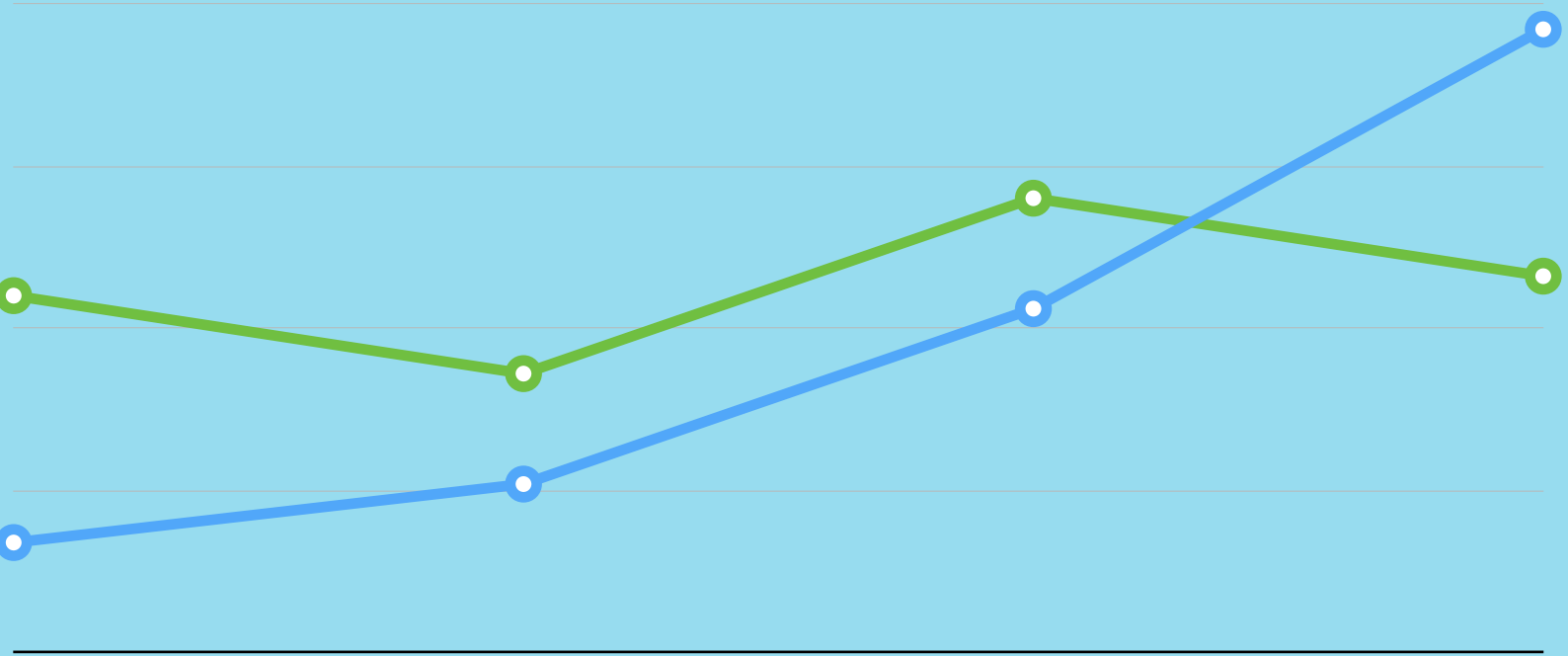


UK Economic Review 2014-15



Peter Baron

UK Economic Review 2014 - 2015

Summary

The UK economy grew by 2.6% from 2014Q1 to 2015Q1, a rate higher than forecast in 2013, whilst inflation continued to fall below forecast, to 0.5% (Dec 2014 - 1.5% below the MPC target of 2%). The budget deficit (Public Sector Net Cash Requirement, PSNCR) remains obstinately high at £91bn, and a persistent current account deficit has coincided with a revaluation of the pound of around 25% (2010-2015), against all currencies except the dollar. Unemployment is lower than forecast at 1.8m, whilst productivity performance has been generally weak in this cycle. The Labour Party has referred to a 'cost of living crisis' of rising inequality and falling real wages, yet since 2014Q4 real wages have grown strongly and the key measure of RPDY is positive. The OECD commented in February 2015 that the Chancellor deserved a 'pat on the back' for persevering with a deficit-reducing strategy with its consequent supply-side implications. We may ask, however, whether the supply side has strengthened significantly. Deficit reduction has also been much slower than forecast.

Issues arising

It is worth preparing an answer to the following issues which arise from the trends in the UK economy 2014-15, and to prepare an answer beforehand which includes a reference to a textbook diagram. Remember to discuss any diagram in words in a way illustrated in this review, introducing data where relevant as illustration. In order to analyse effectively, highlight alternative assumptions, causal processes and conclusions. Marks are also awarded for a clear and concise definition of terms.

1. Does negative inflation (defined as falling prices) matter?
2. Why is UK productivity growth so weak?
3. How and why has growth exceeded targets?
4. What are the major influences on the fall in inflation?
5. What does the strengthening effective exchange rate imply for UK competitiveness abroad?
6. Has the Government done enough to strengthen the supply side in 2014?
7. Does a large budget deficit matter? Does national debt of £1.3 trillion matter?
8. The current account of the balance of payments is in deficit - should we be worried long term about this persistent deficit? Does the UK Government have a current account deficit reduction policy?
9. What are the causes and effects of a decline in world oil prices?
10. Are banks doing enough to support business and enterprise by their lending policy?

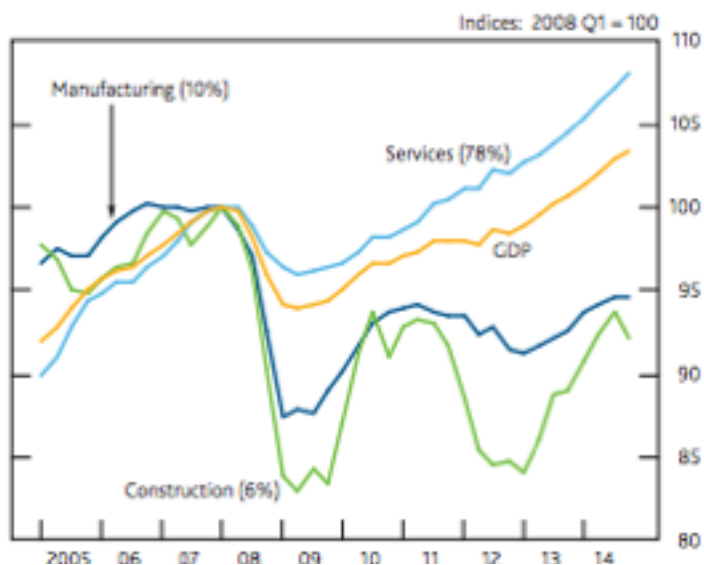
Part 1 Growth, productivity and employment

UK growth has been strong in the past 12 months at 2.6% (real GDP). The split between output and prices in nominal GDP is favourable (0.5% inflation + 2.6% real GDP = 3.1% nominal GDP growth). The Bank of England expects growth to accelerate further to 3.4% by 2015Q4 - making it the most optimistic of all the forecasts. However, inflation has ended up 1.5% under the 2% inflation target in 2014.

Why should this matter?

The answer is that as long as other stimuluses to growth remain, the lower inflation rate could have a positive long term effect on growth. This is because it stimulates aggregate demand in two ways. First of all, the rise in real wages stimulates consumer spending, and secondly, the lower prices improve UK price competitiveness overseas (*ceteris paribus*, assuming no Exchange rate movement).

The UK is moving close to its production possibility frontier (page 3). The position of the frontier depends on two things:



GDP measures (Bank of England)

- The availability of the factors land, labour and capital. For example, labour can be boosted by net migration into the UK and Capital by investment.
- The productivity of factors of production. Students often neglect to mention this second point. Improved productivity of factors, with the quantity of factors constant, will also shift the curve outwards, or if productivity improves in capital goods alone (see diagram) cause a lop-sided shift in the frontier (Fig 2).

Productivity growth remains weak, however. Labour productivity growth in 2014 was just 0.04% - and the level is still below 2012. As Paul Krugman observed in 1990, "productivity growth isn't everything, but in the long run it is almost everything". This is due to three things:

- Productivity growth shifts the PPF outwards (it boosts UK productive capacity).
- Productivity growth has a key influence on competitiveness as it feeds directly into one measure of competitiveness - relative normalised unit labour costs. As productivity rises so, *ceteris paribus*, unit costs must fall.
- Productivity growth makes wage rises affordable and gives the companies a choice of taking the improvement in higher profits, or cutting prices or awarding pay rises. Of course, a labour force rewarded by higher pay may well work harder and feel valued - so continuing the productivity improvement.

Production Possibilities

A production possibility frontier (PPF) depicts graphically the potential output of an economy producing two types of goods. Y might correspond to capital goods like machines, and X to consumer goods such as cars. For productive capacity to increase one of two things can happen:

1. An increase in the **availability** of factors of production: land (raw materials), labour, (positive net migration), capital or enterprise.
2. A rise in factor **productivity** so more is produced for a fixed quantity of inputs.

Point C represents a point of under capacity. For example, the Bank of England estimates there is still unused capacity in the labour market despite the rate of unemployment (5.6%). Businesses could also be operating at below full capacity, as measured by the capacity utilisation index (part of the CBI survey). So the UK in 2015 is still at a point such as C.

D represents a point of **impossibility** - any point outside the boundary is unachievable unless supply-side policies are put in place to increase factor productivity.

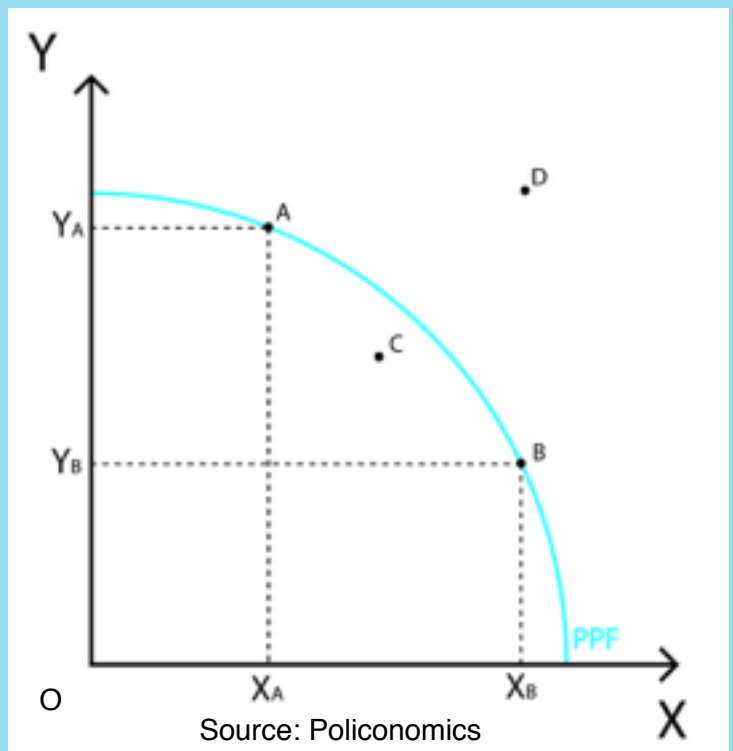
Take the labour market for example. The Government has tried to raise the participation rate, with some success, by changing the relationship between wages and benefits at the bottom end of the labour market. This supply-side policy aims to increase the participation (hence the supply) of a key factor of production, Labour, by reducing benefits. If the Government succeeds, then the production possibility frontier will move outwards.

Consider also the productivity of Capital. This can be boosted by investment which improves the capital/output ratio. What supply side policies might boost investment? A lower corporation tax rate (falling to 20% in 2015) or investment grants, or measures to stimulate bank lending to business might all improve the supply of capital.

Successful investment strategies will in this way also cause the PPF to move outwards.

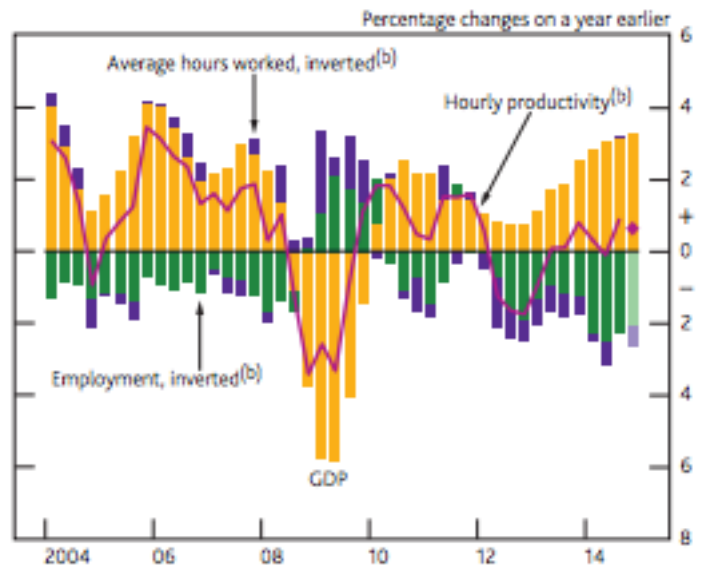
Notice also that the PPF is a long-run possibility curve as all factors are **variable** (the economic definition of the long run) and it is therefore a mistake to talk about diminishing returns here - a short run concept with one **fixed** factor. Instead, the shape of the curve shows increasing opportunity cost - as we move along the curve substituting capital goods for consumer goods we have to give up more and more capital goods to gain one more unit of consumer goods (the marginal rate of transformation).

In 2015 the UK economy is still at point C, but moving towards the frontier - which in practice is also moving away from us as immigration and investment increase our possibilities.



Why has productivity growth been relatively weak since 2007?

1. Unemployment, currently 5.6%, did not rise as fast and far as expected. Companies have given their labour force a choice of wage freezes or unemployment and they have effectively accepted the wage freezes. This translated to a cut in real pay of 9% between 2007 and 2014 (hence the phrase 'cost of living crisis'). However the Labour party slogan doesn't recognise that without the higher employment there would have been many more workers relying on benefits, with consequent effects on public spending, inequality of incomes and aggregate demand.
2. Capital investment has been weak despite low interest rates. This is due to a loss of confidence following the crash of 2007-8. Business confidence, measured by the CBI survey of expectations of investment and output, showed signs of recovery in 2014.



The output gap remains high

Output fell by 13% from 2007-9. The output gap, defined as the difference between trend output and actual output, remains significant at about 20%. This gap can only be bridged by a persistent recovery driven by investment. We consider the prospects for this below.

Part 2 Components of Aggregate Demand

Consumer spending

Growth is driven by the aggregate of the components of the Aggregate Demand equation where $AD = C + I + G + (X-M)$. We can put figures on the contribution of each, in real terms, for 2014.

$AD (+2.6\%) = C (+ 1.0\%) + I (+ 1.0\%) + G (+1.0\%) + (- 0.4\%)$, the latter figure being the net effect of the current account deficit (X-M) on growth, which is negative. So we can conclude that the drivers of the UK growth rate were broadly balanced in 2014 between C, I and G. However, remember that these figures are percentage contributions, not percentage changes. Consumer spending remains the biggest component of GDP at 66%. Put another way, a small change in consumer spending can have a large effect on growth. What are the prospects for 2015?

In 2014 consumer spending grew by 3.3%. This was well above forecast and reflects a growth in household disposable income of 2.8%. The fall in energy prices and its effect on UK inflation will further boost UK disposable incomes in 2015. "Domestically, the projection is for solid consumption growth as the fall in energy prices and rising wage growth supports growth in households' real incomes", commented the Bank of England in February 2015.

There are three further effects on household spending.

1. The wealth effect of rising asset prices in both the housing market and the stock market. In February 2015 the share index broke through its record high achieved in 2007.
2. Interest rates close to 0% will be reflected in cheap mortgages and cheap borrowing generally.
3. The savings ratio, defined as the proportion of household disposable income saved, fell from 12% in 2010 to 5.5% in 2014.

Investment spending

We have already noted that weak investment affects productivity and hence the ability to expand capacity reflected in an outwards shift in the PPF.

The Bank of England believes that after years of weak investment growth 2007-10 we may be on the verge of a strong recovery. During 2011 and 2012, for example, investment growth was largely driven by oil and gas extraction and utilities, which together account for less than a fifth of total business investment. As oil prices fall the profitability of investment falls, and hence we expect investment growth in the next period to come from manufacturing and services.

The CBI reported recently that capacity utilisation was at its highest level for 25 years, and the Bank concludes: "Overall, investment growth is expected to be robust in the near term, supported in part by the favourable demand outlook. Survey balances of expected orders are above average levels. And as businesses appear, on average, to be operating at slightly above normal levels of capacity, they are likely to need to undertake investment in order to satisfy the expected rise in orders", (February 2015)

Government Spending

The IFS estimates that around 50% of the planned fiscal adjustments to tax and spending announced in 2008 have been implemented. The PSNCR is forecast to fall to £91.3bn this financial year, or 5% of GDP. This is considerably higher than forecast two years ago. Why the persistently high public sector deficits?

1. A shift to part-time and self-employed income earners has led to lower than expected tax receipts. There is a time lag in collecting such tax, and also a tendency for a significant proportion to be undeclared (the 'shadow economy' estimated at 10% of GDP). For this reason tax receipts were revised down in 2014-15 by almost £8bn. Even so, the government is still forecasting a small budget surplus in 2017-18.
2. Declines in real incomes are reflected in a wage freeze or effective real wage cut of 9% 2007-14. Put another way, public spending tends to rise with inflation (unless cut in other ways) but receipts stay fairly constant as a proportion of income.
3. The Government announced a rise in tax thresholds from £5,500 in 2007 to £10,500 in April 2015, and a reform of stamp tax duty on property sales in 2014. This has cost the UK £27bn lost income tax receipts and has taken 3.2m workers out of tax.
4. Welfare reforms (to unemployment and housing benefits) have combined with lower unemployment generally to bring cyclical expenditure down (that caused by trade cycle factors). In an election year it is worth noting that the Labour Party intends to control current spending but increase the capital spending component of G.

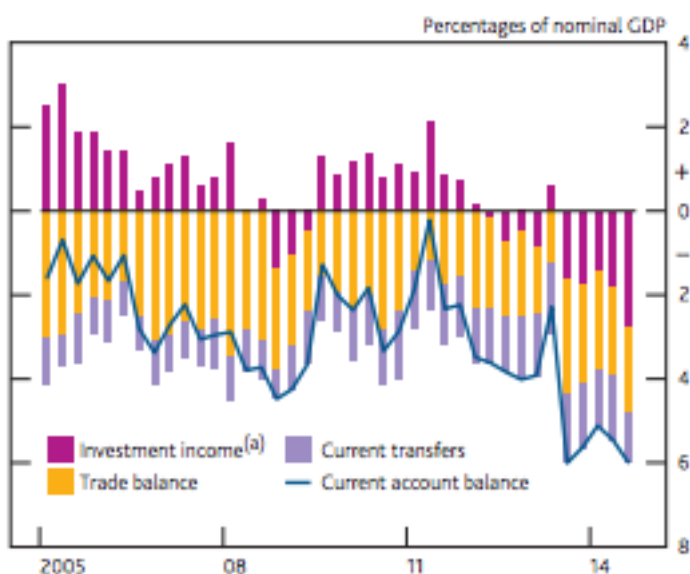
Public spending is forecast to fall from its present level of 41% of GDP to 35% in 2019-20. If it's achieved, this will be its lowest level in 80 years. The two peak years were 2008-9 (44.5%) and 1978-9 (49.5%).

Does the level of UK debt (£1.3 trillion) overall matter? Remember that the total level of debt is the sum of all past deficits less the surpluses. Arguably the key indicator is debt as a % of GDP. Debt rose from 37% of GDP to 72% of GDP in 2014**. In other words, it has doubled in this period. However, the question is whether this can be financed by the sales of long term gilt-edged stock. The exceptionally low interest rates reflect the fact that the UK is perceived by domestic and overseas investors to be a safe haven for funds. As long as this confidence remains, then we might conclude that the level of debt and of the deficit is not as significant as sometimes portrayed. As a historical point, the key year for UK debt to GDP was just after the Napoleonic wars. In 1819 debt was 210% of GDP - three times its present level. On that comparison, we have some way to go.

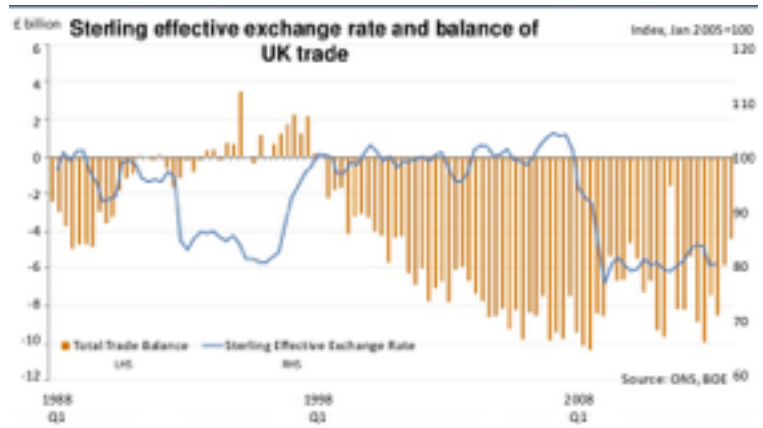
The Current Account Deficit

In 2014 Q3 the current account deficit, representing (X-M) in the AD equation, equalled its record of 6% of GDP. For example, in 2014Q3 our balance of trade in goods was a deficit of £32bn, offset by a surplus on services of £23bn. The effect on UK growth therefore remains negative to the tune of £9bn for that quarter. Import growth continues year on year whilst export growth has been stagnant since 2010. This is due to three factors:

1. The weakness of the world economy particularly in the eurozone means that unless there is a marked improvement in UK competitiveness, UK demand for European imports outstrip European demand for UK X.



2. UK effective exchange rate appreciated 11% from March 2013 to February 2015. This a trade-weighted index which reflects the movement in the exchange rates of our trading partners. EU countries form 70%, and the US, 17% of the index. Sterling continues to rise against the euro, so that in euro which almost reached parity in 2010, traded at the beginning of March 2015 at 73.0 - a weakening of the euro of 27%. This means UK imports are ceteris paribus cheaper, and UK exports more expensive, potentially affecting our trade balance with Europe.



Source: Office of National Statistics

3. Investment income - the money we earn on our overseas investments - has declined sharply in 2014.

The UK is expected to arrest the decline in export market share that was a feature of the pre-crisis decade, which means the negative contribution of (X-M) to GDP growth will be lower in future years. The recovery of productivity growth should boost export competitiveness via its effect on unit labour costs, a key measure of cost competitiveness of UK exports. In addition, relative growth rates in emerging economies are expected to slow, reducing the export market share taken away from mature economies like the UK.

Does the current account deficit matter?

The current and capital accounts of the balance of payments must equal zero, in other words, every pound that flows out due to our trade imbalance must be matched by a corresponding inflow of investment money on capital account. For example, the Chinese current account surplus has been used to buy US bonds, and China now holds 7.2% of total US debt. The UK has experienced a current account deficit since 1984, and Australia since 1974. Similarly, the USA during its period of C19th development imported financial capital to make up for shortfall in domestic savings. This was ploughed into capital stock (Investment) which yielded higher future growth rates as the US production possibility frontier shifted outwards year after year. Consequently, the US was able to run a current account surplus and invest abroad through capital outflows during much of the C20th.

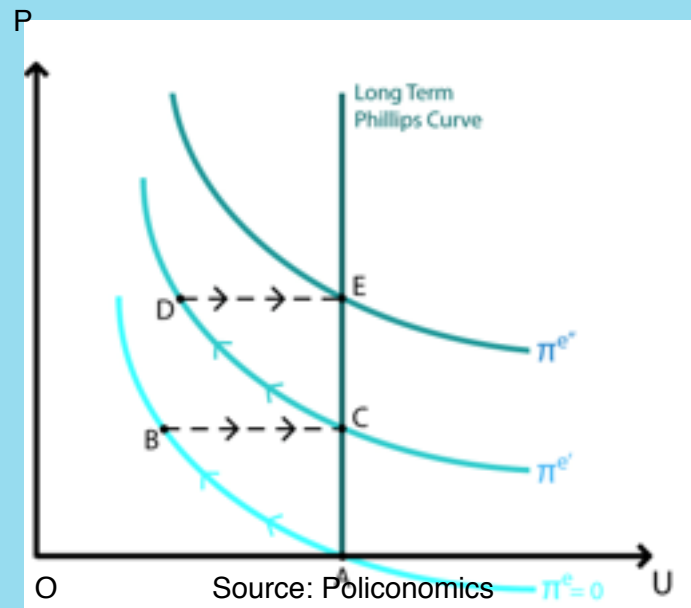
Following the abolition of exchange controls in 1979 (which limited financial movements abroad) the UK has relied on overseas inflows of money to fund this deficit - inflows into UK assets such as Government bonds or property. One argument goes like this: the current account doesn't matter as long as it can be financed by capital inflows at an acceptable rate of interest. And interest rates remain at historic lows.

But a counter-argument might be this: the free movement of capital distorts the price of UK assets. Just look at what foreign investment in London property has done to London house prices and you can see that it has a profound supply-side effect in reducing the ability of the labour market to move house to where the jobs are. It also reinforces the long-run deindustrialisation of Britain by causing the exchange rate to be higher than it otherwise would be. As a result our economy becomes unbalanced - relying on consumer spending to drive growth.

So is the deficit a problem? In the short term, no, as long as it can be financed by attracting foreign investment. But in the long-run, quite possibly, as long term structural problems become exaggerated.

The Phillips Curve

Professor Milton Friedman helped to explain the breakdown in the Phillips Curve trade off between unemployment and inflation in the 1970s. His theory of the expectations-augmented Phillips Curve posited that, as inflationary expectations take hold, workers begin to anticipate price rises in their wage bargaining. Strengthened by Trade Union power, any successful rise in wages in line with expected inflation itself increases the price level - a movement from A to B, as companies pass on the higher costs in higher prices.



However, the cost rise creates a new supply curve at a higher price and the same quantity that was enjoyed before. As the Phillips Curve moves outwards (reflecting a supply curve shift due to the rising costs) so the economy moves back to point C. Notice that this represents a higher price level, but unemployment that is unchanged on OA.

OA is the natural rate of unemployment. The natural rate is sometimes called the non-accelerating inflation rate of unemployment - a rather long-winded but accurate description. Attempts to move the economy below OA will always result, said Friedman, in rising inflation. This is because OA is given by **structural features** of the labour market.

What are these structural features? Well they are the very things George Osborne has been seeking to address in successive Budgets. They include the relationship between benefits and wages at the low paid end of the market, the ability of labour to move to new jobs or to train in new skills. So the natural rate can be influenced by things as diverse as housing policy and regional house price differences, the level of benefits, the level of the minimum wage (currently £6.50 an hour for over 18s), and training programmes.

Friedman is making an important point: there is a limit to the usefulness of demand side policies if you don't address the supply-side - indeed, demand management can be economically suicidal.

Interestingly, in 2014 the MPC had two targets, an inflation target of 2% and an unemployment target of 7%. This seemed to imply that they thought the natural rate of unemployment was 7% and that as unemployment fell below this they would raise interest rates to try to slow the growth in demand and output. Unemployment fell below this, of course, to 5.6%, and no interest rate rise occurred.

Maybe the UK economy has really become more flexible and the natural rate is some way below what the MPC believed. If so, it is a supply-side improvement worth noting.

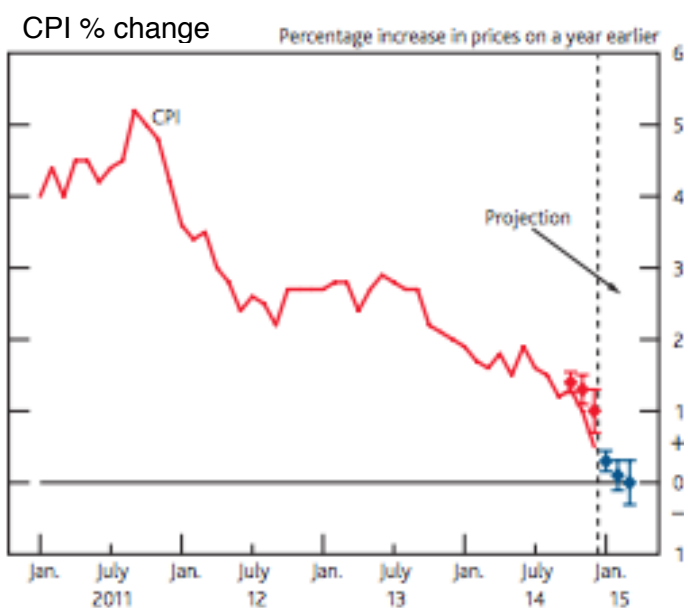
Part 3 Inflation and unemployment

We have already noted that inflation has been much lower than forecast at 0.5% for 2014. Prices continue to fall, driven down by three factors:

1. The halving of oil prices.
2. The strengthening exchange rate.
3. The fall in food prices.

Furthermore, there is a second round effect of the fall in oil prices. Oil represents 2.5% of total UK production costs. So as oil prices fall, there is a second round declining cost push effect on overall inflation rates.

Energy represents a weighting of 3.7% in the CPI. The Bank estimates that a 10% fall in oil prices reduces domestic inflation by 0.15%. It follows that a 50% fall reduced UK prices by about 0.75%.



In 2015 it is likely that the UK will experience negative inflation (negative price rises) for the first time since 1960. Usually this would be seen as something serious, the consequence of a severe depression. However, deflation is an aggregate demand concept, meaning a downward multiplier effect on growth, whereas what the UK is experiencing is strong positive growth with negative inflation. The effect of 'bad deflation' is to make rational consumers postpone consumption as they expect prices to fall further, making the slump in output even deeper. One key effect of this is the influence on inflationary expectations.

Milton Friedman explained the breakdown of the simple Phillips curve tradeoff of a little more inflation for a little less unemployment in the 1970s and 1980s by the role expectations play in wage bargaining (see page 9). Put simply, as workers expect accelerating inflation they translate this into bargaining for higher wages, which itself, through its impact on company unit costs, gives a further cost-push boost to prices. So inflation expectations matter for monetary policy because they can play an important role in determining wage and price-setting. For example, employees may have less bargaining power or be less inclined to bargain for higher nominal wages if inflation expectations fall. Companies may also hold back price increases if they think competitors' prices will be increasing less rapidly.

However, the negative inflation of 2015 can be seen as beneficial, because it allows the Bank to engage in further quantitative easing back to its target inflation rate of 2%. At the same time, real wages should recover strongly this year, giving a further boost to UK growth. We can see this unexpected bonus to growth as a chance to realign the supply side of the economy, by encouraging further bank lending for investment in capital goods and infrastructure. This should produce a second round boost to production, as the production possibility frontier moves outwards. As production increase it should be possible to maintain demand at non-inflationary levels, as aggregate demand and aggregate supply curves move outwards in unison.

An era of Monetarist Keynesianism?

How do we describe UK economic policy-making in 2015? Are we Monetarist, Keynesian, or some hybrid? Well, just as the Phillips Curve adapted by Friedman takes a Keynesian trade-off and adapts it, so it could be argued, modern policy makers take a monetarist idea of monetary fine tuning and adapt it for demand management.

The Government uses two direct policy instruments: interest rate adjustments and quantitative easing. The aim is to influence consumer spending, which is the biggest component of aggregate demand. Interest rates are the price of money (the cost of borrowing) and quantitative easing acts directly on the supply of money. So we have demand management by monetary instruments.

Remember that at the heart of monetarism is a hypothesis about the relationship between monetary growth and prices. It can be explained by reference to the Quantity Theory of Money. Central to this theory is an identity.

$$MV = PQ$$

Described another way, the quantity of money M in circulation multiplied by the velocity of circulation of money equals nominal GDP (which as we've seen on page 2, can be split into a price component P and a real GDP component, Q). So what do we make of the MPC dual targets of inflation and unemployment?

Unemployment corresponds to a level of GDP (output) given some level of factor productivity. The MPC believes therefore that if unemployment falls too far too fast, it will translate into an overheated economy where inflation starts to rise. Hence the emphasis on two targets - inflation is the **monetary** effect of overheating, where prices rather than real output rises. Unemployment is a useful indicator because it shows us the state of one key resource, labour, which is of course crucial to production, a **real** indicator.

The Bank then adjusts interest rates (via the MPC) according to demand conditions - keeping interest rates low if spare capacity exists and raising them as we approach full capacity to prevent overheating. Interest rates act on both consumers and producers. Consumers find the opportunity cost of consumption rises as interest rates rise - we give up more in lost interest to buy that TV. And producers find the cost of borrowing alters the marginal efficiency of investment - put simply, a higher return is needed to make the capital spending worth it.

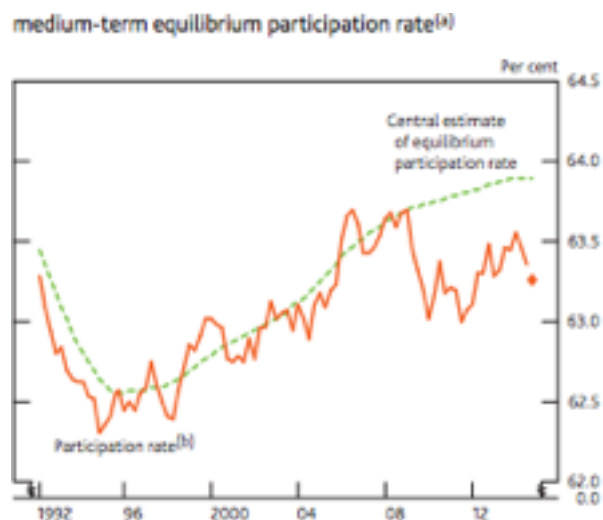
And because two-thirds of us own houses, the majority with mortgages, interest rate rises feed directly through to consumer spending as more and more of our income goes into mortgage repayments (assuming we have variable rate mortgages).

Where does this leave the quantity theory identity above? Well you can target the left hand side of the equation (M) or you can target nominal GDP (PQ) and at the same time, try to tune the economy so that there is rather more Q than P - roughly speaking we are looking at 3.5% for real growth and 1.0% inflation forecasts for 2015 - a favourable P/Q split for long-term economic health.

Unemployment in 2014

The UK saw a net increase of over 1.6 million jobs in the private sector between 2010 and 2013. The Government estimates that 4 jobs have been created in the private sector for every public sector job lost. Unemployment at 2015 stood at 1.8m or 5.7% of the labour force, compared with 11.7% average for the eurozone. Although employment growth slows over the forecast period, the unemployment rate is likely to fall to 5.2% by end-2015 (Budget forecast).

The MPC estimates that labour market slack has narrowed substantially since mid-2013 to $\frac{1}{2}\%$ of GDP, indicating that the UK is moving towards its production possibility frontier. Should labour market slack continue to shrink as expected this would be likely to put further upward pressure on pay and unit labour cost growth in 2015. However, the participation rate (the % of the working population in work or seeking work) remains around 63.5% with an increase of 0.5% attributed to changes in welfare in benefits.



There have been significant changes in the composition of the workforce. Strong rates of employment growth between 2013 and 2015 (to just over 30m) were characterised by disproportionately large increases in jobs, such as lower-skilled ones, that attract a below-average wage, and so-called zero-hour contracts, which account for 697,000 people (2015) or 2.3% of the workforce. The IOD salutes this trend as a sign of a flexible labour market, whilst others point to growing inequality.

The inequality between skilled and unskilled wage-earners may be seen as a major cause of exploitation and weak bargaining power of labour against capital. It is also attributable to weak union power during times of recession. In addition, the rise in self-employment has also contributed half of the 196,000 jobs created in the first half of 2014.

This structural change in the nature of employment pushed down average wages in 2014 and also tax revenues have been lower than expected. In 2014 Q3, however, there were signs of employment growth in high-skilled employment, which will very likely offset this downward pressure on wages in 2015.

Part 3 Monetary Policy, markets and supply-side issues

Monetary Policy

The MPC adjust its quantitative easing and interest rate policy in line with an inflation target of 2% and an unemployment target of 7%. In 2015 the UK economy was operating well below both targets, indicating that further monetary easing can be expected to stimulate aggregate demand.

Quantitative easing (QE) occurs when the Bank buys back government debt (sometimes called bonds or gilt-edged stock) from the banking sector. Since 2007 the central bank has made £375bn of such asset purchases. Banks, which before had held government bonds, now have £375bn more cash to lend out should they so wish.

As confidence in future growth grows, so the banking system, criticised for its weak support of the supply side through its weak investment lending in 2015, should help stimulate further investment for growth. And as investment picks up, so any inflationary pressures building due to demand side rises in consumer spending should be offset by an increase in UK productive capacity.

The Oil Market

The world oil market operates as an informal oligopoly of eleven countries in which Saudi Arabia acts as the policeman. If OPEC seeks to maintain a market price and supply of oil increases, Saudi Arabia has to cut production. As well as the biggest single producer, at 30%, Saudi Arabia is also the least cost, at \$3 a barrel. At \$40 a barrel, 0.5% of world production becomes unprofitable - particularly high cost fields and oil generated by fracking, which is unprofitable at a price below \$65. Revenues also plunge for high cost countries like Venezuela, and Russia, with political consequences in terms of social unrest

In the U.K., North Sea oil fields start to lose money below \$50 a barrel. Many fields are reaching the end of their lives, so stopping production could mean closure. But decommissioning is expensive; some companies may decide to operate at a small loss rather than spend the money to close down operations. What has caused this unexpected oil price collapse?

1. An increase in supply due to increased US oil production. Oil production from shale increased by 30% between 2009 and 2014.
2. A rise in world production overall of 6.5% from 2007-2013.
3. A decline in demand as consumers adopt energy saving lifestyles. In the US oil demand fell by 10% from 2007-9 (since then has stayed constant).
4. A slowdown in economic growth in developing countries such as China.

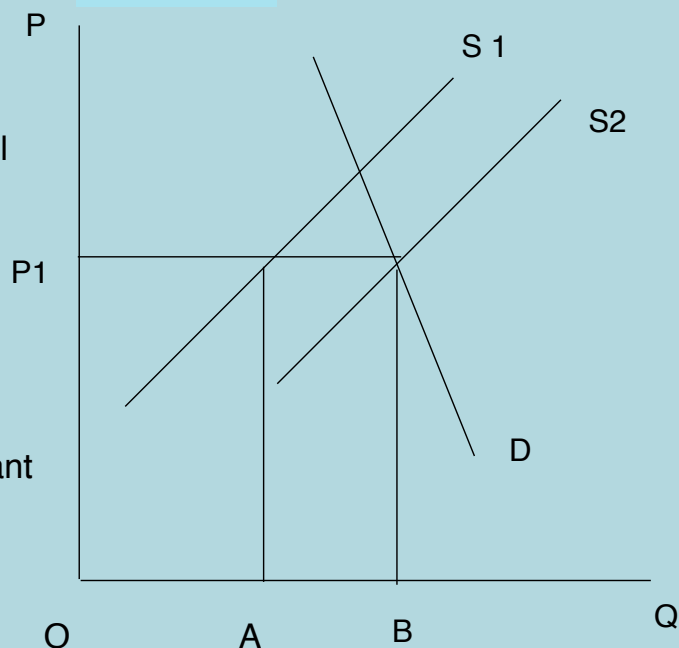
Despite the effect on North Sea Oil output, oil price falls boost consumer disposable income and cut company costs. The net injection to the circular flow is one cause of booming stock markets in 2015. And output forecasts for the UK in 2015 are being revised upwards.

How OPEC determines oil prices

OPEC is a type of informal cartel which relies upon one major producer, Saudi Arabia, to alter production to maintain a price. In the diagram, the agreed cartel price is P_1 , and S_1 is the supply curve of OPEC countries excluding Saudi Arabia. Saudi Arabia controls about 30% of total OPEC annual production of oil. It is also the most powerful with huge cash reserves.

Saudi Arabia, in order to maintain price at P_1 must supply AB of oil. S_2 is total OPEC supply.

Imagine demand stays constant at demand curve D .



If the remaining eleven OPEC countries increase production (and, as happened from August 2014, break any agreed production quota), the supply curve S_1 will move to the right. Now Saudi Arabia will need to cut its production below OA . In other words, it takes the loss in revenue caused by the ill-discipline of other OPEC countries. Moreover, Saudi Arabia is the least cost producer at around \$3 a barrel and may begin to ask itself why it should effectively subsidise higher cost producers like Venezuela. Add to this that some OPEC countries are its enemy (such as Shiite Iran) and it is clear that Saudi Arabia may choose to abandon its role as market regulator.

Two further recent trends have increased the instability of OPEC. America, a major non OPEC producer, has increased production by 70% since 2008, with the discovery of shale-based oil and gas, becoming self-sufficient in oil for the first time in many years. And at the same time, demand for oil is actually falling due to changing consumer consumption patterns. The world, it seems, is becoming more and more energy efficient (and our cars do many more miles to the gallon). So the world demand curve for oil is shifting inwards to the left, providing more downward pressure on prices.

Market economics can predict what will happen next. Least productive wells, those extracting at a higher cost than price, will go out of business. American shale oil is particularly expensive at \$60 a barrel. As America cuts domestic supply, its demand for OPEC oil will rise again. And as the world economic activity recovers, world oil demand will increase generally. The demand curve will eventually shift outwards and the supply curve will inwards due to contraction in supply due to the closure of uneconomic wells.

Supply side reform

Supply-side reform works on a number of levels - by making markets work more effectively, restoring incentives to work or to produce, or by changing the structure of the economy by reducing the public sector relative to the wealth-producing private sector. As we've already seen, by 2009 the public sector soaked up 52% of national wealth and triggered a so-called austerity programme of public spending cuts and job losses. By 2015, this proportion had fallen to 41%.

If the Conservatives win the May election, the IFS estimates that further public sector job losses of 900,000 will occur by 2020, with a real cut in departmental spending of nearly 7%. The estimate for the Labour Government is for a real spending cut of just 1.4% - a policy gap worth £27bn a year more public spending under a future Labour Government. The Labour Party is also pledged only to limit current spending; potentially the 8% of public spending that is for capital projects might even rise under Labour.

1. Labour market: In 2014-15 the UK reduced taxes by increasing the level of the personal allowance again to £10,500 from April 2015 – meaning that this government's increases to the personal allowance will then be worth £805 to every taxpayer, and over 3.2 million low earners will have been taken out of income tax altogether. By changing the relationship of wages to benefits at the lower end, this supply-side strategy boosts the participation rate.
2. Housing market: In 2014 the Government announced an extension in the Help to Buy: equity loan scheme, and created a £500 million Builders Finance Fund to provide loans to SME* housing developers. An increase in housing supply is essential to improve labour mobility and narrow differentials in house prices.
3. Product market: The annual investment allowance was doubled in 2014 to £500,000, until the end of 2015. Corporation tax will fall to 20% of company profits in April 2015, the lowest rate in Europe.
4. Is public sector deficit reduction itself a supply side policy? The answer is 'yes', for two reasons. Economists have argued that public expenditure 'crowds out' private sector activity. It does this by taking resources (labour) from the private sector, and also because the deficit requires funding. Every £1 spent on buying a gilt-edged stock is money that cannot go into funding private sector expansion. Hence there is a **crowding out** of funds available for investment elsewhere. Moreover, *ceteris paribus*, a higher interest rate will be required to attract investment in gilt-edged stock (bonds). This higher interest rate makes borrowing more expensive, and thereby reduces investment in productive private sector activity. Of course, in recent UK history the 'ceteris paribus' assumption hasn't applied as investment money has flooded into the UK, which is seen as a safe haven for overseas money.

*SME stands for 'Small and Medium-sized Enterprises'

** In 2013, United States public debt-to-GDP ratio was 71.8%. The level of public debt in Japan was 243.2% of GDP, in China 22.4% and in India 66.7%, according to the IMF: 76.9% of GDP in Germany, 87.2% in the United Kingdom, 92.2% in France and 127.9% in Italy, according to Eurostat. Estimates vary according to how this ratio is calculated.

Sources:

Bank of England Inflation Report February 2014 and 2015 (all diagrams, unless indicated)

Office of Budget Responsibility Economic Report December 2014 (table below)

Budget Report 2014

Deloitte's Monday Briefing papers 2014-15

Summary of Government Targets

1. **CACB** The Government's 'fiscal mandate' requires it to balance the cyclically-adjusted current budget (CACB) – the amount the Government has to borrow to finance non-investment spending, adjusted for the state of the economy – five years ahead. In December, we forecast that the CACB would be in surplus by 1.6 per cent of GDP in 2018-19. We now forecast the surplus in 2018-19 to be 1.5 per cent of GDP.
2. **PSNB** The Government's supplementary target is for public sector net debt (PSND) to fall as a share of GDP in 2015-16. We now expect PSND to peak at 78.7 per cent of GDP in 2015-16, to fall by a small margin in 2016-17 and then to fall more rapidly to 74.2 per cent of GDP by 2018-19. Debt as a share of GDP is lower in each year of our forecast than in December, reflecting lower borrowing and upward revisions to our nominal GDP forecast.
3. **CPI** The Government, via the Monetary Policy Committee, has a set a target of 2% inflation. If the target is missed, as it was in December 2014, then the Governor of the Bank of England writes a letter to the Chancellor explaining the missed target. Inflation was 1.5% **below** target in 2014.
4. **Unemployment** The Government has a target of 7% unemployment. The March 2014 forecast of 6.8% proved inaccurate as, again, unemployment fell further and more quickly than expected to 5.5%. Unemployment is an approximate measure of the state of demand.

UK economic outcomes and forecasts 2013-2019

	2013	2014	2015	2016	2017	2018	2019
Gross domestic product (GDP)	1.7	3.0	2.4	2.2	2.4	2.3	2.3
GDP levels (2013=100)	100.0	103.0	105.5	107.8	110.4	112.9	115.5
Output gap	-2.2	-1.0	-0.5	-0.5	-0.2	-0.1	0.0
Expenditure components of GDP							
Household consumption	1.6	2.3	2.8	2.2	2.4	2.3	2.4
General government consumption	0.7	1.1	-0.4	-0.8	-0.9	-0.3	0.0
Business investment	4.8	7.7	8.4	6.3	6.3	6.3	6.3
General government investment	-7.3	2.1	3.3	1.6	2.2	1.6	2.3
Net trade	0.0	-0.2	-0.5	-0.1	-0.1	-0.1	-0.2
Inflation							
CPI	2.6	1.5	1.2	1.7	2.0	2.0	2.0
Labour market							
Employment (millions)	30.0	30.7	31.2	31.4	31.5	31.6	31.7
Average earnings	1.8	1.8	2.0	3.1	3.9	3.9	3.8
LFS unemployment (% rate)	7.6	6.2	5.4	5.2	5.3	5.3	5.3