

# Speech

# **Recent Developments in the UK Labour Market**

Speech given by

Professor David Blanchflower, Bruce V. Rauner Professor, Dartmouth College, University of Stirling and NBER Member, Monetary Policy Committee, Bank of England

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It is great to be here in Scotland, which I am pleased to say is the 3rd leg of what amounts to a gradual tour of the UK since I joined the MPC last June – I have already been to Wales and Eastern England, and I'm off to Southampton in May. As part of the MPC's efforts to understand what is happening across the economy, MPC members undertake regular trips to different parts of the UK. This supplements our assessment of the official data and surveys. Monetary policy is ultimately a judgement based on uncertain readings of what is happening and how things might pan out. So although I am talking tonight, my visit is also about listening and seeing.

And as you may know, while I and my family live in the US, I spend well over half of my working month in the UK, where I take part in MPC meetings and discussions and make regular speeches and visits – such as this one – to find out what is happening in the regions and countries of the UK. So I feel very much engaged in the process of setting UK interest rates. External MPC members are meant to be drawn from a variety of perspectives and backgrounds, and the common thread is that they must be experts in their fields. That is one of the strengths of the committee. There is certainly no need for membership to be restricted to those that live in the Home Counties. In my view, the MPC is strengthened and discussion enriched by having different perspectives and backgrounds, so that we reach informed decisions that keep inflation close to target.

My plan tonight is to talk about recent developments in the UK labour market in some detail and then to briefly set out my thoughts on the outlook for growth and inflation.

#### Background

The period since a formal inflation target was adopted in the United Kingdom has been characterised by low and stable inflation, thus fulfilling the Bank of England's mandate to which I now find myself accountable. The stability of inflation has brought broad benefits to the economy, facilitating more rapid and less volatile economic expansion, which in turn has been associated with a decline in unemployment. Over the period 1976-1996 RPIX inflation averaged 7.4% and since then it has averaged closer to 2.4%. CPI inflation fell from 7.5% in 1992 to an average of 1.5% since 1997 (Chart 1).

The improvement in the performance of the economy is closely associated with inflation targeting and independence of the Bank. Our remit is to target CPI inflation at 2%. Furthermore, if CPI inflation falls below 1% or rises above 3%, as it nearly did in December, Governor King would have to write a letter to the Chancellor detailing the necessary actions to be taken by the Bank to bring inflation back to target. The surprise is that we have never had to do so. It doesn't look like we will have to for a while either as inflation is now falling steadily and likely to be back around, and probably well below target, by the end of the year.

Over the years since inflation targeting was implemented the labour market has had an improved performance on almost every measure. The level of employment is set by the level of aggregate demand of course. Monetary policy has a significant impact on aggregate demand. As monetary policy is loosened aggregate demand rises and

unemployment falls. At some point in a recovery labour shortages start to emerge along with rising inflationary pressures. The key question is how much unemployment remains before these pressures emerge. This level of sustainable unemployment can be thought of as the equilibrium rate at which there is no systematic tendency for inflation to rise and fall.

The equilibrium rate of unemployment is impacted by any variable that influences the ease by which an unemployed individual can be matched to available job vacancies and by any variable which raises wages in a direct fashion despite excess supply in the labour market. I refer to it as the equilibrium rate – or Constant Inflation Rate of Unemployment (CIRU) – rather than the NAIRU, following my predecessor on the MPC, Steve Nickell, who argued as follows:

"I prefer the equilibrium rate. The natural rate is a misnomer, as there is nothing natural about it and it can be systematically changed by some types of policy. NAIRU is a misnomer because it should be the constant inflation rate of unemployment i.e. non-changing not non-accelerating" (2001, footnote 3, p.27.)

Chart 2 shows an estimate of the change in the equilibrium rate using a Kalman Filter (see Staiger, Stock and Watson, 2002). It also includes two dotted lines to show the margins of error associated with this estimate. If we take the Kalman Filter estimate at face value, it is apparent that the equilibrium rate has fallen steadily from around 10% in December 1985 to 4.6% in December 2006. This suggests that there is currently a considerable degree of slack in the labour market as the actual unemployment rate (5.5%) is well above the equilibrium level. Indeed, the amount of slack – as measured by the difference between the two rates – has not been this large since June 1994, when the unemployment rate was 9.4%. Of course, such estimates are not very good around end points – emphasised by the widening of the error bands – and a measure extracted using a Hodrick Prescott filter gives a number closer to the actual unemployment rate, but my judgement is that the CIRU has fallen (Blanchflower et al, 2007).

The fall in the unemployment rate has reflected a number of factors. On the one hand, there has been a change in macro-stability – unemployment has fallen in most, but not all, member countries of the OECD. On the other hand, there have been important microeconomic reforms. The most significant of these has been an increased onus on the unemployed to look for work, coupled with initiatives to help the effectiveness of their job search. The decline in the percentage of youths in the labour force, who typically have higher rates of unemployment, has also contributed. And the recent inflow of migrants from the A8, who are more likely to be in employment, has had the effect of reducing the equilibrium rate of unemployment. An increased emphasis on more flexible work patterns has also likely had an impact. Other reasons as to why the CIRU might have fallen include: the changed climate of industrial relations (Kersley et al, 2006) and the move to less centralised bargaining; a decline in union membership; and product market reforms (Wadhwani, 2001). This lecture examines the causes and consequences of this improvement in broader terms, identifying the wider trends in the labour marker over the past decade and more recently, and considering the prospects for the future. I consider six issues.

- 1) Unemployment.
- 2) Older workers.
- 3) Employment.
- 4) Wages and wage inequality.
- 5) Population growth and immigration.
- 6) The Scottish labour market.

#### 1) Unemployment

Table 1a sets out the major changes in the composition of the UK labour force for the period 1997-2006Q4 in levels. Table 1b does the same for rates. Most notable is the decline in unemployment, with 300,000 fewer jobless individuals in 2006 than in 1997. Employment increased by more than 2.5 million over the same period. The unemployment rate thus fell from 7.2% to 5.5% between these years, while both the employment and activity rates rose. The self-employment rate was broadly the same in 2006Q4 as it was in 1997.

There has been a significant improvement in the level of unemployment prevailing in the UK not just since 1997, but considerably earlier. The most notable feature of the immediate post-war era was of low rates of unemployment – which averaged 2.5% from 1945-1975. This situation reversed itself at the end of the 1970s when the unemployment rate rose from 5.3% in June 1979 to 11.9% in June 1984. The rate declined to 6.9% in June 1990, then increased to a new peak rate of 10.6% in March 1993, and subsequently declined again until March 2005 to 4.7%. Since that date the unemployment rate has risen; at the time of writing (February 2007) the unemployment rate for December 2006 stood at 5.5%.

Chart 3 plots unemployment using two different measures, the claimant count based on the numbers claiming benefit and that based on the ILO count derived from the Labour Force Survey. It is notable that since the early 1990s, when unemployment was high and the two series gave very similar rates, the series have separated; the claimant count started to give a much lower rate of unemployment than the ILO series and has continued to do so. As an illustration of the difference, in 2004, there were 600,000 fewer benefit claimants than there were surveyed unemployed. In effect, around 40% of those who found themselves unemployed did not sign on, and that remains the case today. The principal reason behind the separation of the two series is probably the tightening of benefit rules, but rising immigration and rising participation of older workers are also likely to have contributed more recently.

In the most recent data for October-December 2006, there was a decline of both ILO unemployment (-23,000) and in the claimant count (-13,500). This was dominated by a decline in unemployment among 18-24 year olds (-20,000) and over 50's (-20,000),

partially offset by an increase in unemployment among 25-49 year olds. At the same time there was an increase in the numbers who were inactive (+66,000), with a notable increase of 37,000 in the number of 18-24 year olds who were inactive, which was considerably higher than the decline in their unemployment numbers. There was also a small increase in the number of inactives reporting that they wanted a job (+5,000) as well as in the number of temporary workers reporting they couldn't find a permanent job (+30,000) and in part-timers saying they couldn't find a full-time job (+29,000).

Chart 4 shows the contributions to unemployment by duration. It is apparent that the decline in unemployment since 1997 was the result of a fall in the proportion of *long-term unemployed*. The contribution from those who have been unemployed for less than a year is much less volatile over the cycle, reflecting the fact that long periods of unemployment can reduce a workers human capital. However, the proportion of the unemployed who have been continuously unemployed for at least 12 months rose from 19.8% in October-December 2004 to 23.5% in October-December 2006. The proportion of the claimant count continuously claiming unemployment benefit for at least 12 months also rose from 15.7% in November 2004 to 17.1% in January 2007.

The earlier movements reflect both the economic expansion of the period and the introduction of government policy aimed at assisting individuals back into work (for example, the New Deal programmes). The New Deal programmes are distinct for different groups of individuals, but each aims to improve the chances of individuals in finding jobs. For example, New Deal 25 Plus, which was introduced in 1998, is a mandatory programme designed to address the problems of long-term unemployment in individuals aged 25 and over. Those entering the scheme are initially offered advice on how to improve their chances of becoming employed, but should work not be forthcoming then they may be offered additional assistance, including a training allowance. The scheme appears to have been reasonably successful. An evaluation survey in 2004 found that three-fifths of scheme participants had gone on to unsubsidised employment.<sup>1</sup>

Chart 5, worryingly, shows that the unemployment rate of the young has picked up over time. Indeed, in 1997 18-24 year olds constituted 23.9% of the unemployed compared with 29.8% in October-December 2006. In addition, Quintini et al (2007) have noted that over the period 1995-2005 the UK had the largest increase in the ratio of youth to adult unemployment rates in the OECD (Chart 6); the UK moved from having a ratio below the OECD average in 1995 to being well above it in 2005.

# How does the unemployment rate in the UK compare to that in other countries?

It is apparent from Chart 7 that for the period 1945-1980 UK unemployment was below US unemployment, but during the 1980s and 1990s it was above it. Between 2002 and 2005 the UK rate was lower than the US rate, but returned to being above it in October 2005.

<sup>&</sup>lt;sup>1</sup> Price Waterhouse Coopers <u>http://www.delni.gov.uk/new-deal-25-plus-evaluation-report-no-9</u>

Unemployment in the UK is currently lower than the EU27, EU15 and euro area averages for December 2006, of 7.5%, 7.1% and 7.6% respectively, but higher than, for example: Austria (4.6%); Denmark (3.2%); Ireland (4.4%); Luxembourg (4.8%); and the Netherlands (3.6%).<sup>2</sup> Interestingly though, the UK saw the second biggest increase in unemployment in the EU in 2006 on a year earlier of +0.4 percentage points; only Romania had a bigger increase. Unemployment rates among the member countries of the OECD declined from 6.4% to 5.8% between 2005Q4 and 2006Q4; the *only* member countries that experienced increases were the UK, Hungary and Luxembourg.<sup>3</sup>

Over the past decade, unemployment rates around the OECD have been lower than in the previous decade.<sup>4</sup> This is shown in Table 2: the average unemployment rate for the period 1990-1997 for the EU15, for example, was 9.6% from 1990-1997 compared with 8.0% since then. Only in Germany, Austria and Japan was there no improvement. The performance of the UK labour market was significantly better than all other countries, except Ireland, based upon the extent to which the second period average is below the first period average.

## What is the explanation for the improvement in unemployment in the UK?

In part it is likely to reflect global factors given the broad changes in observed unemployment rates in the OECD, principally, as stated earlier, macroeconomic stability. However, other important factors behind the decline in unemployment have been: a) reductions in the replacement rate in the UK along with tightening in benefit rules (Nickell, 2006); and b) the decline in union power in the UK. Union membership has been in decline since around 1980, having risen strongly during the 1970s. The numbers of union members fell from a high point of approximately 13.2 million in 1979, to 6.7 million in 2005. Union density rates reached a high point in 1980 of 50.7%, and have fallen steadily since that point to 29% in 2005. In 2005, only 17.2% of British private sector employees were members compared with 58.6% of public sector employees (Grainger, 2006).

#### 2. Older workers

It is clear from Table 1b that the activity rate has increased since 1997, but that hides very different trends by gender; the male participation rate has declined while the female rate has risen. Interestingly, the aggregate changes are primarily driven by changes in the participation rates of *older workers*, particularly for women (see Gutiérrez-Domènech and Bell, 2004). Chart 8 shows that both the rates for women aged 50-59 and 60+ have

<sup>&</sup>lt;sup>2</sup> Source: <u>Labour Market Statistics</u>, First Release, February 2007, ONS, Table 19.

<sup>&</sup>lt;sup>3</sup> Source: <u>OECD Economic Outlook, 2007</u> downloadable at <u>www.stats.oecd.org</u>. The unemployment rate in Hungary rose from 7.2% to 7.5%, and Luxembourg from 4.5% to 4.8%.

<sup>&</sup>lt;sup>4</sup> Data for the OECD are not strictly comparable over time because of the increase in membership by six member countries - Czech Republic: 21 December 1995; Hungary: 7 May 1996; Korea: 12 December 1996; Mexico: 18 May 1994; Poland: 22 November 1996; Slovak Republic: 14 December 2000.

risen steadily over time, whereas only the 65+ rate has risen for men. In contrast, for both men and women participation rates for those aged 18-24; 25-34; 35-49 have been broadly flat, while participation rates for those under 18 have declined to below 50% across both genders.

There are a number of suggestions as to why older workers have started to participate more in the labour market. One suggestion is that the most recent increases could reflect concerns over pension provisions in light of both the pension shortfalls announced by many firms, and low annuity rates. Other possible explanations are: changes in government policy that have reduced the ability of public sector workers to retire early; falls in the real value of statutory pensions; and increased life expectancy. The most recent increase in the inactivity rate likely reflects the inability of workers to find work – they are so-called discouraged workers.

Older workers who enter the labour force do not claim benefits or report being unemployed. They are disproportionately self-employed. In 2006, self-employed workers (aged 16+) were on average 6 years older than their employed counterparts (45.7 vs. 39.7 respectively). Chart 9 illustrates that the age distribution of the self-employed is skewed to the right, compared with that for employees. It seems plausible that younger workers are less likely to have the necessary human capital (experience) to become self-employed. They are probably also more likely to be credit constrained, limiting a larger proportion of them from starting a new business.

At the other end of the distribution, older workers face retirement, but that is not an issue for the self-employed. Indeed, many retirees (either at state pension age or earlier) may take advantage of the opportunity self-employment brings to remain in the workplace, providing their skills on their own terms. It is probably also fair to say that there is an element of risk in becoming self-employed, and this risk can be minimised if workers have previously ensured financial stability (e.g. mortgage paid off) by working for others.

What about the possibility that the increased participation of older workers has displaced younger workers? Blanchflower et al (2007) found that, despite the fact that activity rates among older workers had increased in all regions, there was no correlation between the increased activity rates of older workers and the increased unemployment rates of youths.

# 3. Employment

Since 2000, total employment in the UK has increased from 27,434,000 to 29,036,000, or 1,602,000. Of this, 549,000 entered self-employment and 530,000 the public sector. Hence, over the seven year period 2000-2006, approximately 70% of the growth in employment was in self-employment or the public sector (Hicks, 2005).

# a) Self-employment

Self-employment as a proportion of the UK workforce is high by international standards (Blanchflower, 2000, 2005). In October-December 2006, out of 29,036,000 workers, 3,794,000, or 13.1% were self-employed. The marked increase in the number of self-

employed, and in the self-employment rate, in the 1980s is particularly notable as is the decline in the numbers and the rate during the 1990s (Chart 10).

It would appear the primary reason for the decline in the self-employment rate from 1995 until 2000 was a shift in a large number of workers from self-employment to employment within the construction industry. This reflected work by the Inland Revenue to stop employers treating employees as self-employed workers in order to avoid paying NIC's, nor provide benefits, training or observe employment protection laws. While the total number of workers employed in the construction industry remained steady at just over 18 million between 1995 and 2000, the proportion of workers declaring themselves to be self-employed fell from 46% to 33%. By 1997, 200,000 construction workers had reclassified themselves as employees, explaining most of the reduction in selfemployment in construction between 1995 and 1997. Following the downturn, the selfemployment rate picked back up, to around 13% in 2006. Between September 2002 and September 2003 the number of self-employed increased by 280,000. During this period a number of tax changes were implemented, including: reform of capital gains tax; and reducing the rate of corporate tax on smaller companies. The largest increase in selfemployment of 120,000 was found in banking, finance and insurance and was dominated by the 35-49 age group, although there were also large increases in the 50-64/59 and 65/60 and over age groups.

## b) Public sector

Both the proportion and number of employees working in the public sector rose significantly during the recession of the late 1980s, peaking at 23.3% of total employment in late 1991. Between June 1992 and June 1998, employment in the private sector grew by 1,865,000 (9.5%), while public sector employment declined by 741,000 (12.5%). Between June 1998 and June 2005, employment in the private sector increased by 1,281,000 (5.9%) compared with a rise in the public sector of 691,000 (13.4%). In September 2006, there were 5,855,000 public sector workers and 23,150,000 private sector workers (Labour Market Statistics, First Release, February 2007, Tables 3 and 4).

It seems unlikely that there will be similar growth in employment in the near future from the public sector (because of more stringent fiscal arrangements) or even from selfemployment, which is cyclically rather volatile.

# 4. Wages, Wage Inequality and the National Minimum Wage

Chart 11 shows the evolution of real wages since 1990 using both the RPI and the CPI. It is apparent that real wage growth actually turned negative on these particular measures in the mid-1990s. However, this period was short lived and the ensuing period of stability has led to strong growth in earnings. Nevertheless, growth has been flat or slowing on most measures since late 2004. It is also apparent that over the period 1997-2006 the gender earnings gap has narrowed. In 1997 full-time median hourly earnings for men were 21% higher than for women based on ASHE/NES data. By 2006 the ratio was down to 14%.

There is evidence that earnings inequality has risen for men and fallen for women over the past decade. Chart 12 shows that, based on ASHE/NES data for full time hourly earnings, the value of the 90<sup>th</sup> percentile over the value of the 10<sup>th</sup> percentile earnings, or 90:10, increased for men whereas for women it declined. There was little change in the 50/10 for men or women, so the rise in earnings inequality is driven by increased male earnings above the 90th percentile. Katz et al (1995) found, using NES data, that there was a large increase in wage inequality among both males and females in Great Britain between 1980 and 1990. So the more recent results confirm a continuation of the previous trend for males, and a change for women.

Rising earnings inequality has occurred despite the fact that a National Minimum Wage was introduced at £3.60 per hour for adults in April 1999. The rate has subsequently incrementally increased, most recently to £5.35 on 1<sup>st</sup> October 2006.<sup>5</sup> There are additional, lower rates for those aged 18-21 and 16-17. The minimum wage is set nationwide in nominal terms and hence its real level varies markedly by region; being much higher outside London and the South East and that is where it is expected to bite (Stewart, 2002), because it will enter at a higher point on the wage distribution. The minimum is also most likely to bind for unskilled 22-24 year olds who are paid adult rates and 18 year olds who jump from the 16-17 year olds' rate.

Chart 13 shows how two of the latest NMW rates compare to wages at the bottom end (10<sup>th</sup> percentile) of the wage distribution in each region using ASHE, and additionally for each age group using the LFS micro-data. According to the data, the newly announced minimum wages are likely to be a binding constraint for employers in all regions except London and the South East for the over 22's and in all regions for those aged 18-21. Taking the LFS data at face value, it is possible that employers may respond to (or have already responded to) the higher minimum wage rates by cutting back on employment. If that were the case, then one might argue that the natural rate of unemployment may have been pushed up recently.

There are estimates from the Department of Trade and Industry of the number of workers in each region who are likely to get a pay rise as a consequence of the recent rises in the NMW.<sup>6</sup> We compute a measure of the 'share' of workers in each region who will be affected by the NMW by dividing this DTI estimate by the total number of employees in each region. Against this we plot the change in youth unemployment between 2006 and 2005 (Chart 14). There is no statistically significant relationship between the share of workers hit by the NMW and the change in the youth unemployment rate.

<sup>&</sup>lt;sup>5</sup> Between April 1999 and October 2006 both the Adult and Development rates rose by approximately 48% Earnings, as measured by the whole economy AEI, have risen by 35% between April 1999 and September 2006 (both including and excluding bonus payments).

<sup>&</sup>lt;sup>6</sup> See Department of Trade and Industry (2006) <u>Government evidence to the low pay commission on the economic effects of the National Minimum Wage</u>, Table F2)

Most studies<sup>7</sup> have failed to find statistically significant evidence that the introduction of the NMW, and past increases to it, have had adverse affects on the demand for labour and employment. While it is too early to explicitly test the impact of the most recent increment, it is clear that if the NMW continues to rise then eventually it will start to have an impact on the amount of labour firms employ and the natural rate of unemployment.

## 5. Population Growth and Migration

Another important change in the labour market that has occurred recently is that the population has started to grow faster, predominantly as a result of an increase in net inward migration, rather than natural change. This is particularly important for regions where the inflow of immigrants has reversed long term declines in, and aging of, populations. As I noted in a recent speech, population growth in the UK as a whole has been remarkably low by international standards over the past thirty-five years (Chart 15). Between 1971 and 2004, the UK population grew by just 7%, less than most of the other EU countries, Australia, Canada, Japan, New Zealand and the United States. However, the UK population is estimated to have grown at a faster pace since the turn of the millennium, rising by 1.8 million (3.2%) since 2000 (Chart 16).

The main cause of this increase has been an increase in net inward migration; the ratio of births to deaths has seen less variation. Both the inflow and outflow rates have risen, but the inflow rate has risen more rapidly, with an influx of migrants from eight East European countries – known as the Accession 8, or A8 for brevity (the Czech Republic; Estonia; Hungary; Latvia; Lithuania; Poland; Slovakia; and Slovenia). As you may have gathered from press coverage, the numerical flow has been particularly large from Poland, but as a proportion of the home population, the flow has been especially dramatic from Lithuania and Latvia. Approximately 1.6% of the home population of Lithuania and 1.25% for Latvia have come to the UK in the last two years according one data source, compared with 0.8% from Poland and 0.2% from Hungary.

It appears that 500,000 workers are likely to be an upper estimate of the number of A8 migrants that could potentially be in the UK in late 2006. But the data suggest that as many as half of the migrants that have come to the UK have not stayed permanently. There is little or no evidence to suggest that that the new A8 migrants have come to the UK to claim or receive benefits: they have come to work.

Of particular interest to this region is the finding in Table 3 which suggests that Scotland's declining population has now been reversed. Since 2002, the Scottish population has been growing as a result of growth in net migration: this occurred despite the fact that the number of deaths continues to outstrip the number of births. Between 2004Q3 and 2006Q3 37,570 workers from the A8 registered in Scotland under the Worker Registration Scheme (WRS) - see Blanchflower, Saleheen and Shadforth (2006). Note that the self-employed do not need to register on the WRS, but they do need a

<sup>&</sup>lt;sup>7</sup> See for example Dickens and Draca (2005) and Stewart (2002, 2004).

National Insurance number (NINo). During 2005-2006, 41,400 workers registered in Scotland for National Insurance numbers.

These new immigrants are in general much younger than the native population. The average age of someone born in the UK and living in Scotland in 2006 was 40, compared with 26 for foreign-born inhabitants. According to the Labour Force Survey, the greatest proportion of these new immigrants who have come to Scotland are also from the A8, accounting for one in five of the arrivals since 2002. A similar proportion has come from other EU countries, with the rest coming fairly evenly from other countries around the globe.

It is plausible, of course, that an influx of immigrants could displace natives or less recent immigrants, but there seems little evidence to sustain such a view. The recent influx of A8 workers into the UK would not appear to have had many displacement effects on native workers – consistent with a large literature on the subject – demonstrated by the continuation of the fall in the unemployment rate; these new workers would appear to have complementary skills to the native labour force.

Gilpin et al (2006) recently conducted a careful econometric analysis of the impact of the new A8 migrants. In particular they focussed on their impact on the claimant count, as this is not a sample. They found that:

"despite anecdotal evidence, there is no discernible statistical evidence which supports the view that the inflow of A8 migrants is contributing to a rise in claimant unemployment in the UK" (2006, p.49).

Immigrant labour can lower the natural rate of unemployment, either by filling skill gaps (assuming that foreign-born workers are complementary to the domestic workforce) or by tempering wage demands, as wage bargainers become aware that they can be replaced more easily than in the past. In support of the latter argument, the OECD Economic Outlook (2006b) notes that "international as well as UK evidence suggests [that] immigration can serve to make the labour market as a whole more fluid and wages less sensitive to demand fluctuations." Katz and Krueger (1999) argue that recruitment agencies for temporary workers also contribute to declines in the natural rate, where A8 migrants are disproportionately employed (Blanchflower, Saleheen and Shadforth, 2006).

Shimer (1998) argues that time series changes in the natural rate of unemployment in the US are driven by demographic changes; the declining natural rate of unemployment over the past decade or so has resulted from declines in the proportion of individuals in the population that had high propensities for unemployment. So the aging of the baby boom generation was particularly important as the proportion of the population that was young – and subject to high unemployment rates – declined over time. Barwell (2000) found, using data from the Labour Force Survey that about 55bp of the 565bp fall in the UK unemployment rate between 1984 and 1998 can be accounted for by changes in the age structure of the labour force. A more recent analogy for the UK is that the workforce has increased in size as a result of adding a group – the A8 – with a relatively low propensity

to be unemployed<sup>8</sup> and claim benefits. The workforce appears more flexible and mobile than it was before the entry of workers from the A8. They had no entitlement to benefits so the replacement rate in the economy has fallen, once again lowering the natural rate of unemployment.

These A8 migrants are also likely to have had an effect on the wage bargaining process, lowering the bargaining power of native workers. The 'fear' of unemployment has risen (Blanchflower, 1991). Consequently, a secondary effect of the influx of A8 migrants has been to reduce inflationary pressures by lowering wage pressures.

Evidence suggesting that there is greater wage flexibility in the UK than in the past is presented in Table 4 (Blanchflower and Oswald, 1994a, b). It estimates a set of log hourly wage equations. As one moves to the right various controls (dummies for year, region, age, sex, race and schooling) are added. The final column includes an interaction term between A8 migrants and the unemployment rate, which is significantly negative. This suggests that the wages of A8 migrants are more flexible than those of other workers.

#### 6. The Scottish Labour Market

It is appropriate to have a brief look at the Scottish labour market, which has been doing pretty well recently. Chart 17 shows that unemployment in Scotland is now below the UK average for the first time in more than a decade.<sup>9</sup> Currently, the Scottish unemployment rate is 5.2% compared with 5.5% for the UK as whole. The employment rate in Scotland is 76.1% compared with 74.5% for the UK and the activity rate is 80.3%, compared with 79.0% for the UK. The claimant count for 18-24 year olds in January 2007 in Scotland was lower than a year earlier, whereas nationally it was higher. So on all of these measures Scotland is doing well.

A Scottish success story is also apparent in a number of other labour market indicators. The number of economically inactive individuals in Scotland reporting that they are looking for a job has declined steadily over the past three years, whereas nationally the number has increased. Similarly, the numbers of part-time workers in Scotland who say they can't find a full-time job has stayed broadly constant, whereas nationally it has

<sup>&</sup>lt;sup>8</sup> Micro-data suggest that, holding constant a variety of characteristics including age, qualifications and location, recent A8 immigrants have higher self-employment rates and lower wages than natives, but similar unemployment rates. In contrast, recent non-A8 migrants have a higher probability of being unemployed, comparable wages and lower self-employment rates than natives. A8 migrants who arrived before 2004 have very low unemployment rates and high self-employment rates, but lower wage rates than natives. The data also suggest that the mix of skills that these A8 migrants have brought to the UK are complimentary to the existing workforce, so displacement of native workers is unlikely to have been much of an issue in aggregate.

<sup>&</sup>lt;sup>9</sup> <u>Labour Market Statistics, First Release</u>, February 2007, ONS and <u>Labour Market Statistics, First Release</u>: <u>Scotland</u>, February 2007, ONS.

increased. And the number of temporary workers who say they can't find a permanent job has declined in Scotland, since December 2003.

The strength of the Scottish labour market, and UK labour market in general, would lead me to expect to see a further improvement in the incapacity benefit data. These data are produced with a significant lag and are only available nationally, but they indicate that the incapacity benefit caseload fell by 42,000 to 2.68 million in the year to August 2006. The number of people claiming workless benefits (unemployment benefits, incapacity benefit and income support) in Scotland was approximately 483,000 in February 2006. This is a reduction of over 14,900 since the same period in 2005.<sup>10</sup>

In terms of earnings, Chart 18 suggests that the relative strength of the Scottish labour market, in comparison with the UK, has been reflected in a pickup in earnings in Scotland. Median, full-time, weekly earnings have been rising faster in Scotland than the UK since around 2004. The obvious question is, as with other UK regions, whether this improvement will continue in the future given three increases in interest rates and a strong pound.

## 7. Summary

In summary, I have identified a number of key, recent labour market developments in the UK. These include:

- (1) Unemployment is currently high relative to CIRU this would conventionally be interpreted as evidence of an "unemployment gap" and a relatively weak labour market.
- (2) There have been increases in both youth and long-term unemployment.
- (3) The joint movements of unemployment and inactivity have to be interpreted with care when trying to draw inferences regarding the tightness of the UK labour market.
- (4) The UK labour market has become more flexible with the enlargement of the EU and increased pool of potential workers.
- (5) The expansion of the EU and increases in the proportion of workers describing themselves as temporary are likely to weaken "outsider" pressure on wage costs.
- (6) Scottish labour market performance has been strong in recent years.

#### So what are the implications for inflationary pressures?

In my view, the labour market for the UK, as a whole, has continued to loosen over the past twelve months or so. Labour demand has remained firm or picked-up in many

<sup>&</sup>lt;sup>10</sup> http://www.scotland.gov.uk/Topics/Statistics/Browse/Labour-Market/TrendWorklessness

sectors, but on the whole has not kept pace with the additional supply. Consequently, while employment has risen, so too has the degree of slack in the labour market.

There has been no evidence in the past twelve months or so of any pick-up in earnings growth. Indeed, the ONS on its website describes pay growth as 'steady'. The Average Earnings Index and Average Weekly Earnings have shown little or no tendency to increase; if anything they have declined slightly over the past twelve months or so. Average earnings excluding bonuses, averaged over three months rose by 3.7% in the year to November 2006, compared with 3.8% in November 2005 and 4.4% in November 2004. Chart 19 illustrates. Wage settlements have also so far remained low, and labour costs have fallen as a result of an increase in hours worked (Chart 20). Public sector wage increases appear to be averaging around 2.5%, which is the same as last year. For example, 482,000 teachers received 2.5% as part of a 2½ year deal and 140,000 police settled at 3%. Wage pressures are likely to remain benign given that the profit share of companies is low and the fear of unemployment is high (Blanchflower, 1991).

The other major considerations in terms of monetary policy are: the degree of spare capacity within firms; and inflation expectations.

Capacity utilisation within manufacturing firms such as measured by the BCC and the CBI as well as the Bank's Agents continue to be around the average for the past decade. The BCC long run survey measure of capacity within services is also around its ten-year average. There is a considerable degree of disagreement over the level of the output gap prevailing in the UK economy – which is the sum of capacity within firms and in the labour market. This is notoriously difficult to measure – indeed it isn't directly observable. My view is that slack in firms has remained broadly constant over the past year or so and the slack in the labour market has continued to increase. The output gap in my view continues to increase in size, suggesting that the potential for the economy to grow in a non-inflationary way is substantial. The pound is now higher and three interest rate rises have yet to have their full impact, alongside the fact that the natural rate of unemployment has fallen.

Inflation expectations are less likely to be dislodged in the event of a cost shock if the monetary framework is credible. It seems to me that monetary policy in the UK *does* have credibility and inflationary expectations are well anchored on the inflation target. In such a case a rise in consumer price inflation generated by some relative price increase such as a rise in oil prices is less likely to feed through into pay settlements because of the general belief that inflation will return to target. As Nickell (2006a) noted "wage inflation has not responded significantly to the recent rise in oil prices so there have been no second-round effects and, consequently, the implications for monetary policy of the oil price increase are few."

If inflation persists above the 2% target for too long the worry is that individuals will start to revise up their expectations for inflation going forward. This may lead workers to demand higher wage settlements to offset the expected fall in their real wage. Inflation expectations did rise early in 2006, perhaps reflecting the preannouncement of energy

price rises, but subsequently expectations appear to have fallen back. The most recent YouGov/Citigroup survey data for February indicate a median expectation that consumer price inflation will be around 2.4% over the next year, down from 2.7% in January and the lowest level seen since November last year. The survey also recorded a fall in average expected inflation over a five- to 10-year time span. I expect these measures to continue to fall as inflation steadily declines, as it surely will, driven by base effects and the recently announced cuts in gas and electricity prices. I expect inflation to be back at target by late Spring/early Summer 2007.

#### The latest Inflation Report projections, February 2007

The Committee's projection for the probability of various outcomes for CPI inflation in the future is given by Chart 21, based on market interest rate expectations. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best judgment is that inflation over the subsequent three years would lie within the darkest central band on only 10 of those occasions.

The inflation profile is a little higher than in the November *Inflation Report* in the near term, but then falls back a little further. There are differences of view among the Committee concerning the central projection. My own particular view is that there is a slightly greater margin of spare resources in the economy than embodied in the central projection, reflecting both greater spare capacity within businesses, and a greater degree of slack in the labour market. I therefore believe that inflation will recede more quickly and to a greater extent than the profile shown in Chart 21, and be below target at the two-year horizon. Other Committee members subscribe to a view that pricing pressures may prove stronger than in the central projection, as a result of strong demand and high asset values. The uncertainties about the outlook for inflation, as in November, continue to be judged to be somewhat greater than normal, and I, like every other Committee member, stand ready to act appropriately given future developments.

The uncertainty, in conjunction with the margin of spare capacity within firms and in the labour market, additionally reflects concerns regarding the evolution of the exchange rate and prospects for world growth, among others.

The world economy looks a little stronger now than it did six months ago. The most recent FOMC decision (31<sup>st</sup> January) yielded a continuation of the pause in policy tightening first abated at their August meeting. However, the FOMC's statement suggested that there now appears to be a more favourable growth/inflation trade-off for the US, reflecting recent data releases. There appears to have been a soft-landing in the housing market. The pickup in euro area demand, perhaps with the exception of Germany, seems to be continuing.

The exchange rate has risen significantly over the past few months and has contributed to the degree of monetary tightening facing the UK economy. It is uncertain where the exchange rate will move next, but looking ahead, the MPC assumes sterling will gently fall back over the next couple of years.

That being said, it is my principal belief that the evolution of the labour market will dictate to a significant extent the prospects for the UK economy and inflation in coming months. But you would expect me to say that, I am a labour economist...and now at Stirling.









| 000s          | 16+ Population | Workforce | Unemployment | Employment | Employees | Self-employed |
|---------------|----------------|-----------|--------------|------------|-----------|---------------|
| 1997          | 45,497         | 28,492    | 2,045        | 26,448     | 22,969    | 3,479         |
| 1998          | 45,661         | 28,497    | 1,783        | 26,713     | 23,327    | 3,386         |
| 1999          | 45,862         | 28,811    | 1,759        | 27,052     | 23,741    | 3,311         |
| 2000          | 46,107         | 29,071    | 1,638        | 27,434     | 24,174    | 3,260         |
| 2001          | 46,413         | 29,122    | 1,431        | 27,691     | 24,410    | 3,281         |
| 2002          | 46,704         | 29,399    | 1,533        | 27,866     | 24,526    | 3,340         |
| 2003          | 46,995         | 29,645    | 1,479        | 28,166     | 24,631    | 3,535         |
| 2004          | 47,324         | 29,839    | 1,429        | 28,410     | 24,780    | 3,630         |
| 2005Q1        | 47,650         | 30,087    | 1,411        | 28,676     | 25,054    | 3,622         |
| 2005Q2        | 47,753         | 30,126    | 1,433        | 28,693     | 25,063    | 3,630         |
| 2005Q3        | 47,853         | 30,242    | 1,447        | 28,794     | 25,133    | 3,661         |
| 2005Q4        | 47,946         | 30,312    | 1,554        | 28,758     | 25,059    | 3,699         |
| 2006Q1        | 48,038         | 30,486    | 1,599        | 28,887     | 25,147    | 3,740         |
| 2006Q2        | 48,131         | 30,613    | 1,683        | 28,930     | 25,211    | 3,719         |
| 2006Q3        | 48,224         | 30,696    | 1,711        | 28,986     | 25,227    | 3,759         |
| 2006Q4        | 48,316         | 30,723    | 1,687        | 29,036     | 25,242    | 3,794         |
| Change        |                |           |              |            |           |               |
| 2005Q4-2006Q4 | +370           | +411      | +133         | +278       | +183      | +95           |

# Table 1a: Recent developments in the UK labour market – 000s

Source: ONS

| 000s   | Employment/<br>Unemployment population |      | Activity | Self-<br>employment |
|--------|--|------|----------|---------------------|
| 1997   | 7.2                                    | 58.1 | 62.6     | 13.2                |
| 1998   | 6.3                                    | 58.5 | 62.4     | 12.7                |
| 1999   | 6.1                                    | 59.0 | 62.8     | 12.2                |
| 2000   | 5.6                                    | 59.5 | 63.1     | 11.9                |
| 2001   | 4.9                                    | 59.7 | 62.7     | 11.8                |
| 2002   | 5.2                                    | 59.7 | 62.9     | 12.0                |
| 2003   | 5.0                                    | 59.9 | 63.1     | 12.6                |
| 2004   | 4.8                                    | 60.0 | 63.1     | 12.8                |
| 2005Q1 | 4.7                                    | 60.2 | 63.1     | 12.6                |
| 2005Q2 | 4.8                                    | 60.1 | 63.1     | 12.7                |
| 2005Q3 | 4.8                                    | 60.2 | 63.2     | 12.7                |
| 2005Q4 | 5.1                                    | 60.0 | 63.2     | 12.9                |
| 2006Q1 | 5.2                                    | 60.1 | 63.5     | 12.9                |
| 2006Q2 | 5.5                                    | 60.1 | 63.6     | 12.9                |
| 2006Q3 | 5.6                                    | 60.1 | 63.7     | 13.0                |
| 2006Q4 | 5.5                                    | 60.1 | 63.6     | 13.1                |

**Table 1b:** Recent developments in the UK labour market – rates (%)

# Source: ONS

Notes: Employment includes employees, unpaid family workers and those on government schemes. The self-employment rate is the proportion of those in employment that are self-employed.

|             |      | Average | Average | Change | Change |
|-------------|------|---------|---------|--------|--------|
| Country     | 2006 | 1990-97 | 1998-06 | (pp)   | (%)    |
| EU15        | 7.2  | 9.6     | 8.0     | 1.6    | -16.6  |
| EU12        | 7.6  | 9.6     | 8.6     | 1.0    | -10.8  |
| OECD Europe | 7.6  | 9.0     | 8.5     | 0.5    | -5.4   |
| OECD        | 5.8  | 6.9     | 6.6     | 0.3    | -4.1   |
|             |      |         |         |        |        |
| Ireland     | 4.2  | 8.9     | 4.5     | 4.4    | -49.1  |
| UK          | 5.6  | 8.7     | 5.4     | 3.3    | -38.6  |
| Netherlands | 3.8  | 4.6     | 3.5     | 1.1    | -25.0  |
| Spain       | 8.4  | 13.9    | 10.8    | 3.1    | -21.9  |
| Denmark     | 3.3  | 6.0     | 4.7     | 1.3    | -21.4  |
| USA         | 5.5  | 6.1     | 5.0     | 1.1    | -17.5  |
| Canada      | 6.1  | 8.5     | 7.1     | 1.4    | -16.6  |
| Finland     | 7.5  | 10.6    | 9.0     | 1.6    | -15.4  |
| Sweden      | 6.2  | 6.6     | 5.8     | 0.8    | -12.8  |
| Italy       | 6.9  | 9.5     | 8.7     | 0.8    | -8.0   |
| France      | 8.6  | 10.0    | 9.3     | 0.7    | -7.2   |
| Belgium     | 8.2  | 8.3     | 8.1     | 0.2    | -2.4   |
| Portugal    | 7.1  | 5.7     | 5.6     | 0.1    | -1.6   |
| Greece      | 8.7  | 9.9     | 9.8     | 0.1    | -1.0   |
| Austria     | 4.6  | 4.2     | 4.3     | -0.1   | +1.5   |
| Germany     | 8.0  | 7.8     | 8.4     | -0.6   | +6.9   |
| Japan       | 4.0  | 3.8     | 4.8     | -1.0   | +26.6  |
|             |      |         |         |        |        |

# Table 2: Changes in unemployment rates in OECD Countries, 1990-2006

Source: <u>www.oecd.org</u>

| Mid-<br>year to<br>mid-<br>year | Population<br>at<br>start of<br>period | Population<br>at end<br>of period | Total<br>annual<br>average<br>change | (m<br>Live<br>births | id-year to | ents of cha<br>mid-year o<br>verages)<br>Natural<br>change | 0     |
|---------------------------------|--|-----------------------------------|--------------------------------------|----------------------|------------|--|-------|
| England and V                   | Vales                                  |                                   |                                      |                      |            |  |       |
| 1971-76                         | 49,152                                 | 49,459                            | + 61                                 | 644                  | 588        | + 76   | -28   |
| 1976-81                         | 49,459                                 | 49,634                            | + 35                                 | 612                  | 582        | + 30   | - 9   |
| 1981-86                         | 49,634                                 | 49,999                            | + 73                                 | 639                  | 582        | + 57   | + 16  |
| 1986-91                         | 49,999                                 | 50,748                            | +150                                 | 689                  | 569        | +120   | + 30  |
| 1991-96                         | 50,748                                 | 51,410                            | +132                                 | 668                  | 563        | +106   | + 27  |
| 1996-97                         | 51,410                                 | 51,560                            | +149                                 | 655                  | 562        | + 93   | + 56  |
| 1997-98                         | 51,560                                 | 51,720                            | +160                                 | 636                  | 544        | + 92   | + 68  |
| 1998-99                         | 51,720                                 | 51,933                            | +213                                 | 630                  | 558        | + 72   | +141  |
| 1999-00                         | 51,933                                 | 52,140                            | +207                                 | 612                  | 550        | + 61   | +146  |
| 2000-01                         | 52,140                                 | 52,360                            | +220                                 | 599                  | 528        | + 71   | +149  |
| 2001-02                         | 52,360                                 | 52,570                            | +210                                 | 591                  | 530        | + 61   | +149  |
| 2002-03                         | 52,570                                 | 52,794                            | +223                                 | 608                  | 532        | + 76   | +147  |
| 2003-04                         | 52,794                                 | 53,046                            | +252                                 | 631                  | 531        | +101   | +151  |
| 2004-05                         | 53,046                                 | 53,390                            | +345                                 | 641                  | 520        | + 121  | + 224 |
| Scotland                        |  |                                   |                                      |                      |            |  |       |
| 1971-76                         | 5,236                                  | 5,233                             |                                      | 73                   | 64         | + 9  | - 14  |
| 1976-81                         | 5,233                                  | 5,180                             | - 11                                 | 66                   | 64         | + 2  | - 16  |
| 1981-86                         | 5,180                                  | 5,112                             | - 14                                 | 66                   | 64         | + 2  | - 16  |
| 1986-91                         | 5,112                                  | 5,083                             | - 6                                  | 66                   | 62         | + 3  | - 9   |
| 1991-96                         | 5,083                                  | 5,092                             | + 2                                  | 63                   | 61         | + 1  | - 0   |
| 1996-97                         | 5,092                                  | 5,083                             | - 9                                  | 60                   | 60         | -  | - 9   |
| 1997-98                         | 5,083                                  | 5,077                             | - 6                                  | 58                   | 59         | - 1  | - 6   |
| 1998-99                         | 5,077                                  | 5,072                             | - 5                                  | 57                   | 60         | - 4  | - 1   |
| 1999-00                         | 5,072                                  | 5,063                             | - 9                                  | 54                   | 60         | - 6  | - 3   |
| 2000-01                         | 5,063                                  | 5,064                             | + 1                                  | 53                   | 57         | - 4  | + 5   |
| 2001-02                         | 5,064                                  | 5,055                             | - 9                                  | 51                   | 57         | - 6  | - 3   |
| 2002-03                         | 5,055                                  | 5,057                             | + 3                                  | 52                   | 58         | - 7  | + 9   |
| 2003-04                         | 5,057                                  | 5,078                             | + 21                                 | 54                   | 58         | - 4  | + 25  |
| 2004-05                         | 5,078                                  | 5,095                             | + 16                                 | 54                   | 57         | -2   | + 19  |

# Table 3: Population changes, 1971-2004/5 (000s)

Source: ONS

# **Table 4:** Wage curves for the UK

|                       | (1)         | (2)         | (3)     |          | (4)     |          |
|-----------------------|-------------|-------------|---------|----------|---------|----------|
| Log regional          |             |             |         |          |         |          |
| unemployment          | 0349 (0.69) | 0457 (3.37) | -0.0517 | (4.78)   | -0.0512 | (4.68)   |
| Log U * a8 migrant    |             |             |         |          | -0.143  | (12.09)  |
| Log U * nona8 migrant |             |             |         |          | 0.003   | (0.65)   |
| Age                   |             |             | 0.0956  | (158.00) | 0.0956  | (158.00) |
| Age <sup>2</sup>      |             |             | -0.0011 | (141.84) | -0.001  | (141.84) |
| Male                  |             |             | 0.2628  | (51.43)  | 0.2628  | (51.43)  |
| Asian                 |             |             | -0.162  | (18.46)  | -0.162  | (18.46)  |
| Black                 |             |             | -0.1782 | (0.97)   | -0.1782 | (10.97)  |
| Chinese               |             |             | -0.0784 | (4.62)   | -0.0784 | (4.62)   |
| Other races           |             |             | -0.0984 | (8.14)   | -0.0984 | (8.14)   |
| Age left school       |             |             | 0.0083  | (5.57)   | 0.0082  | (5.57)   |
| Year dummies          | Yes         | Yes         | Yes     |          | Yes     |          |
| Region dummies        | No          | Yes         | Yes     |          | Yes     |          |
| Constant              | 2.3071      | 2.2384      | 0.0435  |          | 0.0463  |          |
| $R^2$                 | 0.0539      | 0.0852      | 0.2315  |          | 0.2318  |          |
| Ν                     | 662,716     | 662,716     | 644,626 |          | 646,626 |          |

Source: LFS 1996-2006

Notes: standard errors clustered by region and year. Dependent variable log of hourly wage derived from *hourpay* variable. T-statistics in parentheses.

## **References**

Barwell, R. (2000), 'Age structure and the UK unemployment rate', <u>Bank of England</u> <u>Quarterly Bulletin</u>, August, 40(3), pp. 257-265.

Bell, D.N.F. and D.G. Blanchflower (2007), 'The Scots may be brave but they are neither healthy nor happy,' <u>Scottish Journal of Political Economy</u>, May, forthcoming.

Blanchflower, D.G. (2007), 'A cross-country study of union membership,' <u>British Journal</u> of Industrial Relations, March, forthcoming.

Blanchflower, D.G. (1991), 'Fear, unemployment and pay flexibility' <u>Economic Journal</u>, March, pp. 483-496.

Blanchflower, D.G., J. Saleheen and C. Shadforth (2007), 'The impact of the recent migration from Eastern Europe on the UK Economy', <u>Bank of England Working Paper</u>.

Blanchflower, D.G. and A.J. Oswald (1994a), <u>The Wage Curve</u>, MIT Press, Cambridge, MA

Blanchflower, D.G. and A.J. Oswald (1994b), Estimating a wage curve for Britain, 1973-1990', <u>Economic Journal</u>, September, pp. 1025-1043.

Blanchflower, D.G. and A.J. Oswald (2004), 'Well-being over time in Britain and the USA,' Journal of Public Economics, Volume 88, Issues 7-8, July, pp. 1359-1386.

Blanchflower, D.G., A.J. Oswald and M.D. Garrett (1990), 'Insider power in wage determination', <u>Economica</u>, 57, pp. 143-170.

Blanchflower, D.G. and A.J. Oswald (1988), 'Internal and external influences upon pay settlements: new survey evidence,' <u>British Journal of Industrial Relations</u>, 3, pp. 363-370.

Gilpin, N., M. Henty, S. Lemos, J. Portes and C. Bullen (2006), 'The impact of free movement of workers from Central and Eastern Europe on the UK labour market' Department of Work and Pensions, Working paper #29.

Grainger, H. (2006), '<u>Trade union membership, 2005'</u>, Employment Market Analysis and Research, Department of Trade and Industry, March.

Gutiérrez-Domènech, M. and Bell, B. (2004), 'Female labour force participation in the United Kingdom: evolving characteristics or changing behaviour?', <u>Bank of England</u> Working Paper #221.

Hicks, S. (2005), 'Trends in public sector employment,' <u>Labour Market Trends</u>, 113(12), December.

Katz, L. and A. Krueger (1999), 'The high pressure US labor market of the 1990s', <u>Brookings Papers on Economic Activity</u>, 1, pp. 1-88.

Katz, L., G. Loveman and D.G. Blanchflower (1995), 'A comparison of changes in the structure of wages in four OECD countries', in <u>Differences and Changes in Wage</u> <u>Structures</u> edited by L. Katz and R.B. Freeman and published by University of Chicago Press and NBER, pp. 25-65.

Kersley, B., C. Alpin, J. Forth, A. Bryson, H. Bewley, G. Dix and S. Oxenbridge (2006), Inside the Workplace: Findings from the 2004 Workplace Industrial Relations Survey, Routledge, London.

Nickell, S.J. (2001), 'Has UK labour market performance changed, 16 May, 2001. <u>Bank</u> of England Quarterly Bulletin, Autumn, pp. 340-350.

Nickell, S.J. (2006a), Monetary policy, demand and inflation", <u>Bank of England</u> <u>Quarterly Bulletin</u>, Spring, 46(1), pp. 95-104.

Nickell, S.J. (2006b), 'A picture of European unemployment: success and failure' in M. Werding (ed.), <u>Structural Unemployment in Western Europe</u>, (MIT Press).

Macauley, C. (2003), 'Changes to self-employment in the UK; 2002 to 2003', <u>Labour</u> <u>Market Trends</u>, 111(12), December, pp. 623-628.

OECD (2006a), <u>International Migration Outlook</u>, Organisation of Economic Cooperation and Development, Paris.

OECD (2006b), Economic Outlook, 80, November, Paris.

Quintini, G., J.P. Martin and S. Martin (2007), 'The changing nature of the school-towork transition process in OECD countries', IZA Discussion Paper # 2582.

Sacker, A. and R.G. Wiggins (2002), 'Age-period-cohort effects on inequalities in psychological distress, 1981-2000', <u>Psychological Medicine</u>, 32, pp.977-990

Singleton, N., R. Bumpstead, M. O'Brien, A. Lee and H. Meltzer (2000), <u>Psychiatric</u> morbidity among adults living in private households, ONS.

Shimer, R. (1998), 'Why is the US unemployment rate so much lower?'; in B.S. Bernanke and J. Rotemberg (eds.), <u>NBER Macroeconomics Annual</u>, NBER.

Staiger, D., J. Stock and M. Watson (2002), Prices, wages and the US NAIRU in the 1990s' in <u>The Roaring Nineties</u>, edited by Alan Krueger and Robert Solow, Russell Sage Foundation, New York

Wadhwani, S. (2001), 'The new economy: myths and realities', <u>Bank of England</u> <u>Quarterly Bulletin</u>, Summer, pp. 233-245

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