

# Potential employment in the UK economy

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This article discusses a range of factors that may shift the level of UK potential employment — that is, the amount of labour that can be sustainably employed by UK companies to produce goods and services. The level of potential employment reflects four factors: the size of the adult population; the willingness of that population to participate actively in the labour market; the sensitivity of wages to the unemployment rate; and the average number of hours that people are willing to work when employed. Rapid growth in the UK population has been the primary source of growth in potential employment over the past ten years. Structural changes in the labour market are likely to have also enabled a modest increase in the equilibrium participation rate and a decline in the equilibrium unemployment rate which would have further boosted potential employment. But those developments have been partly offset by the continued downward trend in desired working hours.

## Introduction

The balance between demand and supply in the labour market shapes the near-term outlook for inflation, because it affects the rate of growth of companies' production costs. In the long run if companies set prices as a mark-up over costs, then inflation will tend to reflect the rate of growth of production costs in the private sector (although in the short run firms may be able to reduce their margins or put downward pressure on costs). Long-term stability in price inflation therefore requires stable growth in production costs. Labour costs are a key component of those costs: the cost of producing an additional unit of output will in part reflect the cost of employing sufficient labour to produce that output — in other words, the level of wages relative to labour productivity. So for inflation to be stable in the long term the wedge between the rate of growth of nominal wages and labour productivity must also be constant. For that to happen, the labour market must be in equilibrium — that is, employment must stabilise around its sustainable level, referred to in this article as the level of potential employment.

When the demand for labour rises above the level of potential employment, the cost of employing labour will tend to rise faster than the value of the output that workers produce. And when labour demand falls below potential, production costs will tend to rise at a slower rate, as wage growth lags behind the rate at which the output that workers produce is increasing in value. The level of potential employment provides a

reference point against which the current level of employment can be compared to describe the degree of inflationary pressure coming out of the labour market. Unfortunately, the level of potential employment cannot be directly measured, but if monetary policy makers want to gauge the amount of inflationary pressure in the labour market they need to try to make inferences about the likely level of potential employment.

The level of potential employment will reflect a whole range of factors which collectively determine the location of the aggregate labour demand and supply curves — that is, the amount of labour that companies require and the amount of labour that people are willing to provide at any given hourly real wage rate. Potential employment can be decomposed into four components: population; the equilibrium participation rate; the equilibrium unemployment rate; and equilibrium hours worked. This decomposition is discussed in the box on page 61. The rest of the article explores structural changes in the labour market which could have shaped the path of each of these components over recent decades.

## Population

Aggregate potential employment will reflect the sum total of individual decisions by members of the UK adult population to supply labour at any given wage. So increases in the size of the UK adult population will boost potential employment: larger populations can support larger workforces.

## Decomposing potential employment

Actual employment is measured in terms of the total number of hours worked by employees.<sup>(1)</sup> The total number of hours worked in the economy (*l*) can be decomposed into its constituent parts: the number of people in the adult population (*pop*); the fraction of that population that actively participates in the labour market (*pa*); the fraction of that actively participating population that is unemployed (*u*); and the average number of hours worked by those individuals who are employed (*avh*):<sup>(2)</sup>

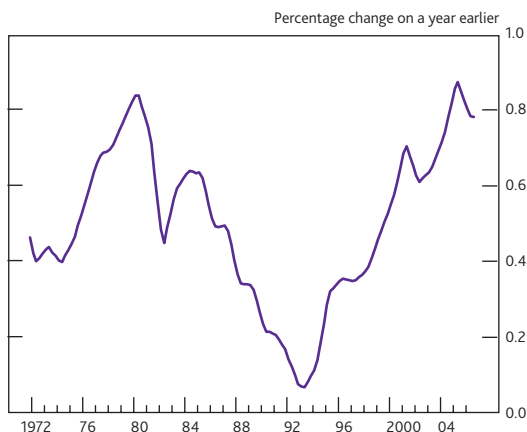
$$l = avh \times (1 - u) \times pa \times pop$$

This article uses an identical decomposition for potential employment (the number of hours that could be employed by companies – *l\**) into its corresponding equilibrium determinants: the size of the adult population, the participation rate (*pa\**); the unemployment rate (*u\**) and average hours worked (*avh\**). The equilibrium concepts abstract from the effects of cyclical movements in the economy:

$$l^* = avh^* \times (1 - u^*) \times pa^* \times pop$$

Population data are subject to considerable uncertainty. The latest figures from the Labour Force Survey (LFS) suggest that the adult population of the United Kingdom has increased by around 0.8% per year in 2005 and 2006 (Chart 1). The current pace of population growth is rapid by recent historical standards. Holding other factors constant, this implies that the level of potential employment has also been expanding at a rapid rate. The pickup in the pace of UK population growth over the past ten years to its current high level is accounted for by both natural change and net inward migration, although official estimates suggest migration has made a larger

Chart 1 The UK adult population<sup>(a)</sup>



Source: Labour Force Survey.

(a) Latest LFS population data are based on mid-2005 population estimates and experimental quarterly population estimates.

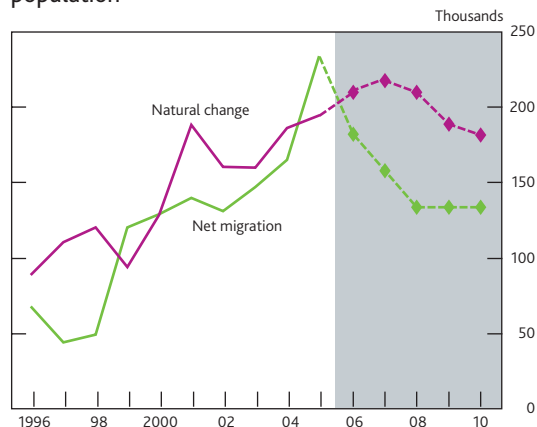
With the possible exception of the population, none of these equilibrium components can be directly measured, although persistent movements in actual participation, unemployment and hours worked are likely to be indicative of underlying movements in their equilibrium counterparts. The advantage of this decomposition is that it can help draw out how structural change in the labour market can affect the level of potential employment, because reforms such as the introduction of tax credits or working-time regulations should affect potential employment through particular channels.

(1) Actual and potential employment will include the self-employed as well as those directly employed by companies. The factors which influence the decision whether to become self-employed or to work for a company are not discussed here. This article focuses on the factors which affect the decision about whether to work at all. For more details on the reasons why people choose to become self-employed see Rees and Shah (1986) and Taylor (1996).

(2) This decomposition follows the 'stock' approach to the labour market — that is, dividing the population according to which state they are currently in: employed, unemployed and economically inactive. There is an alternative approach which focuses on the flows between these states (see Blanchard and Diamond (1992)).

contribution in the most recent data (Chart 2).<sup>(1)</sup> Estimates of international migration flows are extremely uncertain, and it is possible that the official data understate the current rate of growth of the adult population, and therefore the level of potential employment.<sup>(2)</sup>

Chart 2 Sources of change in the UK adult population<sup>(a)(b)</sup>



Sources: Government Actuaries Department (GAD)/ONS and Bank calculations.

(a) Breakdown of historical change in the 16+ population is estimated using net migration data for the 15+ population.

(b) Latest GAD/ONS population projections are consistent with the mid-2004 population estimates that were published in October 2005.

(1) The population estimates only include permanent migrants; they do not include temporary foreign workers who can also contribute to potential employment.

(2) For more detail on international migration data and the impact of migration on potential employment see Barwell (2007).

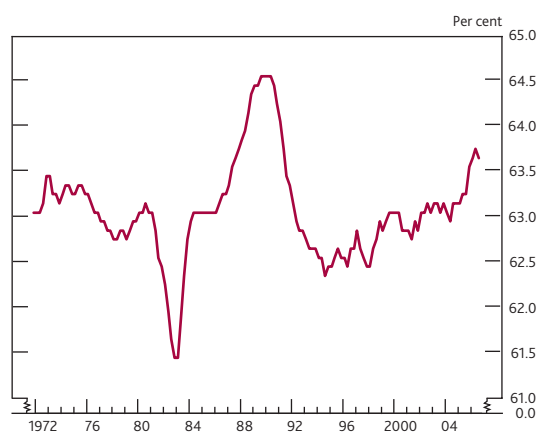
Population growth is typically assumed to be independent of the state of the economic cycle. In other words, it does not depend on whether resources are currently being used above or below normal levels. So any cyclical variation in the amount of labour employed is assumed to reflect variation in the fraction of the population who are in work and the average number of hours they work. But that assumption may be too simplistic, given the key role played by net migration in driving recent UK population growth.<sup>(1)</sup> Some of these migrants may have chosen to travel to the United Kingdom because of the relatively buoyant state of the UK labour market. So the recent growth in the UK population may overstate the growth in potential employment, because some of these migrants may return home in the future if the UK labour market becomes less buoyant than overseas labour markets.<sup>(2)</sup>

The composition of the population can also affect potential employment. As the following sections show, the probability of being in work, and the average number of hours worked when in employment, vary markedly across different subsets of the UK adult population. In some cases those differences will reflect variation in demand for labour. But in many cases, differences in participation rates or working hours may reflect differences in supply.

## Equilibrium participation rate

At any point in time, only a fraction of the adult population will be economically active, or participating in the labour market — that is, either in employment or searching for work. Movements in the participation rate will reflect both cyclical and structural factors. If wages temporarily rise in a boom when the demand for labour is high — as they did in the late 1980s — then there is a greater incentive for people to search for work (**Chart 3**). Any such cyclical increase in the participation rate will not be reflected in a corresponding increase in the equilibrium participation rate or the level of potential employment.

**Chart 3** The participation rate



Source: Labour Force Survey.

Structural changes which alter the incentives to search for work — as may have happened in the late 1990s — will affect the participation rate. These changes will also affect the equilibrium participation rate and hence the level of potential employment. This section explores the factors that could affect the equilibrium participation rate.

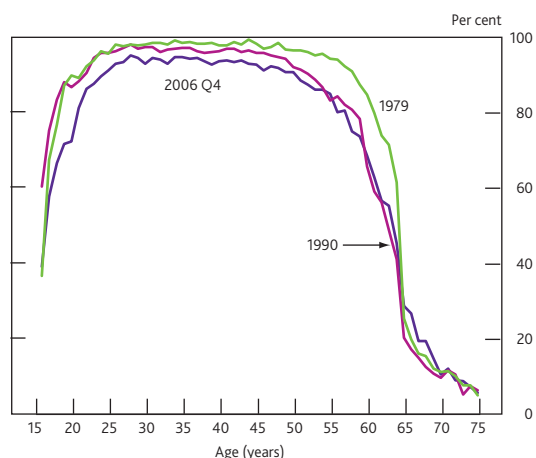
## Demographics

Participation rates vary markedly across different demographic groups. A change in the composition of the population can therefore affect the aggregate equilibrium participation rate. Changes in the fertility rate in the post-war period (the 'baby boom' and 'baby bust') and increased life expectancy have had a profound impact on the age structure of the UK population. During the 1990s members of the baby-boom generation were entering middle age, when participation rates tended to be high. That shift in the age composition of the population is likely to have temporarily boosted the equilibrium participation rate. But as the baby boomers approach and pass retirement age, demographics may start to push down on the equilibrium participation rate.

## Retirement

Many people stop participating in the labour market once they have accumulated sufficient savings to fund consumption in retirement. The decline in participation among middle-aged men through the 1980s can in part be accounted for by an increase in the number of people taking early retirement (**Chart 4**). More men taking early retirement in the early 1980s may also have reflected a lack of suitable job opportunities for those who were previously employed prior to the recession and a greater willingness of companies to let them retire at a time when pension funds were well funded.

**Chart 4** Age-specific participation rates among men



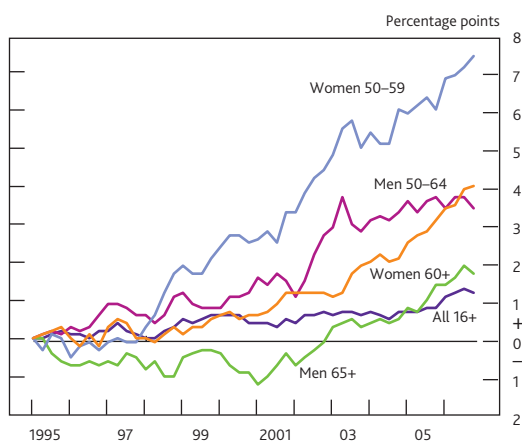
Source: Labour Force Survey.

(1) See Barwell (2007).

(2) This statement refers to the permanent UK resident population. If improved labour mobility has increased the pool of overseas residents who are willing to migrate to the United Kingdom it could be argued that UK potential employment has increased.

Since the late 1990s participation rates among older people have started to rise (Chart 5). This may reflect concerns over the adequacy of savings to fund consumption in retirement. People now expect to live longer in retirement, so they may have revised up their desired level of savings to fund consumption in retirement accordingly. The shift from defined benefit (DB) towards defined contribution (DC) occupational pension schemes may have further reduced the incentive to retire early. And increasing labour market flexibility has allowed many older workers who want to continue to work to do so, but often perhaps by working shorter hours.<sup>(1)</sup>

**Chart 5** Changes in participation rates by age and gender, since 1995 Q1

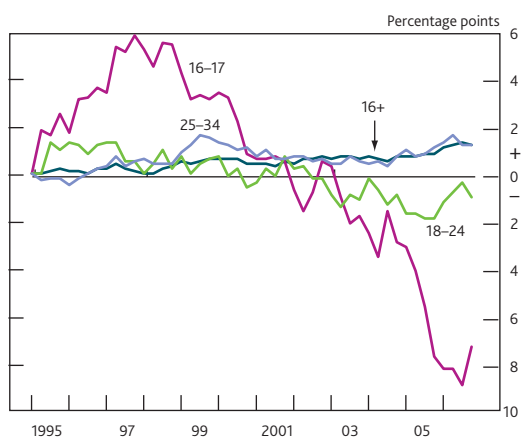


Source: Labour Force Survey.

**Full-time study**

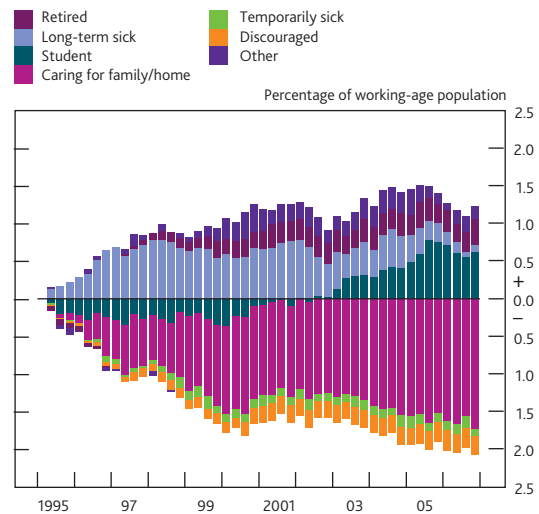
At the other end of the age spectrum, participation rates among young people have fallen (Chart 6). The fraction of the working-age population who report that they are not participating because they are students has risen by around 1 percentage point over the past six years (Chart 7). Young people may choose to delay entering the labour market so that they can study. Students may lose out on income in the short run, but they may be able to earn higher wages once they

**Chart 6** Changes in participation rates by age, since 1995 Q1



Source: Labour Force Survey.

**Chart 7** Changes in working-age inactivity by reason, since 1995 Q1



Source: Labour Force Survey.

graduate, so that they can increase their lifetime consumption. The continued expansion of the post-compulsory education system is therefore one factor which may explain why the participation rate has fallen among people aged under 24.<sup>(2)</sup>

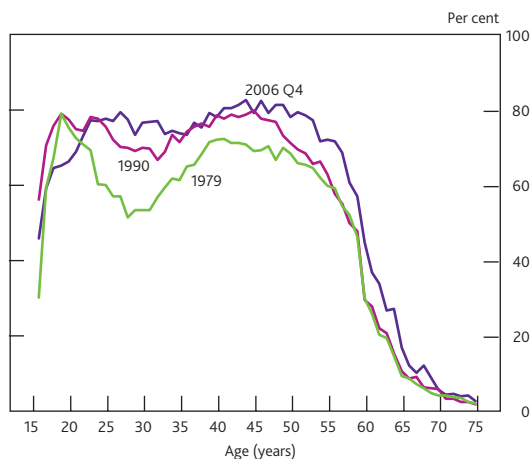
**Fixed costs of work: childcare**

Some individuals may find that it is not in their interest to search for work, because the costs involved in taking a job are prohibitively high. For example, parents with young children have to pay the fixed and variable costs of childcare if they want to participate in the labour market: the costs of taking children to and from a nursery; and the hourly cost of childcare. Once those costs have been deducted from their earnings, some parents may find that there is little incentive to work.

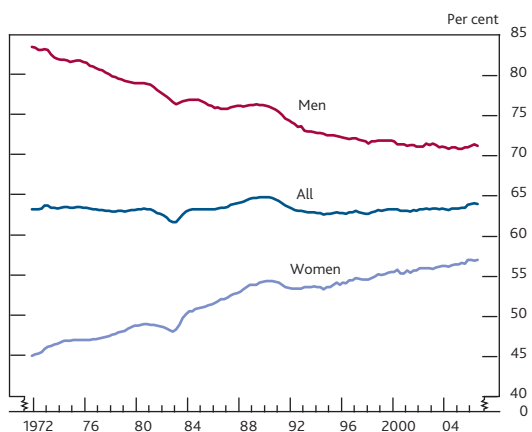
Historically, women have tended to earn lower wages than men. Given that gender pay gap, there may have been an economic incentive for women to stay at home to care for their children rather than pay for childcare. But rising educational attainment among women and reduced discrimination have helped to narrow the gender pay gap. Alongside improvements in maternity rights, this has generated a stronger incentive for mothers to return to work (Gregg, Gutiérrez-Domènech and Waldfogel (2003)). And more recently, increased state provision of nursery care and tax incentives such as childcare vouchers have reduced the costs of childcare. As a result, participation has risen among women between the ages of 25 to 40 (Chart 8), who would be most likely to have young children, helping to explain the overall rise in female participation (Chart 9). Consistent with this, the fraction of the working-age population who give

(1) New anti-age discrimination laws came into effect in October 2006.

(2) Although this may increase the participation rate of these people in later life.

**Chart 8** Age-specific participation rates among women

Source: Labour Force Survey.

**Chart 9** Participation rates by gender

Source: Labour Force Survey.

caring for their family as their reason for not participating has fallen by over 1½ percentage points since 1995 (Chart 7).

### Fixed costs of work: 'inactivity traps'

Another example of the fixed and variable costs of work are the social security payments that individuals may lose when they find a job. Entitlement to benefits can be withdrawn either completely when people find work or on a pound-for-pound basis with any additional income earned from work, so that individuals face very high marginal tax rates when they start work. Individuals who expect to earn relatively modest wages are caught in an 'inactivity trap': there is little or no incentive for them to participate, because they are no better off if they find work. Successive governments have introduced tax credits, such as Family Credit and the Working Families Tax Credit, to reduce these high marginal tax rates. These credits are designed to increase people's take-home pay for a given pre-tax level of earnings, by providing the low-paid with either an explicit benefit or tax credit. And reforms that reduce the level or

entitlement to social security benefits will have encouraged people to participate in the labour market and search for work.

### Long-term sickness

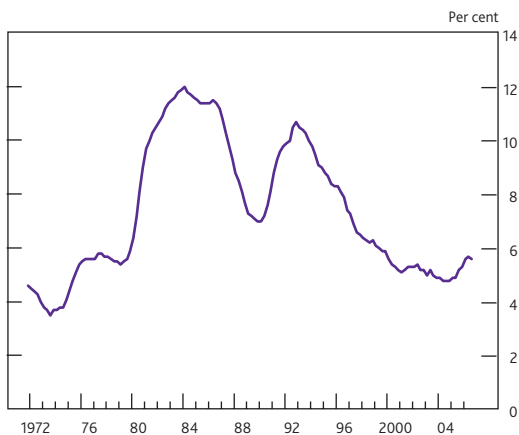
Between 1985 and 1996 the number of men claiming sickness-related benefits increased from 830,000 to 1,630,000 (Nickell and Quintini (2002)). It is extremely unlikely that the incidence of serious disability actually doubled over this period, and more likely that the pickup in long-term sickness claimants largely reflected the design of the benefit system. Many of these individuals had been unemployed for some time before they made their claim for invalidity benefit, which was somewhat more generous than unemployment benefit. There is some evidence to suggest that some unemployed claimants may have been encouraged to file claims for invalidity benefits (National Audit Office (1989)). Invalidity benefit was replaced with incapacity benefit in April 1995, and in the process the financial incentive for older men to switch from unemployment to sickness-related benefits was reduced. These reforms may have helped to stem the rise in long-term sickness claimants: the fraction of the working-age population who reported being inactive because they are long-term sick stabilised in 1998 and has since begun to fall (Chart 7).

### Equilibrium unemployment rate

At any moment in time, only a fraction of those individuals who participate in the labour market will be employed. The remainder are unemployed: out of work, and looking for a job. The size of the unemployment pool can affect the wage bargain between workers and companies. The smaller that pool is, the stronger the position workers are in to push for wage increases in excess of the increase in their productivity, as it is harder for firms to replace them. There is some level of unemployment at which the pool of available labour is just sufficient to keep wages growing in line with productivity, which can be interpreted as an equilibrium. At that point there is no pressure from the labour market for companies to change prices.

The unemployment rate moves with the economic cycle (Chart 10). When labour demand is weak, the unemployment rate will typically rise above its equilibrium, whereas during an expansion unemployment tends to fall below its equilibrium as the demand for labour is strong.

However, actual unemployment may also respond to changes in the underlying equilibrium rate of unemployment that are independent of the cycle. The unemployment rate fell steadily over the 1990s, to levels last recorded in the 1970s (although it has risen somewhat over the past 18 months). In part, that trend decline is likely to reflect a shift in the equilibrium unemployment rate.

**Chart 10** The unemployment rate

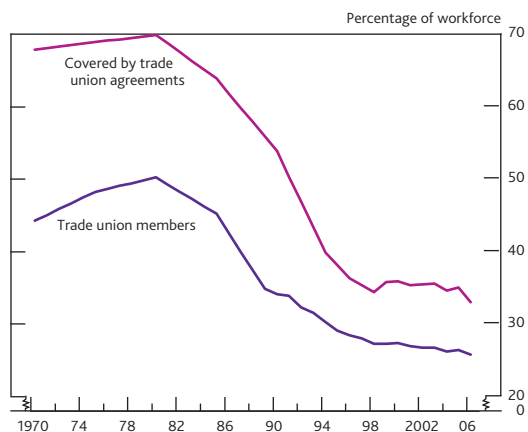
Source: Labour Force Survey.

This section explores factors that may affect the equilibrium rate of unemployment. Equilibrium unemployment will reflect the design of the various institutions that operate in the labour market — trade unions, social security benefits, government policies — because they determine how wages respond to the size of the unemployment pool (Bean (1994)). The lower the equilibrium unemployment rate, the larger the amount of labour that can be employed — that is, the higher the level of potential employment.

### Trade unions

One factor which may have led to a fall in the equilibrium unemployment rate is the decline in the power and coverage of trade unions. Trade unions can use their power as the collective representative of workers to bargain with employers to raise wages.<sup>(1)</sup> Companies may then respond to an increase in wages by cutting back on the size of their workforce, until the productivity of their remaining workers rises to compensate companies for the higher cost of employing labour. In this scenario, wages and productivity are higher, but the level of employment is lower. So the more powerful trade unions are — that is, the greater their ability to raise wages — the higher the equilibrium unemployment rate may be.

The fraction of the UK workforce who are members of a trade union, or whose wages are covered by an agreement made by a trade union, declined substantially over the 1980s and to a lesser extent the 1990s (Chart 11). In part that reflected changes in legislation that empowered companies to avoid entering into a formal bargaining process with trade unions. Those changes in the size of the trade union movement, together with legislative changes in the legal environment in which trade unions operate, reduced their ability to induce companies to pay higher wages. Declining union power may also reflect the changing industrial composition, as service sector industries, which are generally less unionised than manufacturing, became more important in the economy.

**Chart 11** Union density and coverage

Sources: Labour Force Survey and Nickell and Quintini (2002).

These changes may have put downward pressure on the equilibrium unemployment rate since the early 1980s.

### Changes in the benefit system

Another factor that could have affected the equilibrium unemployment rate is the benefit system. If the replacement ratio is high — that is, if the gap between benefits and wages is relatively small — then people may not search so intensively for work, because their benefits provide a reasonable level of consumption. That will tend to raise the equilibrium unemployment rate. There is also evidence that search intensity responds to the expiry of benefit (Meyer (1990)). When there is no time limit on how long people can claim unemployment benefit, on average, they tend to remain unemployed for longer.

There have been a series of reforms to social security benefits from the late 1970s onwards motivated in part by these concerns about the impact of benefits on the equilibrium unemployment rate. There have been changes to: the level of the benefits that the unemployed receive; the types of people who are entitled to claim benefit; the conditions attached to receiving it; and, the amount of time that people can claim certain benefits (Nickell and Quintini (2002)). These changes may have reduced the equilibrium unemployment rate, because they should have increased the intensity with which the unemployed search for work.

### Active labour market policies

It is possible that active labour market policies (ALMP) may have reduced the equilibrium unemployment rate by reducing the incidence of long-term unemployment. Successive governments have experimented with ALMP, such as the Restart programme or more recently the New Deals. These schemes try to help the long-term unemployed back into jobs

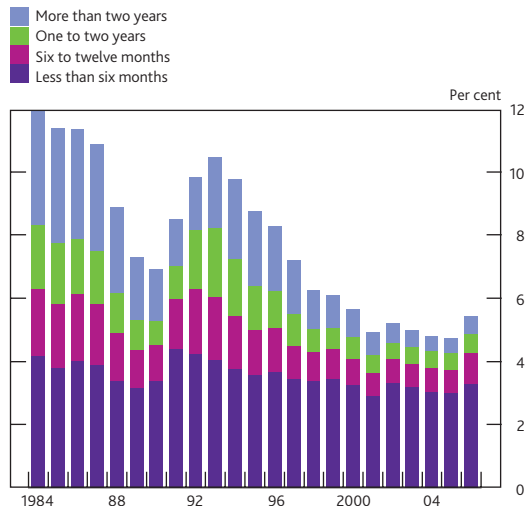
(1) Although unions may also have objectives to maintain employment.

either directly, by subsidising companies to employ them, or indirectly, by providing training to improve their ability to search for work.

Statistically, only a small proportion of the long-term unemployed find work in each period. That may reflect the fact that employers interpret long-term unemployment as a signal that those individuals will not be the most valuable employees. Also, prolonged experience of unemployment may damage an individual's productivity. And it may be that the long-term unemployed search less intensively for work because they have become disillusioned by their experiences. Companies may be less willing, or able, to recruit new employees if the unemployed pool is predominantly made up of long-term unemployed individuals, so the overall level of potential employment may be lower.

Abstracting from cyclical movements, there is some evidence of a trend decline in the fraction of the unemployed who have been continuously out of work for a long period of time (Chart 12), partly as a result of these programmes (see Dolton and O'Neill (1996) and Van Reenen (2003)). It is possible that these schemes have helped to reduce equilibrium unemployment.

Chart 12 The decline in long-term unemployment



Source: Labour Force Survey.

## Demographics

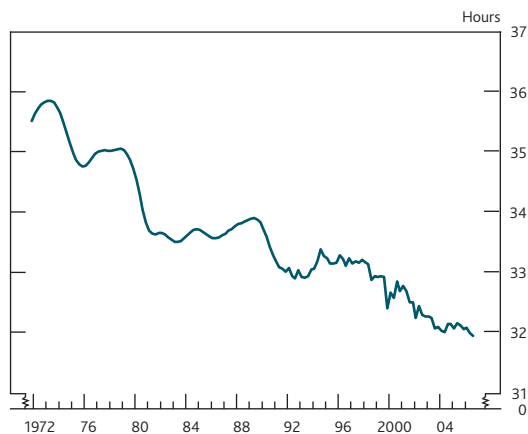
The equilibrium unemployment rate may also be affected by changes in the demographic composition of the population. Unemployment rates are significantly higher among the youth population, compared with those in middle-age, which may reflect the fact that youths have to go through a process of 'job shopping' when they enter the labour market and search through a series of jobs before they find a productive match. During this period of 'job shopping' youths may suffer more frequent periods of unemployment when they quit unsuitable jobs (Barwell (2000)). Youths may not be as effective as older job seekers at filling vacancies, and therefore will put less

pressure on wages. So the decline in the youth share of the adult population during the 1990s could have contributed to a fall in equilibrium unemployment.

## Equilibrium average hours worked

The amount of time that the typical British worker spends at work varies from quarter to quarter. In part, those changes in average working hours reflect the state of the economic cycle (Shortall (2002)). Companies will want their staff to work longer hours to produce more when demand is temporarily high, and people will want to work longer hours when the return from doing so is temporarily high. But over and above these cyclical variations in working hours, there is also evidence of a downward trend in hours worked over recent decades (Chart 13). In fact, average working hours are thought to have been on a downward trend for a century or more, which indicates that structural factors have led to a decline in equilibrium working hours. This downward trend in working hours is also apparent in recent data for most other developed economies, suggesting that those structural factors are likely to have been common across countries.

Chart 13 Average hours worked



Source: Labour Force Survey.

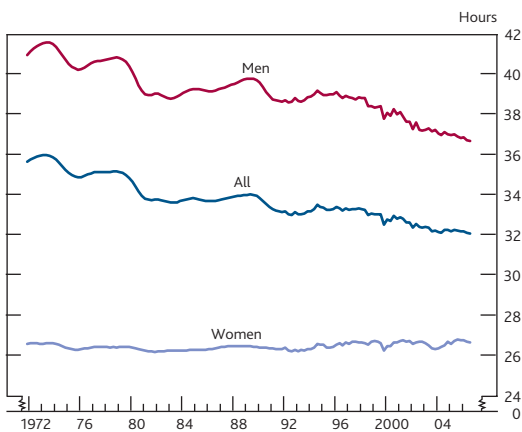
Rising real wages are likely to have been one factor helping to explain the trend decline in average working hours across countries. A permanent increase in the post-tax real hourly wage — that is, the amount of consumption that an extra hour of labour can purchase — will have two effects on labour supply decisions. There is a substitution effect: the opportunity cost of not working (in terms of foregone consumption) has increased so people will want to work longer hours. And there is an income effect: each hour of work enables more consumption so people can reduce their working hours (and enjoy more leisure) and still enjoy more consumption. The evidence suggests that these two effects broadly offset, with the income effect marginally dominating.<sup>(1)</sup>

(1) According to Kimball and Shapiro (2003): 'a tripling of per capita income perhaps yields a reduction of an hour or two in average weekly hours'.

The downward trend in average hours worked may also be a result of increasing participation among particular groups who generally work fewer weekly hours than the average of the population. **Chart 9** shows how participation rates among women have risen over the past 30 years, while the participation rate of men has declined. On average, women work fewer hours than men (**Chart 14**), partly because of a higher incidence of part-time working among women. So, increasing participation among women will reduce overall average hours via a simple averaging effect.

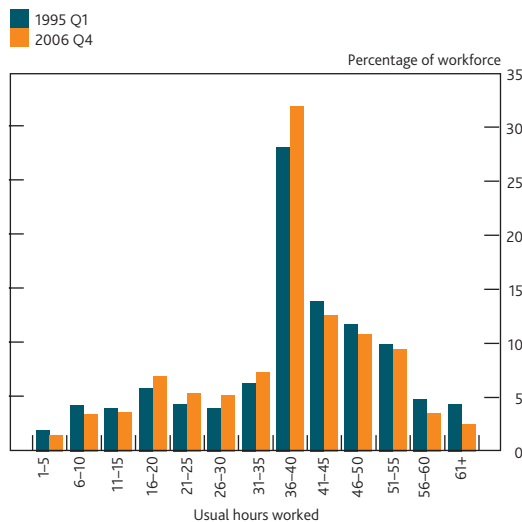
The distribution of average hours worked appears to have narrowed over time (**Chart 15**).<sup>(1)</sup> The fraction of the workforce in the left and right-hand tails of the distribution has fallen, indicating that the number of people usually working both short and long hours has fallen. The next section explores possible supply-side factors that could have driven these shifts in the distribution of working hours.

**Chart 14** Average hours worked by gender



Source: Labour Force Survey.

**Chart 15** Distribution of usual hours worked



Source: Labour Force Survey.

**Why are there less people working very short hours?**

The introduction and expansion of the tax credits system may have raised working hours at the bottom end of the distribution. These credits are designed to encourage people to search for work, by raising the pay-off from an hour of work (the post-tax real wage). But to qualify for these tax credits, people have to work a minimum number of hours each week, so they may have provided a financial incentive for individuals below that threshold to increase their working hours.<sup>(2)</sup> But the impact on working hours is not unambiguous. For those individuals who qualify for the scheme who were already working above the hours threshold there may be an incentive to reduce hours.<sup>(3)</sup> There may also be non-benefit reasons why there are less people working very short hours; for example increasing use of flexible working arrangements.

**Why are there fewer people working very long hours?**

One reason why people might work long hours is to increase their future earnings. Employees in some occupations appear to work long hours to signal to their managers that they are suitable for pay and promotion.<sup>(4)</sup> It is possible that a change in social norms (about the importance of work-life balance) or government legislation may have reduced competition along the hours dimension of effort.

Government legislation may have played a more direct role in reducing working hours. The European Directive on Working Time (WTD) was introduced into UK law on 1 October 1998. The WTD included a 48-hour limit on the number of hours employees could be asked to work within a typical week, and a right to a minimum number of weeks of paid leave.<sup>(5)</sup>

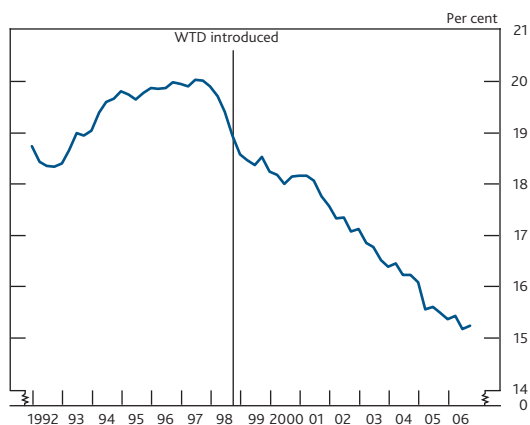
There is circumstantial evidence to suggest that the decline in average hours worked, and in particular the decline in the number of people working long hours, was at least partly driven by the WTD (**Chart 16**). The fraction of the workforce usually working more than 48 hours a week has fallen by about 4 percentage points since the WTD was introduced.

The WTD was not prescriptive: workers were not forced to reduce their working hours. So the legislation should only have had an impact on working hours if there were significant numbers of people who were working more hours than they

(1) **Chart 15** shows the distribution of the number of hours that people usually work in their main job, to abstract from variation in working hours due to holidays or sickness. The picture for actual hours worked is very similar.  
 (2) For example, people had to work 16 hours each week to be eligible for both Family Credit, and the Working Families Tax Credit, and they gained an additional credit if they work more than 30 hours.  
 (3) See Blundell, Duncan, McCrae and Meghir (2000).  
 (4) For more details on such 'tournament' models see Lazear and Rosen (1981). For evidence of tournaments operating in practice see Bell and Freeman (2000); and Landers, Rebitzer and Taylor (1996).  
 (5) The WTD also provided for: one day's rest in seven (or two in a fortnight); eleven hours' rest between working days; a 20-minute rest break if the working day exceeds six hours; health assessments for night workers; and an eight-hour limit on night working. Typical working hours are calculated over a 17-week averaging period. Certain groups of workers, such as doctors and those employed in the transportation sector, were initially excluded from the legislation, but have subsequently become covered by it.



**Chart 16** Percentage of workers who usually work over 48 hours a week



Source: Labour Force Survey.

wanted to. It is possible that the introduction of the WTD allowed some of these workers to reduce their hours. There is some evidence that a significant fraction of the workforce are still unhappy with their current working hours: over one third of the workforce would prefer to work fewer hours at their current hourly wage rate; and the majority of those working above 48 hours each week would prefer to cut their hours.<sup>(1)</sup>

Finally, it is also possible that the decline in long-hours jobs could reflect a shift in labour demand. Companies' preferences may have shifted towards employing more people and asking them to work fewer hours within a given target for the total amount of hours of labour input.<sup>(2)</sup> For example, if manufacturing companies prefer their employees to work longer hours than service sector companies, then the shift in industrial composition of the workforce could have led to a demand-driven reduction in working hours.

## Conclusions

This article has described some of the key factors that are likely to have influenced the level of potential employment over recent decades. Shifts in potential employment will reflect shifts in one of four constituent parts: the size of the adult population; the equilibrium participation rate; the equilibrium unemployment rate; and equilibrium average hours worked. Rapid population growth has played a key role in driving growth in potential employment over the past decade. Structural changes in the labour market which have led to a rise in the equilibrium participation rate and a decline in the equilibrium unemployment rate are also likely to have boosted the level of potential employment. But that has been partly offset by a decline in desired working hours. **Table A** summarises the factors influencing potential employment discussed above.

**Table A** Summary of impacts on potential employment

	Factors increasing potential employment	Factors reducing potential employment
<b>Population</b>	Natural population growth Net migration	
<b>Equilibrium participation rate</b>	Demographics (1990s) Later retirement (from 1990s) Lower fixed costs of work	Increasing full-time study Early retirement (1980s) Rising long-term sickness
<b>Equilibrium unemployment rate</b>	Decline in trade union power Benefit reforms Active labour market policies Demographics (1990s)	
<b>Equilibrium average hours</b>		Real wage growth Increased female participation

(1) Labour Force Survey data for 2006 Q4.

(2) This should reflect the costs of employing an additional head or hour of labour relative to the amount of output that can be produced by an additional head or hour of labour (Hamermesh (1993)).

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