2011	(b) Indicative only Minimum 1996-2011 % of new housing on brown-field land
	All housing types	
North Warwickshire	2,400	80%
Nuneaton & Bedworth	5,600	30%
Rugby	6,100	60%
Stratford-on-Avon	9,000	50%
Warwick	8,000	45%
Total County	31,100	50%

1. Investigate the role of structure plans in the planning of housing in a county with which you are familiar, e.g. <http://www.norfolk.gov.uk>
2. Research the findings of Kate Barker in her Review of Housing Supply (March 2004) and also the responses to it.
<http://www.hm-treasury.gov.uk> www.wwf.org.uk www.cppe.org.uk
3. Investigate the extent to which Inheritance tax, Stamp Duty and Capital Gains tax distort the UK housing market.



Effects of the 'credit crunch'

The financial and economic crisis afflicting the global economy shows little sign of abating. Some say that the crisis is the worst since the Great Depression. Certainly, the collapse in the US housing market is the worst on record and the 'credit crunch' has seriously damaged the banking system claiming Bear Stearns (a major US investment bank) and Northern Rock (a major UK building society) as high-profile casualties. Undoubtedly, there will be more casualties as banks find it difficult to raise capital to cover actual and potential losses. Their balance sheets are under pressure and they are being forced to write-off unprofitable investments in the securitized credit markets which were responsible for the crisis in the first place. The massive fee income earned by investment banks in recent years has disappeared and investors have no appetite for buying complex derivatives product in which there is little liquidity. No wonder that the share prices of all the major global banks have fallen sharply over the past year. If you are thinking of a career in investment banking, best that you look for a more useful and lucrative alternative!

New ways of providing liquidity

The credit crisis has forced the major central banks to resort to a variety of unconventional measures to inject liquidity and help stabilise the financial system. The Federal Reserve, the European Central Bank and the Bank of England are amongst those who recognised that a simple reduction in official short term interest rates would not be enough to resolve the crisis. In a departure from previous convention, they have radically amended the scale and nature of their money market operations to not only inject liquidity to eligible banks but also to primary dealers in bond markets. In addition, they have arranged

so-called 'collateral swaps' in which banks and other institutions can offload junk debt in return for government guaranteed bonds. This allows participants in the money markets to use this collateral to help fund themselves. To some degree, these measures have helped unblock the plumbing in international money markets. However, a high degree of uncertainty remains which is reflected in market rates of interest remaining at a premium to official interest. Lenders are still apprehensive of lending to other banks and institutions for fear that these institutions might go bust. As a result, liquidity is being hoarded and the velocity of money is declining.

Impact on the real economy

Central banks will continue to do whatever is necessary to ensure that the financial system avoids 'meltdown' but there seems to be no early end to the crisis which is likely to persist into 2009. The impact on the real economy is unavoidable. The credit crunch and the severe downturn in house prices are deflationary shocks which are already resulting in slower economic growth and rising unemployment. The US economy has probably been in recession since the beginning of 2008 and consumer confidence is at its lowest in 30 years despite a recent fiscal stimulus. Declines in equity prices are also undermining household wealth and reducing capital expenditure by firms. The sharp rise in oil prices is denting disposable incomes and the higher oil price is acting as a tax on the economy. In the short term, higher oil, food and commodity prices generate higher inflation rates and some commentators have referred to the current economic situation as 'stagflation' or 'slumpflation'. The debate about what is causing the sharp rise in the oil price and

The Global Crisis

Neil MacKinnon is Chief Economist at The ECU Group, a currency management firm based in the City and in this article examines the current economic and financial crisis.

other commodities is complex. Some blame 'speculators', others point to commodity investment funds and others point to 'fundamentals' like China and India who are massive commodity buyers simply reflecting the pace of economic expansion in those countries. My own view is that the recent behaviour of oil prices exhibits classic signs of 'mania' but there are also indications that China and other emerging economies are starting to slow down. Rising inflation in many of these economies is forcing interest rates higher and this in turn will reduce economic growth and commodity demand. The oil price is key at the moment and at \$150 is a major headache for economic policymakers. Having said that I think before the end of the year the oil price 'bubble' can pop which will be a huge boon for the global economy.

Gloomy outlook

In the meantime, the outlook is gloomy. In the UK, recession is practically here and house prices are falling sharply. The Bank of England, who are mandated to exclusively target inflation, face a dilemma. Inflation is going up which prevents them from cutting interest rates. The longer they refrain from doing so the worse the prospects for the economy. At some stage, they will have to re-write the inflation target and cut interest rates. If the oil price does 'pop' then this will allow them to implement badly needed rate cuts. Otherwise, the rest of this year looks difficult and financial markets are likely to remain volatile with equity markets, in particular, looking fragile and vulnerable to a climactic 'crash'. A depressing scenario but a price is being paid for the financial and debt-laden excesses of the past few years.

Should Road Building Depend Solely on Forecasts of Future Road Traffic Demand?



Professor Colin Bamford of the University of Huddersfield and a Chief Examiner discusses how the demand for road transport has implications for deciding on the extension of the UK's road network.

Introduction

In 2006/07 government expenditure on roads in Great Britain amounted to £8.6bn. Of this, around 45 per cent was capital expenditure for the construction and improvement of strategic roads and other projects such as by-passes and local improvement schemes. Public investment in roads is back to the level of the mid-1990's when schemes that were part of the Roads for Prosperity programme came to fruition. Moreover, this level of investment is expected to increase further over the next two or three years until the road-schemes from the 2010 Transport Plan that are going ahead, are completed. Thereafter, new road construction will be much more selective with the emphasis being on new by-passes and local improvements to relieve serious bottleneck congestion.

The demand for road transport

The demand for road transport is a **derived demand**. This is because transport is demanded not in its own

right but because of what it allows consumers to do. In the case of road passenger transport, by bus or car, using these modes is essential for people to carry out their daily lives. Cars and buses are extensively used for a wide range of reasons including the daily journey to work or to school, less regular shopping trips and personal business trips such as to the doctor or hairdresser and for a range of leisure activities.

Figures 1, 2 and 3 show recent trends in the demand for passenger and freight transport by road. The units used are passenger kilometres and tonne kilometres respectively. These are good measures of demand since they take into account the volume of passengers and freight and the distance travelled. These figures show that over the period 1980 to 2006:

- ▶ Most of the growth in demand for passenger transport has been for travel by private car – there was a 77 per cent increase over the period shown.
- ▶ Travel by buses and coaches fell by 18 per cent between 1980 and 1992

Exam Board	AS	Unit	A2	Unit
AQA			✓	3 (3.3.5)
Edexcel	✓	1 (1.3.7)		
OCR			✓	F584
WEJC				
CCEA	✓	1		
Int. Bacc.				

but has since increased. It is still below its 1980 level.

- ▶ Most of the increase in demand for freight transport was for goods moved by road. This was around 79 per cent over the period shown, although the rate of increase in goods moved has slowed down since 1997.

A striking feature of the data in these figures is the relatively unstable nature of the change in demand over the short and longer term periods. This is particularly so for freight transport where, given the derived demand, any change can be expected to be closely related to the annual change in GDP. For example, between 1990 and 1993, the demand for freight transport fell at a time of recession. Demand increased steadily during the following five or six years, again in line with annual GDP growth. Since 2000, this relationship has become less clear – there has been a so-called ‘decoupling’ of annual freight demand growth and GDP growth, meaning that the relationship is less strong.

With respect to passenger transport, Figure 1 shows substantial annual growth in passenger transport by cars, vans and taxis up to 1990, with an acceleration after 1986. Thereafter, the annual rate of increase in demand has slowed down and in some years, there has actually been a slight fall in total demand.

So what determines the demand for road transport? The determinants are broadly the same as for any other product namely:

Demand = f (Price of the good,
Price of substitutes/
complements, income,
taste/fashion).

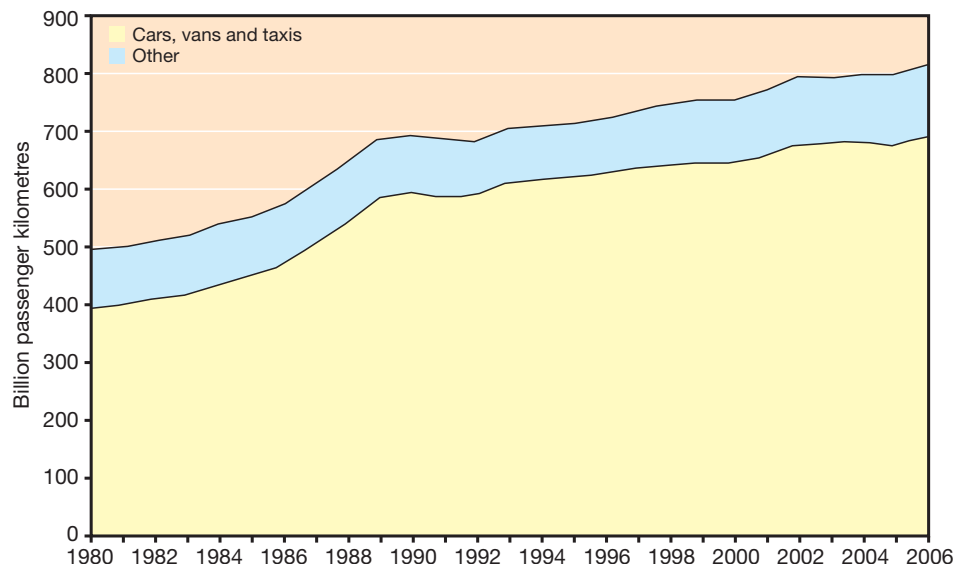
For passenger transport:

- ▶ The price (or cost as it is) for bus and coach travel is the price of the ticket; for private car travel it is the cost per vehicle km of using a car.

But this is far from easy to estimate. Table 1 shows the main changes in such costs from 1996 to 2006. Although the cost of buying a car has fallen in real terms, running costs have increased well above the rate of inflation. Surprisingly, the real cost of bus fares has increased more than the cost of running a car.

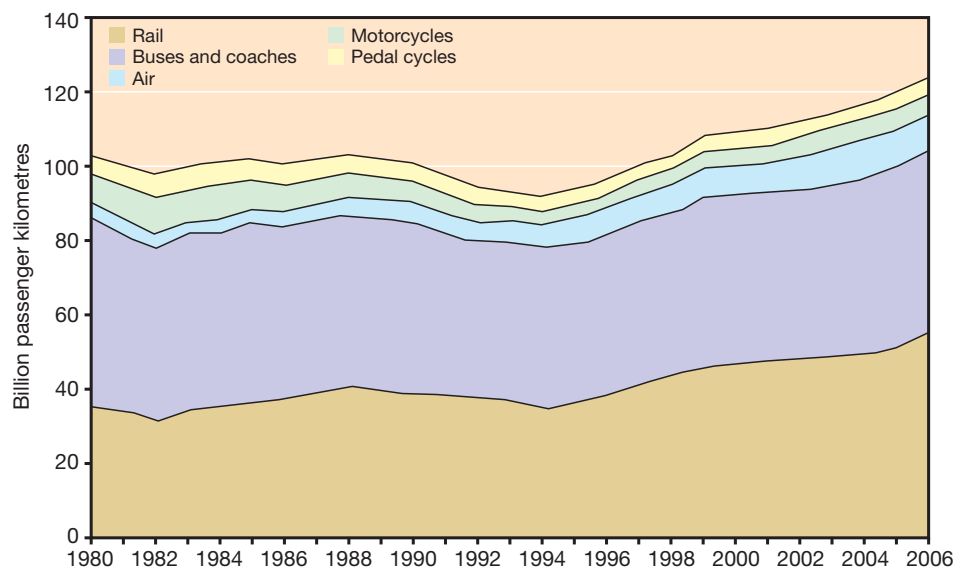
- ▶ For some types of journey, rail or bus is a substitute to the private car. In terms of Table 1, rail fares also

Figure 1: Passenger travel by mode: car and other modes, 1980 to 2006, UK



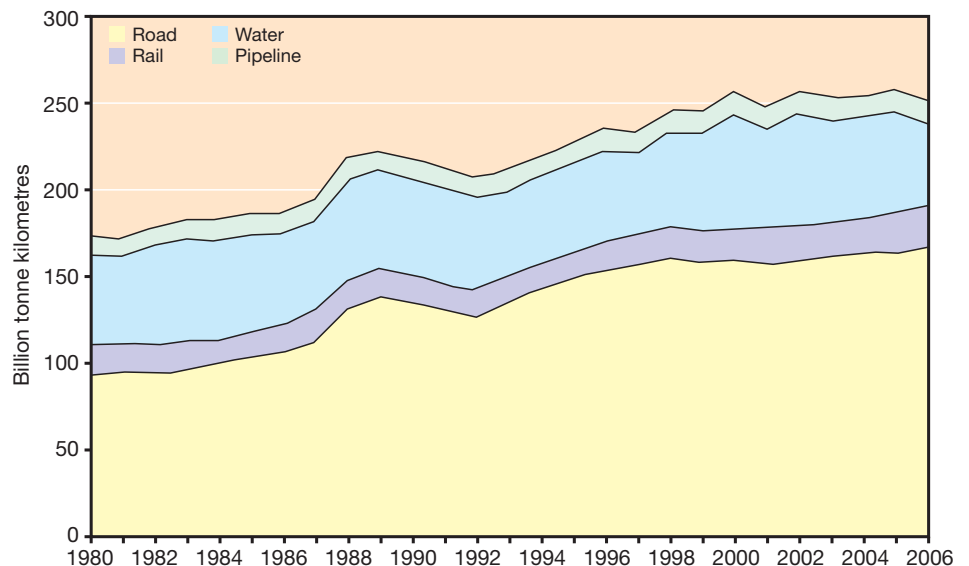
Source: *Transport Trends*, 2007 edition, ONS

Figure 2: Passenger travel by modes other than car, 1980 to 2006, UK



Source: *Transport Trends*, 2007 edition, ONS

Figure 3: Domestic freight moved by mode, 1980 to 2006, UK



Source: *Transport Trends*, 2007 edition, ONS

Table 1: Motoring costs and bus fares since 1996

	RPI	Vehicle Purchase	Petrol & Oil	All Motoring Costs	Bus Fares
1996	100.0	100.0	100.0	100.0	100.0
1998	106.7	101.3	115.4	108.6	106.9
2000	111.5	91.7	141.6	115.5	115.3
2002	115.5	88.6	130.1	113.9	123.8
2004	122.3	83.5	142.3	116.6	135.6
2006	129.7	77.0	163.3	119.0	146.6

Source: *Transport Statistics*, 2007 edition, ONS

increased over the period shown at above the rate of inflation; at 136.3 in 2006, the increase was well above that for road transport. The relative price of substitutes therefore could have a bearing on modal choice.

- ▶ **Income.** As consumer disposable incomes increase as a result of economic growth, the demand for transport will also increase. As stated above, this relationship is not as strong as it used to be but still has to be taken into account. One consequence of rising disposable incomes is that car ownership levels have increased. It seems to be stating the obvious that as people become better off, a car is acquired; increasingly, this is now a case of *additional* cars being acquired.
- ▶ **The taste and fashion variables** are particularly significant in affecting modal choice in road transport. With the private car, this is the only mode that provides its user with a door-to-door service. This is likely to impact upon the time taken for a particular journey and also for many people, what mode of transport they should be using. In contrast, depending upon the frequency of service, the bus is never going to be able to provide the same degree of convenience or comfort.

For freight transport, the determinants of demand are basically similar but with particular emphasis on reliability or customer service and convenience. Although rail freight is increasingly being used by businesses, for most types of haul, road transport is the only realistic option that is available.

It should be clear that the demand for road transport, passengers and freight, depends upon a wide range of variables, economic and non-economic. If planners and governments are serious about

meeting future road requirements, it seems essential that they should be able to forecast this demand over time. This is by no means a straightforward task.

Forecasting road traffic demand

One of the most important, and in some respects most difficult, tasks of professional economists is to make forecasts. With any forecast, if trends remain similar over time, then a trend line can be extrapolated with a certain degree of confidence. You have only to glance at Figures 1, 2 and 3 to see that this is not the case with road transport, particularly if a good estimate is required. Underpinning this is the complexity and inter-relatedness of the individual variables that constitute the determinants of demand.

Having said this, forecasts of road traffic demand are made, for particular road construction projects and nationally, for more strategic transport policy decision-making reasons. Estimates by the Department for Transport are made by making assumptions as to the future growth of:

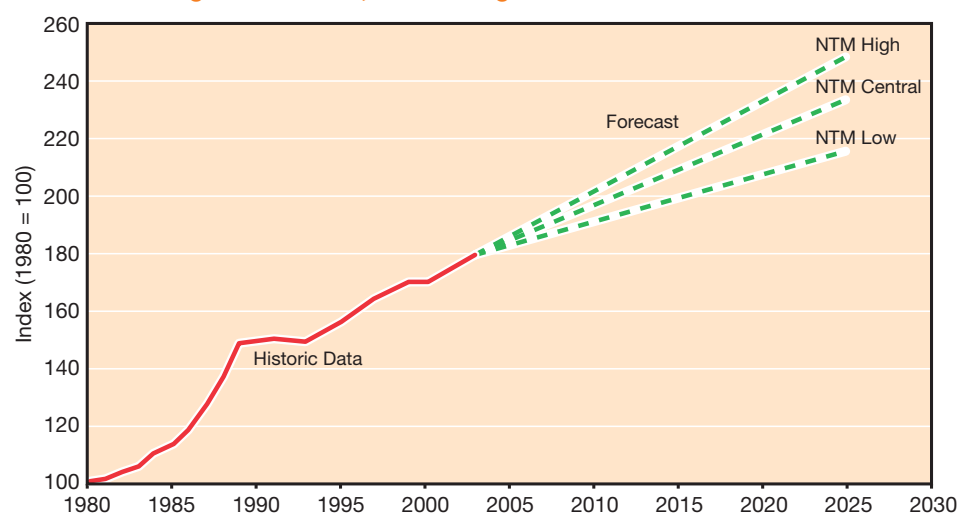
- Gross Domestic Product (GDP)
- Fuel prices
- Population growth and the number of households
- Car ownership and availability, including the number of licence holders
- Industrial output
- Imports of goods

All these impact on the total future demand for road passenger and road freight transport. Further important assumptions are that there will be no significant change to national and local transport policies or to travel behaviour. Assuming there is no change in the latter is very problematic as far as road passenger transport demand is concerned.

Figure 4 shows the most recent estimates of road traffic for Great Britain to 2025. Three forecasts are made. Depending on the key assumptions above, there is a forecasted 20 to 39 per cent growth in road vehicle kilometres for 2025 compared with the base year of 2003. The central forecast lies towards the higher forecast and is for 30.5 per cent growth.

It should be clear from Figure 4 that forecasts made in 1980 or 1990, if based on trend extrapolation, give much higher traffic forecasts than those made in 2003. The big unknown at present is fuel prices which have increased dramatically in 2008 and seem likely to continue to increase further over the next year or so. A price of £2 per litre is forecast for the end of 2009. A consequence of this latest hiking-up of prices is that for the first time, economists are questioning whether the demand for fuel for private cars is now more price elastic than had been previously thought. There is now evidence of modal switching from the

Figure 4: Central, low and high 2025 traffic forecasts



Source: Historic traffic data is from DfT (2006a); forecasts NTM

private car to local bus transport. As this seems likely to persist as fuel prices rise further, the latest road traffic forecasts will need to be revised downwards.

The use of road traffic forecasts

Road traffic forecasts have several important uses. These are:

- ▶ To determine future network needs at a national and at a local level.
- ▶ To estimate where the worst traffic bottlenecks are likely to occur.
- ▶ To be able to forecast the likely effects of particular transport policies, for example, the introduction of local or national road pricing schemes.

Evidence of the last two uses can be found in the Eddington Transport Study, 2006.

Road traffic forecasts are most widely used in the third stage of Department for Transport's COBA model for trunk route assessment. (For further details see the author's book *Transport Economics*, Heinemann, 2006, Chapter 3.) It is at this stage that the various costs and benefits of building a new link of a proposed trunk route are forecasted over its length of life. This can be as little as 15 years, although 25 years is more usual.

This approach, which has resulted in the construction of most of our road network over the past 40 years or so, is popularly known as 'predict and provide'. In other words, on the basis of the outcome of the COBA cost-benefit analysis, decisions are made as to whether a new by-pass should be built or whether a stretch of motorway should be widened. Such decisions rely heavily on future traffic forecasts.

Herein lies a problem. Fundamental decisions are being made using road traffic forecasts that are by no means accurate let alone robust. Given that roads will continue to be provided as a quasi-public good, this raises the question as to what other considerations there might be that could be taken into account when appraising whether a new stretch of road should be constructed in order to give a clearer indication of need.

In recent years, the Department for Transport has used two further project management tools alongside COBA. These are:

- ▶ Environmental Impact Assessment. As its name suggests, this is an assessment of the likely positive and negative influences or effects that

a project such as a new road may have on the environment. Its purpose is to be used alongside COBA to ensure that environmental impact is taken into account before deciding whether a new road project should proceed.

- ▶ A New Approach to Appraisal. This is a very recent initiative that is designed to show whether small scale schemes such as better traffic management can achieve the same or most of the benefits of larger schemes. Operationally, when a road proposal is submitted for consideration, a short summary of the main economic, environmental and social impacts of the proposal has to be produced. These impacts are measured in qualitative ways and where possible, in quantitative ways.

Conclusions

Decisions that are taken on road building are no longer based solely on forecasts

of future road traffic demand. Wider considerations, as referred to above, are now taken into account. These operate alongside the cost-benefit COBA model. These broader matters are to many observers a move in the right direction to ensure that in the future, only those roads that really are needed, do actually get built.

Questions for discussion

1. Using Figure 4, explain why three estimates of road traffic demand have been made for 2025.
2. Assess the relative importance of taste/fashion determinants of demand in an individual's choice of whether to use a private car or local bus transport.
3. Despite problems raised in this article, why is it necessary to have a model for the appraisal of new road schemes in the UK?

Summary of key points

- ▶ Private car travel has risen rapidly during the past 20 years.
- ▶ Rail or bus travel is a partial substitute for private car travel. Rail and bus fares have increased faster than the cost of private motoring.
- ▶ Rising fuel prices may now be making public transport a more compelling alternative than for many years.
- ▶ Forecasts of future road traffic demand are now just one aspect in how the Department of Transport decides the extent of new road-building.



with Chief Examiner,
Robert Nutter

1. Investigate the importance of the Private Finance Initiative (PFI) in road building.
 - (a) For background read 'Roads through private finance' by Clare Knowles (www.publicservice.co.uk)
 - (b) Investigate Birmingham City Council's proposed use of PFI for road maintenance. Search 'PFI initiative 2007' on the council web site www.birmingham.gov.uk
2. Examine the success of the M6 Toll road.

www.m6toll.co.uk www.thisismoney.co.uk (search M6 Toll)

www.notolls.org.uk/m6consult.htm
3. Using the internet research the second Severn Bridge crossing investigating the role of PFI and the effect of the tolls on the Welsh economy.

www.severnbridge.co.uk www.notolls.org.uk/wales.htm

<http://news.bbc.co.uk>

Why did we End Up between

northern rock

and a

HARD PLACE

Stephen Romer considers the reasons for the appearance of the credit crunch in 2007.

Things can only get better. That was the theme tune as Tony Blair's rebranded Labour party was swept into office in an electoral landslide in 1997. But a decade or so later, as the probable end of the New Labour era approaches, 'things' have been deteriorating at an alarming rate.

Things ain't what they used to be. That would be a more apt campaign song as the next election approaches in a suddenly gloomy economic environment. In mid-2008, here is the news: inflation is above target, growth prospects are down, interest rates are relatively high, the housing market is in freefall, the price of oil is at a record level, real incomes are under attack, consumer confidence is in the doldrums and the general outlook threatens recession. And it is news which has been going from bad to worse on an almost daily basis.

After presiding over a long period of sustained growth and low inflation, the Labour government suddenly has an economic crisis on its hands. And with a seeming absence of plausible policy

proposals, Labour's reputation for competence in economic management has evaporated, much as that of the Conservatives did after 'Black Wednesday' in 1992. Gordon Brown's brief political honeymoon as Prime Minister has given way to a twenty point Tory lead in the opinion polls.

But what is interesting for us as economists is to ask how the current economic crisis developed in the first place. How come the economic environment of the 'NICE decade' (non-inflationary, consistently expansionary) has suddenly disappeared? Where did the new instability come from? And why is it that after an unprecedented 15 year-long period of growth, the relevant question today is: will there be a recession?

The sub-prime market in the US

Although there are other factors of influence, the economic crisis of 2008 essentially originated in the turmoil in the sub-prime mortgage market in the US in 2007. During the first half of that year, it began to emerge that mortgage defaults

Current Topics in



ECONOMICS

were becoming increasingly widespread. The reason? Following seventeen successive upward adjustments to interest rates by the US central bank, sub-prime mortgagees – borrowers with poor credit ratings – were typically no longer able to meet their rising monthly mortgage payments. The ‘value’ of the US sub-prime market exceeded \$100 billion, but, by August 2007, it had become clear that sub-prime debt was, in fact, largely worthless.

Why did the subsequent worldwide financial crisis escalate so rapidly? Through mortgage securitisation and other manifestations of what is known as ‘financial engineering’, banks and hedge funds in the US, Europe and elsewhere had become heavily exposed to the sub-prime market. “When the tide goes out,” says the conventional wisdom on Wall Street, “you can see who has been bathing without a costume”.

Thus, the receding of the tide at the end of the sub-prime boom in 2007 revealed that virtually all of the world’s biggest financial institutions, their balance sheets dominated by bad debts, had been swimming in a deceptively placid ocean *without their trunks*. Like East German vacationers at the beach, they had taken the non-textile option.

And as a consequence of their imprudence, banks in the second half of 2007 suddenly found themselves obliged to write off tens of billions of dollars – more than \$100 billion in total by the Spring of 2008 – in assets tied to the now defunct sub-prime mortgage sector.

It is not going too far to say that the collapse of a major bank, and the consequent threat of the downfall of the world financial system, had become a real fear. Against this background, you can see why liquidity in the inter-bank market dried up, banks becoming reluctant to lend to one another. Hence, a new term that appeared – the ‘credit crunch’.

The fear was that a borrowing bank, its balance sheet dominated by worthless assets routed in the sub-prime sector, would turn out to be unable to repay an inter-bank loan. With money market liquidity receding, the Federal Reserve, the Bank of England, the ECB and other central banks were obliged to step in, dramatically bailing out the system. Liquidity in the hundreds of billions of dollars had to be made available.



Rarely has monetary policy been so exciting. And in the US in March 2008, in an atmosphere of mounting tension, the Federal Reserve rushed to the rescue of Bear Stearns, a major investment bank. In effect, there had been the beginnings of a run on the bank – reportedly, depositors had withdrawn about \$10 billion in cash from Bear Stearns on the last day before the rescue.

As things stood, the fifth largest bank in the US was heading for collapse. The implications were unthinkable: one could hardly begin to imagine the scale of the potential crisis in banking in general – and the knock-on effect in the real economy, probably a full-blown depression.

Facilitated by a public subsidy of \$29 billion (29 billion dollars) to cover the losses arising from Bear Stearns sub-prime mortgage based derivatives, the Federal Reserve’s emergency rescue plan involved arranging for the acquisition of Bear Stearns by another investment bank, JP Morgan Chase. The latter took a 39.5% holding, paying about \$1.2 billion in shares to secure the acquisition.

And more generally, the Fed opened its ‘discount window’ wider than ever before in order to keep up with the crucial requirement for preventing the entire financial system from collapse: adequate liquidity in the banking sector. It was crisis management, Federal Reserve Chairman Ben Bernanke’s monetary mandarins maintaining a holding role to contain the fallout from the credit crunch and fend off financial and economic catastrophe.

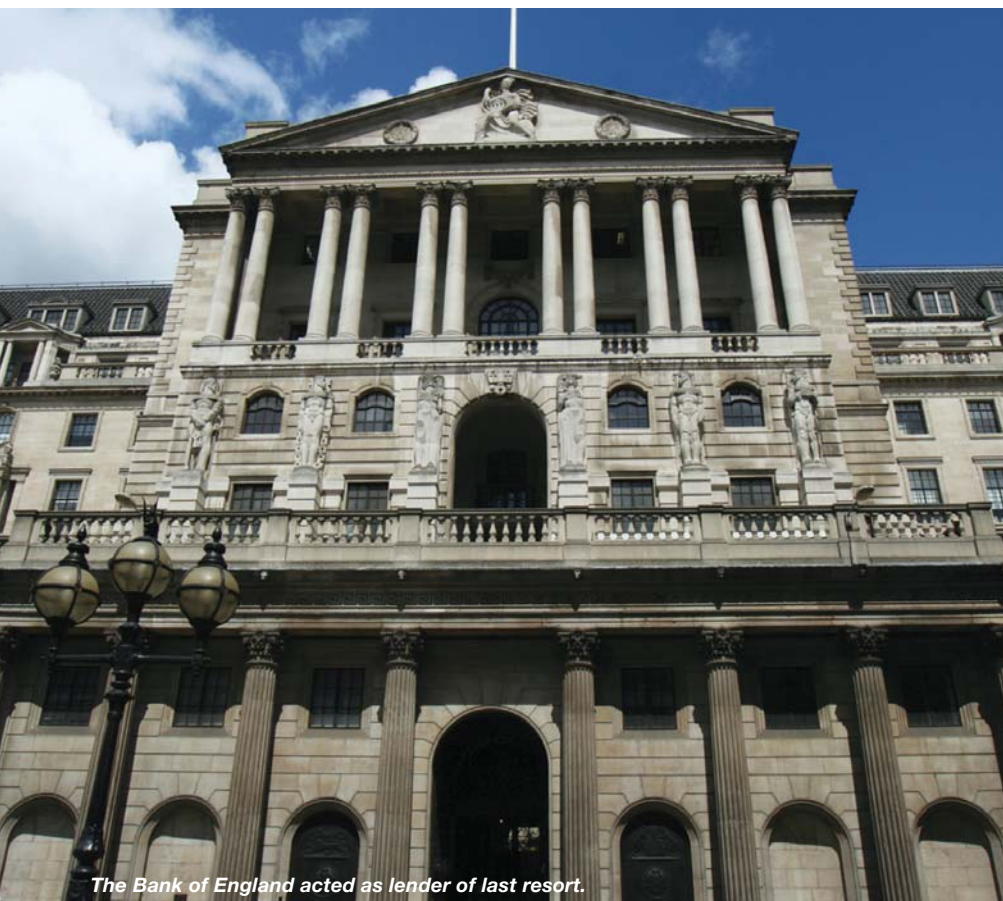
Rock Around the Block

According to a forecast in the *IMF Global Financial Stability Report* issued in April 2008, the final cost of the credit crisis may end up close to \$1 trillion. Total losses originating from the US mortgage market will probably exceed \$500 billion, and the knock-on effect of defaults in consumer credit and commercial property markets could amount to a sum approaching a further \$500 billion.

For the IMF, the global credit crisis had highlighted both the fragile nature of the international financial system and the effectiveness of the institutional response to the crisis. But these were fairly familiar points in the UK following the headline-making Northern Rock crisis of September 2007, the first run on a High Street bank since the Victorian era. The City of Glasgow Bank in 1878 had reportedly been the last.

For three days, angry depositors queued round the block outside Northern Rock branches up and down the country. They were confused and angry, anxious to withdraw their savings, fearing it would soon be too late. Northern Rock had hit rock bottom. Not so much a ‘rock’, more a house built on sand.

Finally, however, just before Northern Rock could put the ‘bank’ into bankruptcy, the government stepped in, halting the run on the bank by underwriting its debts and guaranteeing its deposits. But what is interesting is how this disastrous state of affairs had developed. How did such a well-established bank become so deeply embroiled, and at such an early stage, in the credit crunch?



The Bank of England acted as lender of last resort.

The answer, it seems, lies in Northern Rock's unconventional business strategy. It had been relying on borrowing most of its funds for mortgage lending in the *wholesale money market*, and when that source of finance suddenly began to seize up with the onset of the credit crunch, the writing was on the wall.

Rather than maintaining a close correspondence between deposits and advances (elementary in traditional banking practice), Northern Rock's borrowing policy had meant that it was much more heavily exposed than other UK banks to developments in international money markets.

Northern Rock was eventually taken into public ownership, i.e. nationalised, and a recovery plan introduced under which it would attempt to attract savers with the objective of doubling the percentage of lending based on savers' deposits. Never mind financial engineering, one of the lessons of the Northern Rock debacle would seem to be that sound banking practice still requires a relatively conservative lending policy – one in which the scale of the lending must bear some relation to the volume of deposits.

The nationalisation of Northern Rock took place in February 2008 after the government had failed in an extensive

search for a buyer in the private sector. For the Chancellor, nationalisation had been 'an option to be avoided'. But by the time negotiations with several possible buyers (Richard Branson; a Northern Rock management buy-out group; various private equity interests) had fallen through, state ownership had become inevitable.

At this point, the Government spun the line that "an essentially temporary period of nationalisation would be in the best interest of the taxpayer". The latter is owed about £25 billion by Northern Rock, the sum borrowed from the Treasury to keep the bank afloat during the crisis.

Under public ownership, 2,000 jobs (about one third of the Northern Rock workforce) are being cut, and the plan is that the debt to the taxpayer will be paid off by the end of 2010. The bank will break-even by 2011, and it will then be re-privatised.

The programme calls for the halving of the Northern Rock mortgage book, worth about £107 billion. If you have a Northern Rock mortgage, you may find that you are encouraged to refinance with another bank or building society. In switching your mortgage in this way, your debt to Northern Rock would be repaid, and the proceeds fed into the bank's debt repayment to the Treasury.

Prior to the crisis, Northern Rock had a share of 7.5% of the UK mortgage market; now the policy is to get this down to about 2.5%. There is, however, a danger that only the most credit-worthy mortgagees will be able to move their home loans to another bank, and that Northern Rock will thus retain the mortgage accounts of borrowers with mainly poor credit records (effectively, sub-prime mortgages).

Moreover, it is fairly safe to assume that as unemployment rises and real incomes fall in the deteriorating wider macroeconomic environment in 2008 and 2009, the relative frequency of mortgage default will rise. Indeed, during the Spring of 2008, the number of Rock mortgages falling into arrears doubled. As an observer, you may well be inclined to wonder just how realistic is the Northern Rock debt repayment plan.

A further complication arises from the prohibition of state aid, a basic feature of EU competition policy. The UK government's rescue of Northern Rock was permitted by the European Commission only on the basis that the rescued bank would not use in its advertising boasts that its deposits are backed by government guarantee.

However, in 2008 several rival banks reportedly complained to the Financial Services Authority (FSA) that Northern Rock sales staff *had* in fact been using the guarantee as persuasion in their sales pitch. Boosting savings deposits in Northern Rock in this fashion can be seen as unfair competition.

In 2008, it is ironic that the safest haven for a saver's money is that well-known banking failure, the Northern Rock: every penny of one's deposit is underwritten by the authorities, whereas in any other UK banking institution only the first £35,000 is covered by the FSA's government-backed Financial Compensation Scheme.

Lender of the Last Resort

The Northern Rock crisis of 2007 was also a crisis of financial regulation, a crisis in which the UK's tripartite system of bank regulation was widely regarded as having failed. The Treasury, the Bank of England and the FSA – all had a role to play in the arrangements for banking oversight put in place by Gordon Brown in 1997.

But in the Northern Rock affair, all three institutions came in for some heavy criticism. They were "asleep at the wheel", said some observers; "they do

not understand the complexity of the modern banking sector”, argued others. It was a sign of incompetence, said some critics, that the FSA had been unable to detect in Northern Rock’s unconventional business model an early warning of undue banking risk.

The financial instability of the Newcastle-based bank should have been apparent given that the onset of the credit crunch was a month before the run on the bank, said critics of the regulatory system. In due course, the House of Commons Treasury Select Committee would echo these observations, finding that the FSA had been guilty of “a substantial failure of regulation”.

But for the regulators themselves, the blame lay elsewhere, the crisis having been largely unforeseeable. Moreover, for the Governor of the Bank of England, intervention to bail out big banks had been a particularly unappealing policy: rescuing banks from the consequences of their irresponsible practices would give rise to a ‘moral hazard’. Why? Such a rescue operation essentially forgives banks their excessive behaviour and encourages them to repeat such excesses in the future.

In practice, Mervyn King’s moral hazard position could not be sustained indefinitely, and by September 2007 the central bank had launched the lifeboats. Could a more pro-active Bank of England policy in August have avoided the run on Northern Rock in September? Or would it merely have postponed the inevitable by papering over the cracks?

Would it have been better to have followed the logic of the moral hazard argument, letting Northern Rock go bankrupt? Would this have constituted a valuable lesson to the banking sector, a strong message saying that banks must adopt more responsible practices because they cannot rely on being bailed out?

Following the recommendations of the Treasury Select Committee, the tripartite regulatory system was overhauled in the hope that a future Northern Rock-type crisis can be averted. In the Mansion House Speech in June 2008, the Chancellor announced the setting up of a new Financial Stability Committee at the Bank of England. Just as the Monetary Policy Committee has an obligation to deliver 2% annual inflation, the new committee will have a statutory duty to ensure financial stability.

Under the new rules, the much-

criticised FSA will have responsibility for banking supervision, but will be obliged to refer troubled banks to the Bank of England. If a bank is in danger of failure, Mr King’s Stability Committee will take over the running of that bank under a ‘special resolution regime’. Under the new system, “the authorities can act quickly and decisively to support financial institutions,” explained Alistair Darling, outlining his plans at the Mansion House.

It’s the Economy, Stupid

In 2008, we have been observing two phenomena – (a) a credit crisis and (b) a generally gloomy economic environment – one which carries a very real threat of recession. What links (a) and (b)?

Banks cannot easily raise money because of the credit crunch. Thus, loans and mortgages, if available at all, are granted at higher rates of interest. Consequently, activity in the housing market is down, house prices have fallen and consumer confidence is weakened.

Above all, the transmission mechanism from crisis in the credit market to reduced economic growth (and possible recession) depends on this enfeeblement of consumer spending. Making matters worse, the high rate of inflation in 2008 means that the monetary authorities have little or no scope to alleviate the situation by cutting interest rates: the highest CPI inflation for 16 years in May 2008 (3.3%) implied that an interest rate cut before the end of the year was looking extremely unlikely.

The impact of the credit crisis would continue for some time. Speaking to the Treasury Select Committee in June 2008, Mervyn King explained that the credit crunch had now entered what was expected to be a long phase in which banks were rebuilding their capital and

getting rid of the risky assets acquired over the previous decade.

In this phase (Christened ‘the Great Unwinding’ by Mr King, and ‘de-leveraging’ by Wall Street), banks were unlikely to make significantly more mortgage finance available. Thus, we could expect mortgages to remain scarce and relatively expensive; the outlook for the housing market was poor.

And as regards macroeconomic prospects more generally, the MPC’s position was essentially that the best that can happen would be a period of wage restraint in 2008, followed by falling inflation in the second half of 2009. Only then would interest rates come down.

But the short term outlook remained poor. As the Governor said at the Mansion House in June 2008, “The squeeze on real income growth is likely to mean that both house prices and consumer spending weaken together.”

Questions for discussion

1. What were the causes of the credit crunch?
2. Define the following terms: (a) sub-prime mortgage; (b) securitisation; (c) hedge funds.
3. What would be the economic consequences of a major bank going bankrupt?
4. How realistic is Mervyn King’s argument about ‘moral hazard’?
5. “The plan for Northern Rock to repay fully its government borrowings by 2010 is unrealistic in the deteriorating economic environment of 2008 and 2009.” Explore this statement.
6. “The pace and complexity of developments in financial engineering imply that effective bank regulation is impossible.” Discuss.

Summary of key points

- ▶ The positive economic growth rate of the UK economy during the last fifteen years has given way to fear of recession.
- ▶ Central banks have addressed the credit crunch of 2007 and 2008 by injecting liquidity into the financial system.
- ▶ The fact that major banks are in danger of failure was illustrated by the Bear Stearns crisis in the US whereas in the UK, there was a run on Northern Rock, necessitating a government rescue.
- ▶ The IMF has estimated the eventual cost of the credit crisis will be close to \$1 trillion.
- ▶ In the UK in 2008, the Chancellor announced the setting up of a Financial Stability Committee of the Bank of England.



Tony Emery, a Principal Examiner, considers the relationship between the world's key currency and a precious metal.



The price of the dollar and the price of gold

March 2008 saw the world banking crisis and the credit crunch bite harder. To avoid recession and financial collapse the US Federal Reserve was feeding cash into its banking system and cutting interest rates. One commentator suggested that the 'Fed' was willing to accept bus tickets as security for loans to the banking system. Despite this intervention, pressure on the US\$ continued.

The combination of rising fears of inflation, volatile stock markets, a weak US\$ and no new supply of gold saw gold's price rise 19% in three months. This followed a 32% rise in 2007. A spokesman from the gold industry pointed out, however, that the current price of gold at \$1000 per ounce was in real terms well below the \$850 price of 1980. To be an equal value he asserted that the current price would have to be \$2500.

Figure 1: The price of the dollar in yen and euros, 2003-8

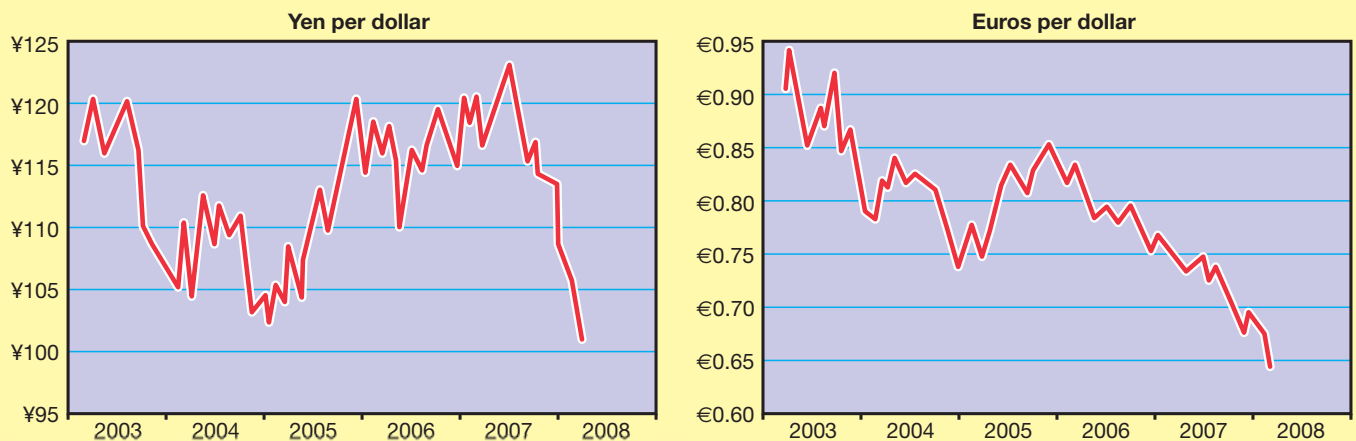
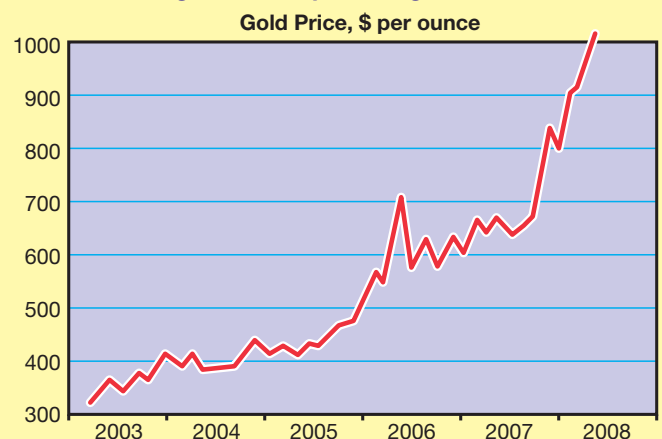


Figure 2: The price of gold, 2003-8



- What can be deduced from the data about the purchasing power of the US\$ between 1980 and 2008? (3 marks)
- Why might fears of inflation have been rising at this time? (3 marks)
- Using Figure 1, compare the changing value in yen of the US\$ between 2003 and 2008 with its changing value in euros. (6 marks)
- How might changes in the price of gold link to changes in the price of the US dollar? (4 marks)
- With the help of a diagram, explain how factors other than the price of the dollar have contributed to the rise in the price of gold. (6 marks)
- Comment upon the extent to which gold was acting as money during this period. (8 marks)

Suggested approach to the questions

(a) What can be deduced from the data about the purchasing power of the US\$ between 1980 and 2008? (3 marks)

It is suggested that \$850 in 1980 had the same purchasing power in real terms as \$2500 in 2008. This means a fall in the purchasing power of each \$ by approximately two thirds.

Remember the distinction between real and nominal values. Identify the evidence then reach a conclusion using the detail that the data offers.

(b) Why might fears of inflation have been rising at this time? (3 marks)

The actions of the Federal Reserve in attempting to avoid recession might be inflationary and have influenced attitudes. Pumping cash into the system would increase bank lending and the money supply (monetary inflation) and cutting interest rates might raise aggregate demand (demand pull inflation). The priority of the Fed, avoiding a crash rather than controlling inflation, might have influenced inflationary expectations and consumer and employee behaviour. This might have meant higher wage demands and cost push pressure.

The answer can be derived from the data but if you are aware of other influences at work in the recent past introduce them to support your argument. At this time there was a strong commodity price boom which was pushing up production costs. This included gold, see Figure 2, oil and commodities.

(c) Using Figure 1, compare the changing value of the US\$ in yen between 2003 and 2008 with its changing value in euros. (6 marks)

A selection from the following points would be acceptable:

- both values fell over the whole period,
- its euro value fell more over the whole period than its yen value (31.5% against 16.5%)
- the dollar rose significantly against the euro in 2005, while it appreciated for longer against the yen, 2005 and 2006,
- its euro value was highest in 2003 while its yen value was highest in 2007,
- the most marked contrast was in 2006 when its yen value rose while its euro value fell.

Not all of these points will be needed but they would all be acceptable. Note the different scales of the graphs. Be sure to bring out the similarities or differences. Do not give two separate descriptions of the changes, leaving the examiner to draw the conclusions. Manipulate the figures rather than copying them.

(d) How might changes in the price of gold link to changes in the price of the US dollar? (4 marks)

Broadly, in euro terms, the fall in the value of the dollar has been accompanied by a rise in the price of gold. While the same is true over the whole period for its yen value they do move in the same direction in some years. The picture is not totally clear cut. However it would make sense for the price of gold to rise if it is being bought by traders who are moving out of dollars because of its depreciation. They might do this to avoid a loss of value and to find a more stable asset.

Be prepared to tackle relationships which you have not seen before. Try to apply principles to the particular context. There might not be a 'right' answer, the examiner might be looking for a sensible and logical reasoning process.

(e) With the help of a diagram, explain how factors other than the price of the dollar have contributed to the rise in the price of gold. (6 marks)

The diagram should show the demand for and supply of gold interacting to fix its price. There is no new supply, so supply remains unchanged. Supply is also likely to be inelastic so making the price rise sharper. The price rise is the result of demand factors. Rising fears of inflation will make gold appear a more stable investment, the volatility on stock markets will cause stocks and shares to appear more risky. In times of uncertainty investors usually favour more gold in their assets. As a result demand will increase, shown by a shift to the right, the supply curve will be unchanged and price will rise.

This is a basic demand and supply application. The link between the factors and the diagram must be made clear. Candidates sometimes draw an accurate diagram without clarifying the underlying reasoning.

(f) Comment upon the extent to which gold was acting as money during this period. (8 marks)

Money is usually defined as anything that is generally acceptable as a means of payment or settlement of debt. It functions as a medium of exchange, a unit of account, a store of value and a standard of deferred payment. In this case gold is increasing its role as a store of value. Its holders will expect that it will increase in value sufficiently to exceed the rate of inflation. It is not serving to facilitate the exchange of goods and services or to value other assets or to encourage the use of credit. It is not matching the requirement to be generally acceptable as its circulation is very restricted. My conclusion would be that it is not acting as money in any real sense. What it is doing might be done as well, if less conveniently, by an antique or a diamond necklace. Not many would argue that either of those are money!

This part has the highest mark allocation being over one-quarter of the 30 marks. Each of the functions will need to be treated in more detail than the outline given above. Do not be afraid to come to a clear conclusion, even if you feel the need to mention any provisos in getting there.

Additional tasks

1. Check the course of the two exchange rates since March 2008. A useful site is Pacific Exchange Rate Service at <http://fx.sauder.ubc.ca>, where you can set up charts at the Archive Plot interface.
2. Find out the key difference in the obligations of the Federal Reserve and the Monetary Policy Committee in setting interest/discount rates. How has this affected their approach to tackling the 'credit crunch'?
3. Compare the long-term price behaviour of gold to that of oil. Gold price trends can be found at infomine.com (where you can also make comparisons to the price trends of other metals), while wttrg.com has oil price data. You could make further comparisons with commodity price trends using the fao.org website.



UK Poverty



Peter Cramp of Nottingham High School, discusses the extent and causes of poverty.

The meaning of poverty

To be in poverty means to be poor. There are two senses in which it is possible to be poor. One can be poor in absolute terms or poor relative to others in society.

Absolute poverty describes the situation of those with income levels so low as to threaten their continued survival. They are likely to be so poor as not to have all their basic human (material) needs met. These needs include food, water, clothing, warmth and shelter. The World Bank has two measures of absolute poverty, defined in terms of income of less than \$1 or \$2 per day.

Relative poverty affects those who are poor relative to other members of society. Those in relative poverty might or might not also be in absolute poverty. Relative poverty increases as the distribution of income in a society becomes more unequal. Relative poverty is often taken to exist amongst those with incomes of less than 40%, 50% or 60% of the median for society.

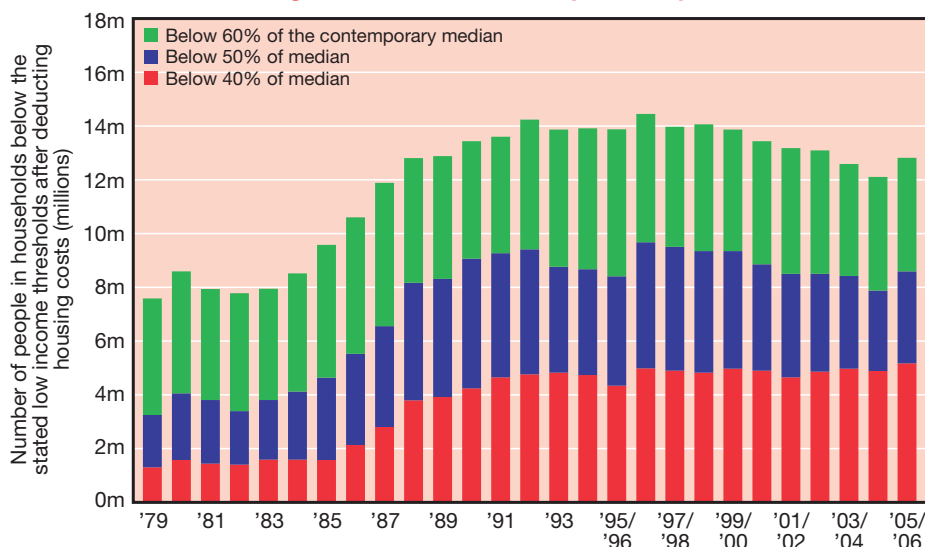
Source: Adapted from Peter Cramp, *Labour Markets 3rd Edition: The Economics of Work & Leisure*, Anforme, 2006.

The extent of poverty in the UK

Absolute poverty is rare in the UK, though it does exist, for example amongst the homeless. Such poverty is, however, much more of a problem in developing countries. For instance, World Bank figures show that 63.6% of the population of Zambia lived on less than \$1 a day in 2004.

The UK does, however, experience significant relative poverty, as is shown in Figure 1. The most recent available data shows relative poverty to have risen to almost 13 million in 2005/06, following falls in each of the six previous years. The 60% of median income threshold was worth £260 per week in 2005/06 for a couple with two dependent children below the age of 14.

Figure 1: The number of people on low incomes rose in 2005/06 following falls in each of the six previous years



Source: Households Below Average Income, DWP (1994/95 onwards) and the IFS (earlier years); UK; updated June 2007; accessed at: <http://www.poverty.org.uk/01/index.shtml>

Is UK poverty a problem?

It is possible to argue that the existence of poverty constitutes a **market failure**. Market failure most commonly refers to a failure to achieve an efficient allocation of resources (that is, failure to allocate resources to the uses in which they produce most utility). This type of market failure belongs to the field of **positive economics**. Those who argue that poverty is a market failure are instead arguing from a **normative** perspective. They believe poverty is unfair and is a sign of *failure to achieve an equitable distribution of income*. But this is an opinion on which not everyone would agree. Whilst many might argue that society has a duty to provide a 'safety net' to prevent people falling into

absolute poverty, this is as far as its responsibility goes.

In practice, UK governments *have* tended to regard relative poverty as a problem, especially governments formed by the Labour Party. Poverty is seen as a source of *social exclusion*. This relates to the idea that poverty denies opportunities to those it affects, leading to a variety of problems such as poor educational attainment, health problems, high crime rates and so on. The government's Social Exclusion Unit monitors 50 indicators of poverty and social exclusion, with a view to reducing their extent.

Particular attention tends to be paid to groups within society that are seen as vulnerable. Children are more likely to

live in low income households than adults and 30% of children lived in households with less than 60% of median income in 2005-06. While *child poverty* has proven difficult to reduce, *pensioner poverty* has halved over the past decade, as shown by Figure 2.

It is likely that the problem of poverty will receive increased attention in the near future, as the UK looks set for a difficult year in 2008-09, with a combination of low income growth and inflation.

What causes poverty?

The majority of income in the UK is earned as a return to labour, in the form of wages and salaries. Thus, the labour market is the first place to look for causes of poverty. The causes of poverty in the UK include:

► Unemployment

While the benefits received when unemployed may be enough to stave off absolute poverty, they are likely to leave those affected by unemployment well below the median level of income for society. The consequences of unemployment are likely to be especially severe where no member of a household is in paid work and when the unemployment is long term in nature.

► Low wages

Low wages typically reflect a lack of skills, in turn associated with a lack of education and training/qualifications. Demand for labour is based on the **marginal revenue productivity (MRP)** of workers. There tends to be a plentiful (and elastic) supply of workers with low MRPs, but limited demand for them. This results in low wages compared to skilled workers with higher MRPs, as shown in Figure 3.

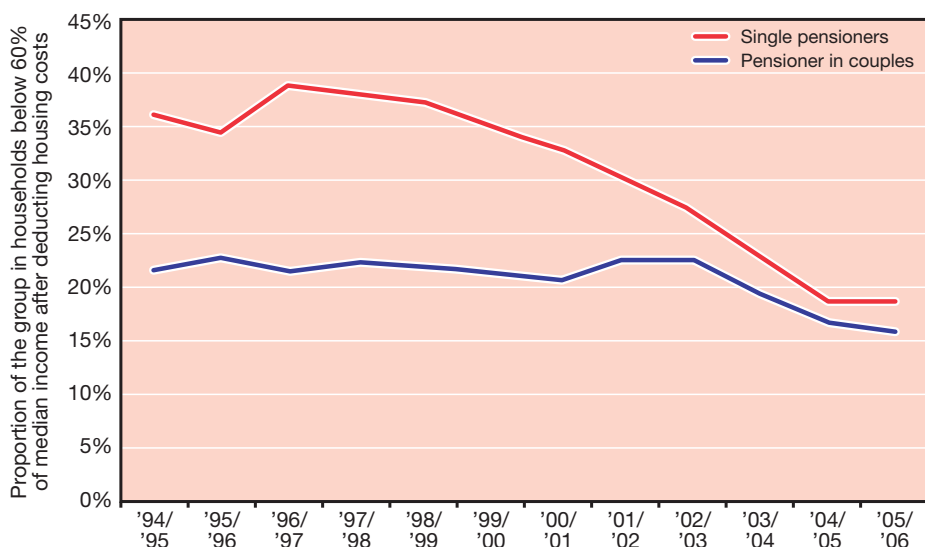
► The globalisation of the labour force

The UK has faced intense competition in recent years from countries where wages are lower. China and India are perhaps the most prominent examples. UK workers with low skill levels are unable to command wage increases in the face of the possibility of firms relocating to other countries or outsourcing production.

► Single parenthood

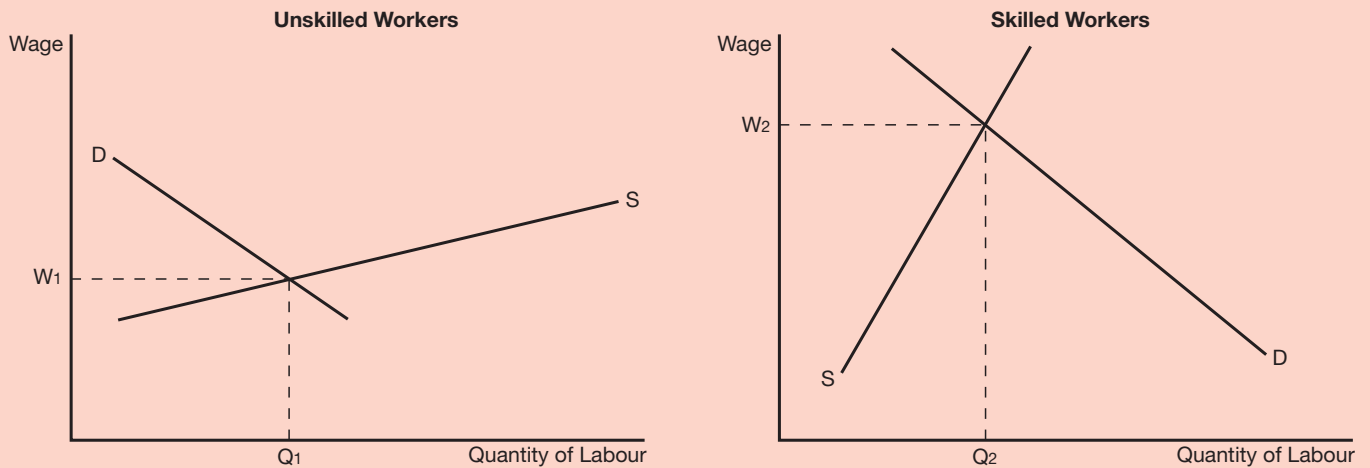
The proportion of parents who are single in the UK is increasing. The incidence of poverty amongst single parent families is high (as confirmed

Figure 2: The proportion of pensioners in low income households has halved over the last decade, with smaller falls for pensioner couples



Source: Households Below Average Income, DWP; UK; updated June 2007; accessed at: <http://www.poverty.org.uk/38/index.shtml>

Figure 3: Low wages for unskilled workers

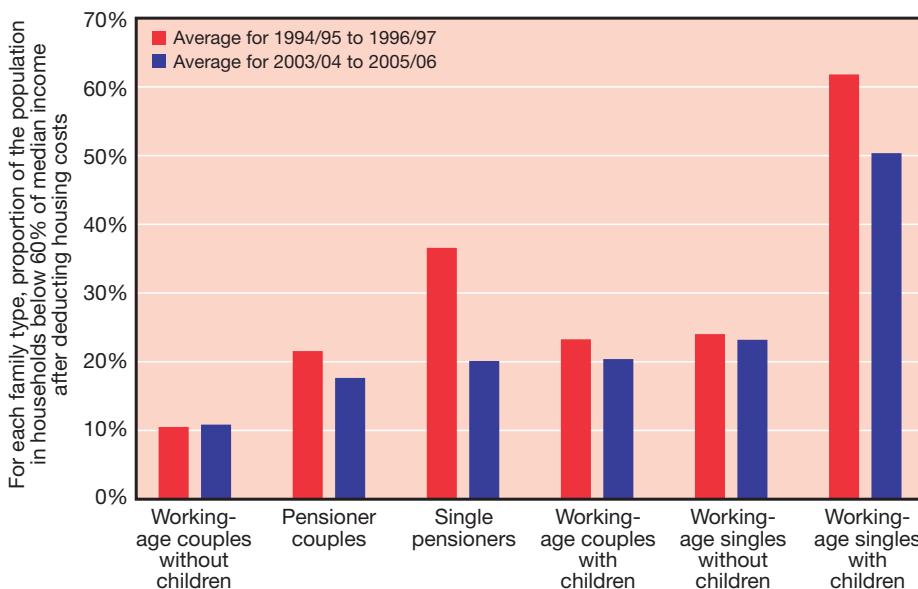


by Figure 4). This is in large part because the family only has one potential wage earner. Further, single-parents may

be unable to work in the absence of affordable child care. If they do work, payments for child care may

take up a significant proportion of the wages earned.

Figure 4: One half of all lone parents are in low income, two-and-a-half times the rate for couples with children



Source: Households Below Average Income, DWP; UK; updated June 2007; accessed at: <http://www.poverty.org.uk/03a/index.shtml>

► Longer life spans

Life expectancy is increasing over time in the UK for reasons such as better diet and healthcare. This means that people are enjoying longer retirements than previously and any pension funds that they built up during their working years must now be stretched over a longer period. If such a fund has to finance a retirement of twenty years rather than ten, it will only yield half the annual income that it would have done previously.

Concluding thoughts: equity-efficiency trade-offs?

Government intervention may be justified to correct any market failure that is perceived to be associated with poverty. Such intervention most commonly takes the form of redistribution of income through:

- Progressive taxation and
- Means-tested or universal benefits

One problem with such measures is that they may interfere with incentives to work. For example, at the lower end of the income scale, much of any additional income earned may be offset by loss of means-tested benefits and payment of tax on the additional income. This may cause a **poverty trap**. It is possible that improvements in equity may come at the expense of a loss of efficiency. Other anti-poverty measures such as the **National Minimum Wage** also have the potential to interfere with the efficient functioning of the labour market. Readers may like to evaluate alternative methods of poverty reduction and attempt to reach a view as to which is best.



The Economy Today

Nigel Tree

In this supplement we look at the major changes in the UK economy over the past year and their likely impact on the UK's economic future.





The Credit Crunch

The last year has seen a world-wide 'credit crunch' which has had major implications for the UK economy. It started in August 2007 in the US 'sub prime' market. This market had developed over several years as a result of low interest rates in the US. As lenders tried to increase their profits they started to offer mortgages to borrowers with poor credit records. But, as interest rates started to rise in the US between 2004 and 2007, from just over 1% to 5%, borrowers started to default on their loans. And, although the loans were secured on properties, a huge increase of 90% on mortgage foreclosures in one year to July 2007 led to a substantial drop in house prices.

Banks and investment companies around the world started to realise that they could be subject to severe losses with the prospect of some of them going out of business. This led to banks hoarding cash and refusing to lend to each other. According to the International Institute of Finance (IIF): "Firms became reluctant to participate in money markets... As a result sub prime credit problems turned into a systemic liquidity crunch." The upshot of this was that by June 2008, according to the IIF, banks made \$476bn in credit writedowns.

In the UK, on 13 September 2007, Northern Rock revealed that it had gone to the Bank of England for emergency



The first run on a UK bank for 140 years.

support, with the Bank operating in its role as 'lender of last resort'. The result of this announcement was the first run on a UK bank for 140 years. Long queues were forming outside Northern Rock branches overnight as depositors rushed to withdraw their savings. Since Northern Rock, the 5th biggest mortgage lender in the UK, relied mainly on borrowing in the money markets to finance its mortgage lending, and since this source of money had all but dried up, the Bank of England was forced to step in. Ultimately, Northern Rock was taken into effective nationalisation as the government ploughed £24bn into the business to keep it afloat.

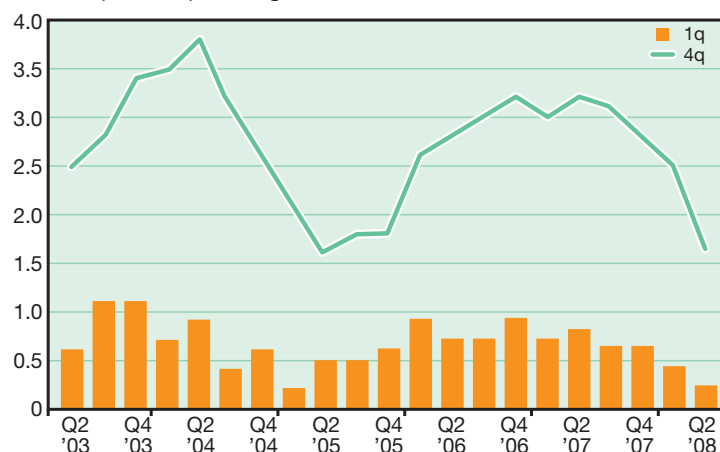
This was also the response of major governments in the US, EU and around the world as they pumped more liquidity into their economies to try to avoid the possibility of recession.

Economic Growth

How successful has the UK government been in staving off recession? The recent picture can be seen in Figure 1.

GDP increased by only 0.2% in the second quarter of 2008 which was down from 0.3% in the first quarter. This means that year-on-year growth decreased from 2.3% in the first quarter to 1.6% in the second quarter. This was the lowest year-on-year growth rate since the first quarter of 2003. In his budget of March 2008, Alistair Darling the chancellor

Figure 1: Economic Growth, annual and quarterly changes in real gross domestic product (percentages)



Source: ONS

reduced his growth forecasts to 1.75-2.25% in 2008 and 2.25-2.75% in 2009.

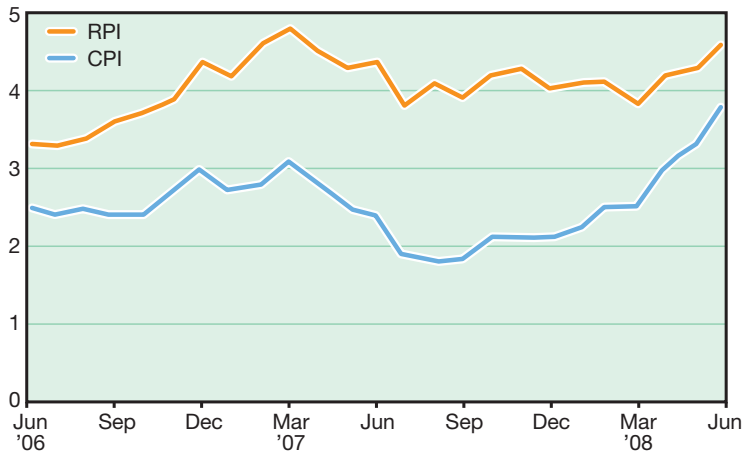
However, the International Monetary Fund takes a much bleaker view of our prospects. They have reduced their forecast for UK growth from 1.8% to 1.4% for 2008 and from 1.7% to 1.1% for 2009. In fact, in the 2nd quarter of 2008 total production output fell by 0.5%, following a fall of 0.2% in the previous quarter. Two successive negative quarters for GDP as a whole is the technical definition of recession, but on balance it looks as though the UK will stay in positive territory. However, having said that, it is still true that the economy has expanded by 57% over the last 64 consecutive quarters.

Inflation

Inflation is back with a vengeance. After a prolonged period of stable growth, low inflation and low unemployment the UK is on the verge of suffering from 'stagflation', which is a stagnating, low growth economy coupled with rising inflation. This is because the annual rate of consumer price inflation rose from 3.3% in May 2008 to 3.8% in June and 4.4% in July. The jump in inflation between June and July was the biggest monthly increase since records began in January 1997, and the annual increase was more than double the Bank of England's target figure of 2%. The recent trend can be seen in Figure 2.



Figure 2: UK Annual Inflation Rates, 12 month percentage change



Source: ONS

The main cause of the rise in the CPI figure was the increase in the prices of food and non-alcoholic drinks, with large upward effects from meat, bread and cereals and vegetables. On top of this there was upward pressure from petrol prices and gas and electricity bills. In fact, between June 2007 and June 2008 petrol prices rose by 24% and food increased by 9.7%. Also, particular staple food items have increased by more than the average. For example, over this period eggs have risen in price by 33.3%, bread by 13%, cheese by 15.8% and milk by 13.5%.

Figure 3: Annual % change in Consumer Price Index for goods and services



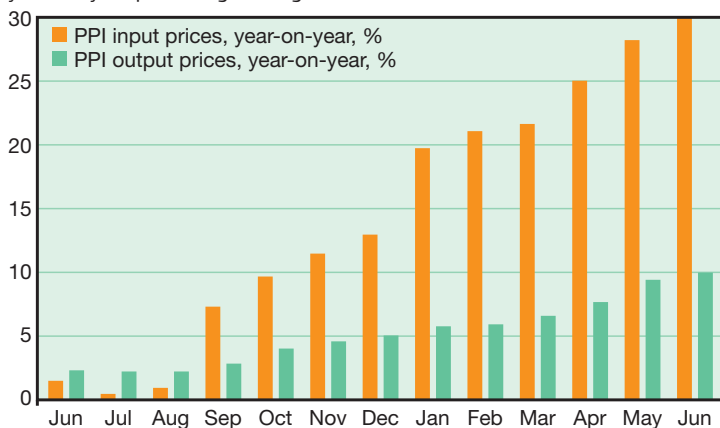
Source: ONS

Figure 2 also shows that the Retail Prices Index rose from 4.6% to 5.0% between June and July 2008. This measure is particularly significant because it is the traditional measure used by trade unions in wage bargaining.

Figure 3 shows that there is a two-tier effect on inflation at the moment. Although services have increased fairly sharply this year the graph clearly shows the faster and more extensive rate of growth in the price of goods. Why have goods prices increased so rapidly? The answer is basically due to the rapid increase in commodity prices over the past year. This is shown in Figure 4.

In June 2008 factory gate output prices rose by a record 10% on the year, which is the highest figure since records began over twenty years ago. At the same time, the cost of raw materials and other inputs rose by more than 30%.

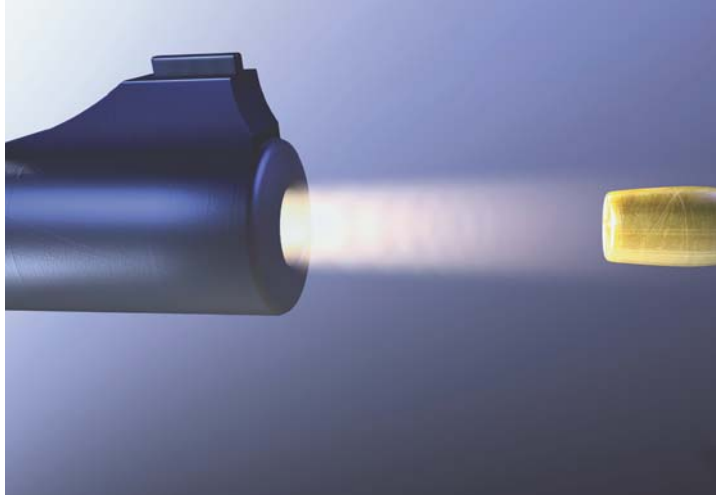
Figure 4: Producer Price Indices for input and output prices, year-on-year percentage change



Source: E&Y Item Club

This rate of increase in input prices has grown from virtually zero a year ago. The cause of this is particularly due to the sharp rise in oil prices which reached nearly \$150 a barrel in June, although many other commodities have risen sharply in price as well. Some good news was that oil dropped back to \$114 a barrel in mid August 2008.

According to Mervyn King, governor of the Bank of England, giving evidence to MPs at the end of June, there is no 'magic bullet' which can shield the UK economy from the global rise in commodity prices. He also said that inflation was "likely to rise further this year."

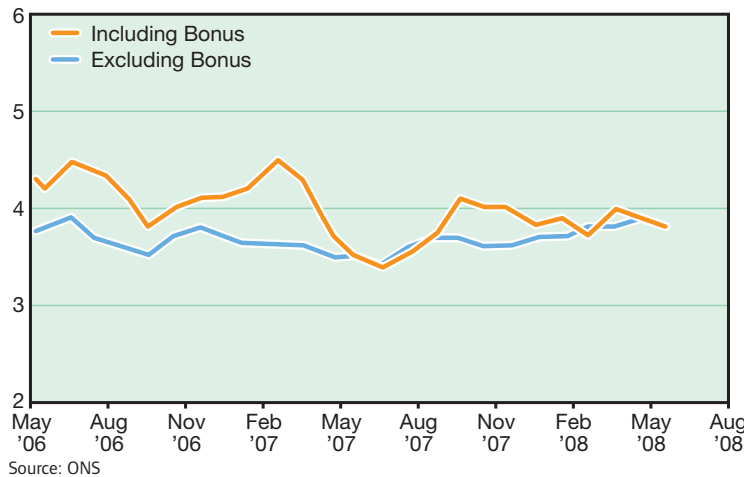


According to the governor of the Bank of England there is no 'magic bullet' to protect the UK economy.

Earnings

It can be seen in Figure 5 that average earnings have been remarkably steady over the year to May 2008. Average earnings including bonuses rose by 3.8% in the year to May 2008, which was down from 3.9% in April. Similarly, average earnings excluding bonuses also rose by 3.8%.

Figure 5: Average earnings percentage growth



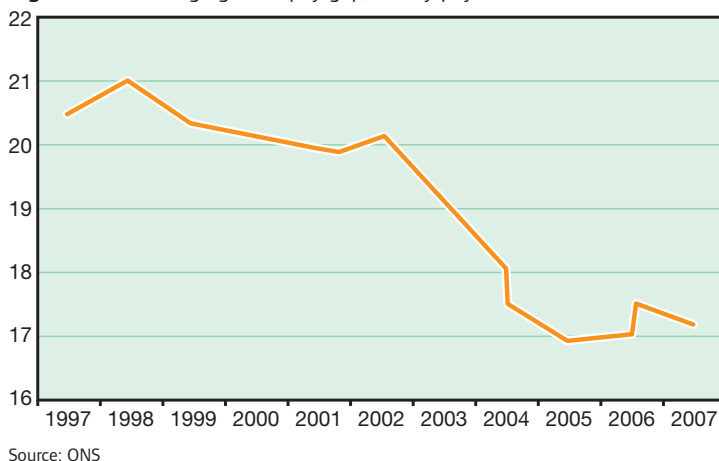
Over the same period increases in pay including bonuses rose by 3.9% in the private sector compared with 3.5% in the public sector. However, there was a marked difference when bonuses are excluded, with growth rates of 3.8% in the private sector and 4.0% in the public sector.

Given the rise in inflation over the past year, why have average earnings remained stable? The basic answer to this is that increasing globalisation makes it possible for firms to switch production to low cost areas which helps to keep UK wages down.

At the same time the effects of increased immigration and the increase in participation rates amongst older workers have both worked to restrain wages.

In June 2008 the chancellor told the BBC that: "Pay awards in both the public and private sectors have got to be consistent with our inflation target of 2 per cent." Public sector unions have come out strongly calling for increases in pay that are at least equal to inflation. However, a leader in the *Financial Times* on Monday 23 June 2008 said: "Public sector pay is already high enough. As in the private sector, salaries should be set at whatever level is required

Figure 6: Percentage gender pay gap, hourly pay



to fill vacant positions with appropriately qualified staff. There is no widespread recruitment problem in the public sector so wages are sufficient."

On the other hand some pressures are being applied in the private sector. In June, Shell tanker drivers agreed to a 14% two year settlement and it was feared that this might lead the way for other negotiating groups. One of the reasons that a number of companies are settling with high deals at the moment is that it is the second or third year of an existing deal which agreed to pay the RPI figure.

According to the latest survey of the Office of National Statistics the gender pay gap between men and women has narrowed to 17.2% in 2006-2007 compared with 17.5% in the previous year, and just over 20% in 1998. This can be seen in Figure 6.

When it comes to part-time work the gap is 35.6%. However, more women still work in occupations which are generally poorly paid and more women work part-time than do men. In 2007 average gross male annual earnings were £26,300 whilst the figure for women was £20,500. This gave an average British annual wage of £24,000 which was an increase of 2.7% on the previous year.

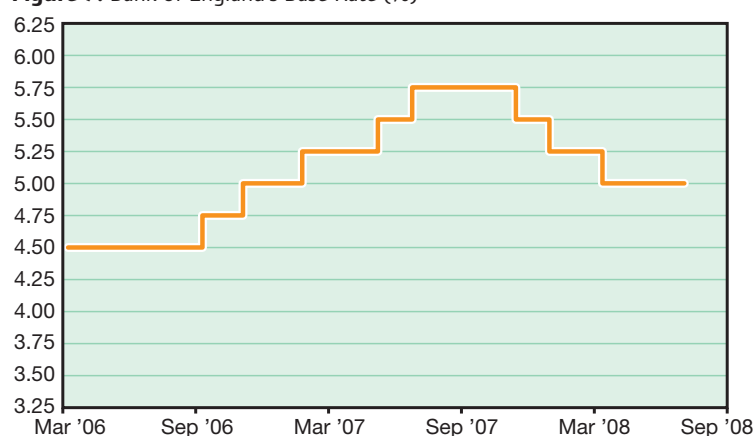
London continues to be the region with the highest weekly earnings recording a figure of nearly £600 in 2007, while at the other end of the scale the figure for Northern Ireland was £402.



Monetary Policy and Interest Rates

During 2007 the Monetary Policy Committee (MPC) of the Bank of England raised interest rates by 0.25 percentage points in February, May and July to reach 5.75%. This was the culmination of a steady increase in interest rates from 3.5% in autumn 2003 to 5.75% by July 2007. The reason for these increases was the increase in core inflation over this period and the need for the MPC to keep inflation at around its 2% target for the Consumer Prices Index.

Figure 7: Bank of England's Base Rate (%)



Source: Bank of England

However, the global financial crisis which broke in late summer 2007 caused the MPC to review its tactics. Eventually, with the prospect of economic growth stalling, the Bank lowered interest rates by 0.25 percentage points to 5.5% in December 2007. This was followed by two similar cuts in February and April 2008 to bring the interest rate down to 5%, at which level it stayed during the summer of 2008. Recent changes can be seen in Figure 7.

Mervyn King, the governor of the Bank of England, said after the April cut in rates that we should not expect another cut in interest

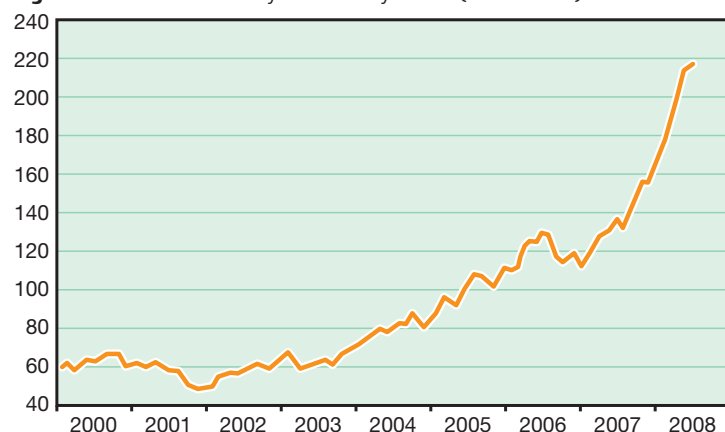
rates for at least two years. He said that inflation rates would rise higher than previous forecasts and remain well above the 2% target rate until early 2010. He also said that it was "quite possible we may get the odd quarter or two of negative growth" but maintained that a recession was not the Bank's central forecast.

In June the governor was forced to write a letter to the chancellor of the exchequer to explain why the Bank had failed to keep prices within one percentage point of the 2% target. This was following a rise in prices to 3.3% in May. This was only the second time the governor had been called on to write such an open letter since the Bank was granted independence to set interest rates in 1997. In the letter he said that: "...the MPC is aiming to return inflation to the 2% target within its normal forecast horizon of around two years, when the present sharp rises in energy and food prices will have dropped out of the CPI inflation rate." He went on to stress the need for economic growth to

slow this year which he expected to result from the squeeze on real incomes associated with higher inflation, together with the reduced availability of credit. The result of this should be a reduction in pressure on the supply capacity of the economy which will dampen increases in prices and wages.

The problem for Mr King is that he has little or no control over the forces which are responsible for the recent rise in inflation. About 17% of the CPI is made up of food and energy prices and these have been rising rapidly as can be seen in Figure 8.

Figure 8: Indices of Primary Commodity Prices (2005 = 100)



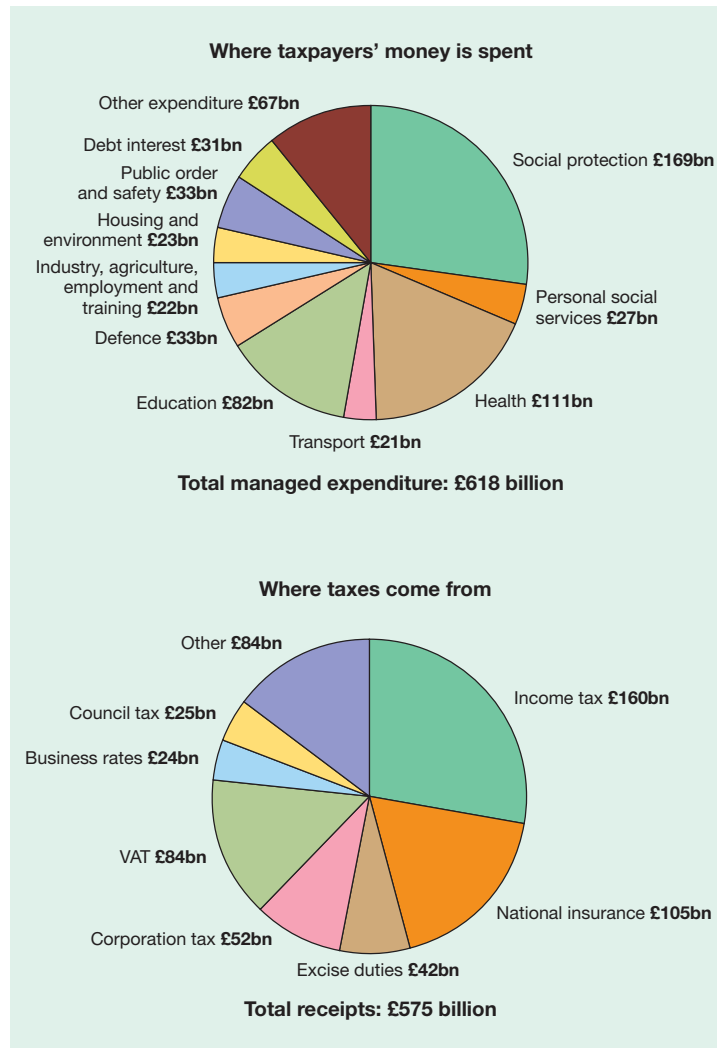
Source: IMF



The big problem for the Bank is in trying to guess the progress of future prices over which it basically has no control, in order to set the correct interest rate. On top of this, it is generally reckoned that it takes 18 months to two years for a change in interest rates to have an impact on economic growth. With the 24% fall in the price of oil between July and August and with other commodity prices also falling from previous highs there is a chance that some of the sting is being taken out of the inflationary influences that the UK and the rest of the world have been suffering from.

Taxation, Expenditure and Government Borrowing

Figure 9: Planned government receipts and expenditure, 2008-2009



Source: HM Treasury

Figure 10: Public sector net borrowing £bn



Source: HM Treasury

In March 2008, Alastair Darling, the chancellor of the exchequer, presented his first budget. He described it as a "responsible Budget that will secure stability in these times of global economic uncertainty". He also announced that public borrowing would be £43bn in 2008-2009 and that this higher borrowing would raise public sector net debt to 39.8% of national income by 2011 – which is only just below the 40% ceiling set by the Treasury.

Mr Darling also increased taxes on alcohol by 9% and raised taxes on 'gas guzzling' cars.

Total public spending is expected to be £618bn in 2008-2009 which will be largely offset by total receipts of £575bn with the £43bn difference made up by borrowing. Figure 9 shows where tax payers money is coming from and where it is spent.

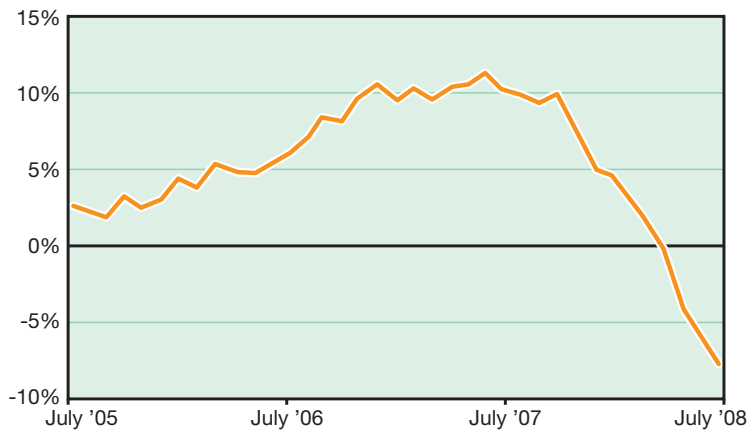
Public Sector Net Borrowing was £35.6bn in the fiscal year to 31 March 2008, and was up from £30.1bn in the previous year, although slightly down on the Chancellor's forecast of £36.4bn. Recent trends can be seen in Figure 10.

The figure shows the steep rise in recent borrowings and in fact the first quarter of 2008-2009 saw public sector net borrowing reach £24.4bn, which is the biggest quarterly figure since 1946. According to the Institute of Fiscal Studies a 1% shortfall in real national output would reduce the major taxes of corporation and income tax by £10bn. Also, most of the price rises at the moment are going on energy and food, which are either low or zero rated for VAT. This again will reduce the tax take. There are also likely to be falls in the tax take on stamp duty as housing transactions slump and on capital gains tax. In fact some commentators believe that the fiscal deficit in this financial year will reach £75bn.

Housing

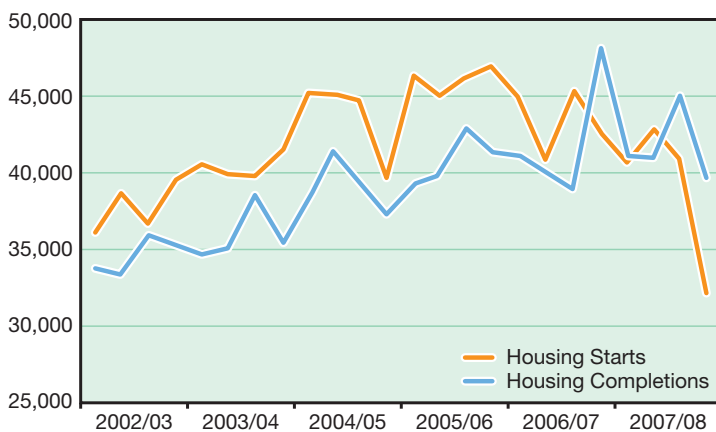
Last autumn's credit crunch has led to a severe deterioration in the housing market. Most commentators expected a downward correction in the market but at present it is turning into something of a rout. In August 2008 Nationwide published their housing index which showed that prices in July had dropped by 1.7% on the previous month and 8.1% on the same month in 2007. This can be seen in Figure 11.

Figure 11: Annual percentage change in house prices



Source: Nationwide

Figure 12: Trends in housing starts and completions in England, seasonally adjusted.



Source: Communities and Local Government, National Statistics

quarter of 2008 compared to the previous quarter, and this was down by 18% in the same quarter of the previous year. Also, total housing starts reached 156,400 in 2007-2008 and this was down by 10% on the previous year. The recent trend can be seen in Figure 12.

Previously, the government had set a target of building 2m new homes over the next eight years at an average rate of 240,000 a year. However, house builders have seen a severe fall in the sales of new houses, with Persimmon reporting at the end of April 2008 that they had seen a fall of one-third in house sales in the previous three weeks. This has meant that house builders are not willing to commit to new developments in the present climate and in fact



However, the Halifax House Price Index, whilst also showing a decline of 1.7% in July, showed a yearly decline of 10.9% in house prices. This is one of the biggest annual falls ever recorded in the UK and puts house prices back to their level in June 2006.

One of the results of the credit crisis has been a tightening in the criteria for mortgage lending with only 10% of borrowers being granted more than 90% of the value of their house purchase in the first quarter of 2008, compared with a peak of 15% in 2007. Also, the impact from higher food and fuel prices has put a lot of homeowners under financial pressure. In fact, over 300,000 home loan accounts were in arrears at the end of the first quarter of 2008 and this has led to an increase in repossessions. Altogether 9,152 properties were repossessed in the first quarter of 2008 compared to 6,471 in the same quarter of 2007, which is an increase of over 40%. According to the Council for Mortgage Lenders there were about 75,000 repossessions at the height of the last downturn in the housing market in 1991, and they estimate that there will be about 45,000 repossessions in 2008.

According to government statistics housing completions fell by 12% in the March quarter of 2008 compared to the previous quarter, and this was down by 18% in the same quarter of the previous year. Also, total housing starts reached 156,400 in 2007-2008 and this was down by 10% on the previous year. The recent trend can be seen in Figure 12.

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Is the housing market going under?

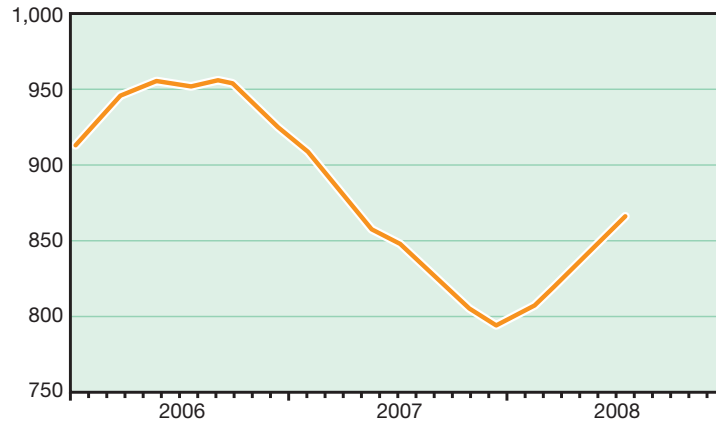




Labour Markets

Increases in inflation, falls in real disposable income, the credit crunch and the slowdown in economic growth have all taken their toll on the UK labour market. In July 2008 the number of people out of work and claiming benefit rose for the sixth month running by a further 20,100 to 864,700. This meant that the unemployment rate rose by 0.2 percentage points to 5.4%. According to a study by the OECD in July 2008, it is predicted that unemployment in the UK will rise by 100,000 by the end of 2009, raising the unemployment rate to 5.8%. The recent upward trend can be seen in Figure 13.

Figure 13: Unemployment – Claimant Count ('000)

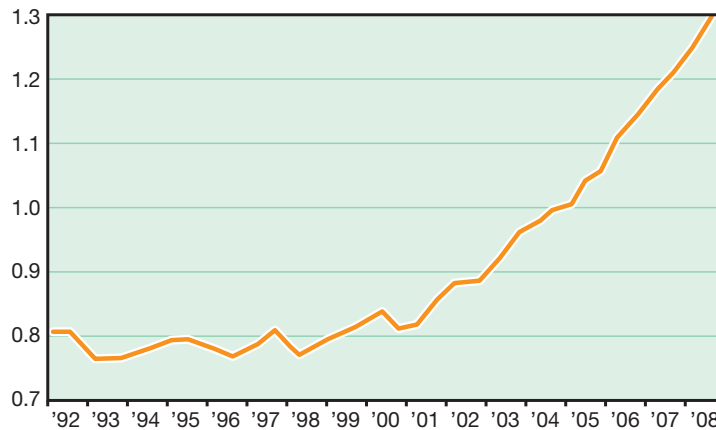


Source: ONS

quarter but up 0.3% on the year. Also, the number of people in employment for the three months to June 2008 was 29.56m, which was up 20,000 on the quarter and 384,000 on the year.

Why is it that employment is still rising fairly strongly at the same time that unemployment is rising? The major reason for this is the number of workers who are over retirement age who are remaining in, or returning to, the workforce. This can be seen in Figure 14.

Figure 14: Workers above retirement age (million)



Source: ONS

pension schemes. Also, because people are living longer, their pension has to stretch over more years and so a lot of fit, healthy pensioners are continuing in work. There is also the advantage of social networking and the reduction in isolation. Although a generation or so ago many jobs were very physically demanding, the movement to a service dominated economy has meant that the majority of jobs can still be handled by those over retirement age.

There has also been a change in migration patterns. It seems that the level of new migrants entering the country from eastern and central Europe has started to decline. In the first quarter of 2008 official government statistics show that registered immigrant numbers have declined by almost 15% to just under 43,000 compared with a year earlier. This is probably due to the fall in the value of the pound which has reduced the amounts which immigrants have left over to send back to families in their own countries, and also because wages are rising in many parts of eastern Europe. This is because employers in countries such as Poland saw such an initial outflow of labour when Poland joined the EU in 2004, that they have had to increase wages to attract workers into employment.

This increase was reinforced by figures for job vacancies and redundancies. Vacancies fell by 47,400 in June to total 634,900 and in the three months to the end of June 2008 there was an increase of 13% in the total number of redundancies to 126,000. The biggest falls in vacancies were in distribution, hotels and restaurants which fell 17,700 and finance and business services which were down 16,200. There was also a fall of nearly 13% in the construction industry.

The employment rate for people of working age was 74.8% for the three months to June 2008, which was down 0.1% on the previous

The number of workers above retirement age has risen by more than two-thirds since 1997 to reach a total of 1.33m. This is reflected in the employment rate for this group having risen from 7.9% to 11.7%. Companies such as B&Q now have about a quarter of their workforce over the age of 50. They, and companies like them, have found older workers to be more trustworthy, have lower levels of absenteeism and job turnover and to increase levels of customer service and satisfaction.

The reasons for this increase include the decline in early retirement packages offered to workers and the reduction in the value of

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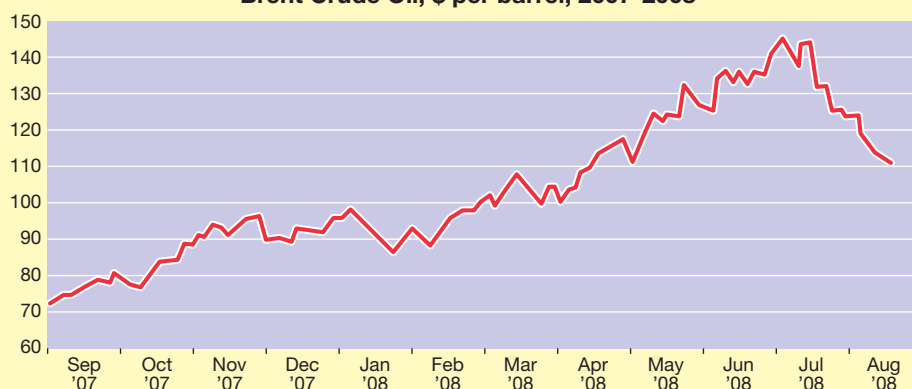
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ECONOMICS TODAY



Have oil prices passed their peak?

Brent Crude Oil, \$ per barrel, 2007-2008



Source: newsvote.bbc.co.uk

The price of oil dropped by 24% between July and August 2008 from just under \$150 per barrel down to \$109 on 19th August. What was the reason for this fall in price? The reason was twofold encompassing both the supply and demand sides of the market. Firstly, the Organisation of Petroleum Exporting Countries (Opec) increased their supply of oil. This was led by Saudi Arabia which increased supply from 9.4m barrels a day to 9.55m in August. This led to combined output of the 13 members of Opec rising to 32.8m barrels a day in July, which compared with 31.1m in the same month of 2007.

However, according to the International Energy Agency (IEA) demand also fell due to the combination of the worldwide economic slowdown and the high oil prices themselves. The IEA therefore reduced its forecast for oil demand growth to 790,000 barrels per day, down from 890,000. The IEA noted that some of the demand coming from the wealthier economies will be lost forever and said that: "Even if retail prices ease,

it seems unlikely that motorists who have purchased smaller cars will revert to gas-guzzling vehicles."

As far as Opec countries are concerned, the increase in production added to the record oil prices has vastly increased their revenues. In 2007 Opec members received \$671bn in revenue, yet in the first six months of 2008 revenue totalled \$645bn. At this rate their revenues will reach over \$1200bn this year which would be a record.

But this revenue is not just being siphoned out of the world economy. The Opec countries have used a lot of this increased income to raise their spending, and in August 2008 their combined imports were up 40% on the previous year. Also, a lot of these funds have found their way into sovereign wealth funds which are vehicles for state investment. This means that a number of Opec countries have been able to use the combination of increased revenues and the fall in values of overseas property and industry to make strategic acquisitions.

Prize Competition

for AS Students



Interest Rates

Read the article 'What are the implications for the UK economy of a cut in interest rates?' on pages 2 to 6 and then answer the questions. The numbers in brackets tell you how many letters there are in each word of the answer. All you have to do is send your 10 answers to us by 14th December 2008. The first one out of the hat will win £25 in music tokens.

1. The three instruments of monetary policy are interest rates, money supply and what else? (8,4)
2. The Bank of England's Monetary Policy Committee uses interest rates to influence which primary target? (9)
3. The interest rate can be defined as the price of what? (8,5)
4. There are a wide range of market interest rates. They vary depending on the degree of _ _ _ _ involved. (4)
5. What is the name of the process by which a change in the Bank Rate feeds through to other areas of the economy? (8,12,9)
6. Most firms borrow in order to do this. (6)
7. What are flows of international funds called that move quickly in response to changes in interest rates? (3,5)
8. As UK output approaches its full employment level, these become scarcer. (7,2,10)
9. Interest rate changes can have a 'second round' effect on spending levels through their impact on these. (5,6)
10. This has shown a strong increase in the UK over the past decade, driven by mortgage equity withdrawal. (11)

Send your answers to: **Economics Today Ltd., Stocksfield Hall, Stocksfield, Northumberland NE43 7TN**, marking your envelope 'Prize Competition'.

The winners of the January 2008 competition were **Ms Zemenides** of London and **Margaret Makate** of Kent. The winners of the March 2008 competition were **Mr Hardy** of Coventry and **Becky Hill** of West Sussex.



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Prize Competition

for A2 Students



Road Building

Read the article 'Should road building depend solely on forecasts of future road traffic demand?' on pages 28 to 31 and then answer the questions. The numbers in brackets tell you how many letters there are in each word of the answer. All you have to do is send your 10 answers to us by 14th December 2008. The first one out of the hat will win £25 in music tokens.

1. What sort of demand is the demand for road transport? (7,6)
2. Most of the growth in demand for passenger transport has been for what sort of transport? (7,3)
3. Any change in the demand for freight transport is closely related to the annual change in what measurement? (3)
4. This comparative measurement of price could have a bearing on what mode of transport is selected by those using transport. (8,5,2,11)
5. Although the relationship is not as strong as it used to be this factor will still have an influence on the demand for transport. (6,10,7)
6. What is the biggest unknown at the moment in terms of making traffic forecasts? (4,6)
7. The demand for fuel for private cars is now more _____ . (5,7)
8. What is the name of the approach taken to road construction over the past 40 years? (7,3,7)
9. What sort of goods are roads? (5-6)
10. The positive and negative effects of a road building project are now taken into account. What is this called? (13,6,10)

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