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Unemployment and Inequality

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Abstract

Analysis of contemporary unemployment has increasingly focussed on the position of the least skilled. The deterioration in their labour market position is first situated in the context of structural trends in the labour market. The development of labour market inequality in the 1980s is summarised and the deteriorating employment position of the unskilled, both in terms of registered unemployment, withdrawal from the labour market and falling relative earnings is documented. Explanations for these trends are discussed, with the distinction being drawn between those which focus on changes in technology and trade patterns and those which see declining overall demand for labour as the primary factor. Alternative policy responses are surveyed, with emphasis on their distributional implications.

Zusammenfassung

Analysen über die aktuelle Arbeitslosigkeit konzentrieren sich zunehmend auf die Situation der geringer Qualifizierten. Die Verschlechterung ihrer Arbeitsmarktposition rührt vor allem von den strukturellen Veränderungen auf dem Arbeitsmarkt her. Die Entwicklung der Ungleichheit auf dem Arbeitsmarkt während der 80er Jahre wird zusammenfassend dargestellt und gleichzeitig die Verschlechterung der Arbeitsmarktposition der Ungelernten an Hand der Indikatoren „Registrierte Arbeitslosigkeit“, „Rückzug vom Arbeitsmarkt“ und „Fallende relative Einkommen“ dokumentiert. Erklärungen für diese Trends werden diskutiert, wobei ein Unterschied gemacht wird zwischen denjenigen Erklärungen, die sich auf Veränderungen in Technologie- und Handelsmustern konzentrieren und den Erklärungen, die in der allgemein zurückgehenden Nachfrage nach Arbeit den Hauptgrund sehen. Unterschiedliche Politikreaktionen werden, vor allem im Hinblick auf ihre Verteilungswirkungen, vorgestellt.

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UNEMPLOYMENT AND INEQUALITY

International organisations are currently subjecting labour market trends in the advanced countries to an unprecedented barrage of analytical scrutiny and policy prescription (Commission of the EC 1993, OECD 1994a 1994b and the ILO 1995). Chart I, lifted from the OECD's massive *Jobs Study*, illustrates why. Unemployment fell only modestly in the expansion of the later 1980s and its subsequent further rise could not, once again, be blamed primarily on external 'shocks'. Several countries, most notably Sweden, which had seemed to have found ways of coping with slower growth without rising unemployment, have finally succumbed. Others, like the UK and New Zealand, which most rigorously applied the free market principles of the 1980s have failed to register marked improvements in labour market outcomes.

Over the last decade unemployment has increasingly come to be seen in the context of an overall increase in labour market inequality. This includes, along with rising registered unemployment, withdrawal from the labour force (economic 'inactivity') and greater earnings inequality. In this broader context policies have to be examined not only for their effectiveness in reducing unemployment, but also for the distribution of costs and benefits.

The first section of this paper outlines in very summary form the main underlying trends in the OECD economies to give the context in which the rise in unemployment has occurred. Then the main features of the unemployment position are documented, and placed in relation to other dimensions of labour market inequality. The third section presents alternative views as to the connections between underlying labour market trends and rising labour market inequality; is the latter simply the form that certain underlying macroeconomic forces take (such as a higher NAIRU) or is it evidence of structural problems which require a broadening of the analysis? The conclusion outlines the main lines of policy response.

I Macroeconomic and Structural Trends

(i) Jobless Growth ?

The combination of stubbornly high unemployment and the spread of computer-based technology has led to a belief that economic growth no longer requires additional jobs to the extent characteristic of the "golden age" of growth in the 1950s and 1960s. This is very misleading. Despite the halving of output growth in the OECD after 1973, numbers at work actually rose faster, up to the recession of the early 1990s, than before 1973 (table 1).

The surprising finding of faster employment growth after 1973 is true of the EC where employment problems have been especially severe. Since average hours of work seem, from patchy data, to have been declining *less* rapidly in Europe than before 1973, there is no evidence of a slowdown in the amount of work performed. Total labour input in the EC was roughly constant over the period 1979-90, whilst it probably declined at around 0.5% per year over the period 1960-73.

The relative steadiness of employment growth implies that labour productivity growth has declined as much (or even more in hourly terms) than output growth. It is absolutely wrong, therefore, to blame technology for "destroying jobs" at an unprecedented rate; if this had been the case labour productivity would have been rising faster than before.

In the short term, rapid expansions in output still leads to faster job creation. In the UK for example, the period 1985-88 saw output rising by 4.7% per year and employment grew by 2.0% per year; from 1990 to 1992 output fell at 1.4% per year and employment declined by 3% per year. With labour productivity typically rising in OECD countries in the range 1.5-2.5% per year in sustained expansions, maintaining a 4% per year growth for several years provides jobs at a rate of around 1.5 - 2.5% per year. Conversely severe recessions inevitably bring major job cuts and this has been especially true of the recession of the early 1990s (the most spectacular case being the 18% fall in Finnish employment from 1990 to 1993). The *Jobs Study* noted (OECD 1994b p 55) that the rather weak recovery in employment at present reflected a feeble rebound in output rather than a failure of employment to respond. The impact of output on jobs applies in the medium-term as well. A cross-section analysis of the (trough-to-trough) period 1982-93 found that for every 1% per year that a country increased its output growth (as compared to the previous cycle), there was a nearly 1% boost to employment growth (Boltho and Glyn 1994 table 3).

(ii) The pattern of jobs

Between 1973 and 1990 the share of OECD industrial employment (manufacturing, mining, construction and utilities) declined from 36% to 30%. In the EC the shift out of industry has been rather faster, starting earliest in the UK where it fell to 29.0% by 1990 as compared to 47.7% in 1960.

Industrial productivity typically grows faster than the average for the whole economy because of weak technical change in services (see Baumol et al 1989). Thus a constant share of industrial employment requires that industrial output also grows faster. After 1973, however, industrial output grew slower than GDP (by 1.5% per year in the EC for example as compared to 2.3% for GDP). More than a switch of consumer demand towards services was involved. Investment, which is mainly demand for industrial output, stagnated up to 1979. Subsequently net exports of manufactures declined, from 14% to 5% of value added in EC manufacturing between 1979 and 1990. Combined with the usual faster growth of labour productivity in industry the result of the slow growth of industrial output was a declining share of industrial employment.

The rate of outflow of workers from industry since 1973 has been less than from agriculture before 1973. So why should loss of industrial jobs be singled out? The explanation is in the nature of industrial work. Traditionally in the OECD countries this has been relatively well paid, mainly carried out by men, working full-time with skills that are specific to industrial work and requiring only basic education as a pre-requisite. Major declines in industrial employment result in large-scale, geographically concentrated redundancies which flood local labour markets with less educated labour. It is difficult for service employment to take up the slack. Much of it (public services, retail and wholesale

distribution, personal services) supplies a local population and is thus spread relatively uniformly across the economy. Even those producer services which are more mobile often require different skills and working schedules from industrial work, with the result that service employment may be unable to absorb many of those losing jobs in the industrial sector. By contrast the outflow from agriculture before 1973 occurred in the context of plentiful job opportunities in the towns. Particularly in the early 1980s many of the EC countries experienced a collapse of industrial employment (in the EC it fell by 13% between 1980 and 1985) which was immediately reflected in rising unemployment despite the fact that employment in services rose by nearly 8% (a similar amount in absolute terms). Many of the new service jobs were filled by women entering the labour force, leaving a large pool without work including many of those previously with industrial jobs.

It is often presumed that a less dynamic creation of service jobs is what lies behind the relatively sluggish growth in European employment as compared to the US "Jobs Machine". The best way to assess a sector's contribution to providing work is to compare employment growth with population of working age. This (table 2 below) shows that since 1973 services in the EC have been nearly as effective in providing jobs for the working population as they were in the USA; in fact in the 1980s their rates of employment creation were the same. The difference in employment performance is almost entirely due to the much faster run-down of employment in agriculture in Europe (which fell by about 3.5% of the population of working age in the EC) and the very rapid decline in industrial employment. In the UK, which started with a smaller agricultural sector than the US, the difference in employment performance is entirely a reflection of the loss of industrial jobs. Indeed in the 1980s per capita creation of service jobs was faster in the UK. Given the faster rundown of agriculture in most of Europe and the decline in industrial employment since 1973, the expansion of services employment needed to be, but was not, faster than in the USA.

The service sector is such a heterogeneous collection of activities that it is helpful to disaggregate. Table 3 shows the importance of the major service sectors; Finance and Business Services and the private part of Community, Social and Personal Services (CSPS) have represented the major sectors for employment growth and here the EC's record since 1973 is very close to that of the USA. But still employment shares are well below those of the US, as is true also for wholesale and retail trade. Moreover the shortfalls are several percentage points larger in both trade and CSPS if employment is compared to the whole population as indicating potential need for these services (the ratio of employment to population is nearly 15% higher in the USA). But it should be remembered that the "service economy" in the USA developed over a very protracted period. The share of industrial employment only began to decline in the early 1970s when agriculture had already shrunk to a low level. In Europe industrial decline has set in whilst agricultural rundown is continuing.

Changes in industrial structure imply changes in the occupational structure of jobs, and these have occurred within sectors as well. Table 4 shows rapid gains at the top of the occupational structure with employment of professional and managerial staff rising on average about 2% faster than total employment. Particular countries have experienced especially rapid growth of sales workers (USA) or service workers (Australia), but on average they, along with clerical workers, have maintained a rather constant share. Finally

the constant absolute numbers of production workers implies a sharply declining share in total employment.

These trends imply an important expansion of opportunities for those with most educational qualifications and contraction of jobs for those with fewest (Gittleman 1994). Although the occupational classification is too broad to draw strong conclusions, this data does not seem to support the notion that the economy is generating disproportionate numbers of "bad" jobs. Such an impression may reflect two other factors. Firstly more of the bad jobs may be visible, behind the hamburger counter rather than out of view in sweatshops. Secondly the bad jobs have been becoming worse in terms of conditions of work, levels of pay (relative and even absolute) and skill levels. OECD (1994b p 163) cite US studies showing that "new technologies both reduce the skill content and the share of low-skill jobs whilst increasing the skill content and the share of high-skill jobs."

(iii) Labour Force Growth and Structure

Section (i) showed that shortage of jobs in the OECD has occurred despite rather steady growth of employment. This implies that an accelerated growth of the labour force has been the immediate change behind the upward trend in joblessness; demand for work has increased faster rather than there having been a slower expansion of available jobs. The growth rate of the labour force in the OECD rose from 1.1% per year during 1960-73 to 1.3% per year after 1973; in the EC the acceleration was more pronounced from 0.3% per year to 0.8% per year.

Population growth does not explain the labour supply trend; in the USA the growth of population of working age has slipped and in the EC it has only been fractionally faster than before 1973. The main factor has been increased participation in the labour force. Before 1968 the labour force was growing 0.4% per year slower than the population of working age in both the OECD as a whole and in the EC; by the 1980s the labour force was growing 0.3% per year faster (0.1% per year in the EC). In the 1960s the average "participation rate" fell as declining male participation (young men spending longer in education and average retirement age declining) outweighed such increases in female participation as there were¹. But after 1973 female participation grew more strongly and since 1979 this has offset continued declines in male participation. By 1992 the average participation rate for women was 60% (79% in Sweden, very close to the OECD average for men); this represented an increase of one quarter since 1973. As the OECD points out (1994b chart 1.9) the rise in women's participation has been closely related across countries to the growth of the services sector.

Comparing the 1980s with the 1960s, of the 0.6% per year acceleration in labour force growth in the EC, 0.5% per year is accounted for by the changing trends in the participation rate. It is this rise in participation which has meant that even the considerable

¹ In the EC women's participation was falling until 1968. This reflected the exodus from agriculture where participation of women was sometimes recorded as being very high (in Germany for example). After 1973 the shift from agriculture slowed (both relatively and absolutely) as the agricultural population sank. So the decline in measured female participation rates as a result of urbanisation was less of an influence.

growth of jobs in Europe by historical standards has failed since 1973 to match the increased numbers of those seeking work. Women entering the labour force were the most important source of demand for additional jobs in services, to which, of course, they had just as much claim as men leaving agriculture or industry or young people seeking work for the first time. It might be tempting, however, to interpret these trends as implying that increased labour force participation was responsible for rising unemployment. But cross-section evidence shows the opposite. Although some countries (such as Switzerland, Austria and Japan) with relatively good unemployment records had little change in labour force participation, the general pattern was for countries with the smallest increases in unemployment to have substantial rises in participation (Nordic countries and North America) whilst the EC countries with large increases in unemployment lagged behind in participation trend (Elmeskov and Pichelmann 1994 figure 2).

The average educational level of the OECD potential labour force has been rising steadily; each decade's cohort of working age has shown around a 10% higher share of people with at least an "upper secondary education" than the previous decade's. The majority of the OECD population aged between 25 and 64 are now in this position with the share being more than three quarters in North America, Germany, Norway and Switzerland (OECD 1993b tables C1(A),(B)). Proportions of the actual labour force with degrees have also been rising, frequently by about one half in the 1980s (OECD 1994b table 1.6). Thus the deterioration in the relative economic position of the less well educated, documented in the next section, has occurred in the context of their diminishing numerical importance in the labour force.

(iv) **Conclusion**

The jobs deficit in the advanced countries has reflected a faster growth in the demand for jobs since 1973 rather than slower job creation. The amount of work provided has if anything accelerated, but not enough to keep pace with the additional demand for employment arising from increased women's participation. Growth rates have declined sharply but employment still responds strongly to faster output growth. Thus a protracted period of faster output growth would lead to a sizeable dent in unemployment rates, provided of course that the higher level of activity could be sustained. The service sector has been the source of additional work and the relatively poor performance of Europe is mainly due to its much greater loss of jobs outside the service sector, and in particular loss of industrial jobs. Relative to the population, however, service employment is not so extensive as in the USA. The occupational structure has shifted out of manual work, with professional and managerial employment growing most rapidly and there has been a parallel shift in the educational qualifications of the labour force. This is the background to the employment problems, and in particular increasing inequality, which have accumulated within the OECD over the past 20 years.

II Labour Market Outcomes and Inequality

A very unequal spread of unemployment is important both from the point of view of the welfare costs involved and because effective policies may need to be focused on the particularly disadvantaged groups. The main task of this section is to evaluate the extent to which the unskilled have been particularly hard hit over the past decade and a half, a matter of increasing concern in recent years. First however some related trends in the distribution of labour market outcomes will need to be outlined.

(i) Broad Trends in Labour Market Inequality

Table 5 provides information on various aspects of rising joblessness in the 1980s. The data is presented for the (broadly) peak-to-peak period 1979-90 in order to focus on the underlying trends (comprehensive data is not available for the current recession with the effect that the major deterioration in the labour market situation of Sweden and Finland is left out). Countries are grouped according to their institutional patterns and responses. The overall rise in joblessness is indicated first of all by the change in overall unemployment (column 1). For the great majority of countries the recovery in the second half of the 1980s failed to bring unemployment down by as much as it had risen in the preceding recession. This picture is reinforced by the data on the change in participation in the labour force by "prime age" men². The latter measure indicates, for what has been a core section of the labour force, that the trend in unemployment in the 1980s systematically understates the rise in joblessness, frequently substantially. In one or two countries (including the UK) the somewhat reassuring picture from overall unemployment, that at least things did not get worse in the 1980s, cannot be sustained once withdrawal from the labour market is included.

Women and young people (under 25) have been disproportionately hit by unemployment since 1973. Women's unemployment was typically one and a half times the male rate in 1979 (here the UK was the leading exception with considerably lower female unemployment). Perhaps not surprisingly in view of the expansion of women's employment, over the 1980s female unemployment typically rose less (in absolute terms) than men's, with the spectacular exception of Netherlands and Spain. Youth unemployment was typically two or three times the average in 1979 (Germany being a striking exception). Over the 1980s the pattern is very mixed; the UK and Australia at one end achieved reductions whilst a number of EC countries saw youth unemployment rise much more than the average. In 1979 the share of long-term unemployment was less than one tenth in North America and some Scandinavian countries, but 30-40% in most of the EC. Shares rose substantially in a number of European countries indicating an increased concentration of the incidence of unemployment. Finally earnings inequality, which was higher in North America than Europe, and especially Northern Europe, at the beginning of the 1980s subsequently rose substantially in a number of countries, most

² Changes in participation rates for women include the strong and relatively autonomous underlying trends discussed above, those of young people reflect growing participation in education and interpretation of participation by people over 55 is muddied by the impact of voluntary early retirement. These factors are much less important for those in the 25-54 age group.

strongly in the UK. It is important to recognise that this was not a universal phenomenon; the great majority of European countries showed very small changes one way or the other and in the case of Germany in particular earnings inequality appears to have declined.

Country experience in the 1980s falls into rough groups:

(a) In North America, Australia and the UK increases in unemployment were slight, the relative position of young people and women tended to improve a little and there was little rise in long-term unemployment. But there were increases in labour market withdrawal, and earnings inequality rose substantially most notably in the UK. (Japan's pattern, though from an extremely low starting level of unemployment, is rather similar though without the labour market withdrawal).

(b) In the EC countries (except the UK) unemployment grew considerably along with sharply rising non-participation in Germany and Italy. There were some spectacular increases in women's unemployment (Netherlands and Spain) and youth unemployment (Italy, France, Spain and Ireland) and usually big increases in the share of long-term unemployment. In contrast to the picture of rising joblessness, with increasingly concentrated incidence, earnings inequality changed rather little. (New Zealand resembles the EC countries in terms of the large rise in total and especially youth unemployment).

(c) In the Nordic countries cracks appeared in the generally high employment/ high wage equality pattern (Rowthorn 1992), with rises in unemployment in Norway and in wage inequality in Sweden in the latter part of the 1980s. This was before the recessions in Finland and Sweden destroyed (most probably for the medium-term at least) their superior employment record (between the highest points for European unemployment of 1984 and 1994 the unemployment rate in the EC rose by 1%, in Sweden by 4.8% and by 13.1% in Finland).

(ii) The position of the Unskilled

A number of factors have contributed to increasing attention being devoted to the employment and earnings prospects of the less skilled or qualified. Above all there is awareness of the dangers of increasing economic polarisation illustrated by the situation of the USA (see for example *Business Week* 1994 and the *Economist* 1994). Secondly the thrust of demands for "labour market flexibility" seems to have shifted from emphasis on the average level of real wages to the issue of the wage structure and the need for those at the lower end of the pay distribution to "price themselves into jobs".

Whilst there are difficulties with any measure of "skill" there is a considerable amount of data available for sections of the population with different levels of educational attainment. This corresponds to part at least of economists' notion of human capital. The OECD recently showed for a number of countries (1994b table 7.2) that there is also a strong correlation between level of education and subsequent involvement in training, a finding that applies also to the UK (Green 1994). Recent work for the USA and UK (Juhn et al 1991, Schmitt and Wadsworth 1994) has documented the extent to which employment varied with educational attainment, noting in particular the importance of non-participation

in the labour force. Table 6 below provides data for a number of countries for the employment rate (ratio of employment to population) of the least educated group (first level of secondary school) relative to that of the most educated (with university degrees or equivalent). This in turn depends on relative ratios of employment to the labour force (1 minus the unemployment rate) and relative labour force participation. Attention is restricted to men aged 25-54 because, for reasons already discussed (see note 2) the impact of changes in the labour market position of those with more and less qualifications shows up most starkly for this group³.

The differences in employment rates are often extremely large. With the familiar exceptions of Sweden and Norway, and less expectedly Italy, the least educated were 10-15% less likely to have jobs than the most educated, and in the USA the differential was 20%⁴. These levels of disadvantage applied towards the end of the 1980s (1987 or 1988) when labour markets were not at their most depressed. The importance of looking at participation as well as recorded unemployment is also underlined⁵; inactivity frequently contributes as much as unemployment to differences in the employment rate⁶.

It may be surmised that the position of the least qualified deteriorated during the 1980s. Comprehensive data is sparse but what is available is shown in table 7. Employment rate changes are shown together with changes in the relative earnings of the two groups. When multiplied together the relative employment rates and relative earnings show relative incomes from employment per head of the population group, an index of educational disparities in income from employment (EDDIE)⁷. The table includes changes in this index.

³ A comprehensive analysis, which is not possible here, would deal in equal detail with women, young people, those over 55 and ethnic minorities. Data for unemployment suggests a broadly similar pattern by educational group for women as for men. In North America, the UK, and Australia, but not in Europe, lack of education leads to particularly high unemployment amongst the youngest age groups. For the less educated between 55 and 65 participation rates are particularly low (OECD 1989).

⁴ Differences between countries have to be interpreted carefully because of the very wide differences in the relative sizes of the two groups in different countries. The OECD (1994b table 1.16) made some rough calculations for unemployment rates for the first and last quartiles of the labour force ranked by educational qualification for a number of countries covered in table 6. In the case of Germany the differential between the most and least educated categories is considerably more than for the quartiles because the least educated group is so small.

⁵ It seems probable that those at the bottom of the educational ladder also constitute a disproportionate number of the "involuntary" part-time workers (put by the OECD at 20-30% of the part-time workers who as a group were accounting for much if not all of increased employment in a number of EC countries) and of the rising numbers of temporary workers in France and Spain (OECD 1994b).

⁶ Where participation rate data is not available, the unemployment rates given by Nickell and Bell show differences for the educational groups in the range 5-9% at the end of the 1980s (France, Spain, New Zealand); only Japan has such small differences as the Nordic countries and Italy in table 6.

⁷ It is analogous to Bob Rowthorn's INDEED index (1992) combining a country's employment rate with an index of earnings dispersion across industries.

The declining relative employment position of the less qualified is confirmed (column 1) with substantial worsening in the USA and EC countries. Bigger absolute increases in unemployment are typical (column 2) and apply to most countries not included in the table (for example France, Spain, Canada and Norway - see Nickell and Bell 1995 table 2). The importance of including participation changes is underlined. It is striking how the change in relative *employment* rates gives a more pessimistic picture of the position of the least qualified than does the change in their relative unemployment rate⁸. Some of those dropping out of the labour force have on to invalidity benefit. As Blondal and Pearson (1995) document this phenomenon has by no means been confined to the UK and in a number of countries has been supplemented by quite large numbers on early retirement schemes. They show that in some countries the criteria for invalidity benefit have quite explicitly included the person's chance of finding a job.

When earnings are brought into the picture the drastic decline in the position of the least qualified in the USA and UK stands out; a fall of one quarter in their relative income from employment over little more than a decade is a huge deterioration. In the UK the deterioration in relative employment is almost as important as relative earnings. This picture of deteriorating job opportunities at the bottom end of the UK jobs market is filled out in graphic detail in Gregg and Wadsworth (1995). Their evidence suggests a chronic shortage of full time, reasonably paid long-term jobs. Unless well qualified, job seekers are faced with predominantly part-time, insecure work at pay rates which are declining relative to the average and with little prospect of this providing a route into a better job.

If the calculation for the change in EDDIE in the USA is taken back to 1975 then the index declines by a full one third, almost one half of which was due to declining employment opportunities for the least educated (a fall in their employment rate of 15% as compared to the best educated). In the USA the disadvantage was taken mostly in employment between 1975 and 1979 and mostly in earnings after 1979. It is very striking that the two countries with the biggest declines in relative earnings (UK and USA) also have the biggest declines in relative employment, whilst conversely Sweden managed to maintain both before the rise in unemployment in the early 1990s which impinged most on the least qualified. Germany is the one case which combined a severe fall in the relative employment rate of the least educated with an apparent small improvement in their relative earnings.

⁸ The use of relative unemployment rates, rather than relative employment rates, in most discussions of the problem (OECD 1994b, 1994d) has tended to suggest that relatively little change in the relative position of the least educated. But it is surely the relative incidence of the desirable characteristic (ie employment) which indicates relative welfare. Consider the relative safety of means of travel. Suppose the chances of a car accident on a particular journey had gone up from 5% to 50% whereas the chances of a train accident went up from 1% to 10%. The relative chances having an accident in a car as compared to a train have remained 5 to 1; but the relative chance of a safe journey by car as compared to train has gone down from 96% to 56%. The position of car travellers has obviously deteriorated relatively and so does that of the less qualified if their relative chances of a job diminish as compared to the better qualified even if the ratio of unemployment rates is unaltered. Thus it is changes in absolute unemployment rate differentials (as used in table 5 above) or (more comprehensively) in relative employment rates (as in tables 6 and 7) which best show the comparative labour market position of different groups. This does not imply that relative changes in unemployment may not be relevant for wage determination (see Nickell and Bell).

(iii) Is there a jobs/low pay trade-off?

Encouraging "labour market flexibility", at the bottom end of the pay distribution in particular, has become a major focus of policy advice with weakening of minimum wage provisions or changes in the benefit system being seen as the most fruitful candidates for amendment. The evidence presented in the last section suggests at least that there are routes other than reducing their relative pay for preventing a deterioration in employment prospects for the less qualified. But the institutions and policies which lie behind the success stories are not well understood and may be even harder to replicate. So wage flexibility could still seem an attractive option. But does it work?

The OECD presents a chart (1994b chart 5.1) which plots the growth of employment over the period 1980-89 against the change in wage dispersion; there would be a strong correlation but for the UK where the biggest increase in wage dispersion in the OECD was associated with employment growth hardly greater than in other European countries where dispersion hardly rose or even fell. But workers in the UK secured much larger than average real wage increases in the 1980s. A better test of the impact of wages at the bottom of the pay distribution may be to look directly at the increase in costs of employing the low paid. More precisely the product wage of the low paid (measuring real labour cost from the employers' point of view) can be compared in a rough way with total hours worked in the private sector⁹.

There is a respectable degree of correlation between the two across OECD countries (figure 2); the regression is significant with every 1 percent per year slower growth of labour costs for the low paid being associated with a 0.5% per year faster growth of private sector employment¹⁰. Inevitably much of the variability in employment remains unexplained and must be accounted for by other factors. Some impact of reductions in low pay on jobs is consistent with the evidence of quite high substitutability between unskilled and skilled labour, although as Wood (1994) points out such estimates vary quite widely. Very large impacts seem hard to square with evidence from France (Bazen and Martin 1991), the USA (Card et al 1993) and the UK (Gregg et al 1994) that minimum wages have small effects (if any) on employment, though it may be that monopsonistic structures rather than lack of substitution possibilities for unskilled labour is the

⁹ Real labour cost for the low paid is estimated from the growth of the average product wage (employee compensation deflated by the GDP deflator) adjusted for the relative growth of pay in the first as compared to the fifth decile, using the figure for men and women combined where possible (OECD 1993a table 5.2). It is clearer to compare hourly pay with total hours worked, for the employment figures are affected particularly by the growth of part-time work which is a distinct issue. Focus is on the bottom of the pay distribution since few have argued that increased dispersion at the top of the earnings distribution creates more jobs! In both the US and UK more of the increased wage dispersion has resulted from rising differentials at the top than at the bottom of the distribution.

¹⁰ If the growth of average product wages is substituted for low-paid product wages the regression with employment growth is wholly insignificant. There has been a very general increase in profitability in the 1980s (product wages growing slower than productivity), but whatever positive effect that might have on employment has been dwarfed by causation running in the reverse direction - the more unemployment rose the slower product wages grew relative to productivity (Glyn 1994).

explanation. It seems fair to conclude that reducing labour costs at the bottom end will have some effect on employment, but just how substantial is very uncertain.

(iv) Conclusion

During the 1980s most countries displayed either increased joblessness, with more long-term unemployment and more concentration on women or youths (many EC countries), or greater earnings inequality (the Anglo-Saxon economies, Japan). Even the high employment /egalitarian earnings distribution typical of the Nordic countries was fraying. The disadvantaged position of the least educated was not confined to pay; in many countries the chances of their having work was much smaller than the best educated, especially when falling participation is included. In the UK and USA there was a dramatic worsening of their position in the 1980s, and some deterioration was apparent in most countries. OECD experience in the 1980s suggests that falling relative wages for the least qualified was certainly not a necessary condition for their employment rates to be maintained; there was some tendency, however, for employment to rise fastest where labour costs at the bottom of the pay distribution grew most slowly.

III Explanations for growing labour market inequality

It is rather easy to rule out the most obvious supply side explanation for the declining job and earning prospects of the least qualified. Since their share in the labour force has been declining (as shown above) it cannot be put down to their increasing numbers. However even if declining, the numbers of the least qualified may not be falling as fast as previously in the face of long-term trends in the pattern of demand. Such an explanation (in reverse) has been suggested for rising earnings differentials for college graduates in the USA and the slowdown in the rising share of university graduates is a rather widespread phenomenon according to the OECD. A glance at the pattern of educational attainment over time suggests that it might be worth conducting a systematic analysis of the numbers of less educated as well. In a number of countries where upper secondary school education had extended to very large percentages of the population some decades ago (North America, Germany, Norway, Switzerland) the cohort aged 25-34 shows no further increases in educational attainment (and in the case of the USA apparently a slight decline - OECD 1993b table C1). Even if these trends prove to be important, the weakening in demand for less qualified labour remains the central underlying factor. This will be discussed next.

It is helpful here to distinguish between the effects of sharp reductions in demand and longer-term changes. The former should not be neglected. There have been three big upward lurches in unemployment (figure 1) which have not been reversed. The labour market position of the least educated deteriorated in absolute terms when total unemployment rose (Nickell and Bell 1995 table 2). The recent rise in unemployment in Sweden is a good example. The difference in the unemployment rates of the least and most educated rose from 1.5 percentage points at the end of the 1980s to 6 percentage points in 1993 as unemployment on average rose by 7 percentage points. Either demand

reductions were concentrated on industries where the least qualified are employed, and/or firms were hoarding their more qualified labour. But such effects would presumably be temporary as labour hoarding was unwound and demand patterns returned to normal if there were no longer-term changes in the structure of demand for labour¹¹.

(i) Trade and Technology

The most debated issue is the role of trade with the South in hastening the replacement of low-skilled jobs in the North by those demanding higher educational requirements. At first sight it seems most implausible that imports of manufactures from low-wage countries could have played a very important role. After all they were only a tiny fraction of the market for manufactures in the North (4.3% of the domestic market in the USA in the second half of the 1980s, around 3.1% in the big EC countries and 2.6% in Japan -Martins 1993); they were also by and large balanced by exports from the North to the South. In his book Adrian Wood argues (1994) that these imports would require very much more labour to produce in the North than their low value would suggest. His estimates suggest that manufactured imports from the South would have been nearly three times as expensive if produced in the North (Wood 1994 table 4.5). Correspondingly, very many more jobs were lost in the North than were gained in the more skill-intensive sectors which produced the goods (machinery etc) exported to the South to pay for the labour intensive imports. Wood goes on to claim that this direct effect has been compounded by the pressure which the imports have brought to bear in forcing the rationalisation (and thus job shedding) in Northern industry.

Wood's fundamental point concerns the *relative* demand for skilled versus unskilled (or more and less educated) labour. Both falling relative prices of imports from the South, and the defensive productivity growth they may engender, increase real incomes in the North. Thus, assuming permissive macroeconomic conditions, there will be large offsetting demand and employment increases in other sectors. Wood's case depends on the employment thereby generated being on average of higher skill intensity than the jobs lost in labour intensive manufacturing. Further, for there then to be an important effect on total unemployment, it must be the case that the twisting of demand away from unskilled labour reduces the sustainable level of employment overall. For example this could be because the economy runs into skill bottlenecks, and thus rising inflation, at a higher overall level of joblessness. Southern trade would then be the generator of an increased degree of labour market mismatch, which would in turn push up the NAIRU, or prevent it falling to the extent indicated by other developments in the 1980s.

This argument has provoked a heated controversy, particularly in the USA where imports from the South have been largest, where the position of the least educated has deteriorated very drastically as described earlier, and where the debate about NAFTA has given the

¹¹ OECD (1994b p13) reports US studies which point to a proportion of workers being employed in jobs for which they are "over-qualified", but not to an increase in this proportion which might explain the deteriorating position of the least qualified by their being "bumped down" off the end of the jobs ladder. It is important to discover whether this is also true of European countries where the trend in unemployment has been sharply upward.

whole issue an unusual degree of policy relevance. A recent very thorough analysis provides at least partial support for Wood, concluding for the US that "As a result of increased internationalisation, employment has declined sharply in low-skill sectors and has increased in high-skill sectors. In addition, the increased trade has contributed to falling relative prices of less skill-intensive goods and to the growing inequality of earnings between low-skilled and high-skilled workers, although the weight of the trade effect is uncertain" (Sachs and Shatz 1994 p 57). The OECD was much more doubtful. Significant, though quantitatively small, effects of North-South trade in reducing Northern employment were found in a "small number of specific industries (textiles, clothing, footwear, computers, radio-TV-communication equipment)"; however it concluded, surprisingly, that this effect was "most noticeable in industries employing a high proportion of skilled workers" (1994b p 104).

This debate will clearly stretch to many more articles and it is too early to predict where the consensus will settle. But trade explanations will at the very least have to be complemented by acceptance of an important role for technical progress. In the very simplest version of the trade story, competition from the South wipes out Northern sectors which use a great deal of less qualified labour, leading to some combination of falling relative wages and rising relative unemployment for the unskilled. It is an example of the pattern of production moving against the unskilled. But the price system should generate some offsetting effects. To the extent that the relative wages of the unskilled decline then unskilled labour should be replacing skilled labour *within* industries. However Sachs and Shatz's data (1994 table 11) show that there was a major reduction in the share of production workers (and they conclude a corresponding rise in the skill intensity of production) within the whole range of manufacturing industries. This evidence is the more impressive because it refers to the USA where the relative wages of the unskilled fell so markedly. A direct link between declining proportions of unskilled workers within industries and technology has been made by studies showing that the shift towards non-manual employment occurred more rapidly in those manufacturing industries identified as introducing new technologies (Berman et al 1993 for the US, Machin 1994 for the UK).

(ii) **What about the NAIRU?**

A decade ago the NAIRU model was taking over as the dominant paradigm for understanding European unemployment (see Rowthorn 1977, Carlin and Soskice 1990, Layard et al 1991). Particular stress was laid on increased trade union power as a result of the extended period of high employment, more powerful organisation and the reduced fear of job loss implied by higher unemployment benefits. The resulting attempts to gain improvements in living standards and extensions to the welfare state collided, after 1973, with deteriorations in the terms of trade as a result of the OPEC price increases .

Numerous estimates have been made of the NAIRU for individual countries, that is of the "equilibrium" rate of unemployment at which the inflation rate has no tendency to rise or fall. As elaborated and tested in Layard et al (1991) the pattern of unemployment is related to variations in the pressures imposed on the bargaining system (for example real income cuts as a result of terms of trade deteriorations) and to differences in the

bargaining structure which had to cope with these pressures.

Bargaining systems are differentiated according to whether wage determination operates at the level of individual firms or plants at one extreme or across more or less the whole economy at the other, with industry-level bargaining occupying the middle of the spectrum. The location of bargaining affects the market power of the participants and the extent to which they themselves bear all the consequences of their actions. A whole industry, if it is protected from international competition, has more latitude for raising prices than an individual firm. Thus part of a wage increase will be paid for by higher prices, and thus lower real incomes, in the rest of the economy. At the firm level, by contrast, more of any money wage increase will represent higher real cost of employing labour for the firm, with consequent effects on employment. If bargaining applies to the whole economy then money wage increases will lead to proportional price increases with no benefit to the workers (or if profits were squeezed jobs would be lost). Bargaining at the national level means that the externalities of the bargain are internalised. Calmfors¹ extremely clear and comprehensive review of the whole issue (1994) discusses the full range of externalities of which price increases is merely the most obvious. Based on this kind of reasoning Calmfors and Drifill (1988) derived their famous hump-shaped curve to suggest that bargaining would be most aggressive, and thus real wages and unemployment highest, in economies with intermediate levels of bargaining.

One important issue, emphasised in Soskice (1990), was that the actual level at which co-ordination of wage setting was carried out which was decisive, not the formal location of wage bargaining. Thus the Japanese system of firm-level bargaining could still be highly co-ordinated if firms, or unions or both closely co-ordinated their bargaining strategies taking into account the impact on the economy as a whole; alternatively a government incomes policy could lay down general norms, within which bargaining took place at a much more local level. It is difficult enough to define in a precise way even the formal level of centralisation of bargaining. When it is replaced by the degree of co-ordination, disputes are multiplied about where a particular country's system sits on the scale, and (a neglected issue) how this changes over time.

The argument has been extended in a number of important ways. For example, industries subject to international competition are thereby relegated, in terms of market power, to something closer to the position of individual firms, flattening the "hump". Calmfors (1994) conjectures that the net result of a number of such considerations is that the hump survives but that extreme centralisation could be expected to produce the best outcomes. But even this tentative result is subject to a further complication when national bargaining is supplemented by bargaining at an industry and/or firm level (as has been argued has always applied in the Nordic countries). In such circumstances, the need for bargainers all levels to demonstrate their capacity to achieve money wage increases may mean that restraint of average real wages, together with necessary changes in relative wages, can only be accommodated within a relatively high inflation rate. Such a very Keynesian role for changes in the price level could mean that at low inflation national (in reality multi-level) bargaining may generate worse employment outcomes than decentralised or even industry bargaining.

It is perhaps not surprising that the empirical work has yielded ambiguous results.

Although national bargaining seems to score fairly consistently over industry bargaining there is no consensus on the existence of a hump. Not only are the explanatory variables difficult to measure but the number of countries is small so that rearrangements of a few rankings can have a big effect. Since, by and large, they all had "full employment" in the 1960s and 1970s what is being examined is the ability of different bargaining systems to withstand the "shocks" of the early 1970s and 1980s. Calmfors concludes that "in the end we do not have much more than individual country examples that may be open to many interpretations" (1994 p 182). One fairly robust result (Layard et al 1991, Bean 1994) seems to be that employer co-ordination has been more important in securing wage moderation than union co-ordination (whilst the theory concentrated on unions).

Most of the empirical work stops before the latest recession. The spectacular rise in Finnish unemployment in the early 1990s, from one of the lowest to one of the highest in the OECD (together with the smaller rise in Sweden), has eliminated the very favourable employment record of the highly centralised group. But the Finnish economy, in particular, was hugely and uniquely affected by the collapse of trade with the former-USSR (and Sweden suffered particularly severe consequences from headlong financial liberalisation). No degree of bargaining flexibility could have prevented fierce recessions. It is notable in addition that in both countries moves to decentralise bargaining were reversed to deal with the crisis (Vartiainen 1994). It would seem unwise to draw strong conclusions about bargaining structures from the high unemployment in these countries..

Unemployment is not the only aspect of labour market performance which may be affected by the bargaining system. Wage dispersion seems definitely to have been lowest in the countries with centralised bargaining systems like Sweden and Norway, with the USA having very high differentials (Rowthorn 1992). The view that relative wage flexibility (to generate jobs for the least qualified) is assuming equal importance with aggregate wage flexibility (to generate jobs in general) is strengthening the hand of those arguing for decentralisation and deregulation of bargaining. But the case of Austria (very centralised bargaining but with high wage dispersion) shows how difficult it is to draw simple conclusions. Calmfors' view that "any proposals for change must build on existing institutions and traditions" (1993 p 182) is highly pertinent to the drawing of policy conclusions.

If the simple NAIRU approach sketched out above is adhered to literally then the structural trends outlined in the first two sections of this overview have no bearing on unemployment outcomes in total, only on which groups of workers are most affected. The fact that male industrial workers were losing their jobs whilst women previously out of the labour force were starting work in the services would lead to the pool of unemployed consisting disproportionately of male, manual, ex-industrial workers. But the size of the pool would be determined only by the extent to which *total* unemployment had to rise to keep inflation from increasing. This would depend on terms of trade deteriorations, bargaining structures and so forth. But for structural change to be irrelevant wage pressure must depend only on the total level of unemployment, without regard to what type of workers were unemployed, from which industries, in what part of the country and for how long.

Unease with such a conclusion grew with the experience of the 1980s. Trade unions suffered major set-backs in Europe and the USA (the Fiat dispute in 1979 in Italy and the UK miners' strike of 1984/5, the air traffic controllers' strike in the USA being important examples). Union membership has declined in a number of countries as has the coverage of collective bargaining (OECD 1994d). A number of countries including the UK toughened the unemployed benefit system in the 1980s, reversing the trend of the previous two decades (see Blöndal and Peason 1995) and minimum wages were frequently reduced or even abolished, which should have further weakened the bargaining stance. Moreover the deterioration in the terms of trade of the early 1980s had been reversed by 1990 (easing the pressure on real wages) and increases in taxation were more moderate as welfare state spending was held back. Thus the overall thrust of developments on the supply side should have generated some reversal in the upward trend of the NAIRU.

Yet Barrell et al (1994) found that, of the big four European countries, the only shift down in the NAIRU occurred in Italy (reflecting in part the dismantling of wage indexation). In all these countries NAIRU estimates were still in the range 8-10% by the end of the decade. The OECD (1994b chart 2.4) found only a slight, and suspiciously temporary, decline in the EC NAIRU at the end of the 1980s. A very detailed analysis of the UK labour market, which above all others should have registered the impact of weaker trade unions and labour market deregulation, strongly confirmed the broad findings of little change in the NAIRU: "Most authors agree that the Thatcher reforms have had very little effect on unemployment or wage formation" (Barrell 1994 p13)¹². The OECD's latest NAIRU estimates are shown in table 8. The only big shift is the non-EC European NAIRU shooting up in the early 1990s, another example of the NAIRU trailing along behind the trend in actual unemployment¹³.

In this connection Blondal and Pearson's detailed examination of the impact of unemployment and other forms of state benefit are very relevant (1995). In common with some earlier studies they find that the generosity of unemployment benefits have some impact on recorded unemployment. But they also find just as big an effect on labour force participation, so that, higher benefits are *not* associated with lower employment rates. Conversely high sickness and invalidity benefits reduce labour force participation. On this evidence the structure of state benefits appears to affect mainly the relative size of the various categories of the non-employed rather than the total number in work.

The NAIRU approach has been developed by taking into account differences in impact on wage bargaining of different sections of the unemployed. The long-term unemployed, it is

¹² Bentolila and Dolado (1994) argue from the Spanish experience that labour market deregulation may paradoxically strengthen the position of core workers by creating a protective layer of temporary workers.

¹³ Actual unemployment rose in Sweden because the gyrations of financial and macroeconomic policy engendered a 15 percentage point rise in the savings ratio between 1989 and 1993 and a 40% fall in business investment. Whatever the longer-term problems with the Swedish model (see Calmfors 1993 and Meidner 1993) they could certainly not explain a sudden leap in the NAIRU. The rise in the estimated NAIRU just expresses the smaller effect on inflationary pressure of the actual increase in unemployment than previous experience suggested.

suggested, exert less of a downward pressure on wage bargaining than those who have recently lost their jobs. This is because their capacity to work may be diminished by erosion of skills or may be thought to be low by employers who take long-term unemployment as a signal of low ability. One way or another their ability to compete in the labour market, is reduced (Layard et al 1991). The implication is that the effect of increased unemployment in holding down wages erodes as the proportion of long-term unemployed grows.

In the extreme case of all the additional unemployed becoming long-term and all of them ceasing to function as part of the reserve army of labour, then a higher level of unemployment would cease after a time to have any impact on wage bargaining (as in the "insider-outsider" models). Such pure hysteresis is an extreme position and would seem hard to reconcile with the micro-econometric evidence that relative wages within an economy are affected by local unemployment rates according to a "wage curve" (Blanchflower and Oswald 1994). More plausibly, some of a rise in unemployment will take the form of long-term unemployment so that its impact on wage bargaining diminishes over time (but does not disappear)¹⁴. A recent OECD study confirmed that there was generally a stronger effect of short-term unemployment on wages than long-term, but that long-term unemployment did have some impact (typically one third of the effect of short-term unemployment - Elmeskov and Macfarlan 1994). The UK was one of the countries where the long-term unemployed apparently exerted no depressing effect on wages at all, which might suggest particularly severe detachment from the labour market. It is noteworthy, however, that in the unusually sharp recovery of employment in the UK in the later 1980s, long-term unemployment declined as fast as short-term unemployment, even adjusting for the impact of the government's Restart programme (Robinson 1994).

Such an elaboration of the NAIRU approach is quite consistent with emphasis on the pattern of demand for unqualified labour or any other factor which causes unemployment to be concentrated on particular groups such as young people or women. For the particular form that a rise in unemployment takes may well affect the extent to which long-term unemployment rises and thus the eventual level of "equilibrium" unemployment. For example, suppose large numbers of comparatively well-paid, but not highly qualified, male industrial workers are losing their jobs in geographically concentrated waves of plant closures, and that many new jobs are in service sectors which are accustomed to paying lower wages to mainly women, often part-time, workers. This would set the scene for a large increase in long-term unemployment as those made redundant failed to find what they regard as "decent" or acceptable jobs; many may end up "withdrawing" from the labour market entirely (though perhaps only temporarily).

Indices of "mismatch", based on the variance of unemployment rates across skill categories or regions, do not show much increase in the 1980s. There was initially some tendency to interpret that as showing that mismatch was not important, in apparent conflict

¹⁴ In this a case a shock leads to a larger increase in the NAIRU in the long-term (when long-term unemployment has risen) than in the short-term (when all additional unemployment is of people who have recently lost their jobs) - see Carlin and Soskice 1990. Any structural change which increased the share of long-term unemployed for given total unemployment, as might result from job loss becoming more concentrated on the least qualified, would increase the NAIRU.

with the cross section finding for US states (Summers 1986) and for OECD countries (Glyn and Rowthorn 1988) that the degree to which unemployment had risen was closely correlated with the degree to which industrial jobs had been lost. It has been pointed out by Layard et al (1991 chapter 6) that even constant shares of mismatch in total unemployment would leave mismatch explaining perhaps one third of the overall *increase* in unemployment on their estimates. Inclusion of inactivity, which as discussed earlier is heavily concentrated on the less qualified, could also increase the weight of mismatch. As explained in Layard et al (1991) the appropriate indicator of mismatch depends on exactly how inequality of unemployment rates affects wage bargaining and thus the NAIRU. Wood's (1994) approach, which emphasises the key role of skilled labour in wage bargaining, suggests that all the excess unemployment of the less skilled as compared to the skilled represents mismatch. Thus most of the increase in the average unemployment rate, that is all the excess rise compared to the skilled rate, would be the result of the relative decline in demand for unskilled. This debate has yet to be resolved (Abraham 1991), but it may very well be that a shift in the pattern of demand towards more qualified workers has been an important factor preventing supply side changes from pushing the NAIRU down.

The "industrial reserve army" is obviously an extremely complicated phenomenon, as Marx pointed out, with varying degrees of displacement from the core of stable employment - temporary or casual employment, short-term unemployment, long-term unemployment, economic "inactivity" and so forth. It is hard to imagine that the size of the various pools, and movements of individuals between them, is independent of structural change within the economy and that all aspects relevant to wage bargaining can be captured by one number, be it total unemployment, or short-term unemployment. From this perspective a stable relationship between one indicator of the labour market conditions and wage increases would seem most surprising. This does not imply that labour market conditions do not matter and that a rise in overall unemployment will have no effect on inflation, only that its impact at any particular time is very hard to predict.

(iii) Inequality as an Equilibrating Mechanism

The assumption thus far has been that the deteriorating labour market position of the least qualified reflects some twist in the balance of labour demand away from them at a rate which has exceeded the fall in their share of the potential labour force. Nickell and Bell (1995) conclude that this is far from the whole story and that much of the greater absolute rise in their unemployment rate is the result of a complex chain of labour market adjustments to a general fall in demand which is not, in the first instance, biased against them. Their argument is that a general fall in demand, leading to equal rises in the percentage unemployment rate for the two groups, will have a smaller impact on the wages of the unskilled who will therefore suffer further job loss as skilled workers become relatively cheaper to employ. The reason that the wages of the unskilled would not decline as much is that an equal percentage point rise in unemployment represents a proportionately smaller rise in unemployment for the unskilled. This is because they have, for a variety of reasons have a lower initial level of unemployment. If it is the proportionate change in unemployment which affects wages, and the evidence for this is discussed in the paper, then the wages of the unskilled will be less affected. Depending

on the degree of substitutability between unskilled labour and skilled labour, the rise in relative wages of the unskilled will lead to a second round of job losses for them, whilst the loss of jobs for the skilled is cushioned to the extent that they are now substituted for the unskilled. If the degree of substitutability between the two types of labour is high then the final outcome could be nearly equal *proportionate* increases in unemployment for the two groups, far removed from the equal *absolute* increases which was the starting point.

Nickell and Bell accept that this cumulative disadvantage for the less qualified - their high initial unemployment rate dooms them to bigger increases - has been exacerbated by a non-neutral shift in labour demand away from the unskilled be it from trade or technology. The very fact that the relative wages of the unskilled have fallen sharply in a number of countries shows that changes in the pattern of demand, and not just its overall level, must have been very important (since general decreases in demand are predicted by them to raise the wages of the unskilled). But, conversely, Nickell and Bell argue that declining overall level of demand for labour has to be accorded a central role. Leaving aside their detailed results, which obviously depend on estimates of a number of parameters, the general point is that understanding the causes of rising labour market inequality, and thus devising remedies, must be based on a full analysis of labour market responses and not just on impact effects.

(iv) **Capital Stock Growth**

Another feature of the 1980s has been the relatively slow rates of capital accumulation (3% per year capital stock growth in Europe since 1973) On some accounts this has no implication for the NAIRU, but Rowthorn (1995) suggests three routes through which low investment may have exacerbated unemployment. A higher level of capacity utilisation may reduce real wages through relaxing the competitive pressure on firms thus allowing them to secure higher profit margins. It may also reduce real wages because lack of capacity worsens the overseas payments position and thus requires a lower real exchange rate to achieve balance. In order to prevent wage pressure unemployment will have to be higher. In addition, slower growth of the capital stock will reduce productivity growth and higher unemployment may then be required to bring the trend of wages into line. These effects of weaker investment may have offset other labour market trends that would have been expected to reduce the NAIRU (weaker unions for example). The fact that fewer "good jobs" will be generated in manufacturing and business services when manufacturing investment is low will then impinge on the less qualified who face more competition for less well paid jobs, in consumer services for example. Rowthorn's general argument is that both overall unemployment, and its differential incidence, may reflect broader aspects of macroeconomic development rather than just labour market characteristics. The implication is that higher investment can play an important role in employment creation.

(v) **Conclusion**

The connection between the deteriorating relative position of the less qualified and overall joblessness is complicated. In the argument of Nickell and Bell much larger falls in unemployment for the unskilled could be generated by factors which initially increase

unemployment across the board. Nothing extraneous by way of structural shifts towards skill-intensive industries or technologies is required. The apparent upward drift in the NAIRU in the 1980s, despite changes in the position of trade unions and benefit systems which would tend to have reduced it, still needs explaining. But any factor which raised the NAIRU would tend to have a larger absolute effect on the unemployment rate of the unskilled. The alternative approach sees changes in the structure of trade or in technologies as having speeded up the switch away from unqualified labour and the resulting concentration of joblessness as having increased the NAIRU or prevented it falling as skill shortages appear at lower levels of unemployment. The two approaches are not inconsistent, but their relative importance is contentious and debate on the matter is in full swing. Consideration of appropriate policies need not await its resolution.

IV Policies to reduce unemployment

In line with the theme of this overview, the policy focus will be on the deteriorating position of the less qualified and on how different policy approaches imply a particular distribution of the costs of reducing unemployment.

The issue of inflation cannot be ducked just because there is a structural element (more versus less qualified workers) involved. A useful benchmark is a generalised demand expansion of the traditional Keynesian type. It was pointed out above that the relative employment position of the least qualified tends to deteriorate in recessions; conversely upswings in demand improve their position. Lack of demand has certainly exacerbated the impact of the more fundamental trends which have been working against them. A strong upswing would obviously help. The basic problem is the NAIRU.

According to current OECD estimates (reproduced in table 8) actual unemployment was close to the NAIRU in North America, nearly 1% above the NAIRU in the four major EC countries and non-EC Europe, and nearly 2% higher in the smaller EC countries. On this basis very little of the current level of unemployment is attributed to government attempts to reduce inflation by pushing unemployment above the NAIRU. Conversely a general demand expansion would soon generate inflationary pressures and only a small reduction in unemployment could be sustained for more than a few years.

As pointed out earlier, on some versions of the NAIRU model expansions would have the same impact on inflation regardless of whether they were consumer or investment-led. If investment is accorded a moderating effect on inflationary pressure then attempting to ensure that a recovery is investment led is extremely important (a position strongly endorsed by the European Commission (1993) which put increasing the share of investment at the heart of its recovery programme). Even over and above the difficulties of engineering an investment expansion a further problem derives from the financial markets. Fearing the worst they can undermine expansions as the currency depreciates and/or interest rates rise. Even co-ordinated expansion at the European level, often advocated as a way to circumvent the balance of payments and exchange rate effects of unilateral deflation, only avoids one corner of the inflationary problem and leaves intact the domestically generated elements.

The position of the least qualified may be tackled more directly either on the supply or demand side (for an extremely helpful review see Wood 1994 chapter 10). If the NAIRU is in part a function of skill shortages then policies to enhance the skills of the unemployed offers a way of reducing it. To take the crudest example, if wage pressure depended only on the unemployment rate of the skilled then training unemployed workers so that they became skilled would reduce the NAIRU. Provided the government ensured that demand expanded appropriately then the newly skilled workers could find jobs with no impact on wage pressure. The effect would be even greater as the expanding employment of the skilled would, given permissive demand conditions, also generate complementary unskilled jobs again without inflationary pressure. Such an approach is egalitarian in terms of its effects on both employment and the distribution of earnings; further it will tend to enhance long-run productive capacity via its effects on the stock of human capital. Assuming the budget was already appropriately balanced the costs of training (including employment of trainers and extra allowances for the unemployed) would have to be met out of general taxation and the cost per additional long-term job created would depend on the effectiveness of the programme in enhancing skills and the impact of additional supply of skills on the NAIRU.

Given limited possibilities for the unskilled and jobless to be trained into being skilled and employed, attention has also been devoted to boosting the demand for unskilled labour. The market approach to encouraging such demand is to ensure that the cost of unskilled labour falls by removing impediments to such flexibility in the form of unemployment benefits or minimum wages. Some evidence for supposing that the behaviour of pay at the bottom of the scale has affected the relative speed of job creation across countries was given above. The relative underdevelopment of European services as compared to the USA noted earlier suggests one route through which pay flexibility at the bottom end might promote employment creation. But available evidence suggests that the price elasticity of demand for services, whilst considerable for individual services, is very small for services as a whole (Summers 1985). Thus reducing their price, via cuts in low pay, does not appear to be a very promising route to higher employment. If skilled and unskilled labour can be very readily substituted then a relatively small fall in the relative wages of the unskilled would provide a way of maintaining demand for the less qualified in the face of underlying trends in the opposite direction. But there are widely differing interpretations of the available evidence on this (see Nickell and Bell 1995 and Wood 1994) and it seems hard to reconcile the very large declines in both the relative demand for less qualified labour and in their relative wages at least in the UK and USA with a very high degree of substitutability. If substitutability is not high then it is clear that the distributional implications of relying on wage flexibility are highly inequalitarian - the worse paid sections of the population have to bear the cost of reducing unemployment via substantial cuts in their wages whilst the better off sections of society benefit from the cheaper services¹⁵.

Concern at the distributional implications of such policies has led to suggestions (Dreze

¹⁵ Cuts in working time in order to share out available unskilled work would raise labour costs and threaten employment unless pay was reduced commensurately, which this section of the labour force is least able to afford.

and Malinvaud 1994) that instead of encouraging declines in relative wages, the employment of the less qualified should be subsidised via their employers paying lower social security contributions (as is already the case to some degree in the UK) or more substantially via direct employment subsidies of one sort or another. The EC (1993 p 142) reports simulations that reductions in social security contributions at the bottom end of the pay scale, financed by a carbon tax, could have quite substantial effects on employment. An alternative tack accepts that market pressures have to force down relative wages (and thus labour cost to employers) but aims to support the incomes of the workers' concerned via some form of negative income tax for the low paid, or most radically by a basic income for everybody. The starting point for such proposals is the belief that the problem of unemployment should not be solved at the expense of the living standards of the least well off but rather that such costs should be broadly spread. The problem of course is that there has to be social acceptance that such costs should be met; otherwise the NAIRU will be pushed up as wage bargaining attempts to compensate for the extra taxation required to fund the employment policies.

The final approach is the direct public sector creation of jobs, which can be concentrated on sectors where less qualified workers predominate (construction or some basic public services would be examples). It is striking that the Scandinavian countries, where public sector job creation played such an important role, managed best to preserve the employment and earnings position of the least qualified. The impact on employment of such government spending is much more predictable than the impact of wage cutting or subsidisation of employers or workers in private services. No cuts in the relative pay of the less qualified are required, provided that taxpayers will accept the costs of redistributing some consumption from themselves to those currently unemployed (Glyn and Rowthorn 1994). Taxpayers benefit in terms of the public sector infrastructure and services provided and in terms of avoidance of the social divisions and dislocations which persistent mass unemployment bring. The welfare state, moreover, through the benefit system guarantees that the net cost to the government of extra public expenditure which reduces unemployment is less than the gross cost, considerably less where tax rates and replacement ratios are high¹⁶. However some net cost is inevitable. If consumption of the newly employed rises, but budgetary considerations rule out deficits, then those currently employed must make a contribution in terms of reduced consumption.

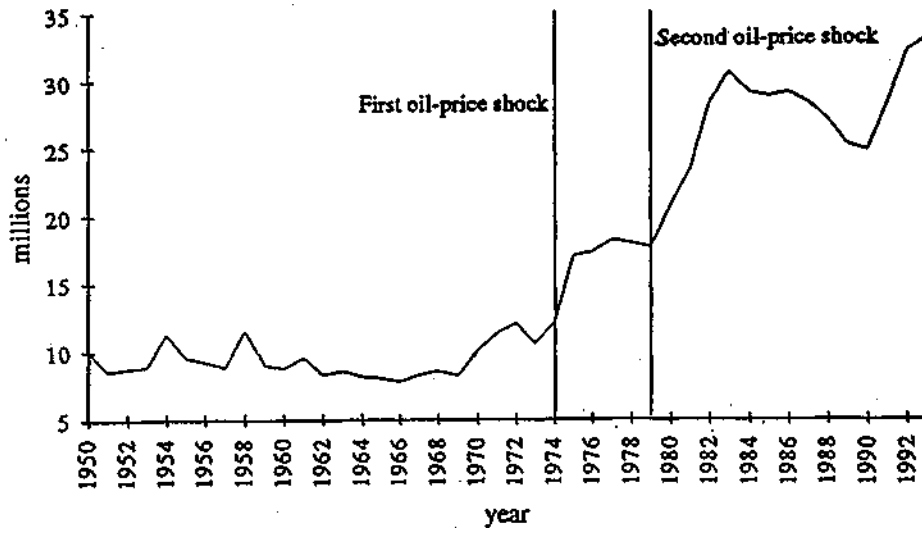
The OECD regards this as infeasible claiming "New Jobs must certainly be generated by the private sector, because in nearly all countries budget deficits and resistance to tax increases rule out significant expansion of the public sector" (OECD 1994a p 33). If they are correct about taxation then it would not just be public sector creation of jobs that would be ruled out, but any measures involving significant costs to the rest of society (such as subsidies for the creation of private sector jobs). This would imply that unemployment can only be tackled by relying on market forces and that there is just no alternative to accepting the distributional effects this generates, however harsh.

¹⁶ The net cost of public expenditure on wages and salaries which creates jobs is: $(\text{Gross Cost}) \times (1 - \text{Tax Rate}) \times (1 - \text{Net Replacement Ratio})$. If the average tax rate on earnings (including indirect taxes and social security contributions) was 33% and the net replacement ratio (post tax benefits as a share of post-tax earnings) was 50% (a low figure for Europe, see OECD 1994b tables 8.1 and 8.B.1) then the net cost to the taxpayer of the public spending would be one third of the gross cost.

This pessimistic, not to say defeatist, conclusion paradoxically coincides with probably the biggest ever transfer of resources to an economically disadvantaged section of a country -the former GDR. The political conditions in this case are very special but at least it illustrates that very large transfers can be acceptable.

There is no shortage of policies to tackle joblessness in general, and the plight of the least qualified in particular, in ways which spread the costs. As Kalecki argued more than fifty years ago (1990 {1943}), maintaining full employment is primarily a political problem.

Figure 1 Unemployment in the OECD Area, 1950-93



Note: Including eastern Germany from 1991 onwards.

Source: OECD Jobs Study.

Figure 2 Employment and Low Pay, 1979-90

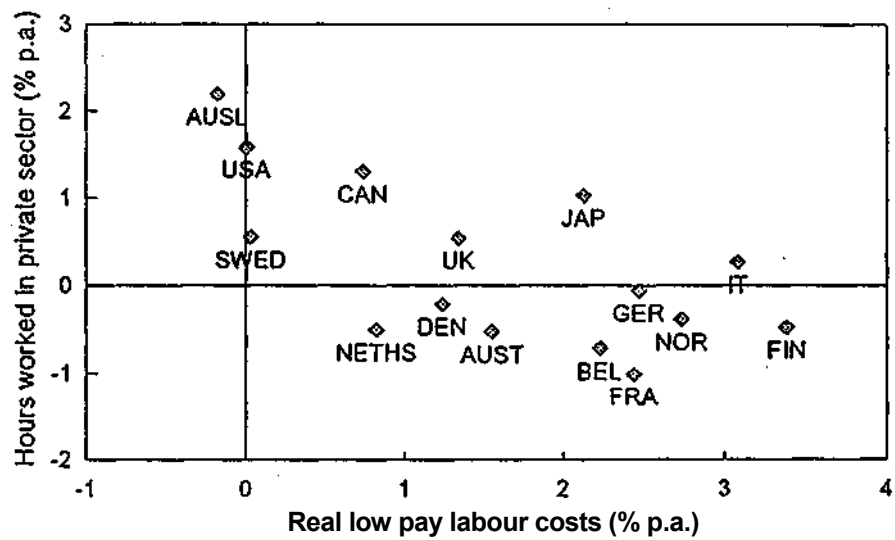


Table 1 Employment Growth, 1960-93

average annual percentage changes	OECD	EC	USA	Japan
1960-73	1.1	0.3	2.0	1.3
1973-90	1.2	0.5	1.9	1.0
1990-93	-0.1	-1.1	0.3	1.1

Source: OECD *Historical Statistics, Economic Outlook, Employment Outlook*.

Table 2 Sector Per Capita Employment Growth, 1973-90

average annual percentage changes,	Agriculture	Industry	Services	Total
USA	-1.6	-0.7	1.5	0.7
Japan	-3.7	-0.4	1.2	0.1
EC	-3.9	-1.6	1.3	-0.2
UK	-1.9	-2.2	1.4	0.0

Note: Per capita employment growth is growth of employment less growth of population of working age.

Source: OECD *Historical Statistics*

Table 3 Patterns of Service Employment

Employment shares (% of total), 1992 Trade	Wholesale & Retail	Transport & Commun- ication	Finance Business Services	Community Social & Personal	
EC	18.4	6.0	8.5	29.1	
Japan	23.5	6.0	10.9	18.5	
USA	22.2	5.6	13.2	31.5	
OECD	20.4	5.8	10.4	27.5	
Per capita employment growth (average % pa 1979- 90)				(private only)	General Govern- ment
EC	0.6	-0.4	3.3	2.7	0.6
Japan	0.3	0.0	2.0	2.7	-0.7
USA	0.9	0.2	3.3	2.2	0.2

Note: Per capita employment growth is per head of population aged 15-64

Growth rates for Community, Social and Personal Services are for private sector only; remainder are in General Government. Source: OECD 1994b tables 1.1 and 1.3

Table 4 Employment growth by occupation, 1980s, average of 9 countries,

	Share (%) early 1990s	Average % pa changes, 1980s
Professional, technical etc	17.5	3.2
Administrative & Managerial	8.7	2.9
Clerical and related	17.4	1.5
Sales	10.2	1.4
Service workers	10.7	1.5
Agricultural	4.4	-1.4
Transport, production & labourers	30.5	0
Total	100	1.3

Note: Arithmetic average of G7 less Italy plus Australia, Austria & Belgium. Source: OECD 1994b table 1.4

Table 5 Labour Market Changes, 1979-90

percentage rates	Average Unemployment	LF Non-Participation males 25-54	Women's Unemployment	Youth Unemployment 15-24	share of L-T Unemployment (%)	Wages Inequality (D9/D1)
Japan	0	-0.3	0.3	0.9	5	9
Canada	0.7	1.8	-0.9	-0.1	0	9
USA	-0.3	1.1	-1.4	-1.6	0	17
Australia	1.2	1.4	-0.6	-1.1	7	11
UK	0.5	1.9	-0.5	-2.2	6	28
New Zealand	5.5	2.2	4.5	6.2	na	na
Belgium	1.2	na	0.1	na	8	-2
Denmark	2.3	na	0.6	na	-2	1
France	3.5	0.9	4.0	5.6	7	3
Germany	3.0	3.7	3.1	1.6	17	-6
Ireland	6.9	0.2	3.9	10.3	29	na
Italy	3.7	2.4	4.2	5.9	20	-1
Neths	3.4	-0.4	6.6	3.0	12	-2
Spain	7.9	1.5	15.5	12.9	25	na
Austria	1.2	0.6	na	na	na	2
Finland	-2.5	na	-2.7	na	na	na
Norway	3.3	0.5	2.4	5.2	16	-4
Sweden	0.2	-0.2	0.1	0.1	-2	7

Notes: Male non- participation in labour force is % of population aged 25-54.

Long-term unemployment is in excess of 12 months; changes estimated roughly from graphed data for 1979.

Wages inequality is % change in earnings differential between first and ninth deciles for men (except in Denmark and Sweden for men and women)

Data for New Zealand in columns (2) and (4) is for 1986-90 and for Sweden in column (6) is for 1986-90.

Swedish unemployment & participation rates exclude change in 1986-7 when series break

Sources: OECD *Labour Force Statistics*, *Employment Outlook*, *Jobs Report*, *Economic Outlook*, *Historical Statistics*, Freeman and Katz (1994).

Table 6 Educational Disparities in Employment 1987 Males Aged 25-55

	Rel Employment (2)x(3)	Rel jobs/ LF (2)	Rel Partic- ipation (3)	% < full Second- ary	% Univ
Australia	0.88	0.94	0.94	34.7	13.2
Austria	0.93	0.96	0.96	23.3	7.3
Belgium	0.87	0.94	0.97	58.5	18.2
Canada	0.83	0.92	0.92	27.0	17.8
Finland	0.92	0.94	0.98	71.3	13.9
Germany	0.82	0.88	0.93	15.3	12.4
Italy	0.94	1.0	0.94	72.3	6.2
Neths	0.88	0.95	0.92	44.7	7.2
Norway	0.97	0.99	0.98	42.7	19.5
Sweden	0.98	0.99	0.99	38.6	14.0
UK	0.85	0.88	0.96	44.5	19.0
USA	0.79	0.91	0.87	16.2	27.3

The disparities are between those who have completed less than full secondary education and those with higher education qualifications.

Relative employment measures the ratio of the employment rates (employment/population) of the least to the most educated groups.

Relative jobs/LF is the ratio of the employment/labour force (100-the unemployment rate) of the least to most educated groups.

Relative participation is the ratio of the participation rates (labour force/population) of the least to most educated groups.

% < full secondary, % Univ are the proportions of the population in the age groups with, respectively, less than full secondary education and with university degrees.

For Italy age-group is 25-59

Sources: calculated from OECD 1989 tables 2.1, 2A, 2B;

Table 7 Changes in Educational Disparities in Income from Employment
Males, 1980s

<u>% changes</u>		Relative Employment	Relative Jobs/LF	Relative Participation	Relative Earnings	EDDIE
Australia	82-90	-3	-1	-2	-3	-6
Germany	78-87	-6	-3	-3	3	-3
Italy	80-87	-4	-2	-2	0	-4
Sweden	71-87	1	0	1	0	1
Sweden	87-93	-4	-4	0	1	-3
Belgium	77-86	-6	-5	-1	na	na
Japan	79-92	-2	0	-2	-4	-6
UK	79-91	-12	-7	-5	-17	-27
USA	79-92	-7	-4	-4	-21	-27

Notes: See table 6,

Relative earnings is ratio of earnings of least to most educated groups; EDDIE is product of relative earnings and relative employment rates (see text) Dates refer to the employment data; changes in relative earnings apply to men of all ages and sometimes differ slightly in coverage of periods and specification of employment categories from the employment data. Ages groups for employment are 25-55 for Australia, Belgium, Germany, Sweden & UK, 25-59 for Italy and 25-64 for USA and Japan

Sources: Earnings and participation calculated from OECD 1994b tables 1.16, 7A1, 7B1; unemployment rates and employment rates for USA and UK and Sweden 1987-93 supplied by Brian Bell. Data for Belgium, Italy and Sweden (71-87) provided by OECD.

Table 8 OECD Unemployment and estimated NAIRUs 1973-94

average % rates	1973-79	1980-89	1990-93	1994
Non Europe - Unemployment	4.6	5.9	5.6	5.7
NAIRU	4.8	5.8	5.4	5.5
Big 4 Europe - Unemployment	4.3	8.7	8.8	10.2
NAIRU	4.3	8.4	9.0	9.4
Smaller EC - Unemployment	4.7	13.4	12.9	16.7
NAIRU	4.6	12.5	14.1	15.0
Other Europe - Unemployment	1.3	2.1	3.8	5.8
NAIRU	1.3	2.1	3.5	5.1

Notes: for Non-Europe first column refers to 1970-79. The OECD describes the NAIRU as NAWRU (Non-accelerating wage inflation rate of unemployment) which is "the unemployment rate below which wage pressures start to emerge"

Source: OECD 1994c table 12

References

- Abraham, K. "Mismatch and labour mobility" in Padoa-Scioppa, F. (ed) (1991) *Mismatch and Labour Mobility*, Cambridge University Press.
- Barrell, R. (ed) (1994) *The UK Labour Market*, Cambridge University Press, Cambridge
- Barrell, R., Caporale, G. & Sefton, J (1994) "Prospects for European Unemployment" in J. Michie & J Grieve Smith (eds) *Unemployment in Europe*, Academic Press.
- Baumol, W., Batey Blackman, S & Wolff, E. (1989) *Productivity and American Leadership* MIT Press.
- Bazen, S. & Martin, J (1991) "The impact of the minimum wage on earnings and employment in France" *OECD Economic Studies* NO 16.
- Bean, C. (1994) "European unemployment: A Retrospective" *European Economic Review* 38 523-534
- Bentolila, S. & Dolado J. (1994) "Labour Flexibility and Wages: Lessons from Spain" *Economic Policy*, No 18 April, 53-99.
- Berman, E., J. Bound and Z. Griliches (1993) "Changes in the Demand for Skilled Labor within US Manufacturing Industries: Evidence from the Annual Survey of Manufacturing", NBER Working Paper #4255, January 1993.
- Blanchflower, D. & A. Oswald (1994) "Estimating the Wage Curve for the United Kingdom, *Economic Journal*, September.
- Boltho, A & A. Glyn (1994) "Macroeconomic Policies, Public Spending and Employment", Background Paper for ILO World Employment Report, Oxford, mimeo.
- Business Week (1994) "Inequality: How the gap between rich and poor is hurting the American Economy" Cover Story, August 15 pp 77-83
- Calmfors, L. (1993) "Lessons from the macroeconomic experience of Sweden", *European Journal of Political Economy* 9.
- Calmfors, L. (1994) "Centralisation of Wage Bargaining and Macroeconomic Performance - A Survey" *OECD Economic Studies* No 21 Winter, 161-191.
- Calmfors, L. & J. Driffil (1988) "Bargaining structure, corporatism and macroeconomic performance" *Economic Policy* No 6.
- Card, D. Katz, L. & A. Krueger (1993) "An evaluation of recent evidence on the employment effects of minimum and sub-minimum wages" NBER WP 4528.
- Carlin, W. & D. Soskice (1990) *Macroeconomics and the Wage Bargain*, Oxford University Press
- Commission of the European Communities (1993) *Growth, Competitiveness and Unemployment* Brussels.
- Dreze, J. & E. Malinvaud (1994) "Growth and Employment: the scope for a European Initiative" *European Economy*
- Economist (1994) "Inequality: For Richer, for poorer" November 5 pp 19-21

- Elmeskov, J. & Pichelmann, K. (1994) "Interpreting Unemployment: The Role of Labour Force Participation" *OECD Economic Studies* No 21 , 139-160
- Elmeskov, J. & M.MacFarlan (1994) "Unemployment Persistence" *OECD Economic Studies* No 21 59-88.
- Freeman R. & L. Katz "Rising Wage Inequality: The United States vs. Other Countries" in R.Freeman (ed) *Working Under Different Rules*, Russell Sage Foundation, New York.
- Gittleman, M (1994) "Earnings in the 1980s: an occupational perspective" *Monthly Labor Review*, July Glyn, A. (1994) "Does Profitability Really Matter" mimeo, Oxford 1994.
- Glyn, A. & Rowthorn, R (1988) "European Unemployment, Corporatism and Structural Change" *American Economic Review*, May.
- Glyn, A. & Rowthorn, R (1994) "European Employment Policies" in J. Michie & J. Grieve Smith (eds) *Unemployment in Europe*, Academic Press.
- Gregg, P. & Wadsworth, J. (1995)
- Green, F. (1994) "Training, Inequality and Inefficiency" in A.Glyn & D.Miliband (eds) *Paying for Inequality* Rivers Oram, London.
- Gregg, P, Machin, S. & Manning A. (1994) "High Pay, Low Pay and Labour Market Efficiency" in A.Glyn & D.Miliband (eds) *Paying for Inequality* Rivers Oram, London.
- ILO (1995) *World Employment Report*, International Labour Office, Geneva
- Juhn, C., Murphy, K & R.Topel (1991) "Why has the Natural Rate of Unemployment Increased Over Time" *Brookings Papers on Economic Activity* 75-126.
- Kalecki, M. (1990, [1943]) "Political Aspects of Full Employment" in J. Osiatynski (ed) *Collected Works of Michal Kalecki Vol 1*, Oxford University Press.
- Layard, R.,Nickell, S & Jackman, R. (1991) *Unemployment* Oxford University Press
- Machin, S. (1994) "Changes in the Relative demand for skills in the labour market", mimeo, University College London
- Martins, J. (1993) "Market structure, international trade and relative wages" OECD Economics Department Working Paper No 134.
- Meidner, R. (1993) "Why did the Swedish Model Fail?" *Socialist Register* Merlin Press, London.
- Nickell, S. & Bell, B. (1995)
- OECD (1989) *Employment Outlook*, Paris
- OECD (1993 a) *Employment Outlook*
- OECD (1993b) *Education at a Glance*
- OECD (1994a) *The OECD Jobs Study .-Facts, Analyses,Strategies*, Paris

- OECD (1994b) *OECD Jobs Study : Evidence and Explanations*, (2 Vols) Paris
- OECD (1994c) *Economic Outlook*, December, Paris.
- OECD (1994d) *Employment Outlook*, Paris
- Robinson, P. (1994) "The British Labour Market in Historical Perspective" CAP Discussion Paper 202, July.
- Rowthorn, R. (1992) "Corporatism and Labour Market Performance" in Pekkarinen, Pohjola, M. & Rowthorn, R. (eds) *Social Corporatism*, Oxford University Press.
- Rowthorn, R. (1977) "Conflict, Inflation and Money" *Cambridge Journal of Economics*, No 1.
- Rowthorn, R. (1995) "Capital Formation and Unemployment" *Oxford Review of Economic Policy* Vol 11 No 1
- Schmitt, J & Wadsworth, J. (1994) "The Rise in Economic Inactivity" in A.Glyn & D.Miliband (eds) *Paying for Inequality* Rivers Oram, London.
- Sachs, J & Shatz, H. (1994) "Trade and Jobs in U.S. Manufacturing" *Brookings Papers on Economic Activity* 1:1994
- Soskice, D. (1990), "Wage determination: the changing role of institutions in advanced industrialized countries" *Oxford Review of Economic Policy*, 6, 4.
- Summers, L. (1986) "Why is the unemployment rate so very high near full employment" *Brookings Papers on Economic Activity*, No 2
- Summers, R. (1985) "Services in the International Economy" in T.Inman (ed) *Managing the Service Economy*, Cambridge University Press, Cambridge.
- Vartiainen, J. (1994) "Can Nordic Social Corporatism survive? Challenges to the Labour Market", mimeo Trade Union Institute for Economic Research, Stockholm.
- Wood, A. (1994) *North South Trade, Employment and Inequality*, Oxford University Press.