

# HSE Horizon Scanning Intelligence Group Demographic study – Report

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## Summary

Predicted changes in employment patterns indicate an increase in the overall number of jobs over the next few years, with a move away from blue collar to white collar jobs as current trends towards a decline in traditional manufacturing work and an increase in the service sector continue. More women will work and there will be more part-timers. Working patterns are changing, with increases in flexible working and teleworking. The average age of the workforce will increase and more people are likely to work beyond the current retirement ages. Predicted changes in the occupational composition of employment indicate a beneficial effect on workplace injuries over time, although this will also be dependant on the economic climate.

1. Highlights include:
  - a. a predicted increase in jobs year on year of 0.5%, resulting in 1.3 m net new jobs between 2004 and 2014;
  - b. A predicted 12 m job replacement demand over the same period in jobs caused by retirement etc;
  - c. most of the new jobs will be part-time and distributed evenly between men and women;
  - d. over ¼ million migrants are issued with National Insurance Numbers each year, with the current net migration figure standing at around 225,000. Over the longer term, however, the net migration figure is anticipated to stabilise at a rate of around 145,000;
  - e. a continuing shift from 'blue collar' jobs to 'white collar jobs';
  - f. more older people in work;
  - g. more women in work;
  - h. more part-timers and people with flexible working patterns;
  - i. more small and medium enterprises.

## Introduction

1. The report presents selected demographic information as it affects the workplace, to give an indication of the types of data that are available and which can be researched in more detail if required. It updates and replaces the July 2005 report, HSIG/JUL05/3.
2. Demographics is typically defined as the statistical study of human populations, especially with reference to size and density, distribution, and vital statistics.<sup>†</sup> A wider interpretation of the term is adopted in this report, encompassing also issues that may affect demography. Although commissioned by the HSIG, the report is intended to provide a resource for HSE staff in general. The data are presented predominantly in graphical form, with supporting data in Annexes.

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\* Telework is defined as 'the use of information and communication technologies to enable remote working from the office' (DTI, 2003).

<sup>†</sup> Encyclopaedia Britannica

## Section 1: Population

### Summary

- There is expected to be a net increase of 1.3 m new jobs by 2014, although this will be dwarfed by the anticipated replacement demand
- Changes to the UK industry profile by sector are anticipated, including a decline in primary industries, utilities, and most manufacturing industries, an increase in the distribution/transport industry, and a large increase in business and other services.
- In terms of occupation, increases are expected in managers, professionals and associate professionals, customer and personal service occupations, in particular caring. High growth is predicted for business and public service professionals (legal, business and statistical, architects, surveyors etc). There will also be demand in teaching, research and S&T including engineering.
- Decreases are expected in skilled trades, transport and machine operatives, elementary occupations and administrative jobs, particularly secretarial.

### National Population

1. The principal source of population projections is the Government Actuary's Department (GAD). Table 1 shows the latest population forecasts, issued in October 2005.<sup>1</sup> Longer-term projections suggest the UK population will continue increasing beyond 2031 reaching 70 million by the 2060s.\*

Table 1: Population Projections for UK 2004-2031

Components of change: five year summary, 2004-2031

United Kingdom (annual averages)

	2004	2006	2011	2016	2021	<i>thousands</i> 2026
	-2006	-2011	-2016	-2021	-2026	-2031
Population at start	59,835	60,533	61,892	63,304	64,727	66,002
Births	714	701	710	722	720	705
Deaths	590	579	573	583	609	648
Natural change	124	122	137	140	110	57
Migration	225	150	145	145	145	145
Total change	349	272	282	285	255	202
Population at end	60,533	61,892	63,304	64,727	66,002	67,013

Source: Government Actuary's Department 2005 projections based on 2004 data.

\* Although HSC/E's responsibility is for Great Britain, figures for the UK are used in this report. Many statistics give some regional breakdown, but most readily available figures are for the UK rather than GB. The Northern Ireland contribution represents about 3% of the total.

Figures for Births, Deaths and Migration are annual. Figures for the UK and individual countries available at <http://www.gad.gov.uk/Population/2004/methodology/compchge.htm>

### Working Population

2. ONS publishes Labour Force Projections. The most recent set was published in January 2006 and covers the years 2006-2020. However, while these give the workforce by age and gender, they do not make any predictions about breakdown by sector, occupation or other attributes.

3. The main source of such detailed projections is Working Futures<sup>2</sup> - a five-part study by the Institute for Employment Research at the University of Warwick, carried out for the Sector Skills Development, the Learning and Skills Council, DfES and Regional Development Agencies. The report, originally published in 2004 and updated in 2006, gives detailed predictions of employment by industry, occupation and gender for the years 2004-2014 and is considered to be the most detailed and extensive ever produced for the UK. It is based on ONS figures, in particular the Labour Force Survey, the 2003 Annual Business Inquiry and the 2001 Census, and uses the Cambridge Econometrics (CE) multisectoral, regional macroeconomic model (RMDM) for its predictions.

Volume 1 – the National Report gives a top-level analysis by broad sector and by occupation and then detailed figures for 25 industry sector categories.

Volume 2 – the Sectoral Report gives more detailed breakdown by sector, including breakdown by occupation for each sector.

Volume 3 – the Spatial Report gives predicted sectoral and occupational changes by region and by Local Learning and Skill Council area.

Volume 4 – the Qualifications Report (forthcoming) concentrates on qualifications by occupation, sector and region.

Volume 5 – the Technical Report gives details of the data sources and methodology.

4. The whole work runs to more than 1000 pages of tables and graphs, and many different analyses are possible. In this report relatively high-level figures will be presented in the main body, with more detailed figures in annexes.

Overall the study predicts a rise in the number of people at work of just under 0.5% pa between 2004 and 2014, amounting to 1.3 m new jobs by 2014. The figure for total jobs in 2007 will be 29.8m. These new jobs are expected to be taken up equally by men and women, although among women about three-fifths of the jobs are expected to be part-time.

5. However, the net increase in new jobs is dwarfed by the replacement demand over the same period, resulting mostly from retirements, giving an overall net figure of about 13.5 m jobs. Problems relate not only to the shortfall of available employees, but also to the replacement of more experienced workers with new workers who will require orientation and training. Efforts to lessen the impact of the replacement demand include encouraging older workers to remain in the labour force longer, and promoting workability among

other disadvantaged groups. Table 2 shows the employment rates for a number of groups between 1994-2003.

Table 2: Employment Rates: by disadvantaged groups<sup>1</sup>

United Kingdom	Percentages		
	1994	1999	2003
Older people <sup>2</sup>	63	65	70
30 LAs <sup>3</sup>	59	60	64
Minority ethnic groups	51	56	58
Lone parents	42	49	53
Low qualifications <sup>4</sup>	54	50	51
Disabled	..	46	49
All	71	74	75

<sup>1</sup> Employment rates for working age people: men 16-64, women 16-59. Figures not census adjusted.

<sup>2</sup> Men 50-64, women 50-59.

<sup>3</sup> People living in the 30 local authority districts with the poorest initial labour market position.

<sup>4</sup> People with no formal qualifications

Source: DWP, HM Treasury, from Labour Force Survey

6. The Working Futures report lists key dependencies that might affect the accuracy of the predictions. The CE model uses assumptions about:

- world growth in GDP;
- world inflation;
- UK population and natural resources (including coal, oil and natural gas);
- current and capital spending of the UK government;
- UK tax rates and allowances;
- sterling/dollar and other exchange rates;
- US and UK interest rates.

7. The report also describes areas of uncertainty that affect the forecasts. These are:

- a sharper correction than anticipated to the housing market. The base forecast allows for a gradual softening of the housing market as unemployment rises in the short term;
- slower fall in oil prices and the prolonging of the dollar's weakness. The base forecast assumes a slight weakening of oil prices in the short and medium term. Manufacturing would be particularly affected by disruptions to this;
- competition from the Far East. If UK companies fail to respond to this challenge, employment prospects could be considerably less optimistic than presented by the base forecast;
- winning the Olympics bid. The forecasts anticipate short term boosts to areas such as construction, but no real effect on long-term trends;
- Rover. Soon after the projections were completed the closure of Rover was announced. While the projections already anticipated a decline in the UK motor industry, the Rover closure will affect the forecasts.

8. Although a direct comparison between Working Futures figures and current Labour Force Survey figures is not possible because of the different ways in which they are constructed (*see note in Annex 1 about variation between different sources of employment figures*) there does not appear to be any major deviation in the top level figures as of Winter 2004/05. (Recent LFS data for employment by sector and occupation are given in Annex 2, Tables A1 to A3).

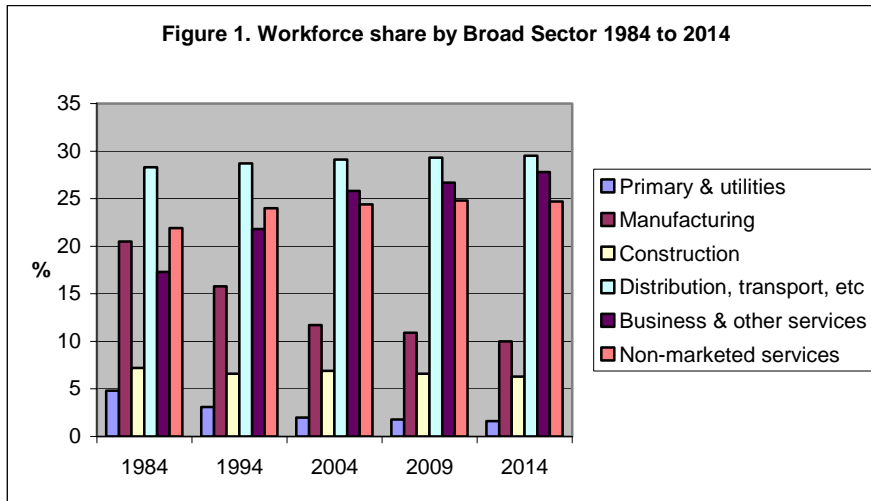
#### Workforce by Sector

9. Figure 1 shows historic trends and projections taken from Working Futures for the working population by broad sector for the period 1984-2014. (Further details are in Annex 2, Table A4. Definitions of the broad sectors are in Annex 2, Table A5). The key drivers of sectoral change are:

- technological change;
- productivity growth;
- international competition;
- globalisation;
- specialisation and sub-contracting;
- economic growth and large increases in real income;
- regulatory & legislative changes;
- dramatic shifts in the pattern of consumer expenditure.

10. The forecast shows a continuation of current trends, in particular:

- a decline in employment in primary and utilities (all sectors – agriculture, mining, electricity, gas and water), with a loss of 100,000 jobs over the decade 2004-2014;
- continuation of the long-term decline in employment in most manufacturing industries, with 400,000 jobs going, in particular, 75,000 in textiles and clothing;
- construction employment will see a decrease over the decade with 100,000 jobs going;
- increases of about 500,000 jobs will be seen in distribution, transport and retailing. Many of the retailing jobs will be part-time. A short-term decline in transport and communication is expected, with recovery later;
- there will be an increase of just under a million jobs overall in business and other services, with a decline in banking, but an increase in insurance. Professional services will see modest rises, in particular in computing driven by government;
- non-marketed services will see an increase of 400,000 jobs overall, with increases in education, health and social work and small decreases in public administration and defence.



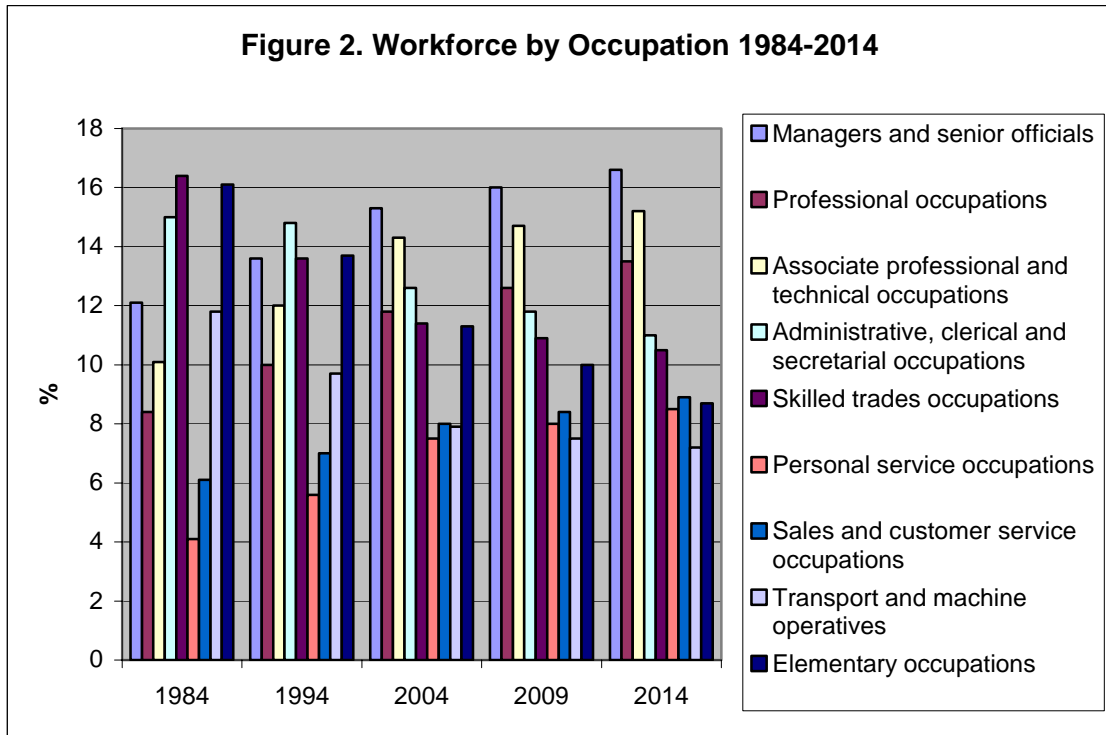
Source: Working Futures 2004-2014, Vol 1, SSDA/IER

### Workforce by Occupation

11. Figure 2 gives historic trends and projections from Working Futures for the workforce between 1984 and 2014, by occupation. (Further details are in Annex 2, Table A6). The following changes are predicted:

- there will be increases in managers and senior officials (617,000, 1.3% pa), professionals (697,000, 1.8% pa), associate professional and technical occupations (238,000, 1% pa), sales and customer service (424,000, 1.7% pa) and personal service occupations (375,000, 1.5% pa), in particular caring;
- in the professions, high growth is predicted for business and public service professionals (legal, business and statistical, architects, town planners, surveyors etc);
- there will also be demand in teaching, research and S&T including engineering;
- there will be decreases in skilled trades (-150,000, -0.4% pa), transport and machine operatives (-118,000, -0.5% pa), elementary occupations (-675,000, -2.2% pa) and administrative jobs (-164,000, -0.9% pa), particularly secretarial.

12. A 2002 report for the NHS predicted that over the next 20 years there will be a substantial increase in demand for healthcare workers, for at least two thirds more doctors and up to a third more nurses. Even with existing plans for expanding the skilled workforce, and targets for reductions in average length of stay from the National Beds Inquiry, without any other action the model projects a small shortfall of nurses by 2020 but a larger shortfall, around 25,000, of doctors, especially GPs. It is suggested that this may result in workload being shifted from doctors to nurses, and from nurses to health care assistants.<sup>3</sup>



Source: Working Futures 2004-2014, Vol 1, SSDA/IER  
(Occupations are defined in more detail in Annex 2, Table A7)

13. A 2005 report published by City & Guilds<sup>4</sup> presented a list of occupations predicted to be most in demand in 2015. Plumbers come top of this list, followed by nurses, chefs and cooks, laboratory technicians, and specialist call-centre operatives. By 2020, it is predicted that specialist call-centre operatives will have moved to the top of this list, followed by laboratory technicians, nurses, teachers, and broadcast technicians. High demand for specialist call-centre operators in 2020 is cited as relating to overcoming increasing customer dissatisfaction with service provided by call center operatives based outside the UK.

## Section 2: Age & Ageing

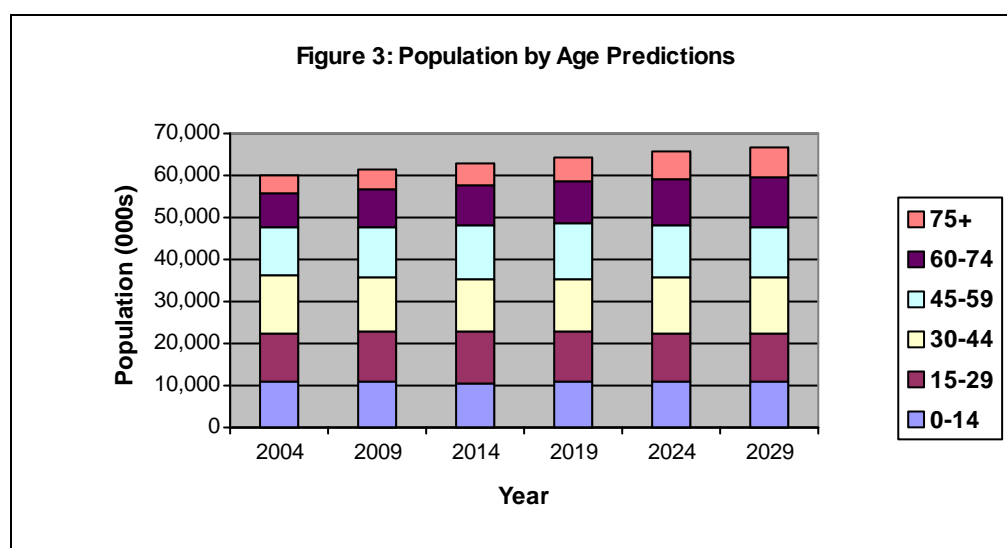
### Summary

- Owing to the ageing population, the workforce share of those over traditional retirement age is expected to increase, particularly among females. Since 1993, the employment rate of people aged between 50 and SPA has increased from 62% to 70%.
- This trend is likely to be accelerated by a number of drivers, including the impending pensions crisis, the introduction of legislation outlawing age discrimination, and restriction of the mandatory retirement age. However, it is predicted that the impact of restricting mandatory retirement will largely affect two distinct groups: those better qualified, who have intrinsically enjoyable jobs, and those in less skilled (or unskilled) jobs, who are likely to be motivated largely by financial factors.
- The distribution of older workers is similar across sectors, although older workers appear to be leaving at faster rates from the construction and manufacturing industries. Older workers are also more likely to be self-employed.
- Evidence suggests that there is little or no deterioration in performance in most types of work, at least until age 70. Exceptions are jobs requiring rapid reactions or physical strength. There are also wide individual differences in changes in cognitive capabilities with age, leading to the conclusion that such changes are more likely to be related to factors specific to the person, rather than the ageing process itself.
- Although HSE ill-health statistics show that self-reported illnesses are most prevalent among workers closest to SPA, this may also be due to factors under the control of the individual e.g. lifestyle factors such as drinking and smoking.
- Despite age-related health differences, sickness absence tends to be concentrated among those aged 30 or under. Typically, younger workers tend to be absent more often, but for shorter periods of time, whereas older workers are more likely to be absent for a whole week when they are absent. Similar trends are observable in terms of accidents. Younger workers have a 40% higher accident risk than older workers. However, younger workers have a lower risk of fatal injuries.

### The Ageing Population

14. Figure 3 shows the predicted age profile of the UK population up to 2029.<sup>5</sup> The shift towards an increasing average age is evident, brought about by increasing longevity and a decline in the birth rate. (Further details are given

in Annex 2, Table A8). However, these figures are for natural change, i.e. excluding migration, which explains the difference between the totals in Figure 3 and those in Table 1. The effect of migration will be to reduce average age slightly, since migrants are predominantly young adults.<sup>6</sup>



Source: Government Actuary's Department

<http://www.gad.gov.uk/Population/2004/uk/wuk045y.xls>

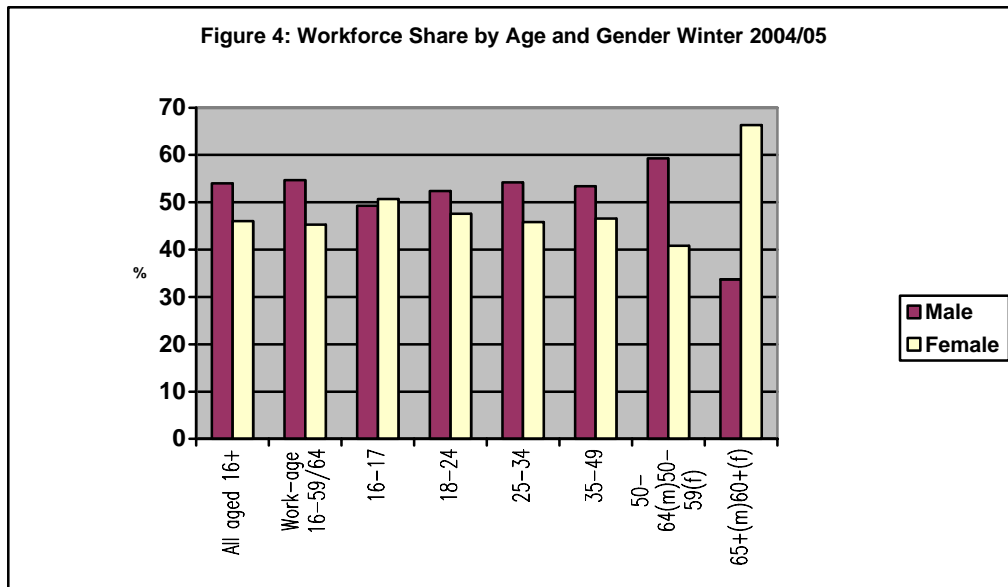
These projections are based on natural change and exclude migration, hence the differences between the totals here and those in Table 1.

15. The employment rate (proportion of the population in employment) for workers aged 50 and over declined for a long period from about 1970 to 1993. Various reasons have been suggested, including changes in demand because of a lack of skills, reduced return to training of older workers, voluntary early retirement. Since 1993 there has been an increase in the employment rate of older workers. For people between 50 and state pension age (SPA - 65 for men, 60 for women) the rate increased from 62% to 70%, while that for all working age increased from about 71% to about 75%. For all workers over 50 the rate increased from about 30% to about 37%. The increases are more marked for women than for men.<sup>7, 8</sup> There are projected to be 775,000 economically active people above the age of 65 in 2020. This compares with 582,000 in 2005, representing an increase of around 33%.

16. The increase in older workers is attributed by researchers partly to the increasing age profile of the working population, but also to economic growth over the period and an increased demand for labour, changing attitudes towards this age group, and a reduction in discrimination. With the impending pensions crisis and the introduction of legislation outlawing age discrimination in some instances, this trend is likely to accelerate. The state retirement age for women is already due to increase from 60 to 65 by 2020 and there are likely to be further changes overall. Over the next twenty years or so, this will be significant, and H&S aspects of employing a progressively older workforce will have to be, and are being considered.

17. The latest LFS figures for the workforce by age and gender are shown in Figure 4 (Further details are in Annex 2, Table A9). In terms of employment, it

is argued that although the distribution of older workers is similar across sectors, workers over the state pension age appear to be leaving the manufacturing and construction sectors at a higher rate than other sectors.<sup>9</sup> However, older workers appear to be at similar rates across the occupations.<sup>10</sup> Older workers are also more likely to be self-employed (as shown in Table 3).



Source: Labour Force Survey Quarterly Supplement 29, April 2005, Table 6, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)

18. The changing shape of the UK population age profile (discussed above), has led to concerns over the future supply of labour and the proportion of economic dependants.\* This situation is further exacerbated by the trend in recent decades towards an early exit from employment. In 2000, the Cabinet Office published its report on the subject – *Winning the Generation Game*<sup>11</sup>, which examined the impact of early retirement on the economy and found that 50% of the 2.8 million people out of work between the ages of 50 and 65 were

\* Economic dependants refers to the section of the population that are younger than 15 years and older than 64 years

Table 3: Employment status by age and sex; United Kingdom, spring 2004

		Employee	Self-employed	Per cent
				Other
All	50-54	84.5	15.1	0.4
	50-59	81.3	18.0	0.7
	60-64	76.4	22.7	0.9
	65+	59.2	37.4	3.4
	Total	80.1	19.0	0.8
Men	50-54	78.9	20.7	0.4
	50-59	74.7	24.5	0.8
	60-64	71.3	28.3	0.4
	65+	51.0	46.0	3.0
	Total	73.6	25.6	0.7
Women	50-54	90.6	8.9	0.4
	50-59	89.2	10.2	0.7
	60-64	85.3	12.9	1.8
	65+	72.9	23.1	4.0
	Total	88.2	10.8	0.9

Sources: Labour Force Survey and ONS, Labour Market Trends, July 2005

[http://www.nationalstatistics.gov.uk/downloads/theme\\_labour/Older\\_workers\\_July05.pdf](http://www.nationalstatistics.gov.uk/downloads/theme_labour/Older_workers_July05.pdf)

on sickness or other benefits. This report addressed the potential occupational health needs of older workers, resulting in five related recommendations:

- Vigorously market the HSE's occupational health strategy;
- Consider increasing funding for the Back in Work initiative as part of the 2000 spending review;
- Primary Care Trusts, Local Authorities and other bodies forming Local Strategic Partnerships should engage with the Employment Service and Benefits Agency to consider what action they need to take to support occupational health;
- Lessons about helping sick or disabled people back to work should be widely disseminated.

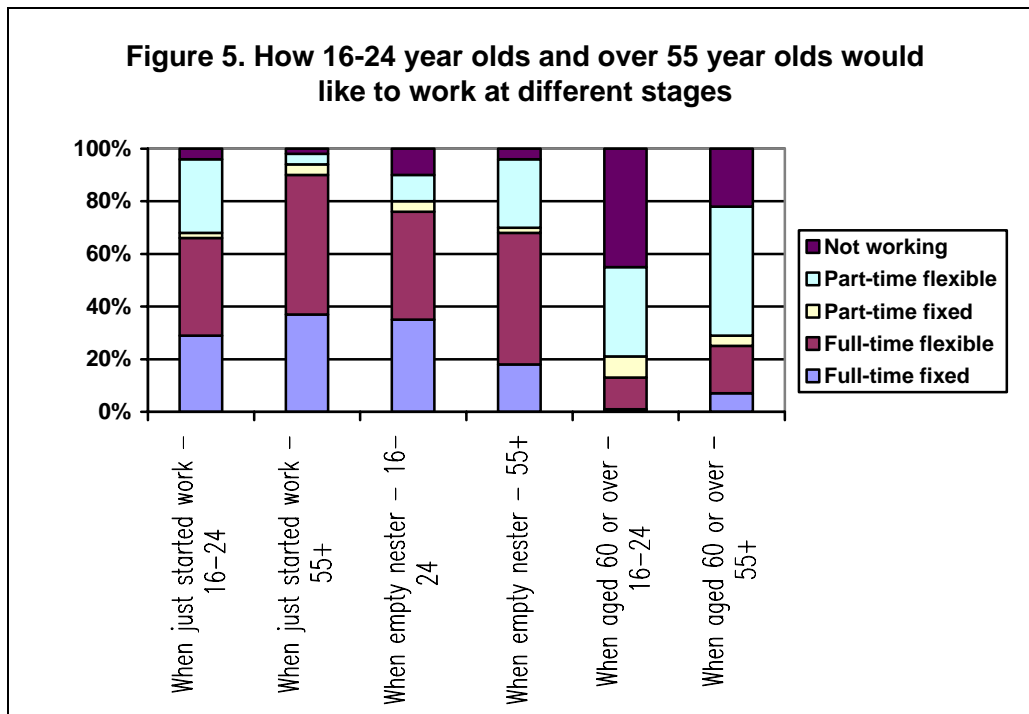
19. The DWP initiative New Deal 50+, launched in April 2000, aims to facilitate the return of 45,000 over-50s back into work every year.<sup>12</sup> Figures show that to January 2006, 150,000 people over-50 had been supported back into work since its launch.<sup>13</sup> In addition to demographic changes, it is predicted that people will also need to work later in life as pensions and early retirement packages are likely to decrease in value.<sup>14</sup> Despite this, however, a DTI report published in 2003 concluded that the impact of restricting mandatory retirement is likely to be modest, as there is little evidence of current 'pent-up' demand for working beyond the normal retirement age.<sup>15</sup> According to this report, those who are likely to continue working fall into two distinct groups: those who are better qualified, and who

have or can obtain intrinsically enjoyable jobs which are not too stressful or challenging, and another, generally poorer group, who are motivated mainly by financial factors. Similarly, it is predicted that many older workers will continue to work because they have to, not because they want to<sup>16</sup>, which may create a level of irritation and feeling of lack of control.<sup>17</sup> However, it is also important to consider that the numbers willing to work beyond retirement age are likely to be larger if more flexible working arrangements and financial incentives were available (see paragraph 21).

20. *'Opportunity Age – opportunity and security throughout life (2005)'* sets out DWP's strategy for promoting active ageing. The strategy proposes three priority areas for action: higher employment rates and greater flexibility in employment for the over 50's; enabling older people to play a full and active role in society with adequate income and decent housing; and allowing all to keep independence and control over their lives as they grow older.<sup>18</sup>

21. According to research by the Work Foundation, the desire to work in later life differs between the younger generations and those currently aged over 55 (as shown in figure 5), suggesting that workers' preferences may change when they near retirement age. The majority of 16-24s would prefer to be either working flexibly on a part-time basis or not working when they reach age 60 or over. For those currently aged over 55, the majority would prefer to be working part-time than not working when aged 60 or over, and more would prefer to be working full-time than not working at all (25% compared to 22%).

22. A recent study investigating retirement age and mortality revealed that early retirement was not associated with better survival than retirement at age 65. In fact, people who retired at 55 had a significantly higher mortality rate at 65 than those who retired at 65.<sup>19</sup> However, the study did not identify whether the employees who retired early were in poorer health, which is clearly a crucial factor. Further research would appear to be needed in order to confirm this association, taking early retirement due to ill health into consideration.



Source: The Work Foundation (2005)

23. In addition to individuals' intentions or desires to work, retirement age is also influenced by external constraints on employers' age policies, notably safety-related age limits set by Statute and limits set by insurance companies on benefits or health insurance or third party cover.<sup>39,15</sup>

### Age-related Performance

24. According to a DTI review, evidence suggests that there is no deterioration in performance in most types of work, at least up until the age of 70. The exceptions are jobs requiring rapid reactions or physical strength. Other evidence suggests that variation in brain functioning in older adults does not necessarily reflect decreased functioning, but simply different functioning from younger adults.<sup>20</sup> The brain's life-long potential for compensation is thought to overcome any changes in cognitive functioning normally associated with ageing. A report by the Department of Health<sup>21</sup> found that of the 1,600 people interviewed over the age of 65, 95% showed no signs of cognitive impairment. Furthermore, the extent to which age-related changes in cognitive functions will affect job performance depends heavily on the nature of the job. Some functions, such as knowledge or reasoning, for example, are likely to remain the same or even improve with age.<sup>22</sup> In contrast, however, some evidence suggests that older workers perform less well than their younger colleagues at problem-solving and dual-task activities, and that short- and long-term memory, as well as visual and auditory processing, decline with age. Although these changes are more marked after the age of 50, they are measurable at earlier ages.

25. Research on human reliability has identified that workers performing detection, recall and recognition tasks are likely to become 15-12% less reliable for every ten years of age between 25 and 85 years of age.<sup>23</sup> However, such age-related differences are only likely to have notable effects

on performance of specific tasks (i.e. detection, recall or recognition tasks) in isolation from other elements (e.g. knowledge, decision-making, team work). In reality, there may be few occupations for which this is the case. The authors of the research suggest that the findings may be of more relevance in safety-critical industries, such as the rail industry. In addition, it is also important to consider other evidence, which suggests that there are wide individual differences in changes in cognitive capabilities with age, leading to the conclusion that such changes are more likely to be related to factors specific to the person, rather than the ageing process itself.<sup>24</sup>

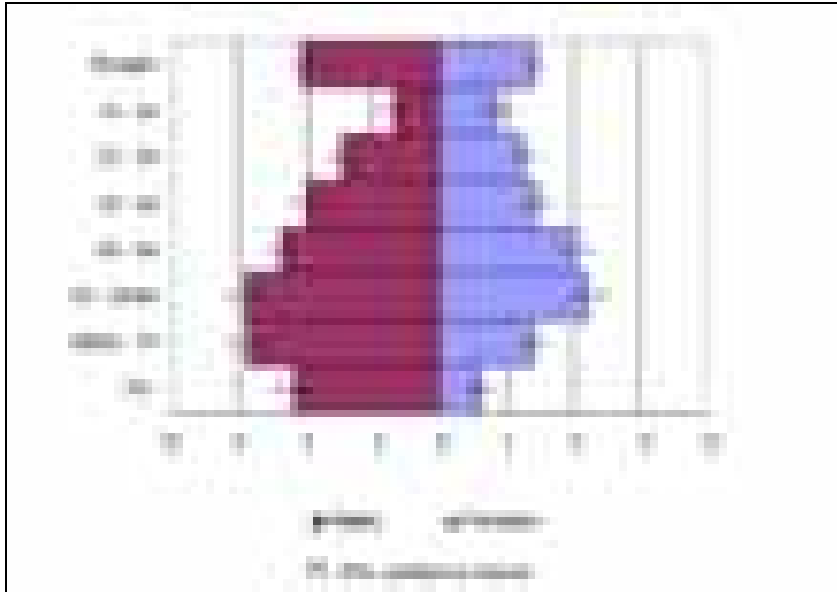
### Ageing and Health

26. Although increased age tends to be associated with declining health, an HSL review of the evidence concluded that this is not necessarily true.<sup>25</sup> Research evidence for the association between age and health is mixed. For instance, both subjective and objective health have been found to be more strongly determined by personally controllable factors such as lifestyle, than by age.<sup>26</sup>

27. Other evidence, however, has identified that the risk of poor health does tend to increase with age.<sup>27</sup> Consistent with this, HSE ill-health statistics for 2003/04 showed that for males self-reported illness was most prevalent in the 55-64 and 65-74 year age groups. For females, the 55-59 and 45-54 year age groups carried the highest prevalence rates of work-related illness.<sup>28</sup> (as shown in Figure 6). The reduction in illness rates among those over SPA may reflect a healthy worker effect, in that only those with good or above average health and fitness choose to remain at work after this time.

28. The increase in the number of older people is expected to lead to an increase in the number of people with chronic diseases, including cardiovascular disease. The number of cases of coronary heart disease is predicted to increase by 44% to 1,303,000 in 2031; the number of hospital admissions by 32% to 265,000.<sup>29</sup> Such trends are likely, or course, to impose further workload and financial pressures on the NHS.

Figure 6. Estimated 2003/04 prevalence rates (%) of self-reported illness caused or made worse by work, by age and gender, for people ever employed



Source: HSE Statistics

29. It has been speculated that the factors that underpin the age-related differences in health may be under the control of the individual, e.g. lifestyle factors such as exercise or smoking.<sup>30</sup> This is not consistent with evidence relating to diet, however, which suggests that older adults (aged 50 to 64) are more likely to eat five or more portions of fruit and vegetables than those aged 19 to 24.<sup>27</sup> Dr Wegman of the University of Massachusetts concluded that, "Some of this variance is genetically determined, but a fair amount can be attributed to differences in active versus sedentary lifestyles, degree of conditioning exercise apart from work, and weight gain or body mass. These non-genetic aspects of physical capacity are amenable to change throughout life."<sup>31</sup>

30. Latency period and length of exposure to occupational hazards are also relevant in terms of health and ageing. Because of these factors, occupational health problems such as noise-induced hearing problems, asbestos-related diseases, and other respiratory problems tend to be more common among older worker groups.<sup>32</sup>

31. In terms of broader occupational health issues, Finnish research suggests that older workers tend to be more likely to find noise at work a stressor, and can find it more difficult than younger colleagues to adapt to shift work. The majority of limitations listed, however, are commensurate with relatively simple adjustments to the work environment or organisation of work. Indeed, Ilmarinen suggested that poor ergonomic design may be the main cause of early decline in ability to work, productivity, and quality of work, and that these factors can be maintained during ageing with improvements in the work and work environment.<sup>33</sup>

32. Regardless of the typical association between age and declining health, sickness absence has been found to be concentrated among those aged 30 or under.<sup>34</sup> Typically, younger workers tend to be absent for shorter periods of time (often 1 day), whereas older workers are more likely to be absent for a

whole week when they are absent.<sup>35</sup> This may reflect the higher prevalence of chronic health problems among older age bands, and a number of other factors not directly related to health (e.g. fewer responsibilities, lower social status) among younger workers.<sup>36</sup>

33. Similar trends are observable in terms of accidents. If all workplace accidents are taken together, younger workers have a 40% higher accident risk than older workers. However, younger workers have a lower risk of fatal injuries.<sup>37</sup> Although accident rates vary widely between occupations, it is thought that these age-related differences can be explained by greater familiarity with tasks coupled with diminished resilience. In addition, following a review of the trends in occupational injuries among older workers in the US, NIOSH argued that older workers may be more likely to be employed in jobs where the risk of homicide is greater, for example in shops, restaurants and security services.<sup>38</sup>

#### Age Discrimination

34. The implementation of the Age Discrimination Act in October 2006 is regarded as a significant landmark in dealing with age discrimination, making discrimination on the grounds of age illegal in most circumstances. However, age discrimination may be a particularly difficult issue to overcome, due to the difficulty of distinguishing between legitimate and illegitimate discrimination. According to the DTI, resistance to increasing age diversity in the workplace may lie with the training and support of middle managers, who may need convincing of the benefits of having an age diverse workforce.<sup>39</sup> This study also revealed HR managers' concerns over conflicts between age discrimination and other legislation, particularly with disability discrimination law. A specific need was identified to clarify what 'reasonable adjustment' for disabled workers might mean, as people grow older. In terms of recruitment and selection, it has been suggested that employers will need to change their attitudes to skills 'certification' because while older workers are less likely to have formally recognised skills, their work experience is valuable.

#### Knowledge Management

35. In addition to issues regarding the performance of older workers, an important consideration in relation to the ageing workforce is that of knowledge management. DTI found little evidence of formal succession planning or strategies for knowledge retention among a sample of 14 case study organisations.<sup>39</sup>

36. Certain sectors may also be more severely affected by early retirement than others. The 2004 annual UK consultant physician census, for example, shows that 78% of consultant physicians intend to retire early.<sup>40</sup> If all the physicians were to retire at 62, it would represent a loss of 6,189 person-years of experienced work to the NHS. The census found that emergency on-call work and increased work pressure towards the end of their careers were the most common reasons for this decision. Voluntary early retirement of those in higher occupations with relative financial stability has been cited as reflecting one half of 'two nations in early retirement'. The second half of this statement refers to the pronounced economic inactivity amongst men aged between 50

and SPA in the manual occupations, who have left the labour market due to a lack of demand for their skills.<sup>41</sup>

### Training and Older Workers

37. There is a perception that older workers have less up to date knowledge and less potential to learn. However, this may partly result from the tendency for older workers to receive less formal training at work.<sup>30</sup> The lack of training opportunities is often due to employer decisions, based on perceptions of a lower return on their training investment.<sup>42</sup> This is not necessarily the case, however, as although older workers have less time until retirement, they also tend to have lower turnover rates.

38. The differences between ages in terms of participation in training at work are also likely to become smaller, as the average levels of higher education are higher in current and future generations of older workers.<sup>30,27</sup> In addition, the increase in average education level with age is likely to mean older adults will change to having more similar learning skills and styles to younger workers. It has been suggested that the combination of an ageing workforce and changes to industry (in terms of de-industrialisation and increasing growth in the service sector) mean that certain skills will be in even shorter supply in the future, unless employers change their attitudes towards training and re-training.<sup>43</sup>

## Section 3: Working Patterns

### Summary

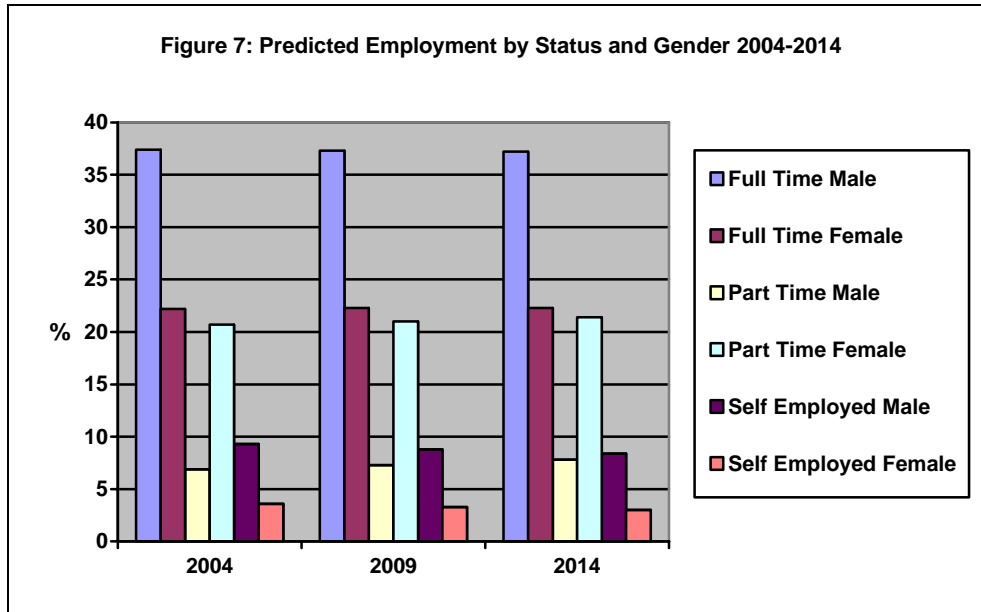
- Predictions to 2014 state that the majority of new jobs will be part-time, distributed evenly between men and women.
- Following a short increase in the early 1990s, it is argued that temporary work has since been on the decrease.
- Currently, 8% of the working population are teleworkers\*, a figure that is expected to continue to increase in the future. The upward trend in teleworking rates (the proportion of the workforce who are teleworkers) has been driven mainly by an increase in people teleworking in different places with home as a base.
- Most teleworkers are self-employed (62%), and the largest proportion are employed within the construction industry. Teleworking is also more common, and is growing at a faster rate, among older workers.
- The proportion of workers engaged in shift work has remained relatively constant for the past decade. However, the increasing numbers of UK establishments offering extended opening hours may lead to an increase in shift workers. Shift work is currently most common within the transport and communications sector.
- Shift working has been associated with a range of health problems including fatigue, sleep and metabolic disorders, stress and irritability, and more recently, increased risk of breast cancer.

### Part-time Working by Gender

39. Figure 7 shows predicted employment trends for men and women by employment status to 2014. Female employment is at a record high, with the working age employment rate for women also at its highest ever and it is predicted to increase further. The majority of women work full-time, but women are more likely than men to be working part-time or in a temporary job. However, only a minority of women cite inability to find full-time or permanent work as a reason, i.e. they prefer flexible arrangements. Overall the trend is towards more part-time jobs as a percentage of all jobs. Further details are in Annex 2, Table A10.<sup>44</sup>

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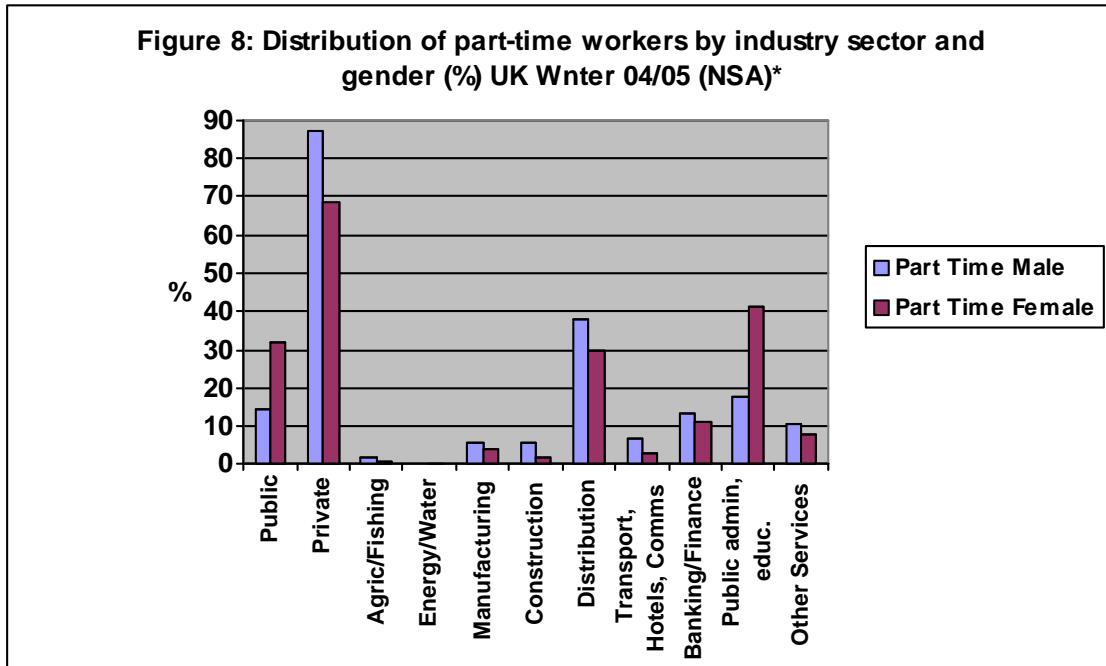
\* Teleworking describes those who work mainly at home, and those who work in various locations using home of the base



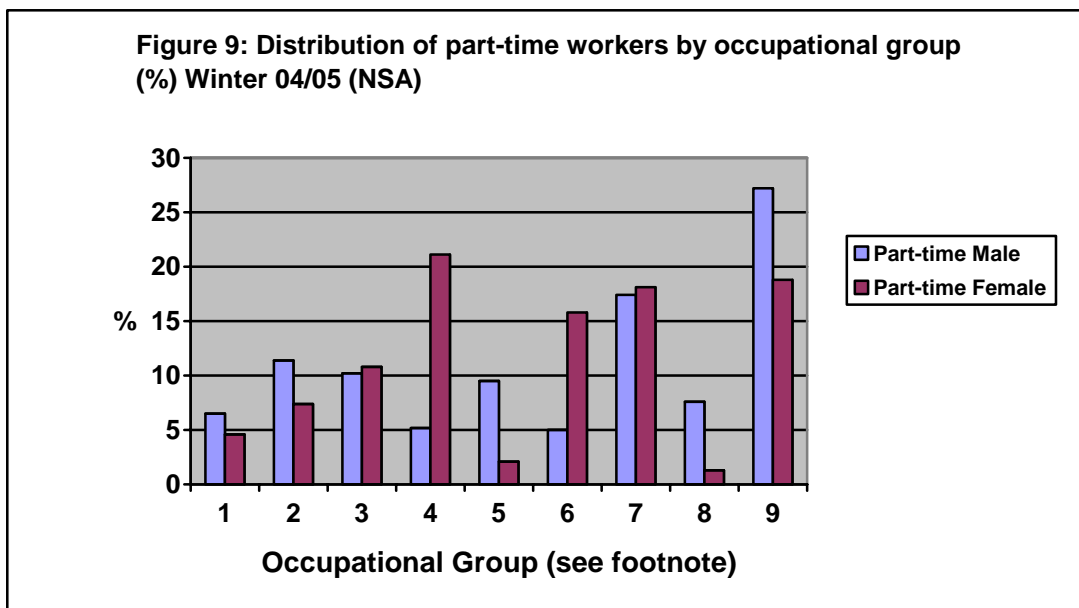
Source: Working Futures 2004-2014, Vol 1, SSDA/IER Tables 3.7 and 3.8

40. Part-time working is defined as fewer than 30 hours a week. The proportion of women working part-time stayed fairly stable between 1993 and 2003 at 44% of women workers and is predicted to rise a little to 46% by 2012. Over the same period the proportion of men working part-time rose from 7% to 10% and is predicted to rise to about 15% by 2014. Figure 8 shows the distribution of the 7.3 m part-time workers identified in Winter 2004/05 by industry sector (further details of the data are shown in Annex 2, Table A11). The sector with most part-time male workers is distribution, hotels and restaurants. While this sector also has many female part-timers, the public sector has more.

41. Figure 9 shows part-time workers by occupation. Further details are in Annex 2, Table A12. Elementary occupations feature prominently for men working part-time, followed by sales and customer services. Administrative, clerical and secretarial occupations are high among women working part-time, which may reflect the public sector figure in Figure 8. Elementary occupations, sales and customer service roles, and personal service occupations are also occupied by relatively large proportions of women working part-time.



Source: Labour Force Survey Quarterly Supplement 29, April 2005, Table 24, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)  
 \*NSA = Not seasonally adjusted.

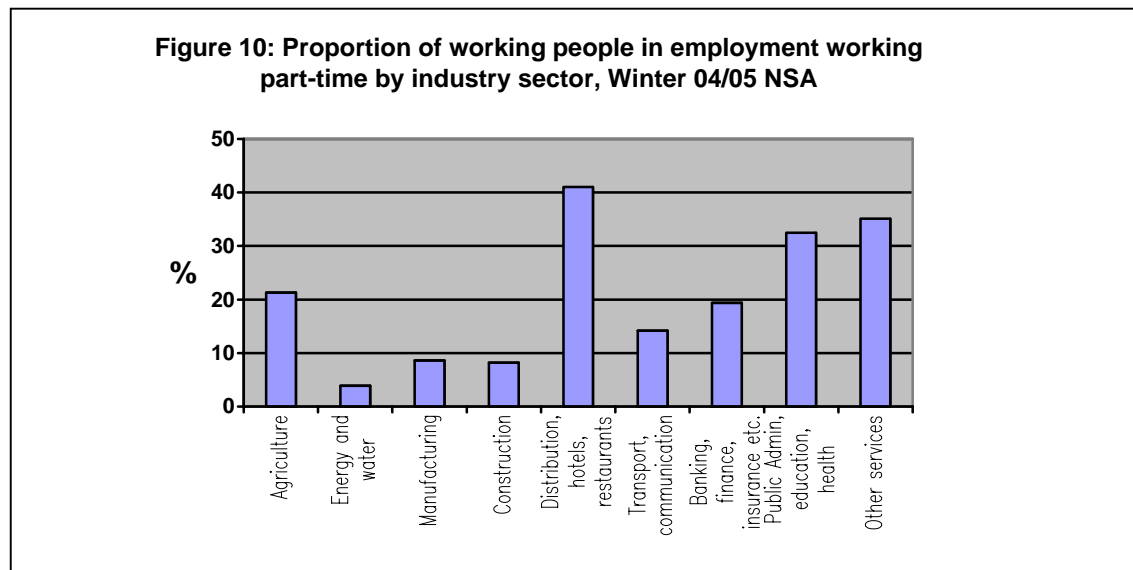


Occupational Groups: 1 Managers and senior officials; 2 Professional occupations; 3 Associate professional and technical occupations; 4 Administrative, clerical and secretarial occupations; 5 Skilled trades occupations; 6 Personal service occupations; 7 Sales and customer service occupations; 8 Machine and transport operatives; 9 Elementary occupations.

Source: Labour Force Survey Quarterly Supplement 29, April 2005, Table 18, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)

42. Figure 10 shows the number of part-time workers by sector as a proportion of all workers in each sector. The proportion of employees working part-time was greatest in the distribution, hotels and catering sector. A recently published cohort study among UK doctors revealed that flexible working patterns (in terms of hours and part-time work) have increased

among GPs in the UK over the past 10 years. However, this trend is distinctly less marked in medical specialties other than general practice.<sup>45</sup>



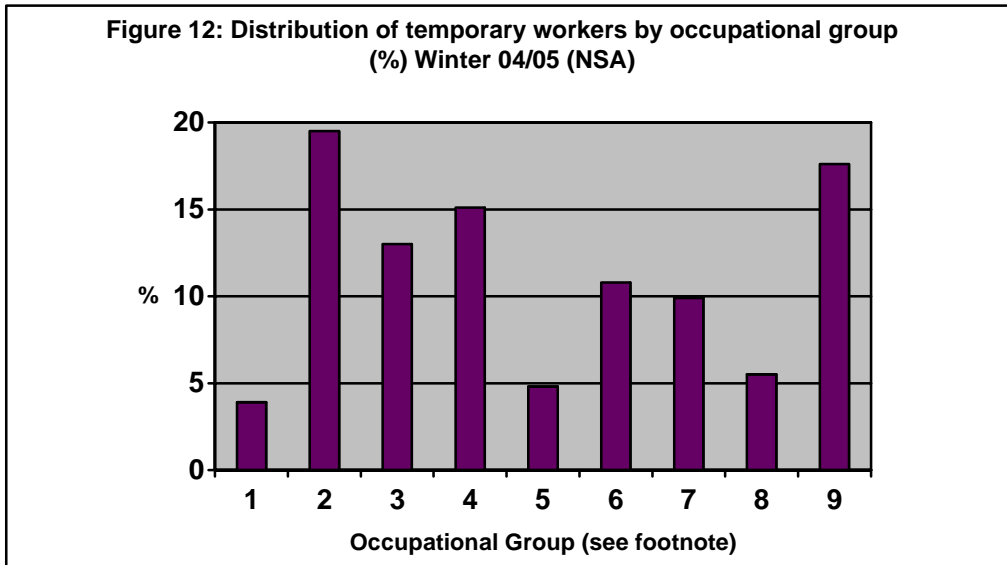
Source: Labour Force Survey Quarterly Supplement 29, April 2005, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)

### Temporary Work

43. Figure 11 shows the distribution of the 1.4 m temporary workers during Winter 2004/05, according to industry sector. These figures show that approximately 20% more temporary workers are employed in the private as opposed to public sector. According to these groupings, the public administration, education and health sector is the sector within which the largest number of temporary workers are employed. Further details of the data used in Figure 11 are given in Annex 2, Table A11. Figure 12 shows temporary workers by occupation, further details of which are in Annex 2, Table A12.



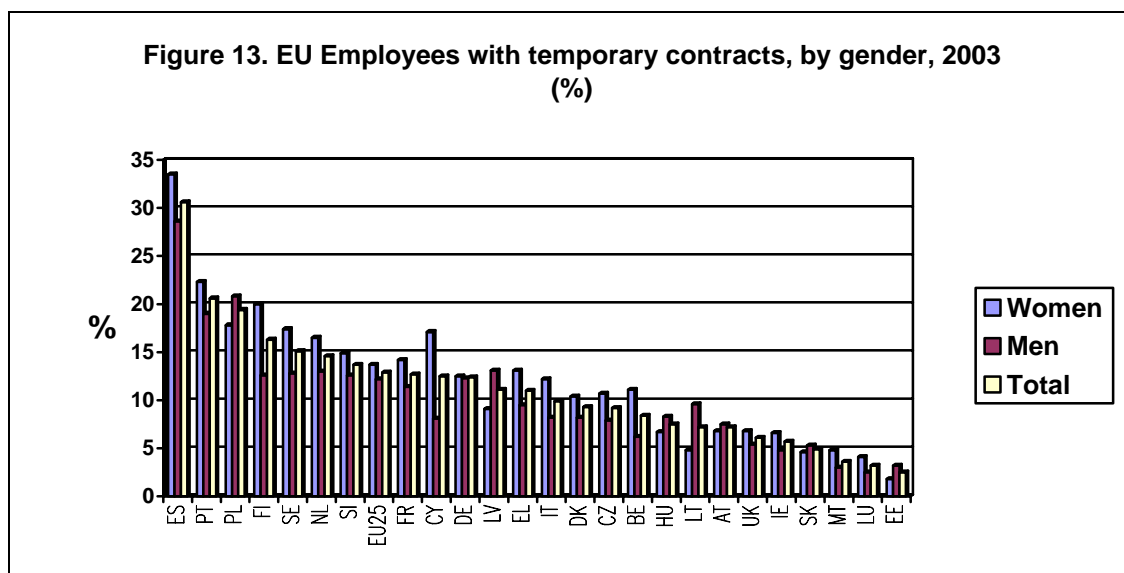
Source: Labour Force Survey Quarterly Supplement 29, April 2005, Table 24, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)



Occupational Groups: 1 Managers and senior officials; 2 Professional occupations; 3 Associate professional and technical occupations; 4 Administrative, clerical and secretarial occupations; 5 Skilled trades occupations; 6 Personal service occupations; 7 Sales and customer service occupations; 8 Machine and transport operatives; 9 Elementary occupations.

Source: Labour Force Survey Quarterly Supplement 29, April 2005, Table 18, [http://www.statistics.gov.uk/downloads/theme\\_labour/LFSQS\\_0405.pdf](http://www.statistics.gov.uk/downloads/theme_labour/LFSQS_0405.pdf)

44. On a European scale however, the proportion of UK employees with temporary contracts is relatively low, as shown in Figure 13. Furthermore, despite predictions of large increases in temporary employment, the TUC argues that full-time permanent jobs remain the foundation of the UK labour market.<sup>46</sup> According to the TUC, after a short surge in the early 1990s, temporary work has since been on the decrease. Further details are in Table A13, Annex 2.



Source: European Foundation for the Improvement of Living and Working Conditions, Annual review of working conditions in the EU: 2004-2005 <http://www.eurofound.eu.int/ewco/reports/EU0502AR01/EU0502AR01.pdf>

### Flexible Working

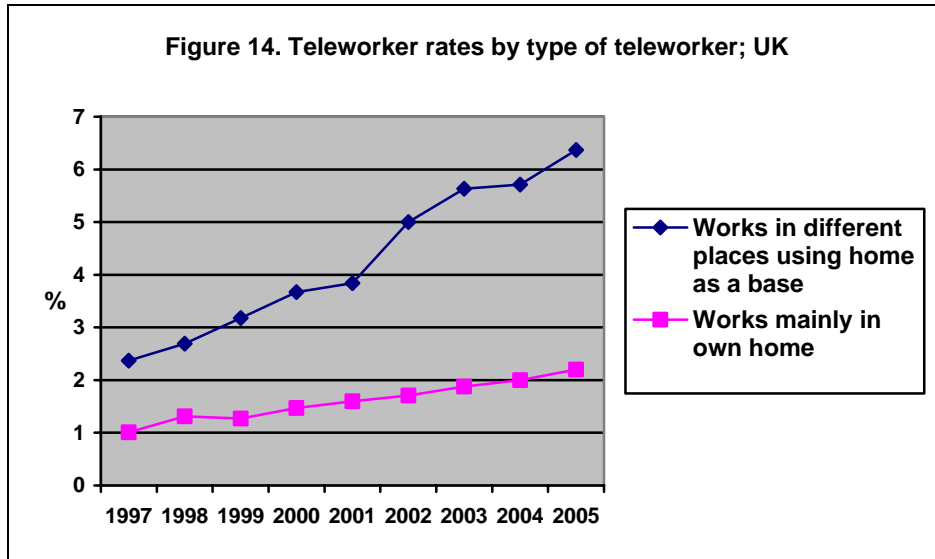
45. Table 4 gives a summary of working patterns. About a fifth of full-time and a quarter of part-time workers had some form of flexible working arrangement.<sup>47</sup> The TUC, among others, predicts that demand for flexible working patterns by both workers and employers is set to gather pace in the coming years, and will become a key collective bargaining issue for trade unions.

Table 4: Employees with flexible working patterns March 2006

	Male (%)	Female (%)	All Employees (%)
Full-time employees			
Flexible working hours	10.2	16.1	12.5
Annualised working hours	4.9	5.1	5.0
Four and a half day week	1.4	0.9	1.2
Nine day fortnight	0.3	0.3	0.3
Any flexible working pattern	18.2	28.5	22.1
Part-time employees			
Flexible working hours	6.8	9.3	8.9
Annualised working hours	3.0	4.1	3.9
Term-time working	4.2	10.9	9.6
Job sharing	0.8	2.2	1.9
Any flexible working pattern	15.8	27.3	25.0

Source: Office for National Statistics, Social Trends 36, 2006 Edition,

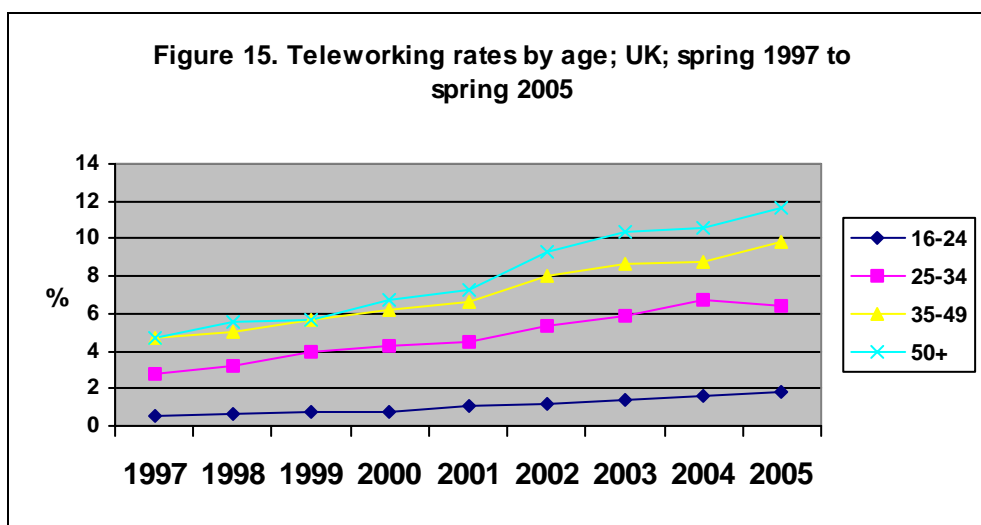
46. In Spring 2005 around 3.1 m people in the UK were 'teleworkers'. This represents approximately 8% of the workforce, compared with 4% in spring 1997.<sup>48</sup> Teleworking is defined by the Labour Force Survey as including three categories: those who work mainly at home, those who work in various locations using home as a base, and occasional teleworkers. From 1997 to 2002 the number of teleworkers increased by about 13% per year compared to an average growth rate for all employees of 1.6%.<sup>49</sup> It is suggested that by 2015 or so, 70% to 80% of those employed could be, at least partially, working from an outside or remote location (USA).<sup>50</sup> The upward trend in teleworking rates (the proportion of the workforce who are teleworkers) has been driven mainly by an increase in people teleworking in different places with home as a base. Figure 14 illustrates that the proportion of the workforce who were teleworkers using home as a base increased from 2% in spring 1997 to 6% in spring 2005. However, the proportion who worked mainly in their own home remained relatively stable (increasing from 1% in spring 1997 to 2% in spring 2005).



Source: Labour Force Survey

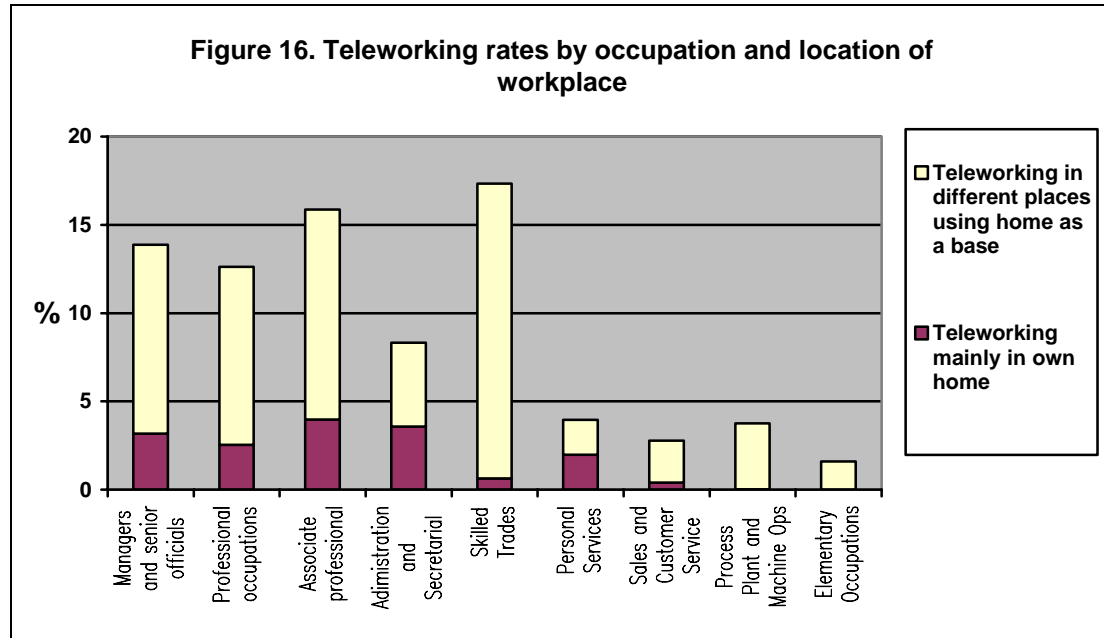
Note: Chart shows teleworkers as a percentage of all in employment, excluding people on government employment and training schemes. Estimates are adjusted for non-response to the homeworking and teleworking questions.

47. Overall, teleworkers are most likely to be men (65%), although those who work at home are more likely to be female and to work part-time. Mobile teleworkers, i.e. those who use home as a base, are more likely to be men, the predominant reason being that more men than women are self-employed. Most teleworkers are self-employed (62%). Teleworking is also more common, and is growing at a faster rate, among older workers than among younger age groups (as shown in Figure 15). The teleworking rate among workers aged 50 or over increased from 5 per cent in spring 1997 to 12% in spring 2005. Teleworking is much less common in the youngest age group; only 2 per cent of workers aged 16-24 are teleworkers. A number of reasons can be speculated for increased teleworking with age, including the possibility that increased flexibility is afforded to employees as they progress through their careers. In addition, rates of self-employment are higher among older workers (as highlighted in paragraph 19), which may also contribute to this trend.



Source: Labour Force Survey

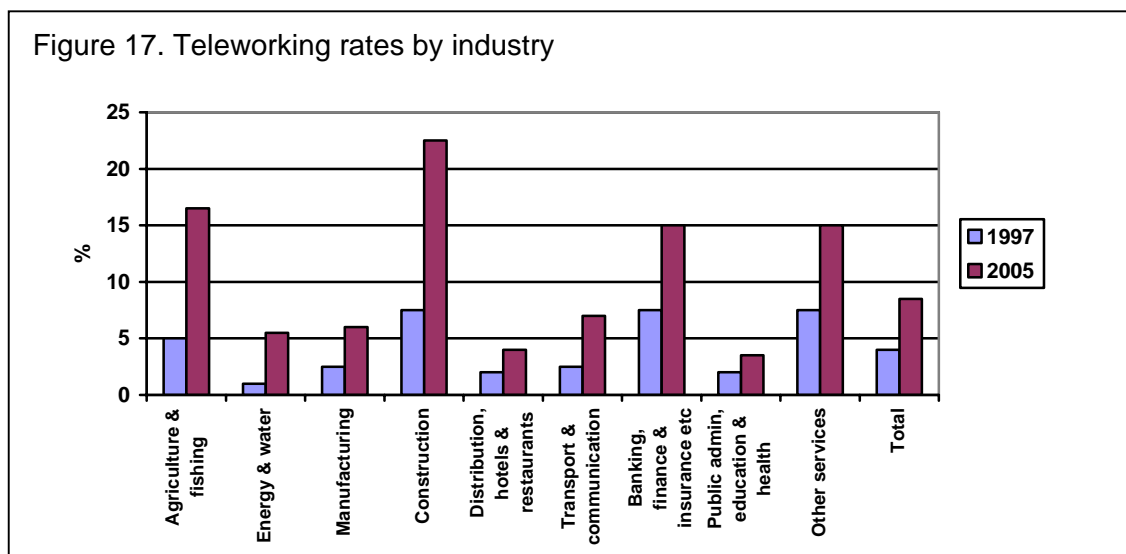
48. Although there are teleworkers in each occupational group, the majority are employed in managerial, professional, technical or skilled trades occupations. Although most teleworkers work in different places using home as a base, this differs according to occupational group (as shown in Figure 16).



Source: Labour Force Survey

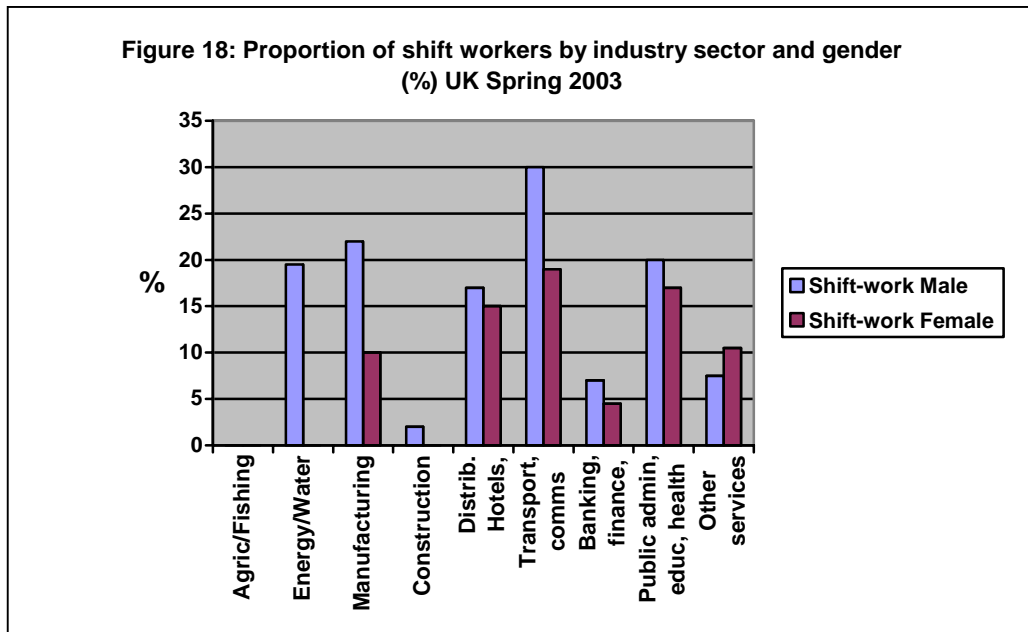
\* Estimates of teleworkers who work in their own home are based on small samples and may be subject to a high degree of sampling variability.

49. Rates of teleworking, and the degree of change, also differ according to industry, as shown in Figure 17. Given that teleworking is most prevalent among workers in building and construction trades occupations, it is not surprising to find that teleworking is also most prevalent in the construction industry. The lower rates of teleworking in the public sector are consistent with research by YouGov, which identified that only 8% of government employees work in fully flexible departments.<sup>51</sup>



### Shift Work

50. Figure 18 gives the proportion of working age people who work shifts, by industry and gender. Overall, a larger proportion of men than women work shifts, with the main areas for both men and women being transport and communications. The proportion of people reporting they never work shifts has remained constant for the past decade. However, the age category showing the greatest increase in the proportion engaged in shift work is the 16-19 age group, rising from 10% in 1993 to 18% in 2003 among men, and women 12% to 20% among women. Men aged 60 to 64 were least likely to report doing shift work over the decade. Since 1993, the proportion of women in the transport and communication industry engaged in shift work has increased by approximately 5%. In 1993 public administration, education and health accounted for 19% of all shift workers, but showed a small decline in 2003 to 17%. Working shifts was least common in the construction industry, with the proportion remaining stable at just over 1 per cent over the course of the decade. Table 5 gives a breakdown of numbers of people working various types of shift pattern. (Annex 2, Table A14 gives definitions of the different types of shift work).



Source: Labour Force Survey

51. Changes to the EU Working Time Directive have important implications for shift work. UK junior doctors, for instance, are now limited to a 58 hour week – due to be reduced to 48 by 2009. Changes to working patterns as a result of the European Working Time Directive mean that most junior doctors now work full 11- to 13-hour night shifts, rather than on-call, as part of their rotas.<sup>52</sup> This has led to an increased number of junior doctors required to work night shifts. In order to reduce the detrimental side-effects associated with shift-work, new guidance recommends that doctors take short naps during night shifts.<sup>53</sup> However, although evidence supports the value of naps in minimizing the

effects of sleep deprivation, research has also revealed that for the few minutes following a sleep a person's capability can be compromised.<sup>54</sup>

52. HSE has commissioned a number of pieces of research on the adverse effects of shift work on health. The detrimental effects of shift work are believed to result largely from desynchronisation of the work and sleep periods within the circadian rhythm. Such desynchrony leads to reduced alertness, fatigue, disturbances to sleep and to metabolic response to meals consumed at night.<sup>55</sup> Also reported are associations with altered bowel habits, stress and irritability, and possibly asthma, epilepsy and diabetes.<sup>56</sup>

Table 5: Types of shift pattern for those who work shifts most of the time in their main job UK Spring 2002 (NSA)\*

	Male	Female	All
Type of shift work			
Two-shift system early/late double day	27	32	29
Three shift system	16	13	15
Sometimes nights/sometimes days	13	10	12
Night shifts	10	10	10
Evening or twilight shifts	4	6	5
Continental shifts	6	1	4
Split shifts	3	5	4
Morning shifts	2	2	2
Weekend shifts	*	1	1
Other types	18	20	19
Totals	2371	1611	3979

Source: Labour Force Survey

\* Not seasonally adjusted

53. In 2001, two studies were published suggesting that disruption of the day-night cycle by exposure to artificial light-at-night, especially through nighttime shift work, may be associated with increased risk of breast cancer.<sup>57,58</sup>

In 2004, the HSE, Medical Research Council and the Department of Health sponsored an expert meeting to review research into the association between shiftwork and breast cancer. The conclusion of this meeting was that the evidence for such an association is suggestive, but not confirmed by empirical evidence. Recent experimental research in mice, however, has provided evidence for the potential mechanism behind the suspected association between shift work and increased risk of breast cancer in humans. This evidence suggested that the association is influenced by the increased night-time use of bright, white electric lighting at night. Exposure to such artificial light at night is thought to extinguish the effect of the human nocturnal, circadian melatonin signal on inhibiting human cancer growth.<sup>59,60</sup> Shift work might also impact on other diseases, such as coronary heart disease, although further research is needed to clarify these associations.<sup>61</sup>

## Section 4: Housing & Living Arrangements

### Summary

- The most populated region of the UK is the South East of England, followed by London, with 26% of the UK population resident in these two locations. This is despite these two regions together covering less than one-tenth of the UK land area.
- A number of larger cities (particularly those in the North of England) have experienced decline over recent decades, the only exception being London, which has continued to experience large growth.
- The number of households in the UK has increased steadily over the past several decades, partly due to the increasing population and partly related to the trend towards smaller household sizes.
- The proportion of one-person households has more than trebled for working-age people over the last four decades, although this trend has levelled since 1991.

### Regions

54. In 2004 over one-quarter (26%) of the UK population was resident in either London or the South East of England. This equates to over 8.1 million people living in the South East region of England. This made it the most populous region of the UK, followed by London, which was home to 7.4 million people. This is despite these two regions together covering less than one-tenth of the UK land area.<sup>62</sup> Figures for 2001 show that nearly eight in ten people in the UK lived in an urban area and this was the case even though these urban areas made up just 8.9% of the total UK land area. Table 6 shows the ten largest UK urban areas in terms of their population size. Between them these ten areas are home to nearly a third of the UK population – just over 19 million people.

Table 6 Population size: The 10 largest UK urban areas

	Population	Area (km <sup>2</sup> )	Density (people per km <sup>2</sup> )
1 Greater London Urban Area	8,278,251	1,623.37	5,099.4
2 West Midlands Urban Area	2,284,093	599.72	3,606.6
3 Greater Manchester Urban Area	2,240,230	556.72	4024.0
4 West Yorkshire Urban Area	1,499,465	370.02	4052.4
5 Greater Glasgow	1,168,270	368.47	3,171.0
6 Tyneside	879,996	210.91	4,172.4
7 Liverpool Urban Area	816,216	186.17	4,384.3
8 Nottingham Urban Area	666,358	158.52	4,203.6
9 Sheffield Urban Area	640,720	162.24	3949.2
10 Bristol Urban Area	551,066	139.78	3942.4

Source: 2001 Census – ONS, General Register Office for Scotland

55. In terms of population change, Table 7 shows that between 1994 and 2004, the London region experienced the highest population growth, with an 8.1% increase over the decade. The number of people living in the East region grew by 6.1%, the second highest increase. In contrast, the populations of the North East and North West regions of England decreased slightly in size over the decade. The largest decrease was seen in the North East, where the population fell by 1.7% between 1994 and 2004. Urban decline reflects the significant continuing decline of the most industrialised regions in the wake of manufacturing decline and steady growth in the less industrialised regions as new types of industry and service-based enterprise grow more readily there. One proposed mechanism to increase the likelihood of this occurring is investment in remediating the damaged urban landscape of former industrial areas, particularly the major cities, which are the hub of their regional economies and the centres of new economic activity.<sup>63</sup>

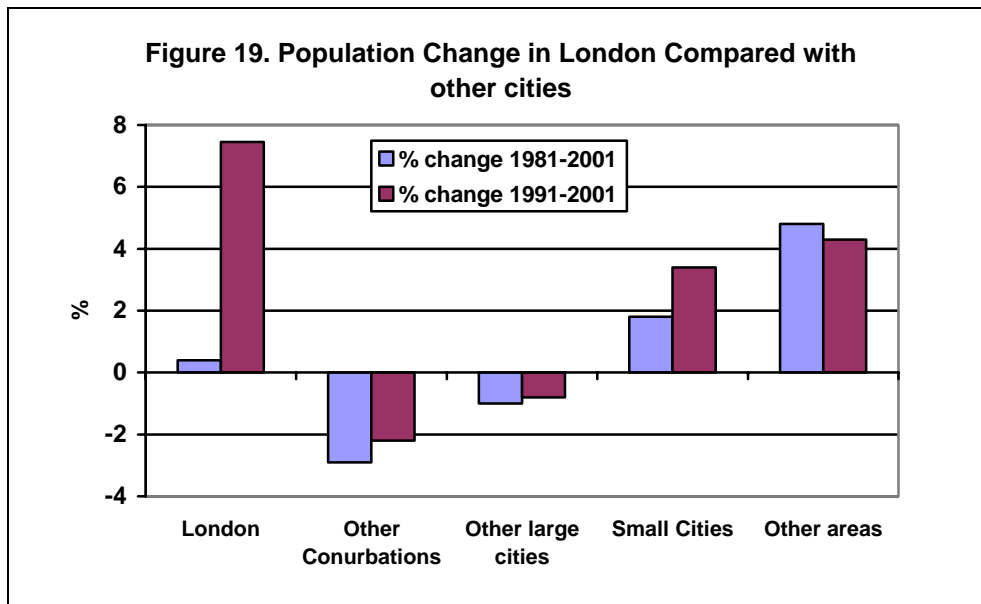
Table 7. Population change by Government Office Region, 1994 to 2004

(Thousands)	1994	2004	Percentage change
North East	2,589	2,545	-1.7
North west	6,839	6,827	-0.2
Yorkshire and the Humber	4,960	5,039	1.6
East Midlands	4,072	4,280	5.1
West Midlands	5,249	5,334	1.6
East	5,178	5,491	6.1
London	6,874	7,429	8.1
South East	7,712	8,110	5.2
South West	4,757	5,038	5.9

Source: Population Estimates - ONS

56. Growing counter-urbanisation was identified as a trend by Defra, cited as resulting from increased 'overflow' from urban areas coupled with heightened focus on positive aspirations to amenity and quality of life offered by the countryside. Rural in-migration in the UK now outstrips North to South migration at a rate of 4:1.<sup>64</sup> The largest age group of country dwellers is now 35-59 instead of 50-54. This is consistent with the strong correlations between the characteristics of in-migrants and those of ICT enabled mobile workers, suggesting that changes in working patterns (partly enabled by ICT), are driving the urban outshift.<sup>65</sup> Potential impacts include increases in new housing developments in the countryside, rural congestion, and increased demands on rural services.<sup>66</sup>

57. The only dramatic exception is London, consistent with the rise of the 'megacity'. In the 1980s, London had just about held its population, with a decrease in outer London being offset by an increase in inner London of about the national average. In the 1990s, large population increases throughout London, particularly Inner London, put London on a completely different trajectory compared to the other cities (as shown in Figure 19). However, it seems hard to imagine that the current pace of growth in London and South East will continue without some evening out of growth patterns.



Source: ONS 1981, 1991, AND 2001 MYEs (Nov 2003)

### Households

58. The number of households in the UK has increased fairly steadily over recent decades, from 16.7 million households in 1961 to 20.6 million in 1981 and 24.7 million in 2004. This reflects partly the increasing population over this period but also a decline in average household size over the past 40 years. Although the population has been increasing, the number of households has increased faster owing to the trend towards smaller household sizes. In 1961 there were on average 3.0 people living in each household in Great Britain but, by 2004, this had fallen to 2.4 (as shown in Table 8).<sup>62</sup> The average UK household size is projected to decrease further, to 2.24 by 2011.<sup>67</sup> In 2004 there were 7 million people living alone in Great Britain, nearly four times as many as in 1961.<sup>68</sup> The proportion of one-person households more than trebled for working-age people over the last four decades, while people of pension age were twice as likely to be living on their own. The rise in the proportion of one-person households has levelled since 1991. In spite of the growth in the number of one-person households, most people in Great Britain still live in a family household. In 2004, eight out of ten people lived in a family household, compared with nine out of ten in 1961.

Table 8. Households by size

Great Britain	Percentages				
	1971	1981	1991	2001	2004
One person	18	22	27	29	29
Two people	32	32	34	35	35
Three people	19	17	16	16	16
Four people	17	18	16	14	14
Five people	8	7	5	5	5
Six or more people	6	4	2	2	2
All households (=100%)					
(millions)	18.6	20.2	22.4	23.8	24.1
Average household size					
(number of people)	2.9	2.7	2.5	2.4	2.4

Source: Census, Labour Force Survey, Office for National Statistics

59. More lone-parent families, smaller family sizes, and the increase in one-person households have driven this decrease. One in 8 people (12% of the population) lived in a lone-parent household in spring 2004 – three times the proportion in 1971. One of the most notable changes in household composition over the last three decades has been the increase in one-person households (as shown in Table 9). Although in the mid-1980s and 1990s, these households largely comprised older women (reflecting the tendency for women to outlive their husbands), the largest increases of people living alone have been among people aged 25 to 44 years.

#### Dwellings and Patterns of Living

60. The 'shrinking' of major UK cities (marked by increasing areas of vacant brownfield land around city centres, and movement of families to surrounding towns and villages), prompted the 1999 Urban Task Force report to provide recommendations for rejuvenating UK cities. The report recommended that 60% of all new housing development be built on brownfield land, with at least 30 homes per hectare. Whilst the brownfield percentage has now risen from 56% to 68%, it is argued that rejuvenation has not been sufficiently widespread, as only 9% more homes were built in 2004 than in 1999, the majority being smaller flats and fewer houses with gardens.<sup>69</sup> In 2003/04, 33% of new dwellings built by private enterprise in England were flats, compared with 13% in 1996/97. This increase may reflect increased numbers of students, divorce and separation, people marrying later or not at all, and widowhood. Despite the decrease in size, the average price of a dwelling in the UK has continued to rise, to over £172,788 in 2004. This is almost 12% higher than in 2003. Property prices vary across the UK according to region, as shown in Table 10.

Table 9. People living alone: by sex and age

Great Britain	Percentages				
	1986/87	1991/92	1996/97	2001/02 <sup>1</sup>	2003/04 <sup>1</sup>

Males					
16–24	4	4	5	7	6
25–44	7	9	11	17	15
45–64	8	9	10	15	14
65–74	17	18	21	19	19
75 and over	24	32	31	32	29
All aged 16 and over	9	11	12	16	15
Females					
16–24	3	3	3	3	3
25–44	4	5	6	6	8
45–64	13	13	12	14	15
65–74	38	37	39	35	34
75 and over	61	60	58	59	60
All aged 16 and over	16	16	16	17	17

*1 Data from 2001/02 onwards are weighted to compensate for non-response and to match known population distributions.*

Source: General Household Survey, Office for National Statistics

Table 10. Average dwelling prices by region, 2006

	All dwellings (£)	Percentage change 2003–04
United Kingdom	172, 788	11.8
England	184, 987	11.0
North East	121, 260	26.2
North West	133, 647	21.6
Yorkshire & the Humber	131, 279	21.5
East Midlands	151, 339	14.0
West Midlands	154, 758	15.5
East	197, 187	7.1
London	257, 266	7.2
South East	227, 726	6.4
South West	191, 426	10.6
Wales	130, 648	24.1
Scotland	110, 266	21.4
Northern Ireland	109, 184	10.6

Source: Survey of Mortgage Lenders; Office of the Deputy Prime Minister

61. A number of changes are also predicted for the way in which we use our homes. For instance, it is predicted that homes will re-emerge as vital centres of learning, work and entertainment.<sup>70</sup> The increasing trend in teleworking will allow people to choose where they live without the constraint of needing to be near their office.<sup>71</sup>

## Section 5: Ethnicity & Migration

### Summary

#### **Ethnicity**

- The majority (92%) of the UK population is White, other ethnic groups constituting only 8% (4.9 million in 2001). Minority ethnic groups have a younger age structure than the White population, reflecting past immigration and fertility patterns.
- Unemployment rates are generally higher among non-white ethnic groups, around three times higher among Bangladeshi, Mixed, Black African, Pakistani and Black Caribbean men compared to White British men.
- Working-age men and women from non-White ethnic groups are generally more likely than those from White groups to be economically inactive. In 2002/03 Chinese men had the highest male economic inactivity rate in Great Britain, twice the rate for White British men, the vast majority of whom were students. Bangladeshi and Pakistani women had the highest female economic inactivity rates, the majority of whom were looking after their family or home.
- Asians, particularly Bangladeshis and Pakistanis, tend to be considerably more likely than the general population to describe their health as bad or very bad. Differences have also been identified in a number of specific health problems according to ethnicity (e.g. MSDs, stress, lung disease and cancer, work-related hearing problems, some infectious diseases).
- Asians (in particular Bangladeshi and Chinese workers) tend to have lower minor accident rates overall.

#### **Migration**

- Since the late 1990s there has been a net inflow of migrants to the UK. In 2004/05 440,000 overseas nationals were allocated a UK National Insurance number (NINo), up by 69,000 (19%) on 2003/04.
- The number of British citizens leaving the UK to live elsewhere also increased in 2004, to 208,000. This is the highest estimated annual outflow of British citizens.
- The majority of overseas nationals entering the UK are here to work. Of the 2003/04 arrivals, 17,000 (6%) were claiming a key out-of-work benefit (compared with 13% of the total working age population in Great Britain).

- While individuals from most white immigrant communities have on average higher wages than UK-born whites with the same characteristics, immigrants from all ethnic minority communities have lower wages.
- The London region received 39% of immigrants, far outnumbering those arriving in any other region.
- The most common country of origin was India (28,500), followed by Poland (18,300), South Africa (16,300) and Pakistan (16,100). Since the expansion of the European Union in April 2005, more than 345,000 migrants from Eastern Europe have registered to work in Britain.
- Education and skill levels are polarised within the migrant population: there are both highly educated people, and more relatively unskilled. Language proficiency also varies considerably. Bangladeshis and Pakistanis have the lowest proficiency in the English language.
- The top five industry groups for migrants were health and medical services (24%), computer services (17%), administration, business and managerial services (13%), education and cultural activities (8%); and financial services (8%).

### **Illegal Immigration**

- The Home Office estimates there are around 500,000 illegal immigrants in the UK. The majority of these workers are in the south east of England and the hotels and catering, construction, agriculture and textiles industries.
- Underreporting of accidents is thought to be particularly high among workers with insecure immigration status, limited permission to work or lack of marketable job skills.
- According to the Construction Industry Training Board (CITB), many illegal immigrants do not have the necessary safety qualifications required for UK construction work (Construction Skills Certification Scheme) or the language skills to communicate effectively in English.
- Asylum applicants have formed a significant proportion of total immigration since the 1990s, varying from about one sixth to one third of the total annual inflow. However, the qualifications, skills, or employment experience of asylum seekers entering the UK do not appear to be systematically recorded.
- The number of removals and voluntary departures of asylum applicants has increased annually since 1992.

## Ethnicity

62. As shown in Table 11, the majority (92%) of the UK population in 2001 were White. The remaining 4.6 million (8%) people belonged to other ethnic groups. More recent experimental population estimates by ONS<sup>72</sup> suggest that the non-White population has been growing at an annual growth rate of 3.8% between 2001 and 2003. Despite the absence of demographic projections for the population by ethnic group, this trend is expected to continue in the short to medium term at least.

63. Unemployment rates\* for non-White ethnic groups are generally higher than those from White ethnic groups (see Figure 20). In 2004, men from Bangladeshi and Mixed ethnic backgrounds had the highest unemployment rates in Great Britain, at 18% and 17% respectively. The next highest male rates were among Black Africans (15%), Pakistanis (14%) and Black Caribbeans (13%). These rates were around three times the rate for White British men (5%). The unemployment rates for Indian and Chinese men, at 7 and 6% respectively, were similar to those for White British or White Irish men (5% for each group). Among women, Pakistanis had the highest unemployment rates (17%). Unemployment rates for women from the Black African, Black Caribbean and Mixed ethnic groups, at around 12%, were also relatively high and around three times the rate for White British women (4%).<sup>73</sup> Figures for winter 2005 suggest that overall, the employment rate of ethnic minorities has increased slightly, by 1.3%, since spring 2003.<sup>74</sup>

64. Figure 21 shows that working-age men and women from non-White ethnic groups are also generally more likely than those from White groups to be economically inactive, that is, not available for work and/or not actively seeking work. Possible reasons include: being a student, being disabled, or looking after the family and home. In 2002/03 Chinese men had the highest male working-age economic inactivity rate in Great Britain, at 35 per cent, twice the rate for White British men. The vast majority of inactive Chinese men were students. Bangladeshi and Pakistani women had the highest female economic inactivity rates (77 per cent and 68 per cent respectively). The majority of these women were looking after their family or home. Within each ethnic group women were more likely than men to be economically inactive.

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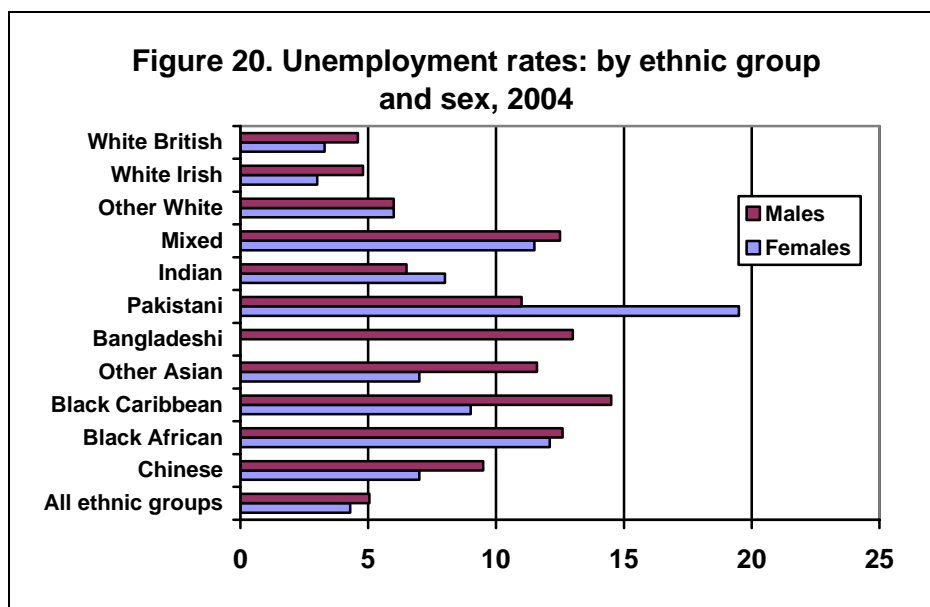
\* The ILO criteria for unemployment are that the individual wants a job, has been seeking employment in the last four weeks, and is available to start in the next two weeks.

Table 11. Population of the United Kingdom by ethnic group, April 2001

United Kingdom			
	Total population		Non-White population (Percentages)
	(Numbers)	(Percentages)	
White	54,153,898	92.1	-
Mixed	677,117	1.2	14.6
Indian	1,053,411	1.8	22.7
Pakistan	747,285	1.3	16.1
Bangladeshi	283,063	0.5	6.1
Other Asian	247,664	0.4	5.3
All Asian or Asian British	2,331,423	4.0	50.3
Black Caribbean	565,876	1.0	12.2
Black African	485,277	0.8	10.5
Black Other	97,585	0.2	2.1
All Black or Black British	1,148,738	2.0	24.8
Chinese	247,403	0.4	5.3
Other ethnic groups	230,615	0.4	5.0
All minority ethnic population	4,635,296	7.9	100.0
All population	58,789,194	100	

Source: Census, April 2001, Office for National Statistics

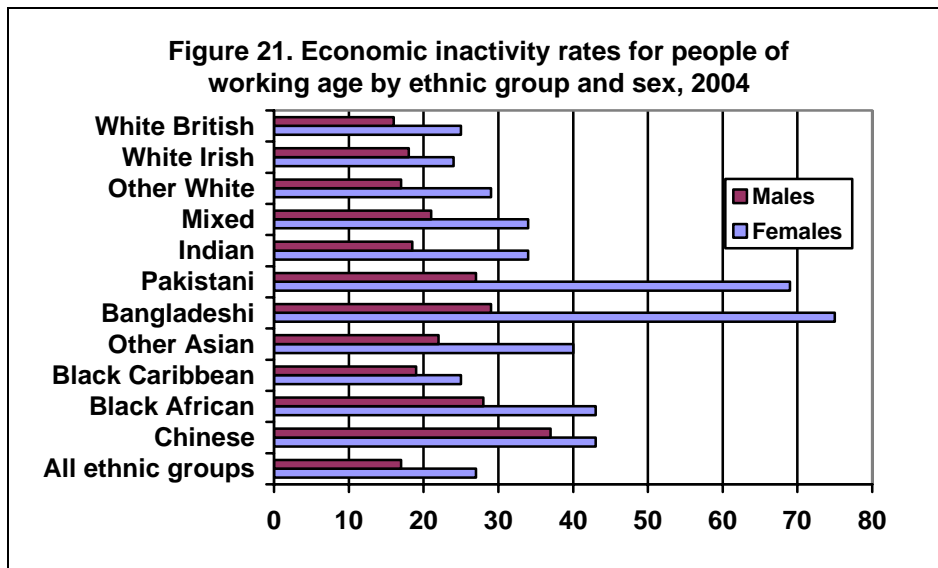
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Note: Bangladeshi females are not shown as samples are too small for reliable estimates.

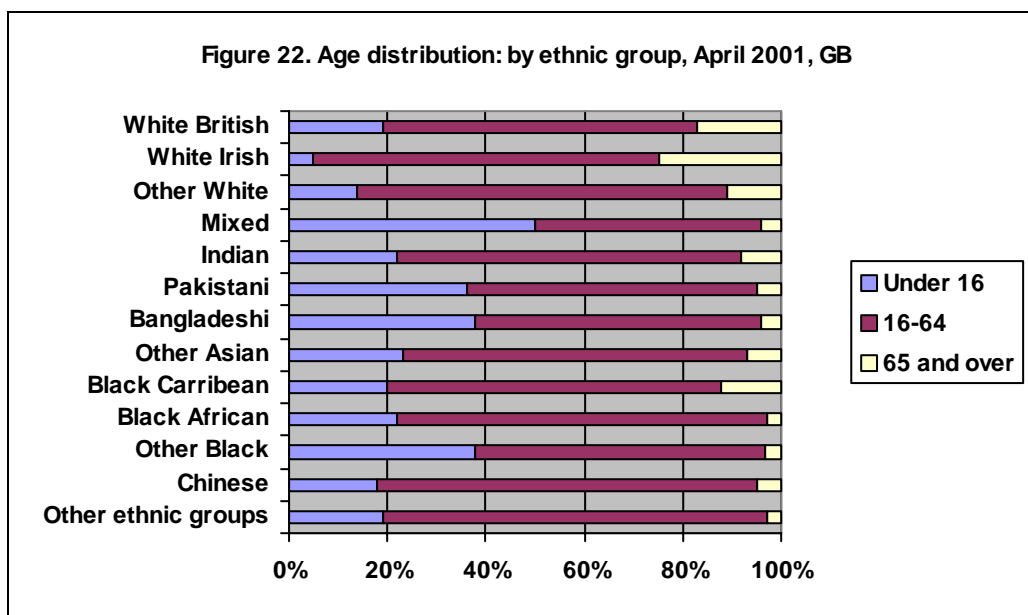
Source: Labour Force Survey 2004, Office for National Statistics

<http://www.statistics.gov.uk/cci/nugget.asp?id=462>



Source: Labour Force Survey 2004, Office for National Statistics, <http://www.statistics.gov.uk/cci/nugget.asp?id=462>

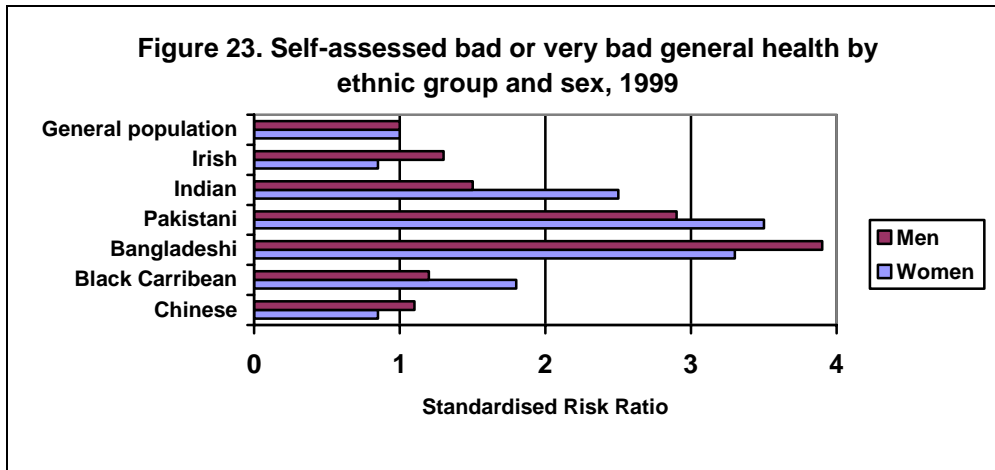
65. As shown in Figure 22, ethnic minority groups have a younger age structure than the White population, reflecting past immigration and fertility patterns. As a result, ethnic minorities will rise as a proportion of the workforce simply due to there being more of working age. The Mixed group had the youngest age structure - half (50%) were under the age of 16. The Bangladeshi, Other Black and Pakistani groups also had young age structures: 38% of both the Bangladeshi and Other Black groups were aged under 16, and 35 per cent of Pakistanis also fell into this age group. This was almost double the proportion of the White British group where one in five (20%) were under the age of 16. The age profile of the non-White ethnic population is anticipated to increase in the future, but this will depend on fertility levels, mortality rates and future net migration.



Source: National Statistics, Ethnicity & Identity, <http://www.statistics.gov.uk/cci/nugget.asp?id=456>

## Ethnicity and Health

66. Figure 23 shows that Asians tend to be considerably more likely than the general population to describe their health as bad or very bad (further details of the data are shown in Annex 2, Table A14).



Source: Census, April 2001, Office for National Statistics; Health Survey for England, The Health of Minority Ethnic Groups, 1999. TSO (London 2001).

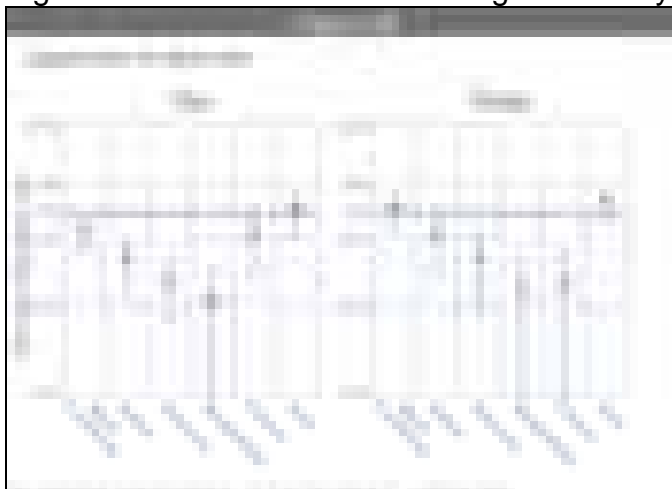
Relationships of varying strength have been identified for differences in a number of specific health problems according to ethnicity.<sup>75</sup> For instance:

- mixed evidence for ethnic differences in musculoskeletal disorders, one study finding higher rates of back pain among black women (although it is not clear whether this study controlled for job type); another finding lower impairment ratings and temporary total disability costs for African Americans than for white workers.
- a recent HSE research report identified a significant association between ethnicity and work-related stress. Racial discrimination, particularly in combination with gender and ethnicity, was identified as having a strong influence on work stress. As a result Black Caribbean females who had experienced racial discrimination were most likely to report high work stress.<sup>76</sup>
- ethnic variations in lung disease and cancer among workers exposed to dust and other materials (after controlling for gender, age, and smoking differences). For example, a particularly high occupational mortality from esophageal cancer has been reported among US ethnic minority workers in occupations potentially associated with exposure to silica dust and chemical solvents or detergents.<sup>77</sup>
- US data on mortality rates for selected work-related cancers among African Americans and Latinos also indicate that African Americans have higher than expected mortality rates for cancers of the lung, nasal cavity, peritoneum and leukemia.<sup>78</sup> However, studies of workers in the fibreglass industry indicate that length of exposure is the main risk factor.
- ethnicity was also identified as a major effect-variable for work-related hearing problems, with lower rates for white vs. non-white workers.

- ethnic differences in work-related infectious diseases (e.g. TB & hepatitis B/C), including drug-resistant TB in migrant and seasonal farm workers.
- higher blood lead concentration among ethnic minorities working in the lead industry;
- the standardised mortality ratio for stroke has been found to be two to three times the population average among Bangladeshi-born men living in the UK.<sup>79</sup> Although the reasons for this are unknown, areas suggested for further investigation include lifestyle factors such as smoking or tobacco chewing, vitamin B deficiency, and infection.

68. As shown in Figure 24, South Asians (in particular Bangladeshi and Chinese workers) tend to have lower minor accident rates overall (further details of the data are shown in Annex 2, Table A15). Although they do tend to be employed in lower risk occupations, this is still the case after controlling for job type. Black Caribbeans have accident rates similar to the general population.<sup>75,80</sup> Research in New Zealand and Australia has identified poor language and communication skills as possible factors for higher workplace injury rates among ethnic minority or immigrant workers.<sup>75</sup>

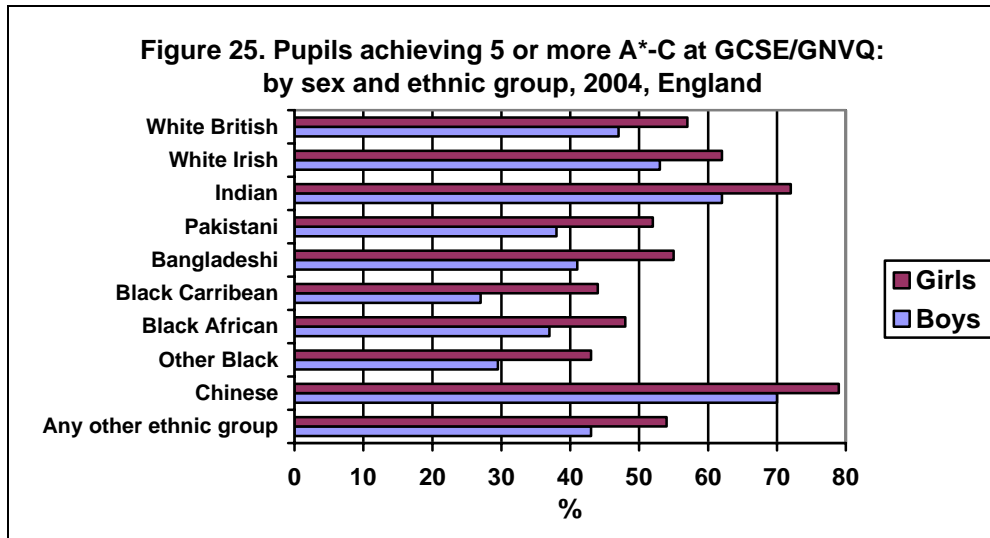
Figure 24. Accident rates according to ethnicity



Source: Health Survey for England – The health of ethnic minority groups 1999, Department of Health (2000)

### Ethnicity and Education

69. As shown in Figure 25, educational performance differs according to ethnicity. In 2004, Chinese pupils were the most likely to achieve five or more GCSE grades A\*-C in England, with 79% of Chinese girls and 70% of Chinese boys respectively. Indian pupils had the next highest achievement levels: 72% of Indian girls and 62% of Indian boys achieved these levels. White pupils tend to come third highest (excluding the 'any other' ethnic group), with Pakistani, Bangladeshi, Black Caribbean, Black African, and Other Black generally performing less well. Comparison with figures from previous years suggests that GSCE attainment is improving for ethnic minorities.

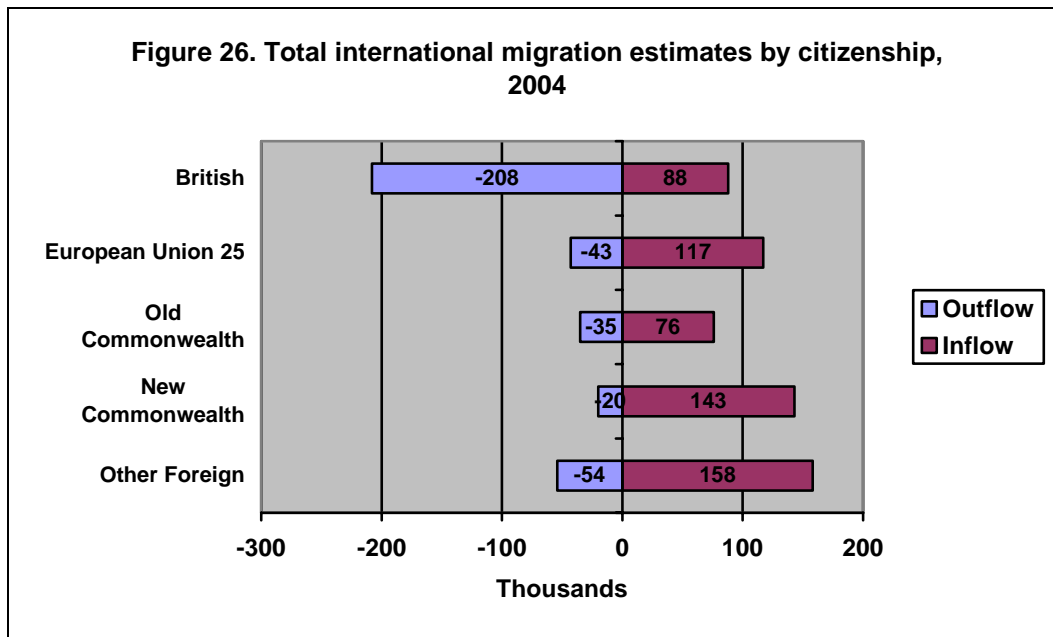


Source: Office for National Statistics, Ethnicity & Identity,  
<http://www.statistics.gov.uk/cci/nugget.asp?id=461>

### Migration

70. Over the period 1975 to 1999, 2.85 m employed migrants entered the UK, while 2.99 m left. In the early part of that period there was a net loss of workers. During the mid 1980s to early 1990s movement fluctuated around zero net change, and towards then end of the 1990s there was a net inflow. This trend is continuing, although it remains to be seen what the effect of a harder line on migration might be. The headline population data in Table 1 show an immigration figure of about 145,000 pa over the long term, but this is a net figure after emigration is taken into account.

71. In 2004/05 440,000 overseas nationals were allocated a UK National Insurance number (NINo). Of these migrants, 53% were men, 35% were aged 16-24 and 81% aged 16-34. Overall, 223,000 more people migrated to the UK than left in 2004. This is estimated net inflow is 72,000 higher than the previous year, and is the highest since the present method of estimation began in 1991. The number of British citizens leaving the UK to live elsewhere also increased in 2004, to 208,000. This is the highest estimated annual outflow of British citizens.<sup>81</sup> Figure 26 shows that people from the New Commonwealth (largely India, Pakistan, and Africa, excluding South Africa) made up the biggest proportion of net migration.



Source: News Release Oct 2005, ONS,  
<http://www.statistics.gov.uk/pdfdir/intermig1005.pdf>

72. The majority of overseas nationals entering the UK are here to work (although some claim benefits). Of the 2003/04 arrivals, 17,000 (6 %) were claiming a key out-of-work benefit - Jobseeker's Allowance (JSA), Incapacity Benefit (IB) or Income Support (IS) - in one or both of the two quarters after being allocated a NINo. Of these, almost 13,000 were actively seeking work (receiving JSA) and over 4,000 were not obliged to be actively seeking work (receiving IB or IS). This compares with 13% of the total working age population in Great Britain claiming JSA, IB or IS at any given point in time since May 2001.

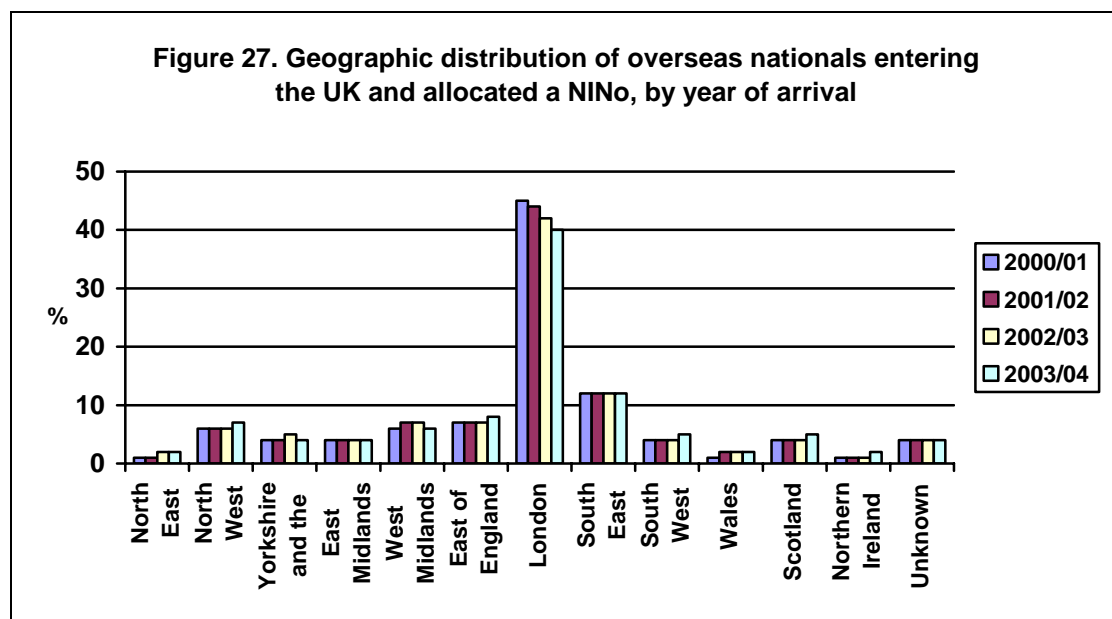
73. Registrations to accession nationals increased from 20,000 to 111,000 between 2003/04 and 2004/05, with Poland as the largest country represented. 63,000 NINo registrations were made to polls in 2004/05 (57% of all registrations to accession nationals). Registrations in respect of non-accession nationals fell by 22,000 (351,002 to 329,000 between 2002/03 and 2003/04).<sup>82</sup>

74. Since the 2004 enlargement of the EU, according to a 2006 report, countries that did not apply restrictions on migrant workers (UK, Ireland and Sweden) have experienced high economic growth, a drop in unemployment, and a rise of employment. In Ireland, Spain, and the UK, migrant workers from new Central and Eastern Europe member states generally have even higher employment rates than country nationals. In addition, flows into the UK and Sweden, are comparable if not lower to those into countries with migration restrictions.<sup>83</sup>

75. For wages, there is a dividing line between white and non-white immigrants. While individuals from most white immigrant communities have on average higher wages than UK-born whites with the same characteristics, immigrants from all ethnic minority communities have lower wages. This is

true for both males and females, with differences being more accentuated for males. Wage differentials are substantial, reaching about 40 percent for male Bangladeshis.<sup>84</sup>

76. The London region received 39% of the total, far outnumbering those arriving in any other region, although the proportion residing in London is decreasing slightly. 39% of registrations in 2004/05 were made to migrants living in the London Government Office Region, down from 43% in 2002/03. The South East is next, with 12% of arrivals in 2004/05. The numbers of entrants between 2000/01 and 2002/03 residing in each region are shown in Figure 27. However, no immigrant group constitutes a majority anywhere in the UK, and only in some urban areas do they constitute the largest minority.<sup>85</sup>



Source: DWP (2004) National Insurance Number Allocations to Overseas Nationals Entering the UK 2002/03

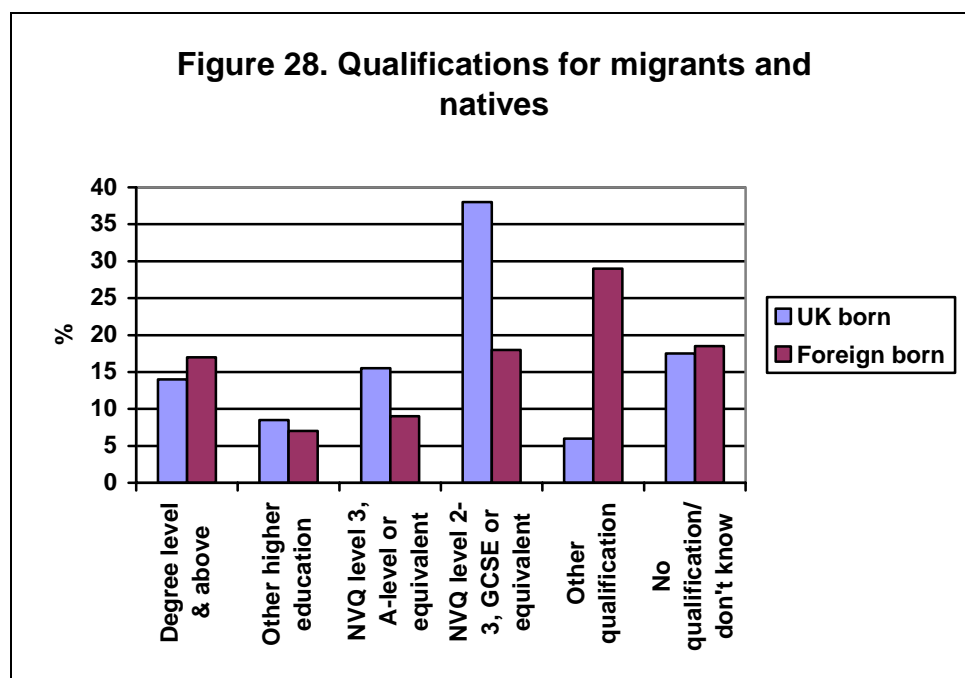
[http://www.dwp.gov.uk/asd/asd1/niall/niall\\_report.pdf](http://www.dwp.gov.uk/asd/asd1/niall/niall_report.pdf)

77. The most common country of origin was India, with 28,500 NINOs issued to arrivals. Next was Poland, with 18,300 followed by South Africa with 16,300, and Pakistan with 16,100. Overall, the foreign national workforce has a broadly similar socio-economic distribution to the UK population, but it tends to be more skilled than the UK workforce. Table A16 in Annex 2 gives the top ten countries of origin for migrant workers.<sup>86,87,88</sup>

### Migrant Skills & Occupation

78. According to a recent Home Office report,<sup>89</sup> education and skill levels are polarised within the migrant population: there are both highly educated people, and more relatively unskilled. This is likely to be a function of the immigration system – those allowed into the UK on work permits/students will be highly educated, those entering through other routes likely to have more diverse range of skills – both because of their various reasons for migrating

and the diverse education systems they come from. Figure 28 summarises the qualifications for migrants and natives.



79. There is also considerable variation in language proficiency across the various minority immigrant groups, with Bangladeshis and Pakistanis tending to have the lowest proficiency in the English language. Language proficiency improves with time of residence, is higher for the more educated, and is higher the lower the age at which the immigrant entered the country. Language fluency is strongly and positively associated with the probability to be employed, and with wages. As a result, language proficiency is likely to reduce the gap between UK-born whites and minority immigrants considerably. The Government's Five Year Plan on Immigration and Asylum published in early 2005 set out a new requirement that all those seeking to stay in the UK, as refugees or skilled migrants, will be required to pass tests on the English language and knowledge of the UK, not just those applying for citizenship.<sup>90</sup> In March 2006, the Government proposed a new point based system for managing migration.<sup>91</sup> Underpinning the new system is a five tier framework. This is aimed at helping identify applicants of the following categories:

- Tier 1: Highly skilled individuals to contribute to growth and productivity
- Tier 2: Skilled workers with a job offer to fill gaps in UK labour force
- Tier 3: Limited numbers of low skilled workers needed to fill specific temporary labour shortages
- Tier 4: Students
- Tier 5: Youth mobility and temporary workers: people allowed to work in the UK for a limited period of time to satisfy primarily non-economic objectives

80. In the US, migrant workers are disproportionately represented among temporary workers, part-time workers, and workers in the 'informal economy'.<sup>92</sup> Ethnic minority immigrants and individuals from the Irish community/EU are more likely to be self-employed than UK-born whites approximately five years after arrival.

81. Over the period 2000-2002 as a whole the total number of work permits issued to migrants was 238,341. The top five industry groups were:

- health and medical services (24%);
- computer services (17%);
- administration, business and managerial services (13%);
- education and cultural activities (8%); and
- financial services (8%).

82. This is quite a different picture from that of 1995:

- administration, business and managerial services (17%);
- financial services (13%);
- entertainment and leisure services (12%);
- retail and related services (12%); and
- manufacturing (8%).

83. There has been a shift in migrant employment from the traditional domination of commercial oriented services to the health and ICT sectors. This is a response to the skills shortages in the UK over the past few years. For the three years 2000-02 consistently the largest occupational category was associate professional and technical occupations – the majority of which are health associate professionals and other health/medical occupations (21,458, or 24 per cent of all issues in 2002) that include nurses and medical occupations such as radiographers and physiotherapists. Professional occupations is the next largest category with around 24 per cent, in 2002 (21,508). The main occupation here is engineers and technologists (9,587, 11 per cent of total issues in 2002). These figures are consistent with the reports that 31% of doctors and 13% of nurses are non-UK born, in London 23% and 47% respectively. An estimated 70% of catering jobs in London are also believed to be filled by migrants.<sup>89</sup>

84. For many highly-skilled occupations, the international movement of expertise is increasingly taking place in ways that do not involve traditional migration. These take the form of new types of collaboration between firms in different countries, shorter-term secondments, weekly commuting and the electronic transmission of knowledge.<sup>93</sup> There is growing competition between countries to attract skilled foreign workers. Germany introduced a 'green card' plan to import 20,000 IT specialists, predominantly from Eastern Europe and India. By March 2001 it had recruited about one quarter of those wanted.<sup>93</sup> More recent reports, however, suggest that the numbers of highly qualified immigrants moving to Germany has declined in recent years.<sup>94</sup> In October 2000 President Clinton signed into law legislation to increase the annual quota of visas available for skilled foreign workers from 115,000 to 195,000

over the next 3 years. However, in 2003 this was reduced to its previous level of 65,000, attributed partly to ongoing offshoring in the IT industry.<sup>95</sup>

85. Labour migration flows by British citizens frequently tend to be ignored. Yet in- and outflows by them are a substantial part of the total migration picture. Since 1981 their annual outflow has never been less than 100,000 and their inflow has exceeded 90,000 in all but two years. One of the main reasons for this neglect is that the emigration of British citizens and their return has not been perceived to be a problem and thus not in the remit of any government department. Further, with few exceptions (especially 1981-2), British flows have fluctuated within narrower bands than those of the non-British and this relative stability has encouraged invisibility.

### Illegal Immigration

86. The government last year published for the first time estimates on the numbers of illegal immigrant workers, which confirm figures from unofficial sources and put Home Office estimates at about 500,000. The majority of these workers are in the south east of England and the industries in which they work are mainly: hotels and catering; construction; agriculture and textiles. Many work for 'gangmasters', which in some cases may involve very low wages and poor conditions.<sup>96</sup>

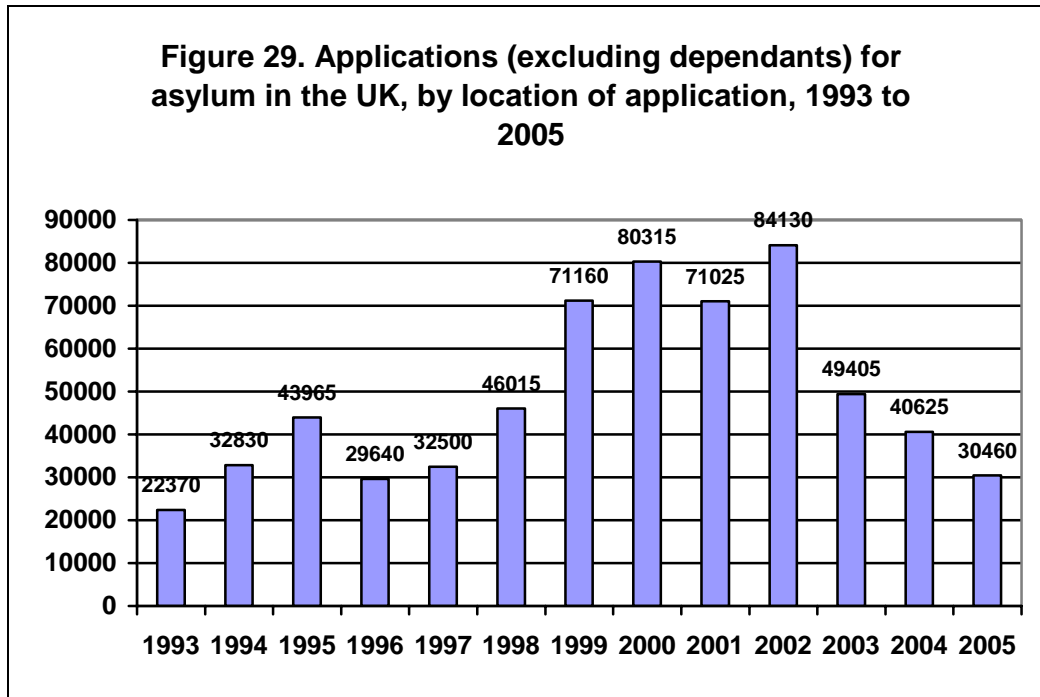
87. Underreporting of accidents is thought to be particularly high among workers with insecure immigration status, limited permission to work or lack of marketable job skills. US research shows that immigrant workers are believed to be unaware that they are eligible to receive benefits and do not know the procedures for reporting injuries. This may underpin the low rates of injury compensation among ethnic minorities. The picture in the UK, however, is unclear. The Home Office recently published a survey of a random sample of 83 immigrants in detention in the UK, 60% of whom had entered the UK illegally. Others became illegally resident by overstaying a tourist, student, or work visa. The main reason cited for leaving their home country was actual or perceived lack of safety, and 75% had worked illegally whilst in the UK. Only 4% (3 of the 83) had illegally claimed benefits, 40% claimed benefits legally, and 14% did not apply to claim benefits they were entitled for.

88. According to the Construction Industry Training Board (CITB), many illegal immigrants do not have the necessary safety qualifications required for UK construction work (Construction Skills Certification Scheme) or the language skills to communicate effectively in English.<sup>97</sup>

### Asylum Seekers

89. Asylum applicants have formed a significant proportion of total immigration since the 1990s, varying from about one sixth to one third of the total annual inflow. However, the data sources which specifically focus on asylum seekers and refugees often lack relevant information. For example neither the qualifications, nor the skills, nor the employment experience of asylum seekers entering the UK are systematically recorded. The most significant trends for refugees display a peak in 1991, a dramatic reduction in

applications between 1991 and 1992, and a gradual increase in applications towards the late 1990s. According to Home Office statistics (Figure 29), the number of applications for asylum in the UK reached an historic high in 2002, followed by a dramatic reduction in 2003 (and further reductions in 2004 and 2005). This reduction may reflect government initiatives to tackle abuse of the asylum system, such as removing border controls to France and Belgium and investment in new technology.



Source: Home Office

90. Between 1990 and 2000, the most common age group for asylum seekers in the UK was the 25–29 group. This group has consistently accounted for one quarter or more of all applications. Asylum seekers between the ages of 21 and 39 have consistently accounted for over 70 per cent of all applications during this period. The conclusion is that asylum seekers are youthful, and are dominated by those in the most economically active age groups.<sup>98</sup>

91. Between 1990-1999 a total of 225,295 asylum applications were refused. Many of these people may have returned home voluntarily, and some will have been removed. In 2000 a further 92,330 applications were refused. Between 1992 and 2000 (Table 12), Home Office statistics record a total of 44,175 total removals or departures, including asylum applicants as well as rejected asylum seekers. However, it is impossible to estimate how many more rejected asylum seekers have left the country voluntarily, without notifying the Home Office.<sup>98</sup>

Table 12. Removals and voluntary departures of asylum applicants, excluding dependants, 1992-2000 (1) (2)

Year	Total
1992	1345
1993	1820
1994	2220
1995	3170
1996	4820
1997	7165
1998	6990
1999	7665
2000	8980

Figures are rounded to the nearest five  
Data for 2000 are provisional

Source: Home Office Statistical Bulletin, 2004

## Section 6: The Shape of Industry

### Summary

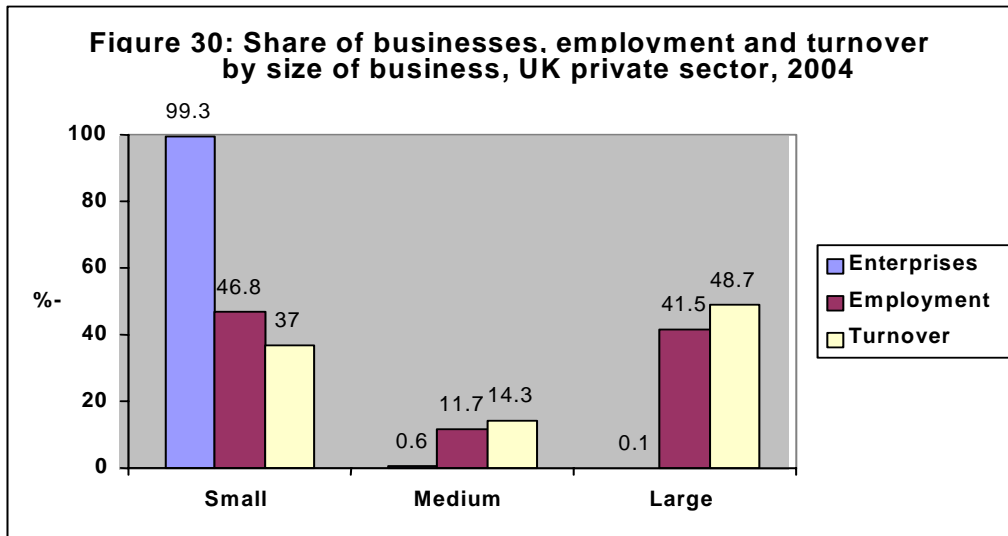
- Of the 4.3 million UK businesses in existence at the start of 2004, over 99% were small businesses (0-49 employees), employing 46.8% of the private sector workforce.
- Of these businesses, 3.1 m had no employees, i.e. they were sole proprietorships or companies comprising only a sole director (72% of all enterprises). The number of SMEs is predicted to increase to 4.5 million SMEs by 2010.
- Self-employment is highest in the construction sector, a trend that saw continued growth between 2000-2003.
- The prevalence of self-reported work-related illness and working days lost both tend to be significantly lower for small organisations. A similar trend is evident for reported accidents, although on site monitoring recorded more accidents smaller organisations.
- Outsourcing has continued to grow in popularity over recent decades, facilitated by the emergence of technologies that have allowed organisations to outsource a wider range of non-core aspects of their operations. Skilled services such as training, human resources, and legal services are now increasingly being outsourced.
- For the same reasons, the geographical location of the service provider has also become much less important, a situation that has led to many companies outsourcing to areas with lower cost labour. Common offshore locations include India, China, and the Czech Republic.

### Organisation size

92. Figure 30 shows the proportion of businesses by size, the proportion of private sector employment by company size, and the proportion of UK turnover. Of the 4.3 million UK businesses in existence at the start of 2004, over 99% were small businesses\* (0-49 employees), employing 46.8% of the private sector workforce. Only 0.6% of enterprises were medium in size (0-249 employees) and 0.1% large (over 250 employees). The increase in number of enterprises to 4.3 million from 4.0 million at the start of 2003 is the largest since this series of data began in 1994. Most of this increase is due to a rise of unregistered sole proprietorships. From 1995 to 2001 the number of enterprises was stable at 3.7 million.

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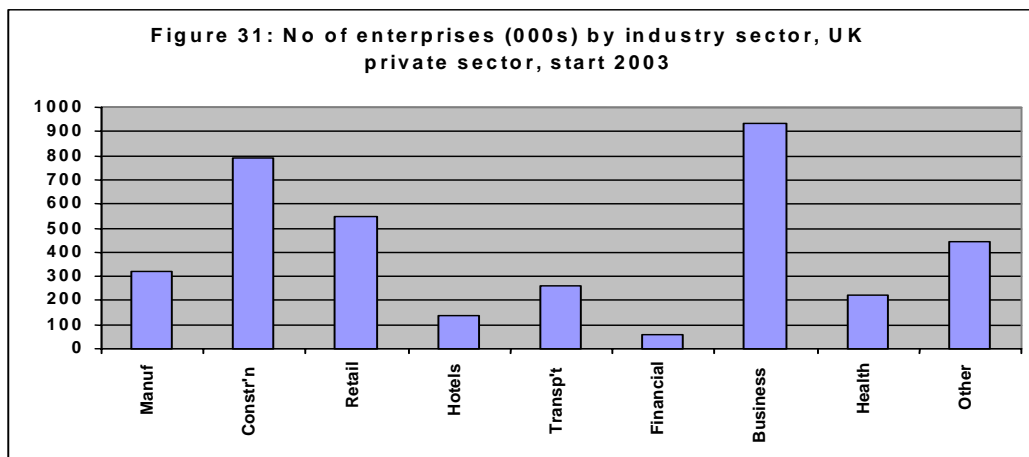
\* On 1 January 2005 the EU introduced a new definition of SME, which adds the term 'micro-enterprise', i.e. fewer than 10 employees



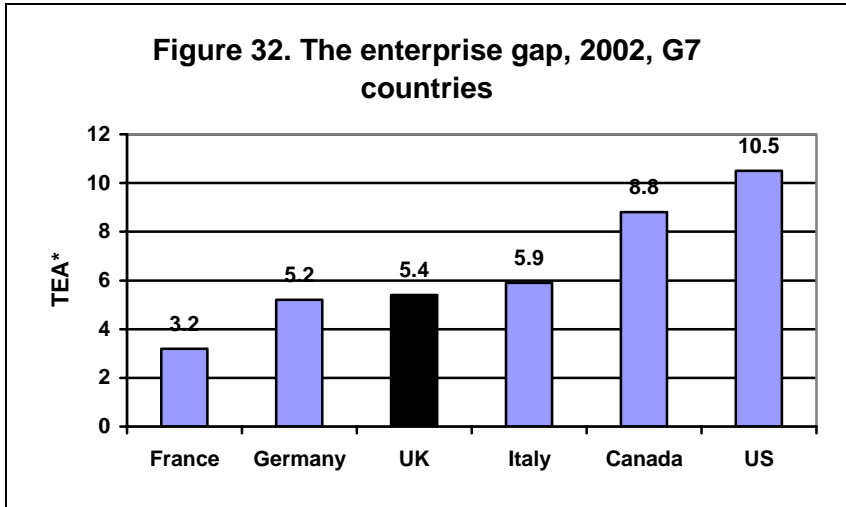
Source: SME Statistics 2004, Small Business Service, DTI, [http://www.sbs.gov.uk/SBS\\_Gov\\_files/researchandstats/SMEStats2004.pdf](http://www.sbs.gov.uk/SBS_Gov_files/researchandstats/SMEStats2004.pdf)

93. The number of SMEs is growing. The Government's Foresight programme in 2001 predicted an increase to 4.5 m SMEs by 2010, leading to 2 m new SME jobs, and the Government is committed to creating a climate for entrepreneurship. Two sectors lead in terms of overall number of firms – business services and construction (see Figure 31), but when VAT registered firms (1.7 m in total) are considered, wholesale retail and repair moves into second place. The Foresight programme also predicts that businesses owned by ethnic minorities could be a rapidly growing proportion of the SME population.

94. Despite rapid growth of the small business sector since the 1970s, rates of entrepreneurial activity in the UK remain only moderate by international standards, as shown in Figure 32. Countries exhibiting the highest rates of entrepreneurial activity are typically characterised by more widespread involvement of women. An OECD report found that the UK had the third lowest rates of female entrepreneurship amongst a sample of 15 industrialised countries. A new task force aimed at boosting the number of women entrepreneurs is to be launched in the UK in 2006.<sup>99</sup>



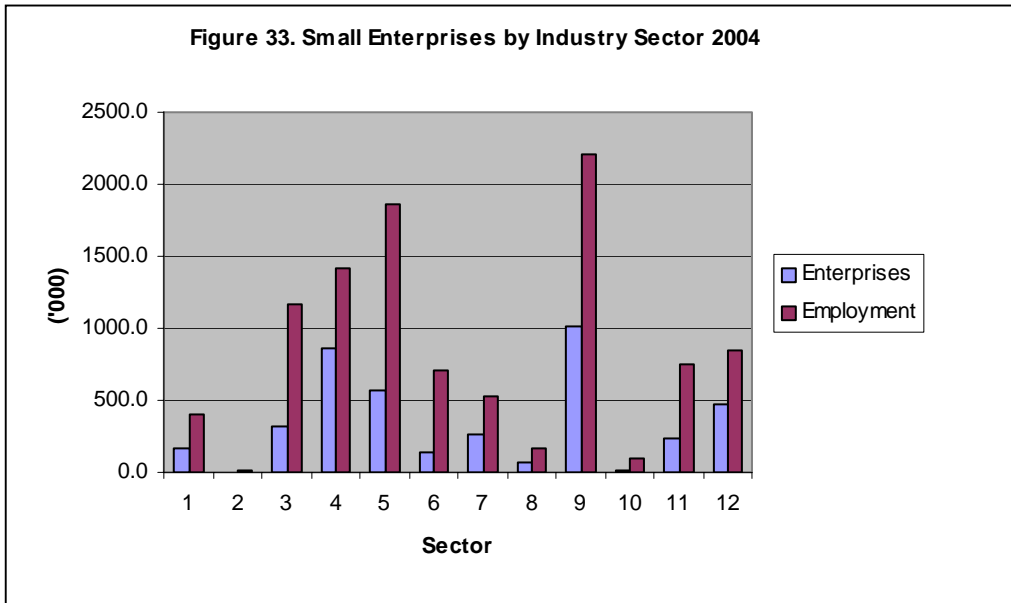
Source: SME Statistics 2003, Small Business Service, DTI



\*Total Entrepreneurial Activity Index: Population of the working-age population involved in starting or growing a new business

Source: Global Entrepreneurship Monitor UK report (2002), London Business School

95. Figure 33 gives a graphical representation of the distribution of small firms by industry sector (Further details in Table A17, Annex 2), showing that the number of small enterprises varies widely across different industry groups.



**Key:** Definition of Sectors: 1. Agriculture, Hunting and Forestry; Fishing; 2. Mining and Quarrying; Electricity, Gas and Water Supply; 3. Manufacturing; 4. Construction; 5. Wholesale and Retail Trade, Repairs; 6. Hotels and Restaurants; 7. Transport, Storage and Communications; 8. Financial Intermediation; 9. Real Estate, Renting and Business Activities; 10. Education; 11. Health and Social Work; 12. Other Community, Social and Personal Service Activities

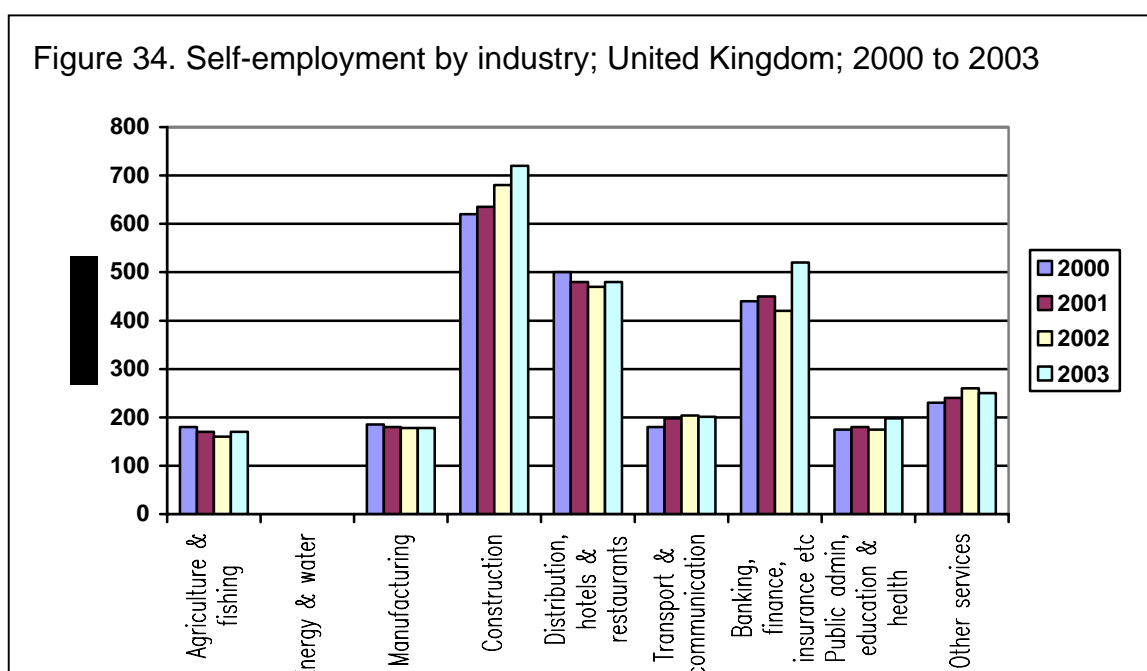
Source: SME Statistics 2004, Small Business Service, Dti.

<http://www.sbs.gov.uk/sbsgov/action/layer?r.l2=7000000243&r.l1=7000000229&r.s=tl&topicId=7000011759>

96. Of the 4.3 m businesses in existence at the start of 2004, 3.1 m had no employees, i.e. they were sole proprietorships or companies comprising only a sole director (72% of all enterprises). However, this proportion varies among different industries, from 86.6% of SMEs in the construction industry to 17.9% in the hotel and restaurant industry.<sup>100</sup>

### The Self-Employed

97. Figure 34 shows changes in the number of self-employed by industry between 2000 and 2003, according to the sectors in which they operate. The latest Working Futures projections<sup>2</sup> predict that self-employment among both sexes is expected to decline; male self-employment by 6%, and for females the predicted fall is 11%.



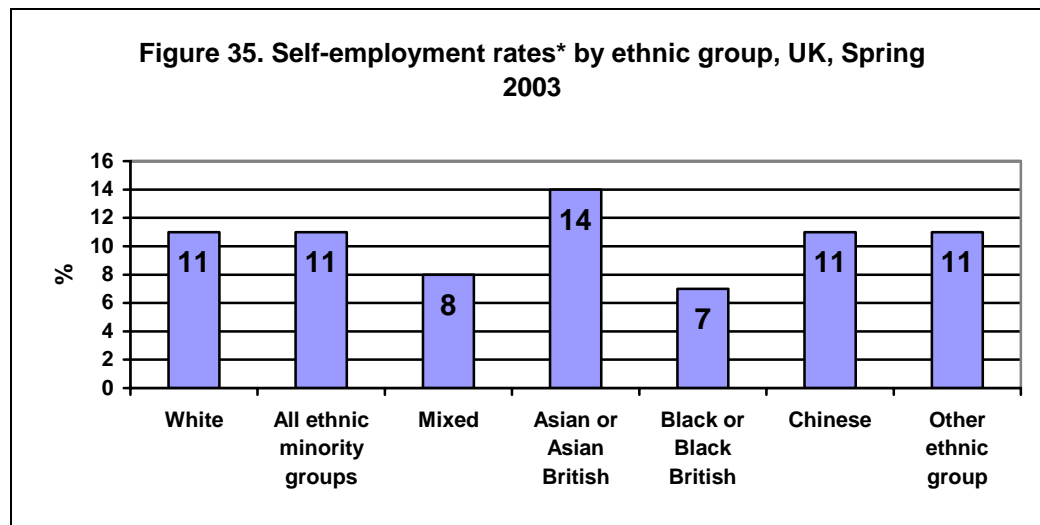
Source: Labour Market Trends: Changes to self-employment in the UK: 2002 to 2003, Office for National Statistics, December 2003

[http://www.statistics.gov.uk/articles/labour\\_market\\_trends/self\\_employment\\_1203.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/self_employment_1203.pdf)

98. While women account for 44% of all economically active people in the UK, only 25% of the self-employed population are women, compared to men at 75%. However, the number of self-employed women is growing. Figure 35 shows the differences in self-employment according to ethnicity. More recent statistics show that the participation rates of Black and Mixed ethnic groups, however, appear to be increasing. The business activities of ethnic minority entrepreneurs are concentrated very heavily in the transport and distribution sector. Self-employment rates also appear to increase with age, as shown in Figure 36.

99. The main reason given for self-employed individuals not employing any staff was that they felt they could not attract, or were not attracting enough work to necessitate taking on any staff (47.7% of sole proprietorships).

Another 27.1% said that they preferred to work alone, 11.9% cited the expense of employing labour, and 7.4% cited employment regulations.<sup>101</sup>



\* Self-employed as a rate of all economically active people of working age  
 Source: SBS Statistics Team, from ONS Labour Force Survey (Spring 2003)



\* Self-employed as a rate of all economically active people of working age  
 Source: SBS Statistics Team, from ONS Labour Force Survey (Spring 2003)

### SMEs

100. Whilst business survival rates for SMEs have improved over recent years, according to VAT returns, the majority of today's SMEs have been in existence for less than 40 months. If this pattern continues, most of the SMEs that exist today will not exist in 2010. However, new businesses, especially smaller new businesses, are the greatest single source of new jobs, providing jobs at all points of the economic cycle.<sup>102</sup>

101. A total of 38.7% of all SMEs thought that 'regulations' acted in some way to place obstacles in the way of their success, and for 14.5% this was their

greatest obstacle. Of the businesses that found regulations to be a problem, 24.4% (just under 1 in 10 of all SMEs), highlighted health and safety regulations. Despite this, among SMEs as a whole, just over half (52.7%) had not sought any advice or information from any external sources during the past year about regulations that might affect them. The likelihood of seeking advice rises sharply with the size of the business, however, such that among medium-sized businesses only 21.1% had not sought advice. The three main sources that were consulted when advice was sought, were the business's accountant (12.8%), the trade/business association to which the business belonged (10.7%), and public information sources such as the internet, library or press (6.3%). In addition, almost half of all small business owners (45.1%) said that they had had no contact with any government services during the previous year.<sup>102</sup>

102. A number of sources suggest that small businesses are often at a competitive disadvantage compared with larger organisations because of the time and cost involved in regulatory compliance. An evaluation of the Manual Handling Operations Regulations published in 2001, for example, revealed that the cost per employee of taking action to manage manual handling risks was £341 per employee for small organisations and £37 per employee for large organisations.<sup>103</sup> A subsequent HSE report found that large organisations with over 5000 employees report consistently less expenditure per employee for all regulations compared with organisations with fewer than 5000 employees.<sup>104</sup>

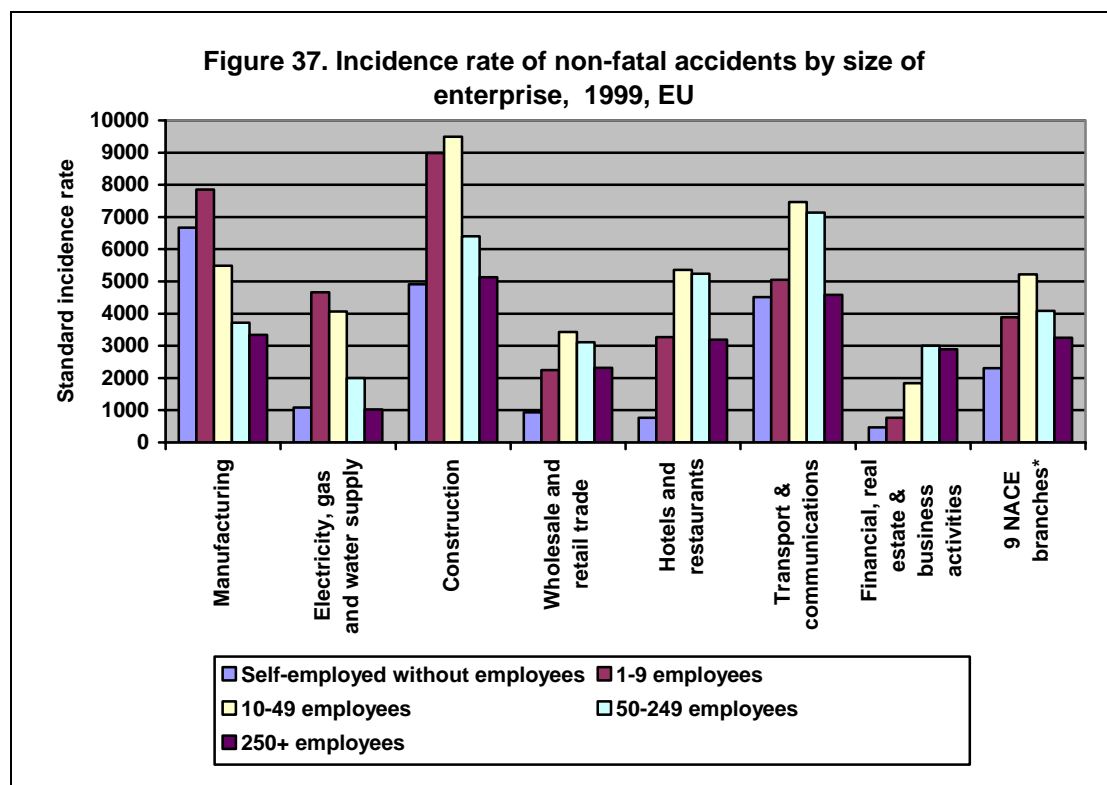
103. When asked about crime, 30% of small businesses with employees considered crime to be a considerable problem for their business.<sup>102</sup> A report by the Federation of Small Businesses revealed that over half (58%) of all small businesses in the UK have suffered at least one crime during 2003 – 2004, the most frequent crimes being vandalism and vehicle damage. Businesses in the service industries are particularly vulnerable, including retail, wholesale and motor trades, and the hotels and restaurants sector. Regional location was also an important factor, with crime being more often experienced by SMEs in four particular regions: Yorkshire and Humberside, NW England, the East Midlands and Northern Ireland.

104. In 2003/04 the prevalence rate of self-reported work-related illness for workplaces with 50 or more employees (4.1%) was significantly higher than that for smaller organisations, with a prevalence rate of 3.3%. The rate for workplaces employing fewer than 25 employees was even lower, at 3.1%. The rate of self-reported illness for businesses with no employees was 3.6%. Similarly, incidence rates of work-related illness were significantly lower in smaller organisations (1.5%) than medium and large sized workplaces (2.2% and 2.0% respectively).

105. Differences were also identified in working days lost due to ill-health according to organisation size. In 2003/04, an average 1.2 days were lost per worker in workplaces of 50 or more employees, significantly higher than an average 0.93 for smaller organisations. The average for workplaces employing fewer than 25 employees was even lower, at 0.82.<sup>105</sup>

106. A MORI study commissioned by the HSE Occupational Health Advisory Committee revealed that employers from small organisations felt that because their companies were small and everyone talked to each other, there was no need for external help with controlling risks to employee health. It is suggested that this may be due to a reluctance to attract the attention of enforcing authorities and invite unwelcome recommendations.<sup>106</sup> A recent HSE study found that large companies were most likely to provide occupational health support (74%), compared to medium-sized (54%), small (34%), and micro-sized organisations (13%).<sup>107</sup>

107. A 2003 HSE report found that medium-sized organisations report more accidents than small and large organisations. However, when sites were monitored, it was found that more accidents were recorded in small organisations than both medium and large organisations. A higher accident rate was also found in smaller organisations overall within the EU, although rates differed significantly according to organisational sector, as shown in Figure 37.



\* 9 NACE<sup>1</sup> branches : Agriculture, Manufacturing, Electricity gas water supply, Construction, Wholesale and retail repairs, Hotels and restaurants, Transports communications, Financial intermediation, Real estate business activities. )

Source: Eurostat

[http://epp.eurostat.cec.eu.int/cache/ITY\\_OFFPUB/KS-BP-02-002-3A/EN/KS-BP-02-002-3A-EN.PDF](http://epp.eurostat.cec.eu.int/cache/ITY_OFFPUB/KS-BP-02-002-3A/EN/KS-BP-02-002-3A-EN.PDF)

<sup>1</sup> NACE is derived from the French "Nomenclature statistique des Activités économiques dans la Communauté Européenne" (Statistical classification of economic activities in the European Community)

108. The main cultural influence on health and safety attitudes and behaviour in small businesses tends to be the organisational culture that typifies many such enterprises, reflecting less formal approaches to management, the preference of owner/managers for autonomy and the closeness of employer/employee relations in small businesses. In the case of some ethnic minority businesses (EMBs), ethnic background can be an important second order influence in some cases.<sup>108</sup>

### Outsourcing

109. Whilst discrete functions such as payroll and data input have been passed to third parties for decades,<sup>109</sup> technologies that have emerged in the past five years have allowed organisations to outsource many other non-core aspects of their operations. Skilled services such as training, human resources and legal services are now increasingly being outsourced. Outsourcing has already had a profound impact on parts of the public sector, a trend that is likely to continue, at least so long as it remains a cost-effective strategy. The use of private health care in the NHS is one such area of growth. The role of independent treatment centres is expanding to the extent that within a few years they will account for 500 000 NHS elective operations (around 10%).<sup>110</sup> Changes over the last few years have also seen a gradual shift of long-term care from the public to the private sector.<sup>111</sup>

110. Outsourcing of public services to private companies is a sensitive issue, particularly in relation to the NHS. Criticisms include the fact that in recognition of start-up costs, most of the first wave of treatment centres are being paid around 15% above the NHS tariff.<sup>110</sup> It has also been argued that private healthcare providers are likely to adopt the most profitable operations, leaving public hospitals to deal with the more complex, expensive services.<sup>112,110</sup> Outsourcing among other public sector organisations has also been met with some resistance. Unison recently opposed plans by a local authority to outsource jobs from its Revenues and Benefits department to a private company, for example.<sup>113</sup>

111. As a result of technological developments, the geographical location of the service provider of outsourced services has also become much less important – a situation that has led many companies to obtain greater savings by outsourcing to areas with low cost labour, most notably India, China, and the Czech Republic.<sup>109,118</sup> Momentum towards offshoring is now greater than ever, with the majority of companies accepting offshore activities as a competitive necessity. The National Association of Software Companies (Nasscom) estimate India's share of the global offshore outsourcing market for software and back-office services at 44%.<sup>114</sup> India's IT industry is also now seeking a larger proportion of more profitable, high-skilled engineering and research and development work.<sup>114</sup>

112. China's outsourcing companies are aiming to replicate the success of their Indian rivals by attracting any larger share of U.S. companies seeking to diversify business beyond India.<sup>115</sup> However, a shortage of well trained graduates could hinder the growth of the Chinese economy and prevent it

from developing more sophisticated industries. Lack of practical skills and poorer English speaking levels will make it hard for China to develop service-based industries such as the sort of IT outsourcing that India has specialised in over the past decade.<sup>116</sup>

113. The offshore boom has recently led to expansion of the search for suitable workers into countries such as the Philippines<sup>117,118</sup> and Vietnam,<sup>119</sup> where a large numbers of young, well-educated and highly trainable professionals are available for work. It has also recently been reported that British workers are now being recruited to staff India's call centres because of a shortage of suitable candidates on the subcontinent.<sup>120,121,122,123</sup> One Indian call centre is reported to recruit at least 10% of its 900 employees from Europe.<sup>123</sup>

114. Although outsourcing has become a dominant trend, typically adopted in order to reduce costs, expand capabilities, and increase flexibility, emerging evidence indicates that results have been mixed.<sup>124</sup> Concerns have also been raised regarding the intellectual property and confidentiality risks of outsourcing, in addition to loss of institutional knowledge, and loss of control over outsourced functions. A number of reports in the British press have described alleged information security lapses in Indian call-centres.<sup>125,126</sup>

115. A recent ruling by the Court of Appeal<sup>127</sup> could have profound implications for those exercising control over workers and the duties they owe under health and safety legislation. In that case, it was decided that it was possible for an employee to have more than one employer, and that both such employers could be vicariously liable for a single act of any person who was, in law, their employee. It had been thought that an employee could only have a single employer at any one time. If the same principle is capable of being applied to health and safety legislation, this could have implications for the management of contracted, sub-contracted and seconded workers.

## Section 7: Effects on accident & ill-health rates

### Summary

- Analysis of statistics suggests that an increase in older workers could have the effect of reducing overall rates of accidents and ill-health.
- Predicted sector and occupational changes also indicate a beneficial effect on accident rates.
- A 1% increase in GDP above trend indicates a 1.4% increase in the rate of major accidents.

### Predicted trends

116. In 2003, EAU and EMSU carried out an analysis using the GAD predictions and HSE's accident and ill-health figures by age group to predict the effect of ageing on accident and ill-health figures. They concluded that although there would be increases in absolute numbers of accidents and ill-health, the effect of ageing on the overall rates would be to reduce them slightly. The rates in each age group were assumed to be constant, but the change in distribution between age groups affected the overall rate.

117. More recently, the Institute for Employment Research at the University of Warwick has used the Working Futures predictions of employment by sector and occupation coupled with an analysis of RIDDOR data from 1986-2004 to estimate the effect of the predicted sector and occupational changes on accidents.<sup>128</sup>

118. Their analysis revealed a general downturn trend in over-3-day injury rates among males. In contrast, over-3-day injury rates among women increased prior to 1994, but have fallen since. Contrary to the general downward trend over time however, major accident rates appear to have increased since 2000 among both men and women. Analysis by sector revealed that whilst major accident rates have continued to decline in traditional industrial sectors and the public sector, but have remained relatively stable in the private services sector. It is implied that this may be due partly to correcting for underreporting, which is particularly common among women.

119. In terms of other factors associated with injury rates, the report states that a 1% increase in GDP above trend is associated with a 1.4% increase in the rate of major accidents, with similar effects on both male and female rates. This is reported to equate to an increase of around 11-12% in major accidents during a boom compared to a recession. Pro-cyclical patterns are thought to be particularly prominent within the construction and manufacturing industries. The effect of an economic boom is believed to be largely due to the hiring of new staff and increased overtime (resulting in an estimated 1.7-2.5% increase in the rate of major injuries and 1-1.5% increase in over-3-day injuries).

120. Analysis of the Labour Force Survey identified a number of factors that were associated with reportable workplace injuries during the previous 12 months:

*Personal characteristics:*

- Higher rates of workplace injury exhibited by males compared to females can be almost entirely explained by differences in other job and establishment characteristics.
- The strong regional gradient observed in workplace injury rates can be explained by differences in the observable personal and job related characteristics within these regions, there is no evidence of a 'regional effect'.

*Employment characteristics:*

- The dominant influence that contributes to an individual's risk of injury is their occupation. The 5 most hazardous occupational categories were identified as being Construction Labourers; Metal, Wood and Construction Trades; Vehicle Trades; Agriculture and Animal Care Occupations and Stores/Warehouse Keepers.
- The risk of workplace injury declines rapidly as employment tenure increases. The increased risks associated with tenure are particularly apparent during the first 4 months within a new job.
- In terms of the length of the working day, after correcting for exposure, those working less than 10 hours per week were most likely to report having had a reportable workplace injury per hour worked.
- Among other employment characteristics, shift working, and working in the public sector were associated with individuals being more likely to indicate that they had suffered a reportable workplace injury. Being self-employed and working within small establishments (less than 10 employees) were each associated with a reduced likelihood of individuals reporting that they had suffered a reportable workplace injury.

121. In terms of future trends, as occupation is the dominant influence on an individual's risk of suffering a workplace injury, future changes in rates of workplace injury over time are likely to reflect future changes in the occupational composition of employment. Based upon the Working Futures occupational projections of employment to 2012, projections of workplace injuries derived from the LFS suggest that the rate of reportable non-fatal injuries would be expected to decline by approximately 6% between 2004 and 2012. Estimates based upon RIDDOR suggest that the rate of reported injuries would be expected to decline by 7-8% over the same period. The largest declines in workplace injuries are estimated to occur in those sectors that are projected to exhibit a relatively large movement away from employment within manual occupations such as construction and transport, storage and communication. Thus, whilst projected changes in the occupational composition of employment appear to be working in favour of HSE, these could be either offset or reinforced depending upon the relative position of the economy within the business cycle.

## References

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- <sup>1</sup> Government Actuary's Department, <http://www.gad.gov.uk/Population/index.asp>
- <sup>2</sup> Working Futures: New Projections of Occupational Employment by Sector and Region, 2004-2014. (Forthcoming), Institute for Employment Research, University of Warwick. (The previous report for 2002-2012 can be found at <http://www.ssda.org.uk/ssda/PDF/wf-national.pdf>).
- <sup>3</sup> Securing our future health: Taking a long-term view, Derek Wanless (2002), HM Treasury, [http://www.hm-treasury.gov.uk/Consultations\\_and\\_Legislation/wanless/consult\\_wanless\\_final.cfm](http://www.hm-treasury.gov.uk/Consultations_and_Legislation/wanless/consult_wanless_final.cfm)
- <sup>4</sup> Rare Species – Critical skills for tomorrow's future, August 2005, City & Guilds
- <sup>5</sup> Government Actuary's Department, <http://www.gad.gov.uk/Population/2003/methodology/mignote.htm>
- <sup>6</sup> National Insurance Number Allocations to Overseas Nationals Entering the UK 2002/03, DWP, [http://www.dwp.gov.uk/asd/asd1/niall/nino\\_allocation.asp](http://www.dwp.gov.uk/asd/asd1/niall/nino_allocation.asp)
- <sup>7</sup> Implications of population ageing for the labour market, Sylvia Dixon, Labour Market Trends 2003, Office for National Statistics, [http://www.statistics.gov.uk/articles/labour\\_market\\_trends/Implications\\_of\\_population\\_ageing\\_feb03.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/Implications_of_population_ageing_feb03.pdf).
- <sup>8</sup> The employment rate of older workers, Ulrike Hotopp, Labour Market Trends, February 2005, Office for National Statistics, [http://www.statistics.gov.uk/articles/Labour\\_market\\_trends/employment\\_rate\\_old\\_workers.pdf](http://www.statistics.gov.uk/articles/Labour_market_trends/employment_rate_old_workers.pdf)
- <sup>9</sup> HSL Report (in press?) Peter Shearn
- <sup>10</sup> Occupation by Age and Gender, ONS Labour Force Survey Spring 2003
- <sup>11</sup> Winning the Generation Game (2000), Cabinet Office [http://www.cabinet-office.gov.uk/innovation/2000/winning/winning\\_index\\_page.htm](http://www.cabinet-office.gov.uk/innovation/2000/winning/winning_index_page.htm)
- <sup>12</sup> <http://www.newdeal.gov.uk/newdeal.asp?DealID=50PLU>
- <sup>13</sup> A new deal for welfare: Empowering people to work, DWP Green Paper 24 January 2006. <http://www.dwp.gov.uk/aboutus/welfarereform/foreword.asp>
- <sup>14</sup> The Fifties revival, J Kodz, B Kersley & P Bates (1999), Institute of Employment studies, London
- <sup>15</sup> Retirement ages in the UK: a review of the literature, Employment Relations Research Series No. 18, 2003, DTI
- <sup>16</sup> Factors affecting the labour market participation of older workers, Humphrey et al., DWP Research Report No 200
- <sup>17</sup> Unhappy senior workers, The Herman Trend Alert, October 12, 2005, [http://www.hermangroup.com/alert/archive\\_10-12-2005.html](http://www.hermangroup.com/alert/archive_10-12-2005.html)
- <sup>18</sup> Opportunity Age, 2005, DWP, [http://www.dwp.gov.uk/opportunity\\_age/](http://www.dwp.gov.uk/opportunity_age/)
- <sup>19</sup> Age at retirement and long term survival of an industry population: prospective cohort study, Shan Tsai et al., BMJ 21 Oct 2005
- <sup>20</sup> P Reuter-Lorenz (2002) New visions of the ageing mind and brain, Trends in cognitive sciences, 6 (9), 394-400
- <sup>21</sup> Department of Health (2000). The 2000 health survey for England: the health of older people
- <sup>22</sup> Ilmarinen, J (2001). Ageing workers. Occupational and Environmental Medicine, 58 (8), 546-552.
- <sup>23</sup> Improving the predictive power of an existing human reliability assessment method, Julie Bell et al., paper presented to the 2nd European Conference on Rail Human Factors 21st - 23rd November 2005
- <sup>24</sup> Wilson et al. (2002) Individual differences in rates of change in cognitive abilities of older persons. Psychology and Ageing, 17 (2), 179-193.
- <sup>25</sup> Facts and misconceptions about age, health status and employability, Kirsten Benjamin, HSL Report HSL/2005/20
- <sup>26</sup> Healthy ageing among inner-city men. International Psychogeriatrics, 13 (4), 425-437.
- <sup>27</sup> Implications for population ageing for the labour market, Labour Market Trends, April 2002, ONS.
- <sup>28</sup> Self-reported work-related illness in 2003/04, HSE Statistics <http://www.hse.gov.uk/statistics/causdis/swi0304.pdf>

- 
- <sup>29</sup> The ageing population of the United Kingdom and cardiovascular disease, *BMJ*, 331, 10 December 2005, Azeem Majeed and Paul Aylin.
- <sup>30</sup> Griffiths, A. (1997), Ageing, health and productivity, a challenge for the new millennium, *Work & Stress*, 11 (34)
- <sup>31</sup> Wegman, D H (1999), Older Workers, *Occupational Health State of the Art Reviews*, 14 (3), 537-557
- <sup>32</sup> Rantanen, J (1999). Impact of ageing on the workforce. In: Ageing and health: a global challenge for the 21<sup>st</sup> century. WHO, Geneva.
- <sup>33</sup> Ilmarinen (1995). Ageing and work: The role of ergonomics for maintaining work ability during ageing. In A.C. Bittner & P.C. Champney (Eds), *Advances in Industrial Ergonomics and Safety VII*. London and Bristol: Taylor & Francis, 3-17.
- <sup>34</sup> Office for National Statistics (2002). Trends and sources of data on sickness absence. *Labour Market Trends*, April, 177-185.
- <sup>35</sup> Government Statistical Service (1999). Labour Market Spotlight: Sickness absence by age and sex (LFS). *Labour Market Trends*, December 625-631.
- <sup>36</sup> OPCS (1995). Occupational health decennial supplement. Stationery Office, London.
- <sup>37</sup> HSE (2004) Injury rates by age for 2003.2004 <http://www.hse.gov.uk/statisticsc/index.htm>
- <sup>38</sup> Kisner, S & Pratt, S (1997). Occupational fatalities among older workers in the United States: 1980-1991. *Journal of Occupational and Environmental Medicine*, 39 (8), 715-721.
- <sup>39</sup> The age dimension of employment practices: employer case studies, Employment Relations Research Series No.42, 2005, DTI
- <sup>40</sup> 2004 annual UK consultant physician census, Royal College of Physicians, [http://www.rcplondon.ac.uk/college/mwu/mwu\\_04\\_home.htm](http://www.rcplondon.ac.uk/college/mwu/mwu_04_home.htm)
- <sup>41</sup> Age matters: A review of existing survey evidence. Peter Urwin, Employment relations research series No.24, DTI
- <sup>42</sup> Age and participation in vocational education and training, 2001. *Work, Employment and Society*, 15 (4), 763-779.
- <sup>43</sup> Ageing Workforce, Natalie Turner & Laura Williams, The Work Foundation, Corporate Partners Research Programme, 2005
- <sup>44</sup> Changes in working trends over the past decade, Trish McOrmond, *Labour Market Trends*, January 2004, Office for National Statistics, [http://www.statistics.gov.uk/articles/labour\\_market\\_trends/working\\_trends.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/working_trends.pdf)
- <sup>45</sup> UK doctors move towards general practice and flexible working, *BMJ* Vol 331, 19 November 2005
- <sup>46</sup> Work-life balance, Research trends, TUC, [http://www.tuc.org.uk/work\\_life/index.cfm?mins=475](http://www.tuc.org.uk/work_life/index.cfm?mins=475)
- <sup>47</sup> Social Trends 36, 2006 Edition, Office for National Statistics, [http://www.statistics.gov.uk/downloads/theme\\_social/Social\\_Trends36/Social\\_Trends\\_36.pdf](http://www.statistics.gov.uk/downloads/theme_social/Social_Trends36/Social_Trends_36.pdf)
- <sup>48</sup> Home-based working using communication technologies, *Labour Market Trends*, October 2005, ONS, [http://www.nationalstatistics.gov.uk/articles/labour\\_market\\_trends/teleworking\\_Oct05.pdf](http://www.nationalstatistics.gov.uk/articles/labour_market_trends/teleworking_Oct05.pdf)
- <sup>49</sup> Teleworking in the UK, Ulrike Hotopp, *Labour Market Trends*, June 2002, Office for National Statistics, [http://www.statistics.gov.uk/articles/labour\\_market\\_trends/Teleworking\\_jun2002.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/Teleworking_jun2002.pdf)
- <sup>50</sup> The technology revolution, P. Ryan, Economic Reports, December 2002, The Marubeni Corporation Economic Research Institute, <http://www.marubeni.co.jp/research/eindex/0212-2/>
- <sup>51</sup> Sector's flexible-working song seems to be falling , *The Times*, 24 Nov 2005-
- <sup>52</sup> Royal College of physicians, *Surviving the Nightshift: a New Guide* [http://www.rcplondon.ac.uk/news/news.asp?PR\\_id=299](http://www.rcplondon.ac.uk/news/news.asp?PR_id=299)
- <sup>53</sup> Horrocks & Pounder (2006), Working the night shift: preparation, survival and recovery. A guide for junior doctors. *Clinical Medicine*, 2006, Vol 6.
- <sup>54</sup> Effects of sleep inertia on cognition, Wright et al, 2006, *Journal of the American Medical Association*, Vol 295, No 2, Jan 11 2006
- <sup>55</sup> Effect of shift schedule on offshore shiftworkers' circadian rhythms and health, HSE Research Report 318.
- <sup>56</sup> Declining health of shift workers, *Health and Safety at Work*, June 2005.
- <sup>57</sup> Davis et al., Night shift work, light at night, and risk of breast cancer. *Journal of the National Cancer Institute*, 2001, 93, 1557-1562.

- 
- <sup>58</sup> Schernhammer et al., Rotating night shifts and risk of breast cancer in women participating in the nurses' health study. *Journal of the National Cancer Institute*, 2001, 93, 1563-1568.
- <sup>59</sup> New research shows artificial light at night stimulates breast cancer growth in laboratory mice, National Institute of Health News, December 19 2005, US Department of Health and Human Sciences
- <sup>60</sup> Melatonin-depleted blood from premenopausal women exposed to light at night stimulates growth of human breast cancer xenografts in nude rats, Blask et al., *Cancer Research* 2005; 65 (23), December 1 2005.
- <sup>61</sup> Shift work and breast cancer, Report of an expert meeting 12 November 2004, Institute for Environment and Health, May 2005.
- <sup>62</sup> Population Trends 122, Winter 2005, National Statistics, [http://www.nationalstatistics.gov.uk/downloads/theme\\_population/PopTrends122v1.pdf](http://www.nationalstatistics.gov.uk/downloads/theme_population/PopTrends122v1.pdf)
- <sup>63</sup> The Growth and Decline of Cities and Regions, Ruth Lupton and Anne Power, July 2004 Census Briefs No 1, STICERD, London School of Economics, <http://sticerd.lse.ac.uk/dps/case/cbcb/census1.pdf>
- <sup>64</sup> Findlay, A. & Stockdale, E. (2003). Rural In-Migration: A catalyst for economic regeneration, International Geographical Congress
- <sup>65</sup> Beyond digital divides? The future for ICT in rural areas, Commission for Rural Communities, April 2005
- <sup>66</sup> Trend No 166, Fast Future, Defra
- <sup>67</sup> Trend No 41, Fast Future, Defra
- <sup>68</sup> Households, Focus on Families, National Statistics, [http://www.nationalstatistics.gov.uk/cci/nugget\\_print.asp?ID=1162](http://www.nationalstatistics.gov.uk/cci/nugget_print.asp?ID=1162)
- <sup>69</sup> Public Opinion, Peter Hall, Public Agenda, The Times 29 November 2005
- <sup>70</sup> The Learning Revolution, Gordon Dryden 1999, The Learning Web Ltd.
- <sup>71</sup> Human Knowledge: Foundations and Limits, Brian Holtz (2005), <http://humanknowledge.net/Thoughts.html>
- <sup>72</sup> New experimental population estimates by ethnic group, News Release 26 January 2006, National Statistics, <http://www.statistics.gov.uk/pdfdir/nep0106.pdf>
- <sup>73</sup> Labour Force Survey 2004, Office for National Statistics, <http://www.statistics.gov.uk/cci/nugget.asp?id=462>
- <sup>74</sup> Ethnic Minorities in the Labour Market: Winter 2005, Analysis Team, EMED, Labour Market Statistics, April 2006
- <sup>75</sup> Review of the occupational health and safety of Britain's ethnic minorities, Ala Szczepura et al., HSE Research Report 221, 2004.
- <sup>76</sup> Ethnicity, work characteristics, stress and health, Andrew Smith et al., HSE Research Report 308, 2005.
- <sup>77</sup> Cucino, C., Sonnenberg A. (2002). Occupational mortality from squamous cell carcinoma of the esophagus in the United States during 1991-1996. *Digestive Diseases & Sciences*. 47(3):568-72, March.
- <sup>78</sup> Loomis, D. and Schulz M. (2000). Mortality from six work-related cancers among African Americans and Latinos. *American Journal of Industrial Medicine*, 38(5):565-75, November.
- <sup>79</sup> Persistent high stroke mortality in Bangladeshi populations, *BMJ* Vol 331, 12 Nov 2005
- <sup>80</sup> Health Survey for England, 1999: The health of minority ethnic groups, Department of Health, 2000. <http://www.archive.official-documents.co.uk/document/doh/survey99/hse99-12.htm>
- <sup>81</sup> Migration to the UK rises, News Release 20 Oct 2005, National Statistics, <http://www.statistics.gov.uk/pdfdir/intermig1005.pdf>
- <sup>82</sup> National insurance number allocations to overseas nationals entering the UK, Department for work and pensions 2005, [http://www.dwp.gov.uk/asd/asd1/niall/niall\\_report.pdf](http://www.dwp.gov.uk/asd/asd1/niall/niall_report.pdf)
- <sup>83</sup> Report on the functioning of the Transitional Arrangements set out in the 2003 Accession Treaty (period 1 May 2004-30 April 2006), Commission of the European Communities, 2006. [http://europa.eu.int/comm/employment\\_social/news/2006/feb/report\\_en.pdf](http://europa.eu.int/comm/employment_social/news/2006/feb/report_en.pdf)
- <sup>84</sup> Labour market performance of immigrants in the UK labour market, Dustmann et al., Home Office Report 05/03. <http://www.homeoffice.gov.uk/rds/pdfs2/rdsolr0503.pdf>
- <sup>85</sup> Beyond black and white: Mapping new immigrant communities, Sarah Kyambi, Institute for Public Policy Research, 2005
- <sup>86</sup> Work permits and foreign labour in the UK: a statistical review, James Clarke and John Salt, Migration Research Unit, University College London, Labour Market Trends, November

- 
- 2003, Office for National Statistics, [http://www.statistics.gov.uk/articles/labour\\_market\\_trends/Workpermits\\_nov03.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/Workpermits_nov03.pdf)
- <sup>87</sup> Foreign Labour in the United Kingdom: patterns and trends, John Salt and James Clarke, Migration Research Unit, University College London, Labour Market Trends, October 2001, Office for National Statistics.
- <sup>88</sup> Migrant workers in the UK, Vicki Robinson, Labour Market Trends, September 2002, Office for National Statistics, [http://www.statistics.gov.uk/articles/labour\\_market\\_trends/Migrant\\_workers\\_sept2002.pdf](http://www.statistics.gov.uk/articles/labour_market_trends/Migrant_workers_sept2002.pdf)
- <sup>89</sup> Glover et al., 2001, Migration: an economic and social analysis. Home Office Research Development and Statistics Directorate Occasional Paper no 67. <http://www.homeoffice.gov.uk/rds/pdfs/occ67-migration.pdf>
- <sup>90</sup> Integration Matters: Government sets out strategy to ensure refugees contribute to UK, Home Office [http://www.ind.homeoffice.gov.uk/ind/en/home/news/press\\_releases/2.html](http://www.ind.homeoffice.gov.uk/ind/en/home/news/press_releases/2.html)
- <sup>91</sup> A Points-Based System: Managing Migration for Britain, March 2006 <http://www.homeoffice.gov.uk/documents/command-points-based-migration?view=Binary>
- <sup>92</sup> Immigrant workers at risk: The urgent need for improved workplace safety and health policies and programmes, August 2005, American Federation of Labor & Congress of Industrial Organisations.
- <sup>93</sup> International migration and the United Kingdom: Recent patterns and trends, Janet Dobson et al., December 2001, RDS Occasional Paper No 75, Home Office, <http://www.homeoffice.gov.uk/rds/pdfs/occ75.pdf>
- <sup>94</sup> Green card immigration to Germany falls in 2005, Expatica, 10 January 2006, [http://www.expatica.com/source/site\\_article.asp?subchannel\\_id=155&story\\_id=26671&name='Green+card'+immigration+to+Germany+falls+in+2005](http://www.expatica.com/source/site_article.asp?subchannel_id=155&story_id=26671&name='Green+card'+immigration+to+Germany+falls+in+2005)
- <sup>95</sup> Congress cuts visas for skilled foreign workers, San Francisco Chronicle Wednesday, October 1, 2003, <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2003/10/01/MN55780.DTL>
- <sup>96</sup> How illegal workers are propping up our lifestyle, BBC News, 10 Feb 2004, <http://news.bbc.co.uk/1/hi/magazine/3475147.stm>
- <sup>97</sup> Future Skills – CITB, <http://www.citb.co.uk/futureskills/default.asp>
- <sup>98</sup> Asylum Statistics, United Kingdom 2003 2nd edition, Tina Heath, Richard Jeffries and James Purcell, 24 August 2004, Home Office Statistical Bulletin
- <sup>99</sup> New Task Force on women's enterprise, Innovation Policy Review, Vol 6, Number 12, December 2005
- <sup>100</sup> Small and Medium-sized Enterprise (SME) Statistics for the UK 2004, Small Business Service, DTI, [http://www.sbs.gov.uk/SBS\\_Gov\\_files/researchandstats/SMEStats2004.pdf](http://www.sbs.gov.uk/SBS_Gov_files/researchandstats/SMEStats2004.pdf)
- <sup>101</sup> Annual Small Business Survey 2003, John Atkinson & Jennifer Hurstfield, July 2004, Small Business Service, DTI, [http://www.sbs.gov.uk/SBS\\_Gov\\_files/researchandstats/annualsbsssummary.pdf](http://www.sbs.gov.uk/SBS_Gov_files/researchandstats/annualsbsssummary.pdf)
- <sup>102</sup> Financing the Enterprise Society: Financial Services for Small and Medium-sized Enterprises in 2010, Foresight, DTI, [http://www.foresight.gov.uk/Previous\\_Rounds/Foresight\\_1999\\_2002/Financial\\_Services/Reports/Financing\\_the\\_Enterprise\\_Society/Document.pdf](http://www.foresight.gov.uk/Previous_Rounds/Foresight_1999_2002/Financial_Services/Reports/Financing_the_Enterprise_Society/Document.pdf)
- <sup>103</sup> Second Evaluation of the Manual Handling Operations Regulations, Rebecca Lancaster, Catherine Jacobson Mahler and Andrew Alder, HSE Contract Research Report CRR346/2001, HSE Books, [http://www.hse.gov.uk/research/crr\\_pdf/2001/crr01346.pdf](http://www.hse.gov.uk/research/crr_pdf/2001/crr01346.pdf)
- <sup>104</sup> Costs of compliance with health and safety regulations in SMEs, Rebecca Lancaster, Rachel Ward, Paul Talbot and Andrew Brazier, HSE Research Report 164, HSE Books, <http://www.hse.gov.uk/research/rrpdf/rr174.pdf>
- <sup>105</sup> Self-reported work-related illness in 2003/2004, HSE Statistics, <http://www.hse.gov.uk/statistics/causdis/swi0304.pdf>
- <sup>106</sup> Occupational Health Advisory Committee report and recommendations on improving access to occupational health support, 5 July 2000, <http://www.hse.gov.uk/aboutus/hsc/iacs/ohac/access.htm>
- <sup>107</sup> Survey of use of occupational health support, Pilkington et al., 2002, HSE CRR02455, [http://www.hse.gov.uk/research/crr\\_pdf/2002/crr02445.pdf](http://www.hse.gov.uk/research/crr_pdf/2002/crr02445.pdf)
- <sup>108</sup> Cultural influences on health and safety attitudes and behaviour in small businesses, 2003, HSE RR150, <http://www.hse.gov.uk/research/rrpdf/rr150.pdf>

- 
- <sup>109</sup> Business process outsourcing, Infoconomy 30 November 2005, <http://www.infoconomy.com/pages/infoeconomist-crib-sheets/group102846.adp>
- <sup>110</sup> Use of private health care in the NHS, BMJ Vol 331, 12 November 2005
- <sup>111</sup> [http://www.unisys.co.uk/clients/featured\\_case\\_studies/metropolitan\\_police\\_.htm](http://www.unisys.co.uk/clients/featured_case_studies/metropolitan_police_.htm)
- <sup>112</sup> Former minister attacks health service privatisation, Unison News, 10 October 2005
- <sup>113</sup> Unison opposes outsourcing plan, BBC News, 24 August 2005
- <sup>114</sup> India extends IT outsourcing boom, BBC News, 2 June 2005
- <sup>115</sup> China hopes to repeat India's outsourcing success, CIOL, August 13 2005, <http://www.ciol.com/content/news/2005/105081302.asp>
- <sup>116</sup> Graduates 'may fail Chinese economy', The Financial Times, 7 October 2005
- <sup>117</sup> Global financial services offshoring, Deloitte Development LLP, 2005
- <sup>118</sup> The strategic value of offshoring, Strategy Magazine, Issue 5, August 2005
- <sup>119</sup> The Times 24 November 2005
- <sup>120</sup> Young Britons flock east to answer India's call-centre crisis, The Independent, 30 November 2005
- <sup>121</sup> Call centre staff lured to India, BBC News, 24 June 2005
- <sup>122</sup> Brits snap up new call centre jobs – in India, The Guardian, 22 January, 2005
- <sup>123</sup> Call of India lures European workers, BBC News, 24 November 2004
- <sup>124</sup> Calling a change in the outsourcing market, Deloitte Development LLP, April 2005
- <sup>125</sup> Outsourcing exposes firms to fraud, BBC News, 16 June 2005
- <sup>126</sup> How secure are India's call centres?, BBC News, 24 June 2005
- <sup>127</sup> Viasystems (Tyneside) Limited v (1) Thermal Transfer (Northern) Limited, (2) S & P Darwell Limited and (3) T Hall & C Day t/a CAT Metalworks Services [2005] EWCA Civ 1151, 10 October 2005.
- <sup>128</sup> Trends and context to rates of workplace injury, Rhys Davies and Paul Jones, HSE RR 386, <http://www.hse.gov.uk/research/rrpdf/rr386.pdf>