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**WATER UNDER THE BRIDGE:
CHANGES IN EMPLOYMENT IN BRITAIN AND THE
OECD**

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ABSTRACT

Evidence is presented for the UK, the US and France that the pace of change in the structure of employment by occupation has **not** been accelerating. Changes in the occupational structure of employment are taken to proxy changes in the net demand for labour by skill level. Efforts are made to make the data for these three countries comparable, reflecting the problem that data published by the ILO on the distribution of employment by occupation are not readily comparable.

The direction of employment change across countries seems very similar, with manual jobs being replaced primarily by managerial, professional and technical jobs which tend to require higher qualifications. However, in themselves the changes in employment which have occurred require only modest improvements each decade in the qualifications of the workforce. In the UK, skilled manual employment has declined at the same rate as unskilled manual employment.

Changes in the qualifications structure of the workforce occur gradually across generations, as the children of people with few formal qualifications attain higher qualifications and their parents leave the labour force. Sharp changes in the structure of employment over a relatively short space of time can throw the labour market into a position of structural imbalance. But over time as the changes in the structure of employment moderate and the new generation attains higher qualifications, these imbalances can work their way out. In this sense the shock of the early 1980s recession in the UK represents 'water under the bridge'.

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WATER UNDER THE BRIDGE:
CHANGES IN EMPLOYMENT IN BRITAIN AND THE OECD

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Peter Robinson

It is widely assumed in the public debate that the pace of change in the structure of employment in the industrialised countries is accelerating. At an industry level, jobs in the primary industries and in manufacturing are being replaced by jobs in the 'services' sector. At an occupational level, blue collar, manual jobs are being replaced by white collar, managerial, professional and technical, or service and sales jobs. It is assumed that this is occurring at a more rapid rate than in previous decades. These structural changes in employment, whatever their source, might in turn be causing imbalances in the labour market and structural unemployment.

The aim of the paper is to look at the nature of employment change in a number of OECD countries to see to what extent these assumptions are valid. Specifically, the paper seeks to illuminate the answers to the following questions:

- a. Has the change in the structure of employment by industry or occupation been accelerating?
- b. Has the structure of employment by industry or occupation been changing at different rates in different countries?
- c. Where are the net new jobs being generated and does this pattern vary across countries?
- d. In particular, is the pattern of job generation different in the US when compared with some European countries? This might throw light on why the US labour market has generated a much faster increase in overall employment rates when compared with the European countries.
- e. What are the implications of employment change for the demand for higher qualifications or skills?
- f. And finally, are the data good enough to fully answer these questions?

This is an ambitious agenda, and the final point relating to data limitations will, of course, put a limit on the conclusions which can be reached.

The first section of the paper takes a broad-brush look at changes in the structure of employment in 10 OECD countries. The second section looks in greater detail at changes in the UK labour market. The third section looks at changes in the **occupational** structure of employment in the US and France when compared with Britain. As far as possible the US data have been made to conform with the British Standard Occupational Classification (SOC) for this analysis. A key premise underlying the paper is that the occupations in the SOC closely correspond to different levels of employment by skill, so that changes in the occupational structure of employment can be taken to proxy changes in the net demand for labour by skill level. The fourth section looks at the implications of employment change for the demand for higher qualifications. Finally, the conclusions of the paper are drawn together. In part, this paper follows up on work reported in Robinson (1994) and it is written with reference to the analysis offered by the OECD (1994a) and in the light of work by Machin (1996) and others looking at changes in the structure of employment.

1. THE STRUCTURE OF EMPLOYMENT IN 10 OECD COUNTRIES.

Initially, the analysis focuses on 10 countries (Table 1). These countries were picked primarily because it was possible to obtain data on employment by occupation over a sufficient period of time which could be reasonably relied upon. The selection includes all the G-7 countries except Italy, three smaller Northern European countries (Norway, Sweden and Finland) and one Southern European country (Spain).

Table 1 presents some summary data on the unemployment rates and civilian employment-population ratios of these countries over a

period from the early 1980s to the early 1990s. The exact dates chosen for each country relate to the availability of reasonably consistent data on employment by occupation. The countries are ranked according to their employment-population ratios in the early 1990s though, with the exception of Germany, this is reasonably well correlated with a ranking by unemployment rates in the early 1990s.

Japan has had the best record both in terms of maintaining relatively low unemployment and increasing its employment-population ratio. It is the only OECD country not to have seen a decline in the employment-population ratio for men over the period. The three Scandinavian countries maintained relatively low unemployment rates and high employment-population ratios in the 1980s but, in the case of Sweden and especially Finland, have suffered major reverses in the early 1990s. The US record has been relatively good, with a moderate average unemployment rate and a rising employment-population ratio. Canada's record has been poorer. The dates chosen for the UK, which span two censuses, rather flatter British performance. If the period 1979-93 had been chosen rather than 1981-91, it would reveal a sharp rise in unemployment and a fall in the employment-population ratio. Finally, both France and Spain have very high levels of unemployment and particularly low employment-population ratios.

It is also important to emphasise the gender differences between the countries in Table 1. Across the OECD as a whole, unemployment rates are higher for women than for men, a point often neglected by Anglo-American economists heavily focused on their own countries' labour markets where the reverse has generally been the case. Indeed, in this sense the sample of 10 countries chosen here is **un**representative, in that there are more countries with higher male unemployment rates which is not the case for the OECD as a whole. Where unemployment rates for men are higher than those for women, the gap is smaller than when the reverse is true. This can be seen by comparing France and the UK in Table 1. The concentration of unemployment amongst women in France and Spain is especially

pronounced, as is the much lower employment-population ratios for women in these two countries.

It is important to set this context because we are interested in changes in the structure of employment not for their own sake, but because such changes might help throw light on the overall pattern of employment and unemployment outlined in Table 1.

Table 2 outlines the distribution of employment by industry for the 10 countries, with the industry data aggregated up to six categories. The countries are ranked according to the annualised percentage point decline in employment in the primary and manufacturing industries over the period in question (the final column¹). Such a ranking reveals a more modest decline in the share of employment in these ‘traditional’ industries in Japan and Germany, countries which also stand out in terms of still having a much higher proportion of employment in manufacturing in the early 1990s than in other OECD countries. Britain does not particularly stand out in Table 2; the rate of decline in employment in the traditional industries over the period is somewhat faster than the average, but the overall structure of employment by the early 1990s does not look out of line with many other OECD countries.

Table 3 shows the rate of decline in employment in the primary and manufacturing industries over three time periods. The overall pattern reveals no sign of any significant acceleration in the rate of change in the 1980s when compared with the 1970s. The same conclusion was reached by the OECD, using more formal measures of the pace of structural change as measured by sectoral employment shifts (page 15, OECD, 1994a). Interestingly, the OECD chose to highlight the UK as the only country where there was evidence of a greater rate of change in the 1980s when compared with the 1970s. The OECD went on to point out, however, that this was confined only to the early 1980s. The pace of change in the mid-late 1980s was not out of line with historical experience. Table 3 confirms this. From 1979-84, Britain did witness a sharp acceleration in the rate of decline in the share of employment in the traditional industries, and its

experience at this time was out of line with other countries. But after 1984 the pace of change slowed down again.

By the late 1980s and early 1990s countries such as Finland and Spain were witnessing the kind of sharp falls in the share of employment in the primary and manufacturing industries which Britain had witnessed in the early 1980s. Another interesting feature of Table 3 is that Japan appeared to experience its most rapid period of structural adjustment in the 1970s, an observation which is also confirmed by the OECD. For most of the other countries in Table 3, the 1980s saw a pace of change little different from the 1970s.

Employment is shifting from the primary and manufacturing industries towards the 'services' sector throughout the OECD. But is this the low paid, low skill services sector, or the high paid, high skill sector?

Table 2 breaks the services sector down into three broad groupings and shows that for all 10 countries the growth in the share of employment is occurring primarily in the public and social services and in business and financial services, and not in the distribution, hotels and catering and transport industries. The share of employment in these latter industries, where lower paid and lower skilled employment is concentrated, is not increasing significantly in any country except Spain. The sectors which are growing – public, social, business and financial services – provide more highly paid and skilled jobs. So in itself the shift from 'industry' to 'services' is not altering the structure of employment adversely in the sense of being associated with a shift to lower quality jobs.

However, this is about as far as an analysis based on industry can get us. This is because there are significant shifts occurring in the structure of employment by occupation **within** industries, broadly speaking away from blue collar to white collar jobs. This has been emphasised by Machin (1996) in his analysis of UK manufacturing industry, where he shows the process to have been ongoing over the whole post-war period. Thus data on employment change by **occupation** should be more illuminating than data on employment

change by **industry**.

Ideally, one would want to construct a matrix of employment by industry **and** occupation and track changes over time. Such a matrix for the UK for 1981 and 1991 is presented in section 2 below and similar data for the US is referred to in section 3. However, constructing consistent matrices across time for an individual country is very problematic, given continuous changes in the industrial and occupational classifications of employment. Comparisons across countries are even more difficult, for the same reasons which are explored in this section looking at employment change by occupation only.

Table 4 presents data for the 10 countries on employment change by occupation over the period from the early 1980s to the early 1990s. It employs the International Standard Classification of Occupations (ISCO–1968) as used by the ILO and OECD. Countries are ranked according to the annualised percentage point decline in the share of manual or blue collar employment (final two columns of the table). The rankings, unsurprisingly, are similar to those in Table 2. This, of course, is because the decline in employment in the primary and manufacturing industries involves primarily the loss of manual jobs. The figures for the US refer to the period 1983-93 (rather than 1981-91 in Table 2) because the occupational classification of employment changed significantly in 1983, rendering comparisons with time periods before 1983 problematic, of which more in section 3.

Over the period from the early 1980s to the early 1990s, Table 4 shows that the rate of decline in the share of blue collar employment in the US was significantly slower than in the other countries over similar periods of time. Even more so than in Table 2, the pace of change in the UK is not out of line with other countries. Indeed, the UK's position is very much in the middle of the Table.

However, the trend in blue collar or manual employment is about the only comparison which can be relied upon in Table 4. A quick glance at such categories as (2) managers and administrators or (4) sales occupations, suggests that the data are **not** comparing like with like.

In several of the countries in the Table, such as Japan and Germany, the managerial/administrative category (2) includes only senior managers and administrators. By contrast the British classification, for example, also includes many intermediate managerial and administrative jobs which the other countries would classify in column (3) as clerical employment. The British classification also includes the managers or owners of retailing establishments whereas other countries classify these in column (4) as sales workers. Sweden no longer has a separate category for managers and administrators, but includes some as professionals (1) and most as clerical staff (3).

Table 4 cannot be relied upon to compare the levels of employment by occupation across countries, and problems arise too in comparing rates of change. In the US, Britain, Canada and France the data on clerical employment (3) seem broadly comparable and all show a slight decline in the share of clerical jobs in total employment. The other countries include in column (3) many intermediate managerial and administrative staff, and the growth in the share of employment in this classification in Germany, Japan and Sweden probably reflects growth in these kinds of jobs, which in the US, Britain, Canada and France would show up as an increase in the share of employment in the managerial and administrative occupations (column 2).

These uncertainties in the data cloud the issue of whether the share of routine clerical employment is declining or not in all the OECD countries, though it is worth emphasising that in none of the countries in Table 4 is there any sign of any really sharp decline in the 1980s.

However, to the extent that Table 4 can be relied upon to look at changes **within** each country then an important pattern does emerge. Nearly all the increased share of 'white collar' employment is in the professional and technical and managerial and administrative occupations and **not** in the sales or services categories. In other words, manual jobs are being replaced primarily by more highly paid and highly skilled jobs at the top of the occupational spectrum and not by low paid, low skilled jobs. This of course matches the trends observed

in Table 2 where the growth in employment in the service industries was mainly concentrated in the public and social services and business and financial services sectors where employment is heavily weighted towards professional, managerial and technical jobs, and not in the distribution, hotels and catering sector where lower paid, lower skilled sales and service jobs are concentrated. Spain is a partial exception in both Tables 2 and 4 in witnessing a modest growth in the share of employment in both the distribution, hotels and catering industries and in sales and service employment.

There is no strong evidence in Table 4 of any strong ‘bipolarisation’ of employment, that is a decline in manual jobs and their replacement by a nearly equal mixture of both high skill and low skill jobs. Rather, most of the increased share of employment is coming at the top end of the occupational distribution.

Unfortunately the absence of reliable data over time, even for some of the industrialised countries in this analysis, means that it is not possible to look at the rate of change in the occupational distribution of employment, comparing the 1980s with the 1970s, as was done for industries in Table 3. However, in sections 2 and 3 data on employment change by occupation over two or more decades for the UK, US and France will be presented.

Figures 1 and 2 present the data on the structure of employment by industry (Figure 1) and occupation (Figure 2) for the 10 OECD countries for the early 1990s in a different way. The share of employment in each industry or occupation is presented as a proportion of the civilian employment-population ratio for each country. The Figures are trying to throw light on where the countries with high employment-population ratios have all their extra jobs, when compared with the countries with low employment-population ratios. Or to put it another way, if, for example, countries such as France and Spain wished to increase employment to match the high levels achieved in the US, what types of jobs would they have to expand?

From Figure 1 it can be seen that, with the exceptions of Germany and Japan, most countries have a similar proportion of their adult

populations employed in ‘industry’, including construction. The position of the construction industry is worth pointing out here in that, along with transport, it is an industry which is **not** in secular decline and which provides many blue collar jobs. When comparing, for example, France and the United States, the latter’s significantly higher employment-population ratio is due to a higher level of employment across the ‘services’ sector, in business and financial services, in public and social services and in distribution, hotels and catering. So an expansion of employment in ‘services’, brought about for example by a liberalisation of product markets, would not necessarily generate employment in low paid service sectors. And the creation of employment even in some relatively ‘low skill’ service sectors might be necessary in many continental European countries, given the heavy concentration of unemployment in these countries amongst women (Table 1) and young people, who tend to find work disproportionately in sectors such as distribution, hotels and catering.

On the other hand, perhaps not too much should be made of the concentration of employment growth in many European countries in the public sector (as does the OECD, 1994a). Most public sector employment is encompassed in the public/social services category of the industrial classification used in Table 2 and Figure 1. The US has seen significant growth in the share of employment in this sector (Table 2) and has a very high level of employment overall in these services (Figure 1), including areas such as health and social care and education. That in the US many of these jobs show up as private sector employment, financed for example by deductions from workers’ gross incomes for health insurance payments, rather than, as in Europe, showing up as public sector employment, financed by taxes taken out of workers’ gross incomes, is not perhaps as important as is sometimes emphasised.

Figure 2 is less useful in throwing light on cross-country differences in employment-population ratios and unemployment, because of the lack of comparability in the occupational data. Comparing the US and France, the European country appears to have

a significantly lower proportion of its adult population employed in lower level service and sales occupations, but also a significantly lower proportion employed in the high skill managerial, professional and technical occupations. With aggregate unemployment high and with unemployment in France disproportionately concentrated on young people and women, such continental European countries should not be reluctant to see an expansion across the board in employment in the 'services' sector.

2. EMPLOYMENT CHANGE IN THE UK: ACCELERATION OR DECELERATION?

Uncertainty about the data on employment by occupation makes it important to look more carefully at changes within particular countries. In this section the nature of employment change in Britain in recent decades is explored to see whether there is evidence of an acceleration in the rate of change in the structure of employment.

Figure 3 is taken from Robinson (1994) and uses Census data on employment by occupation over the period 1951-91. The data are aggregated to five broad occupational categories and reveal the steady decline in manual employment over time and its replacement largely by managerial, professional and technical jobs. The share of employment in sales and service occupations shows little change. Clerical employment was an increasing share of the total over the period 1951-81, before its slight decline in the 1980s. This is the only break in trend. The decline in the share of manual employment appears to have proceeded at a steady pace through the 1960s, 1970s and 1980s. The effects of the Thatcher recession, with its associated sharp fall in employment in manufacturing and for manual workers, is partly hidden by this analysis as the 1981 Census falls right in the middle of the recession. Nevertheless, the absence of any sharp break in trend in a run of data going back 40 years is impressive.

Table 5 shows in more detail the structure of employment by

industry for the UK over the period 1971-96. This Table picks out the impact of the Thatcher recession and the especially sharp fall in manufacturing employment in the early 1980s. By contrast, the recession of the early 1990s saw a much less dramatic fall in the share of manufacturing employment. Rather, the sharp contrast with past experience is the decline in the share of employment in construction due to the collapse in the property market. Construction is a heavily cyclical industry and one can expect a recovery in its share of employment at some point in the 1990s. The share of employment of business and financial services also grew less strongly in the first half of the 1990s. Overall, the rate of change in employment by industry was less pronounced in the early 1990s when compared with the early 1980s. It is clearly the case that the early 1990s recession was different from the early 1980s recession, particularly in terms of its lesser impact on manufacturing.

The evidence suggests that the rate of change in the structure of employment by industry, having accelerated in the early 1980s, has now fallen back down to the kind of rate of change seen in previous decades. In 1979 it could be argued that Britain was out of line in having an abnormally high share of employment in manufacturing, reflecting overmanning. Having by the early 1990s converged on the OECD average, there is less scope for further dramatic shifts in the employment structure.

The data in Table 5 reflect two different data sources and a change in the industrial classification of employment. This should not invalidate the analysis based on comparing the rates of change over the time periods shown. Table 6 shows changes in the structure of employment in Britain by occupation over the period 1979-96. In 1991 the occupational classification in the UK changed significantly, rendering comparisons across time difficult. The Standard Occupational Classification was designed specifically so that the occupational groupings brought together jobs with similar requirements in terms of qualifications, training and experience. The ranking of the occupational categories from 1-9 was meant to reflect the progression

of the occupations from those requiring a higher level of qualifications, training and/or experience down to those requiring a much lower level of skill or experience.

Table 6 tries to provide a consistent series with the data for 1984 and 1990 reclassified to the post-1991 SOC, using a mapping supplied by the Institute of Employment Research at the University of Warwick. Table 6 would suggest no acceleration in the rate of change in employment by occupation in the early 1990s when compared with the early 1980s. The share of manual employment has been declining at the same rate over the two time periods, while the share of managerial, professional and technical employment has been increasing at a slightly slower rate in the early 1990s.

Critically, the decline in manual employment in the early 1990s was concentrated on **skilled** (craft) manual work, reflecting in part the problems of the construction industry highlighted in Table 5. Even in the mid-to-late 1980s skilled manual employment was losing share at about the same rate as unskilled (other occupations) manual employment. Semi-skilled manual employment (operatives) has been declining at a slower rate. In other words, it is strictly misleading to talk about a decline in **unskilled** employment in Britain. It is **manual** employment which is in decline, with skilled manual employment declining at at least the same rate as unskilled manual employment, but with semi-skilled employment declining less sharply.

The share of clerical employment has been declining at a somewhat faster rate in the early 1990s when compared with the early 1980s, though it is notable that during the period of expanding employment in the mid-to-late 1980s the share of clerical employment increased marginally again. The share of employment in the personal services has been rising at a significantly faster rate in the early 1990s.

Table 7 reports results from the Institute of Employment Research utilising the post-1991 SOC, and looking at the changes in employment over the period 1971-91 alongside estimates of the future structure of employment projected to 2001. The OECD has argued that projections at this level of aggregation have been reasonably accurate in the past,

though attempts to project the future occupational structure of employment at a lower level of aggregation have often been unsuccessful (OECD, 1994b). If they can be relied upon, these projections suggest a slowing down in the rate of change in employment by occupation when comparing the 1990s with the 1980s, and in particular they show a slower fall in the share of manual employment. As these projections are referred to extensively in the policy debate in the UK these results are of significance.

In Section 1 the value of looking at a matrix which presented data by industry and occupation simultaneously was emphasised. Table 8 presents such a matrix for the UK from the 1991 Census using the six broad industrial categories already familiar from earlier tables and the nine occupational categories from the Standard Occupational Classification (SOC). Table 9 presents the same data from the 1981 Census, using the mapping provided by the Institute of Employment Research to enable one to re-arrange the occupational data for 1981 using the SOC. A comparison of Tables 8 and 9 allows for a much finer analysis of the changes in the structure of employment over the period 1981-91 in the UK. Table 10 gives examples of typical jobs within each of the main cells as a guide to interpretation.

Unsurprisingly it is the cells in the top right hand corner of the Tables, covering managerial, professional and technical employment in the services industries, which show the major gains in terms of the share of total employment. The cells in the bottom left hand corner, covering manual jobs in the primary and manufacturing industries, show the major losses in share. This would paint a portrait of a steady increase in the share of employment requiring higher qualifications and skills and/or experience. However, in the centre and bottom of the Tables there are a number of cells representing 'service' occupations and some manual work in the construction and service (especially transport) industries where the share of employment is also expanding modestly or is remaining steady.

As Machin (1996) has pointed out, within the shrinking manufacturing sector there has been a shift in employment away from

blue collar, manual jobs towards white collar jobs. This occurred steadily over the whole period 1948-90, with a slight acceleration associated with the early 1980s recession. Within this shift towards white collar jobs, Machin identifies a significant increase in the employment share of managers and professional staff.

Tables 8 and 9 confirm this. Managerial employment in manufacturing actually increased its share of overall employment between 1981-91, despite the sharp fall in manufacturing employment, and it is this shift to a more management-intensive employment structure which dominates the trend identified by Machin. Indeed, the overall trend of an increased share of white collar employment disguises the fact that clerical employment in manufacturing fell sharply over this period and, indeed, at a faster rate proportionately than manual employment. Within the category of manual employment in manufacturing, skilled manual (craft) employment has fallen at a faster rate than semi-skilled (operatives) manual employment, while unskilled manual (other) employment shows the sharpest decline.

The rising share of managerial and administrative employment is common to all industrial sectors. Indeed, most of the expansion in employment in this occupational category has occurred as a result of increased employment **within** industries. By contrast, the growth in employment in the professional and associate professional and technical occupations has occurred mainly as a result of changes in the structure of employment **between** industries, that is, the rising share of employment in the business and financial and public and social services where professional and technical employment is especially concentrated. More professional and technical staff have also been employed **within** each industry. The public and social services also have a high concentration of employment in the personal and protective services occupations, which has been the only occupational category embracing some less skilled work to have expanded its share of employment. The sharp fall in the share of clerical employment in manufacturing over the period 1981-91 was partly offset by an increase in clerical employment in the business and financial and public and

social services. However, the share of clerical and secretarial employment fell in every industrial sector.

The share of both skilled and semi- or unskilled manual employment fell sharply over the period in the primary and manufacturing industries. A comparison of Tables 8 and 9 also shows a fall in unskilled manual employment in the public and social services, which probably in part reflects the impact of contracting-out in slimming the workforce in areas such as refuse collection. However, in the construction and the distribution and transport industries there was no significant decline in manual employment as a proportion of total employment. This is an important point to emphasise. In 1991 manual employment in these two industries accounted for about one-in-seven of all jobs in the economy, a proportion largely unchanged from 1981. These jobs accounted for about one-in-five of all the employment opportunities available for men in 1991 (Table 11). Construction is a very cyclical industry, but neither it nor the distribution and transport industries are in secular decline. By 1991 for every nine workers employed in manual jobs in the primary and manufacturing industries, there were 11 workers employed in manual jobs in construction and the services industries. In 1981 these two broad sectors employed equal numbers of manual workers.

Tables 11 and 12 show matrices of employment by industry and occupation for men and women respectively in 1991. It shows the expected pattern of the heavy concentration of men in the manual occupations and in managerial/administrative positions, and the heavy concentration of women in the clerical, service and sales occupations. 45 per cent of men in 1991 held manual jobs and of these over half – 25 percentage points – were employed outside of the primary and manufacturing industries. Overall, a similar proportion of women as men were employed in the professional and associate professional and technical occupations, though with women concentrated in the public and social services as teachers and nurses, for example.

In order to throw more light on the issue of whether the changes in the structure of employment represent a trend towards better paid or

lower paid jobs, Table 13 and 14 show the average earnings for men and women respectively in the main industry-occupation cells where employment is concentrated. These tables might also help illuminate whether sharp differences in pay are likely to make it difficult for workers displaced from one cell to find acceptable jobs in other cells, that is employment which does not require too sharp a fall in pay.

For men in skilled, semi-skilled and unskilled manual jobs there seem to be few sharp differences in pay across industries. Generally, pay in the primary industries and in the public and social services is somewhat below average, but there few differences in pay across the manufacturing, construction and distribution/transport industries. Employment in business and financial services offers the highest average pay for most occupations and has been the fastest expanding area of employment. For men and women there are few sharp differences across industries in pay for clerical employees, except that the business and financial services offer the highest rates. The sharpest differences in pay across any one occupation occur in the managerial/administrative category, with much higher levels of pay for managers in the business and financial services, and much lower levels of pay for managers in the distribution, hotels and restaurants sector. This category of the SOC covers a wide range of employment from corporate and financial managers through to shopkeepers.

For men, most full time jobs in the 'service' occupations tend to offer lower pay than most manual jobs. For women, however, any differences are less obvious. Women displaced from manual jobs who can find full time employment in the service occupations would not on average have to take a significant pay cut. However, men displaced from skilled or semi-skilled manual jobs in the primary or manufacturing industries would on average suffer a significant reduction in pay if they took a full time job in the service occupations. On the other hand, such men would not have to take a significant pay cut if they found another full time manual job in the service industries. Semi- or unskilled manual workers might be better able to make this transition across industry sectors as the skills required of a labourer or

a driver will differ little across sectors. Ironically, it might be the skilled manual workers who could find it more difficult to cross an industry boundary if their craft skill is too specialised to a particular industry.

As noted earlier, it is the cells in the top right hand corner of the matrices covering managerial, professional and technical employment in the service industries which show the major gains in the share of employment, and cells in the bottom left hand corner which show the major losses. Pay in the expanding cells is on average about two-thirds higher for men than in the contracting cells and nearly twice as high for women. A more formal analysis of trends in employment by occupation and by pay is contained in the next section, where UK and US experience is compared.

3. CONVERGENCE? EMPLOYMENT CHANGE IN THE UK, US AND FRANCE COMPARED

In section one it was shown how ILO data from different countries on changes in the structure of employment by occupation were not readily comparable. In this section data from the US are re-ordered as far as possible to fit the UK SOC in order to compare levels of, and changes across time in, the occupational structure of employment.

Firstly, Tables 15 and 16 look at changes across time in the occupational structure of employment for the US and France respectively, using national data as would be represented in the International Standard Classification of Occupations (ISCO-1968). The interpretation of data for the US is rendered problematic by the sharp change in the occupational classification of employment which took place in that country in 1983. Table 15 compares the change in employment by occupation over the period 1973-82, using the old classification, with the change over the period 1983-93, using the new classification. It reveals a clear **deceleration** in the rate of change in employment by occupation in the latter period in comparison with the

earlier period. In particular, the decline in the share of blue-collar employment slowed down significantly. The only break in trend was the modest decline in the share of clerical employment between 1983-93 when compared with a modest increase in the earlier period.

This conclusion, that the rate of change in employment by occupation shows signs of a deceleration in the US, is in contrast to the findings reported by the OECD (1994a, pages 11-13). It also conflicts with the findings of Berman *et al* (1994) who detected signs of a slight acceleration in the rate of increase in the share of white collar employment in US manufacturing in the 1980s.

The OECD detected signs of a slight acceleration in the shift of employment towards white collar jobs and away from manual employment, when comparing the two periods 1972-79 and 1979-90. However, in comparing these two periods the OECD does not seem to have taken account of the change in the occupational classification in 1983. Another important reason for the different results is that the period 1973-82 incorporates two quite major recessions in the US, while the period 1983-93 included only one relatively minor recession. The time periods chosen by the OECD split up the two major recessions.

Berman *et al* compared two periods, 1973-79 and 1979-87, similar to those used by the OECD, and also do not seem to have taken into account the change in the occupational classification. The acceleration in change noted by Berman *et al* is small enough to be wiped out by small alterations to the data brought about by a change in the classification. Even these authors urge putting the skill upgrading in the 1980s into historical context, given the evidence of a sharp shift towards white collar employment in US manufacturing in the 1950s.

The arguments presented here highlight a critical point of this paper. The recessions of the mid-1970s and early 1980s in the US and in Britain saw significant jolts to the structure of employment. But since the early 1980s the pace of change may have slowed, even taking into account the recessions of the early 1990s in both countries.

When the rate of decline in the share of manual employment in the US over the period 1973-82 reported in Table 15 is compared with the rates of decline in manual employment in other countries in the 1980s, reported in Table 4, it can be seen that the rates are very similar. For example, the rate of decline in blue collar employment in Britain between 1981-91 is almost exactly equal to the rate of decline in the US between 1973-82. This is suggestive that some European countries in the 1980s were witnessing the kind of changes experienced by the US in the 1970s.

Another important point to register about the data in Table 15 is that it shows manual employment being replaced primarily by managerial, professional and technical employment. In neither period is there any significant growth in the share of the sales and service occupations. The American labour market has **not** seen a sharp increase in the proportion of people working in ‘low skill’ service employment, but has seen a sharp increase in the share of ‘high skill’ managerial, professional and technical employment. This is very different from what is perceived to have occurred in much popular discussion of the so-called American ‘jobs machine’.

Table 15 is based on data from the US Current Population Survey (CPS), a household survey similar to the Labour Force Surveys carried out in the UK and other European countries. It is thus measuring the proportion of people employed in different occupations. The Occupational Employment Statistics (OES) record firm level data on the number of jobs in the economy and do record an above average increase in some ‘low skill’ service jobs (Rosenthal, 1995). The two sources are reconciled in part by consideration of the increased number of people holding two jobs, most of whom are in low skill employment. Also, the OES does not include self-employment where the growth appears to be disproportionately concentrated in the managerial, professional and technical occupations.

The US Bureau of Labour Statistics (BLS) constructs a detailed matrix of employment by industry and occupation similar in concept to the simple matrices presented in Table 8 for the UK. However, the

US matrices are constructed using data from the OES and therefore suffer from the two weaknesses discussed in the last paragraph.

For the period 1983-93, Table 15 also includes a disaggregation of employment change within the blue collar occupations into skilled and unskilled manual workers and transport operatives. It shows a significantly faster decline in the share of unskilled manual employment when compared with skilled manual employment, but no decline at all in the share of transport operatives. Once again this makes the point that there are areas of blue-collar work, in this case the transport industry, where the share of employment is relatively steady.

Table 16 looks at changes in the structure of employment by occupation in France over a thirty year period and the results reported here are consistent with those reported by the OECD (1994a, page 11-13). There is no sign of any acceleration in the rate of change in the structure of employment by occupation. In particular, the rate of decline in the share of blue collar employment over the period 1982-92 is very similar to the rate of decline over the period 1975-82. Over the period 1962-75 the share of agricultural employment alone was declining at a similar rate to agricultural and blue collar employment combined over the latter two periods. In common with the UK and the US, the only break in trend in the 1980s is the very modest decline in the share of clerical employment, following expansion in the previous two periods. The share of employment of the sales and service occupations shows little change over the whole thirty year period. Overall, the general trends in France over the period 1962-92 look very similar to those reported for the UK over the period 1951-91 (Figure 3).

Table 17 reports the results of matching as far as possible US data on employment by occupation with the UK's Standard Occupational Classification (SOC). Only by making the data comparable in this way can one be more confident about comparing like with like. Each of 278 job titles in the US post-1983 occupational classification were assigned to one of the 22 sub-major categories in the UK SOC. US data for 1983 and 1993 were then mapped onto the UK SOC. The

slightly different dates for the US (1983-93) and the UK (1981-91) in Table 17 reflect the availability of consistent data from the two countries.

The main differences between the UK and US classifications relate to the managerial and administrative, sales and personal services and other manual occupational categories:

- a. Like most countries the US continues to have a separate category for agricultural and related workers. The UK SOC does not. Farmers are counted as managers (SOC 1.2), farm workers are counted in the other manual category (SOC 9.1) and gardeners are counted as skilled manual workers (SOC 5.2).
- b. Like most countries the US counts the owners or managers of shops as sales workers, but the SOC counts them as managers (SOC 1.2).
- c. Many 'service' workers in the US, including cleaners and kitchen workers, would be classified in the 'other' category in the UK (SOC 9.2). This category in the UK also includes postal workers, who are counted as clerical employees in the US.
- d. Even within the top occupations, the US puts accountants, for example, into the managerial category, while the UK puts them into the professional category (SOC 2.4).

Given the difficulties in exactly matching occupations, small differences between the US and the UK figures in Table 17 should not be over-emphasised.

In the early 1980s Britain had a much higher share of manual employment than in the US, and a much lower share of professional and technical employment, and of sales and service employment. By the early 1990s the UK's structure of employment by occupation had converged on that in the US. Indeed, the similarity between the proportions employed in the three broadest categories in Table 17 by the early 1990s is striking.

However, this broad picture needs elaboration. The UK had a

higher proportion of its workforce employed as managers or owners of service establishments, but a significantly smaller proportion in professional and technical employment. The UK still had a higher proportion of its workforce in clerical employment, but a similar proportion employed in the personal and protective service occupations and as sales workers. The US had a higher proportion employed as sales representatives. The UK had a significantly higher proportion employed as craft workers (in manufacturing) when compared with the US, but a very similar proportion employed as operatives and drivers (that is semi-skilled manual employment). The US had a slightly higher proportion employed in unskilled manual jobs. These differences in the structure of manual employment are interesting and primarily reflect the different mix in US manufacturing, which relies more on a strong cadre of managerial, professional and technical staff matched with a large semi-skilled workforce, but with fewer craftsmen.

When looking at changes across time, the direction of change has been the same in the two countries, that is, the declining share of manual employment and the rising share of managerial, professional and technical employment. The UK saw a more rapid shift in this direction over the period in question. Important exceptions to note for both countries are the relatively constant shares of employment in the construction trades (SOC 5.1) and for drivers (SOC 8.2). As noted before these are two areas of manual employment which are not in secular decline.

Tables 18 and 19 present data on the structure of employment by occupation in the US and the UK for men and women respectively. The similarities in the employment structure overall by the early 1990s hide important differences between the genders. A higher proportion of men in the UK are employed in managerial and administrative positions (including owners and managers of service establishments). A significantly higher proportion of American women are employed in professional and technical occupations. A higher proportion of American men are employed in relatively low skilled personal services occupations as sales workers and in unskilled manual jobs, but a lower

proportion of American women are in such jobs when compared with the UK. Overall, the US labour market seems less gender segregated than the UK labour market.

Table 20 presents this information in a slightly different way, by calculating the proportion of each country's civilian employment-population ratio accounted for by the different occupations. When presented this way it can be shown that between 1983 and 1993 the proportion of all adult Americans employed in manual, blue collar jobs hardly altered. Three-quarters of the increase in the employment-population ratio in the US occurred as a result of the expansion of managerial, professional and technical jobs. The UK's shortfall in its employment-population ratio was the result of lower employment across many of the occupational groups, including the professional and technical occupations and semi- and unskilled manual occupations.

To finish this section an analysis is undertaken for the UK and the US similar to one in Robinson (1994). The occupations in the UK SOC are ranked according to the level of earnings in each occupation. This is in order to identify four categories of employment ranging from high paid managerial and professional jobs, down to low paid service and unskilled manual jobs. Changes in the proportion of total employment falling into these categories are then traced across time for the US and the UK.

Table 21 reports median earnings for each of the major occupations in the UK SOC for men and women separately. Three of the nine categories are split in two because of the very sharp differences in the types of jobs contained within them. The four categories of occupation by pay in Table 22 were arrived at by identifying:

- a. For the first category, those occupations where median pay was above the upper quartile for the whole earnings distribution.
- b. For the second category, those occupations where median pay was between the median and the upper quartile for the whole earnings distribution.
- c. For the third category, those occupations where median pay was

between the median and the lower quartile for the whole earnings distribution.

- d. For the fourth category, those occupations where median pay was below the lower quartile for the whole earnings distribution.

The third category, which turns out to be by far the largest, embraces what the Americans would refer to as ‘middle class’ jobs, that is skilled and semi-skilled manual jobs (especially for men) and clerical jobs (especially for women) and also owners and managers of service establishments. The purpose of this analysis then is to cast light on the so-called ‘disappearance’ of these kinds of jobs, and what jobs are replacing them.

Rosenthal (1995) conducted a similar, but more finely disaggregated, analysis of the US labour market using OES data and without carrying out a separate analysis for men and women. Table 22 reports the results of the analysis used here which allows for a comparison of UK and US data.

Table 22 shows the decline in ‘middle class’ jobs in Britain and the US over the periods shown. In Britain their share fell by five percentage points and in the US by three percentage points over a decade, reflecting the significant decline in the share of manual employment and the more modest decline in clerical employment. In both Britain and the US this share has been taken up by professional, managerial and technical jobs which on average pay significantly more. In neither the UK nor the US has there been an increase in the share of employment in lower paying occupations.

Rosenthal (1995) reports a modest increase in the share of lower paying occupations in the US, but with higher paid occupations still increasing their share at twice the rate of the lower occupations. This conclusion is based on an analysis of OES data which suffer from the drawbacks discussed earlier. The two results can be reconciled by saying that the proportion of dependent jobs which are in the lower service occupations has risen modestly, but the proportion of all Americans employed in the lower service occupations has not altered

significantly over the period 1983-93. Table 22 reveals no signs of any strong bipolarisation in employment patterns, that is the replacement of 'middle class' jobs by managerial, professional and technical jobs **and** low level service jobs in almost equal measure. Rather the bulk of the growth is in managerial, professional and technical jobs.

In terms of comparing the structure of employment in the two countries in the early 1990s there are signs of convergence. The UK still has a higher share of employment in 'middle class' jobs reflecting the greater proportion of the workforce employed in both skilled manual (craft) and clerical jobs. By contrast, it has a much lower proportion employed in highly paid professional and technical jobs. The overall share of employment in lower paid service and semi- and unskilled manual jobs is similar in both countries. These overall patterns again hide significant gender differences, with the US having a much higher proportion of women employed in 'high paid' jobs and conversely a smaller proportion in 'low paid' jobs. A higher proportion of American men are employed in lower paid occupations and fewer in 'middle class' skilled manual and clerical jobs. For women in both the UK, but more especially in the US, the structure of employment has been changing more rapidly than for men.

4. EMPLOYMENT CHANGE AND THE DEMAND FOR QUALIFICATIONS

It is now possible to draw together some of the analysis from the previous sections. There is a general shift in the structure of employment away from manual jobs in the primary and manufacturing industries towards managerial, professional and technical jobs in the business, financial, public and social services. The share of employment in lower paid service occupations is relatively constant. There are no signs of any acceleration in the rate of change in employment structure by industry for 10 OECD countries, and no signs of any acceleration in the rate of change in employment by occupation

for the UK, the US and France. In fact, following sharp changes in the structure of employment in the US in the 1970s and in the UK in the early 1980s, the pace of change appears to have abated.

The changes which have occurred in the structure of employment by occupation point unambiguously to an increase in the demand for higher educational qualifications which the expanding managerial, professional and technical occupations often require. However, the pace of change is such that the increased demands appear to be incremental rather than necessitating a drastic expansion of provision of post-school education.

Robinson and Manacorda (1996) looks at the change in the occupational and educational structure of employment in Britain over the period 1984-94. It shows that changes in the occupational structure of employment can only explain a modest part of the increase in the holding of qualifications by the employed workforce. On the other hand, the increase in the proportion of the workforce with different qualifications over the period 1984-94 can predict with remarkable accuracy the structure of the occupations by qualification in 1994, implying that the increased holding of qualifications by each successive age group simply results in employers of each occupation upping their educational requirements as would be suggested by the credentialist hypothesis. The **predictability** of this process argues against an interpretation based on skill biased changes in the demand for labour, which would be expected to have a differential impact across occupations. These are stark conclusions, suggesting that the outputs of the education and training system in Britain over the period 1984-94 did not merely keep pace with labour market changes, but allowed employers to hire more qualified people for what in the data look like essentially the same jobs.

Table 23 reports a similar shift-share analysis for the US to that performed on British data and reported in Robinson and Manacorda (1996). In this analysis all 278 job titles which make up the US occupational classification were assigned to an educational category reflecting the typical requirements for the jobs contained within that

sub-occupation. The changes in employment by occupation over the period 1983-93 can then be used to map the changes in the requirements for different levels of educational attainment. Table 23 uses four educational categories ranging from higher educational qualifications to post-secondary technical qualifications, to jobs requiring extensive work related training, and finally jobs requiring the minimum in terms of formal education and/or limited on-the-job training. In Table 23 these four categories are broadly matched to the National Vocational Qualification (NVQ) levels used to inform the debate on educational reform in the UK.

The changes in educational requirements mapped out in Table 23 are as strikingly modest as those reported in Robinson and Manacorda (1996). Over a decade the proportion of jobs requiring higher or post-secondary education increased by just under three percentage points, and the proportion of jobs requiring high school graduation or less education fell by two percentage points. There was also a modest decline in the proportion of jobs requiring extensive work-related training, reflecting the declining share of employment in skilled manual jobs. This analysis uses OES data which excludes the self employed. With self employment expanding more rapidly amongst managers and professionals, Table 23 will slightly understate the increased requirement for higher qualifications.

More importantly, the analysis does not take into account the increase in the demand for qualifications **within** occupations. But then it is not possible to know whether if we observe an increase in the proportion of clerical workers, for example, holding higher educational qualifications, this reflects an increase in the demands made in the job, or simply that employers are using qualifications to screen applicants, and graduates are being required to accept such jobs because they cannot find work which will fully utilise their qualifications. These are the issues discussed more fully in Robinson and Manacorda (1996), and in Beduwe and Robinson (1996) which reports results from six European countries.

It is interesting to compare Table 23 with Table 22. Many of the

jobs which are in the 'third quartile' in Table 22 are in the bottom educational category in Table 23. These are the routine manual and clerical jobs which pay reasonably well, but which demand few formal educational qualifications. These jobs are a declining share of the total. This is an important component of the 'hollowing out' of 'middle class' jobs referred to in much of the debate in the US. However, the rate of decline should not be over-emphasised.

One interesting feature of Table 23 is that it makes it clear that the changing occupational structure of employment is increasing the demand for higher qualifications delivered through full time higher education, and not intermediate skills and qualifications delivered through extensive work based training programmes. The UK's education and training system has been evolving along 'North American' lines, with a sharp increase in enrolment in full time further and higher education. This direction of change seems completely correct when considered in terms of the changing structure of employment.

An important area of contrast between the 'North American' model of educational participation, towards which the UK is evolving, and the 'continental' model, is the prevalence of part time working amongst students. Table 24 charts this and shows the significant increase in the proportion of UK students holding part time jobs. For teenagers the UK had by the early 1990s converged on the US and Canada with over a third of students at any one point in time holding a part time job. There was still a significant shortfall amongst young adults in higher education, where only one in five in the UK held a job at any one point in time in the early 1990s compared with around half in the US and Canada. This may reflect the higher proportion of British students in higher education studying away from home, where it may be more difficult to tap into informal job networks, as well as the more generous financial support offered to higher education students in the UK. Nevertheless, the contrast between the English speaking countries and the continental European countries is striking.

The North American pattern almost certainly has significant

advantages, in that individuals matching full time education and part time work come out of the system with qualifications and also, through their work, practical skills and experience (and an employer's reference) which will probably enhance their employability.

6. CONCLUSIONS

The pace of change in the structure of employment by industry and occupation does not appear to be accelerating. In the UK in the early 1990s the structure of employment by industry was changing more slowly than in the early 1980s. In the US the structure of employment by occupation showed less change over the period 1983-93 than during the period 1973-82. In France, as in the UK, the structure of employment by occupation seems to be changing at a steady pace, decade by decade. Aside from the early 1980s, Britain has not seen a significantly higher rate of change in the structure of employment than other OECD countries. The direction of employment change across countries seems very similar. Manual jobs are a declining share of total employment. Skilled manual jobs in Britain have been declining at a similar rate to unskilled manual jobs. Semi-skilled manual jobs, including those for transport operatives, have been declining more slowly. The same is true in the US. These trends reflect the declining share in total employment of the primary and manufacturing industries.

Managerial, professional and technical jobs are increasing their share of employment, reflecting the shift in the industrial structure toward financial and business services and the public and social services, and for the UK at least the increased proportion of the workforce employed in managerial and administrative positions **within** each industry.

Assessing the trend in clerical employment across the OECD is difficult because of differences in occupational classifications across countries, but in the UK, the US and France there was a modest decline in the share of routine clerical employment in the 1980s and early

1990s. This is the one break in trend with past experience. The share of employment in the sales and services occupations in most countries is broadly constant, though in the UK the personal service occupations are the one less skilled occupational group whose share of employment is increasing. However, middle ranking manual (and clerical) jobs are being replaced primarily by more highly paid jobs at the top end of the occupational spectrum.

The direction of employment change in the US is little different from other countries, though the rate of change in the structure of employment by industry and occupation was somewhat slower than in a number of other OECD countries in the 1980s. The US appeared to experience more structural change in the 1970s. The US has not in the 1980s expanded employment disproportionately at the lower end of the labour market in low paid sales, service or unskilled manual occupations. By the early 1990s the US did not have a significantly higher proportion of its workforce in lower paid occupations when compared with the UK. However, this overall picture did hide significant differences by gender, in that the US has a smaller proportion of women employed in these occupations but a higher proportion of men employed in low skill jobs. This leaves open the possibility that the American welfare system is associated with greater pressure on men to accept low paid jobs. However, it needs to be stressed that the US in the 1980s did not see an increase in the overall share of the workforce employed in such jobs.

Continental European countries such as France have significantly higher unemployment rates and lower employment-population ratios when compared with the US. This shortfall in employment opportunities is related to lower levels of employment across the services sector and across all the 'white collar' occupations. Policies under the heading of product or labour market deregulation might help generate jobs in the distribution industry **and** in the business and financial services or public and social services. This would include jobs in the less well paid sales and service occupations as well as jobs in the highly paid managerial, professional and technical occupations.

Given the heavy incidence of unemployment amongst the young and women in countries such as France, a strategy which accepted that some employment generation would occur in the lower skilled sections of the labour market, which disproportionately employ these demographic groups, should not be seen as unwelcome.

The shift in employment away from manual jobs towards managerial, professional and technical occupations unambiguously implies an increase in the demand for higher qualifications. However, straightforward analysis for the US reported here, for the UK reported in Robinson and Manacorda (1996), and for six European countries reported in Beduwe and Robinson (1996), suggests a rather modest increase in demand. The changes which have occurred in the occupational structure of employment, which might be taken to proxy changes in the net demand for labour by skill, would seem to require an increase of no more than a few percentage points each decade in the proportion of the workforce holding higher qualifications, and a decline of a few percentage points each decade in the proportion of the workforce with few or no formal qualifications.

It could be argued that these measures of change focusing on quite aggregated categories of industries and occupations is failing to pick up more subtle changes going on at the sub-industry or occupation level. Most of the increase in wage inequality in the US and Britain has occurred **within** occupations. Economists have so far been able to say relatively little about what might be causing these changes at a more disaggregated level.

A final point to stress is that the data published by the ILO and used by the OECD and others on the distribution of employment by **occupation** are not readily comparable across countries. Interpretation of the data is rendered problematic by the differences in the manner by which countries classify jobs into different occupational categories.

The question is often posed, how can displaced manual workers possibly find jobs in the expanding managerial, professional and technical occupations? A similar question could have been posed in the 1950s or 1960s in the OECD countries in relation to the difficulty

of displaced agricultural workers finding jobs in the expanding managerial, professional and technical occupations. The direction and pace of change in the last two decades really seems to differ little from previous post-war decades for most countries. In practice few displaced farm or manual workers do make that transition. It is their sons and daughters who do.

Changes in the qualifications structure of the workforce occur primarily across generations, as the children of people with few formal qualifications attain higher qualifications and their parents leave the labour force. This process is usually a gradual one. And this raises the possibility that sharp changes in the structure of employment over a relatively short space of time can throw the labour market into a position of structural imbalance. But over time as the changes in the structure of employment moderate and the new generation respond to the changed employment opportunities by embracing the need for higher qualifications, these imbalances can work their way out.

This seems a reasonable description of the British labour market over the period from the mid-1970s to the mid-1990s. It might well fit for other OECD countries as well. In the early 1980s Britain witnessed a very severe recession with sharp job losses in manufacturing industry and for manual workers. However, by the mid-to-late 1980s the pace of change in the structure of employment had moderated again. The recession of the early 1990s saw less dramatic shifts in the employment structure by industry. In the meantime, in the late 1980s young people began to vote with their feet to enter further and higher education in much greater numbers, as documented by Robinson (1995). This began to feed through into the stock of qualifications in the workforce in the early 1990s. As a consequence of this moderation of the change in the structure of employment, and the supply response in education, by the early 1990s unemployment rates by qualification had evened out again significantly in Britain (Nickell and Bell, 1995).

The significant dislocation caused by the early 1980s recession in Britain is to a large extent 'water under the bridge'. The pace of change in the structure of employment is now moderate enough and the

supply response in education great enough to be sanguine that a downward path for unemployment in Britain in the rest of the 1990s will not be spoiled by any severe imbalance between the demand for, and supply of, labour in different occupational groups with different educational requirements. It is again worth stressing that reasonably well paid manual jobs in the construction and transport industries are not in secular decline, and with so many jobs in the primary sector and in manufacturing having already been eliminated, manual employment seems unlikely to decline at the same rate in the 1990s as in the 1980s.

There is a less satisfactory side to this ‘water under the bridge’ argument. Many older manual workers (a good proportion of them doing **skilled** jobs even if they were formally **unqualified**) displaced in the early 1980s recession have left the labour force entirely, as documented by Schmitt and Wadsworth (1994). This cohort is now past retirement age. The early 1990s recession also saw a sharp fall in male employment and economic activity rates. Older manual workers displaced during recessions are the least likely to find alternative employment. For many any recovery in employment may come too late to avoid the transition into inactivity. A robust recovery in employment will be associated with a levelling off in economic activity rates for men and a rise for women. But it seems unlikely that many of those older workers who are already inactive will be drawn back into the labour market.

The recovery in the UK economy over the period 1993-96 was driven by a relatively expansionary monetary policy and a significant depreciation of the exchange rate which produced an export and manufacturing led increase in output. In turn, this has been associated with a very significant slowdown in the rate of change of employment by industry and occupation. If the overall stance and balance of macroeconomic policy in Britain in the second half of the 1990s is got right and there are no further shocks to the economy, we can expect only modest further changes in the employment structure. With the stock of qualifications in the workforce rising strongly there is reason to think that unemployment could continue to fall.

ENDNOTE

1. This measure of change is used here because it is the measure used by the OECD (1994a) and this paper wishes to highlight any discrepancies with OECD's analysis.

TABLE 1
Unemployment rates and employment-population ratios for 10 OECD
countries, early 1980s S early 1990s

		Unemployment rate %			Civilian employment as a % of population 15-64		
		Men	Women	Total	Men	Women	Total
Sweden	1981	2.3	2.6	2.5	84.5	73.3	79.0
	1992	6.1	4.1	5.2	78.0	75.8	76.9
Japan	1981	2.3	2.2	2.3	87.2	54.1	70.5
	1992	2.1	2.2	2.1	87.8	60.6	74.2
Norway	1982	2.4	3.1	2.7	83.4	62.4	73.1
	1992	6.6	5.1	5.9	74.8	67.1	71.1
US	1983	9.6	9.2	9.4	73.9	55.9	64.8
	1993	7.1	6.5	6.8	76.9	64.4	70.9
UK	1981	10.0	8.8	9.5	78.6	53.7	66.1
	1991	9.2	7.2	8.2	75.5	61.6	68.6
Canada	1981	7.0	8.3	7.6	79.5	53.9	66.7
	1991	10.8	9.7	10.3	74.2	61.4	67.8
Germany	1980	2.5	4.3	3.2	79.6	50.6	65.0
	1991	5.0	6.3	4.2	73.8	54.5	64.3
Finland	1982	5.4	5.2	5.3	75.7	68.6	72.0
	1992	15.2	10.7	13.1	64.6	63.2	63.9
France	1982	5.8	10.5	7.8	72.2	48.5	60.9
	1992	7.9	12.8	10.1	66.0	51.1	58.5
Spain	1980	10.4	12.8	11.1	69.9	28.1	48.8
	1992	14.3	25.5	18.4	62.2	31.4	46.8

Source: OECD Labour Force Statistics.