CHAPTER 3
A RETURN TO FULL EMPLOYMENT?

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Introduction

This chapter is concerned with several fundamental and controversial issues which underlie the macro-economic analysis put forward by the Cambridge Economic Policy Group in the first chapter of this and previous *Policy Reviews* and are relevant in particular to our views about how full employment can be restored.

The relevance of the analysis hinges in particular on the answers to the following related questions:

(*i*) why has unemployment risen?
(*ii*) why has employment not increased?
(*iii*) could sufficient jobs be created to restore full employment in the 1980s?
(*iv*) is a successful manufacturing sector essential?
(*v*) how can the process of de-industrialisation in the UK be reversed?

Our answers to these questions may be summarised as follows:

(*i*) Unemployment has risen because the number of job oppportunities has fallen seriously short relative to the labour supply. In the first section it will be shown that the statistical addition to labour supply does indeed represent people seeking work and that little if any of the recent large increase in unemployment has been voluntary.

(*ii*) The shortfall of employment has been caused by stagnation of output. There is no evidence of an increase in 'technological unemployment', in the sense of a significant reduction in the total number of jobs caused by accelerated increases in productivity or labour saving. On the other hand there is good evidence that in the past two years aggregate productivity has been held down, and employment protected, by 'job-saving' measures.

(*iii*) If there is no general problem of 'technological unemployment', it can reasonably be supposed that a high rate of growth of output would provide an increasing number of jobs and that, since most unemployment is involuntary, these jobs would by and large be filled. The estimate in section 3 below is that a 5% annual average growth of GDP should be sufficient to reduce unemployment to about $^3/_4$ million by 1985. With a growing labour supply this would involve an increase of $2^1/_2$ million in total employment. Given 5% growth of the economy as a whole, there is every reason to expect a large increase in employment in every sector, including manufacturing industry as well as services. The increase in employment would include some $^1/_2$ million additional jobs in construction and public utilities, a further $^1/_2$ million in manufacturing and about $^3/_4$ million each in private and public services. It is therefore implausible that increased employment would have to be provided solely, or mainly, by the public sector.

(*iv*) The reason for believing that a fast-growing manufacturing sector is essential is not, however, that it can provide additional employment, but rather that there is no other way of achieving a satisfactory balance of trade at a high level of employment and national income. If there was an attempt to maintain economic growth without a strong manufacturing sector, the balance of trade in manufactures would move into a large deficit. When the contributions of different sectors to the balance of trade are examined, it is clear that no other sector, certainly not services, could provide sufficient export earnings to cover such a deficit on manufactures. The suggestion that Britain should accept decline of its industry and rely instead on services founders completely on the arithmetic of the balance of trade.

(*v*) The final question considered here is the most central and difficult issue of all - how to reverse the process of 'de-industrialisation', in order to ease the balance-of-payments constraint, permitting the fast growth of the whole economy which alone can generate a large increase in employment and a reduction in unemployment. Past experience suggests that 'de-industrialisation' cannot be put right by rationalisation, by measures to raise profits, or even by general grants and other financial incentives alone. The most important problem of all has in our view been slow growth of the domestic market, compounded by import penetration, which made growth of sales too uncertain to justify major investment in new facilities and products. On this view the most essential precondition for an effective industrial policy is the prospect of fast growth in domestic sales. This can only be ensured by a general system of control of imports to prevent trade deficits and to permit sustained fast expansion of demand in the economy as a whole.

This is not to say that protection and fiscal expansion are necessarily sufficient. A very large, broadly spread and sustained programme of industrial investment is necessary as well and the question of how this should be planned and financed in both public and private manufacturing enterprises is a major issue. The two points we wish to emphasise are, first, that without protection it is not plausible that such an investment

programme could be carried through, and second, that even with protection there is a need for government policies to encourage it.

1. Why has unemployment risen?

This section shows that unemployment has risen because of an increase of labour supply not matched by an increase in employment opportunities and that very little of the rise in unemployment has been voluntary. The first part analyses the increase in labour supply, the reasons why it occurred and the size of the shortfall in the number of jobs. The second part considers the direct evidence as to whether the increase in unemployment has been voluntary, either because of higher social security payments relative to earnings or because there has been a fundamental change in attitudes to work. This evidence shows that a reasonable maximum estimate of the increase in voluntary unemployment since the mid-1960s is 100,000, or 10% of the total increase in unemployment over the same period.

(a) *Changes in the labour supply and in total employment*

The simplest measure of labour supply is the sum of recorded employment, self-employment and registered unemployment. However our estimates in Table 3.1, given separately for men and women, also include an allowance for unregistered unemployment (see footnotes to the table). The result can be checked by comparison with available evidence on the total population aged 15 and over, taking account of the age breakdown, activity rates for different age-groups, and whatever may be known about reasons for changes in activity rates. Our table distinguishes increases in total population aged 15 and over, the effect of changes in age structure assuming fixed activity rates, and the effect of changes in activity

Table 3.1. Changes in mid-year labour supply, employment and unemployment, 1951-77 (thousands)

	Males				Females			
	1951 –66	1966 –73	1973 –77	1951 –77	1951 –66	1966 –73	1973 –77	1951 –77
1. Increase in population aged 15 and over	+1388	+416	+436	+2240	+1253	+406	+351	+2010
plus								
2. Effect of changes in age structure	–435	–282	–352	–1069	–1231	–549	–333	–2113
plus								
3. Estimated effects of changes in activity rates	–88	–614	+44	–658	+1583	+784	+1054	+3421
equals								
4. Increase in labour supply	+865	–480	+128	+513	+1605	+641	+1072	+3318
of which								
5. Increase in employment	+700	–873	–487	–660	+1651	+491	+388	+2530
6. Increase in registered unemployment	+95	+262	+489	+846	–9	+32	+241	+264
7. Estimated increase in unregistered unemployment	+70	+131	+126	+327	–37	+118	+441	+522

1. Total (*de jure*) population
2. The change in the number of participants each year if the same proportion of each age/sex/marital status group were participating as in 1966.
3. (4) - (2) - (1)
4. (5) + (6) + (7)
5. Employees in employment, employers and self-employed, and armed forces.
6. Wholly unemployed.
7. for males - ln RU = -2.991 + 1.345 ln $(RU + URU)$
   for females - ln RU = -12.864 + 2.497 1N $(RU + URU)$
   where RU = registered unemployment
   URU = unregistered unemployment.

It is well established that the recorded participation in the labour force of both men and woman varies with the pressure of demand for labour; these equations are based on implied average propensities to register observed in the postwar period. However, since there are identifiable groups of both men and women who have below average propensities to register (such as those still in education, those near retirement age, and married women) and these people represent a more important part of the flows into and out of employment at low levels of unemployment than at high levels, the equations also incorporate a marginal propensity to register which rises as unemployment rises.

rates. The last item is derived as a residual but there is quite a lot of independent evidence which confirms that it is plausible.

There has been an unusually large increase in labour supply during the past four years, consisting mostly of women rather than men. The main source of the increase has been an accelerated rise in activity rates. The most likely explanations for this rise are, for both men and women, the halt to expansion of further education and, in the case of women, the decline in births, which has reduced the number stopping work in order to have children. The recent increase in participation of women is common to most European countries. The long-term increase has been greater in the UK than abroad and can be shown to be due to changing behaviour of succeeding generations - in particular an increasing tendency of newer generations of women to return to work after having children.

If the estimates of labour supply in our table are accepted as correct estimates of the number of people seeking work, the cause of increases in unemployment, both registered and unregistered, must have been a worsening shortfall in the number of jobs available. Men were already affected by a shortfall of job opportunities in the 1960s and early 1970s when the male labour supply fell slightly and the number of male employees fell by an average of over 50,000 a year. During the past four years male employment fell by an average of over 120,000 a year while the male labour supply increased slightly. Women only began to be seriously affected after 1973; the number of female employees continued to increase by an average of nearly 100,000 a year, but this was no longer sufficient to absorb the accelerating increase in labour supply, amounting to 150,000 per annum.

The estimates of labour supply are suggestive, but there is not sufficient independent evidence on participation trends to show conclusively that the apparent rise in labour supply was wholly genuine and hence that the rise in unemployment was entirely involuntary. For example, it might still be suggested that the large rise in male unemployment was voluntary and that this was the cause rather than the consequence of the fall in male employment, and even that the apparent rise in female labour supply was a result of the fall in male employment - in effect, that more women went to work because more men preferred to be unemployed. These suppositions can, however, be refuted by direct evidence on unemployment to which we now turn.

(*b*) *Direct evidence on voluntary unemployment*

The number of people unemployed at any point of time has risen in recent years from about $^1/_2$ million to $1^1/_2$ million. This number depends both on the flow of people becoming registered as unemployed (which has been relatively constant at about 4 million each year) and on the length of time for which people remain unemployed (the average having risen from about 7 weeks to 15 weeks, although the duration varies enormously for different people and in different places).

A voluntary increase in unemployment could take the form either of more people choosing to become registered, or of those already registered choosing to remain unemployed for a longer period of time. The main reason commonly put forward as to why there might have been a voluntary increase in unemployment is that various benefits payable have improved relative to net earnings from employment. It may also be suggested that there has simply been a change in attitudes to work or to unemployment.

The appendix to this chapter contains a detailed analysis of evidence which will here be summarised briefly.

Most investigators have concluded that the effect of improved benefits (payable since the mid-1960s) has been to increase the normal level of male unemployment by about 70,000. There has been no further increase in the financial inducement to remain unemployed since 1970.

The main reason for an increase in benefits relative to earnings was the introduction in 1966 of an earnings-related supplement to unemployment and sickness benefit[1]. This raised total benefits for the unemployed from about 60% to 80% of the net earnings likely to be obtained in employment. But only a limited number of men, and a very small number of women, are in receipt of the earnings-related supplement. The induced addition to unemployment must be less that the total number in receipt of the benefit, except on the very extreme assumption that in the absence of the benefit none of them would have been unemployed at all. If the effect is simply to increase the average time for which they remain unemployed, the induced addition must be significantly less than the total number in receipt. Between 1966 and 1970, the average number of men in receipt was 100,000: this fell to 80,000 in 1973 and has increased to 200,000 in 1977. Assuming that the effect of the benefit had been to double the length of time for which each person remained unemployed - which would appear quite a strong assumption - the effect of increased benefits on the level of male unemployment would be only 50,000 between 1966 and 1974, rising in recent years to 100,000.

The 1976 Department of Employment Survey of attitudes and characteristics of the unemployed recorded 26% as being 'somewhat unenthusiastic' in their attitude to work. But this was a smaller proportion than in 1973 when total unemployment was only $^1/_2$ million. Moreover the proportion recorded as being both 'somewhat unenthusiastic' and having good reasonable prospects of work was only 2%. A follow-up survey in 1976 showed that one-third of those recorded as 'somewhat unenthusiastic' had found a job within 6 months, despite the fact that they had nearly all been thought to have poor prospects of so doing, and that jobs were by then hard to find.

There has been a large increase in long-term unemployment (the number of people who had been unemployed for more than a year rose from about 45,000 in 1966 to 324,000 in 1977). But this seems unlikely to have been caused by a changed attitude towards work, because the same phenomenon has occurred before and proved to be reversible when employment opportunities increased[2]. It should be noted that the long-term unemployed are not entitled to the earnings-related supplement.

[1] The other important factor was the introduction of the Redundancy Payments Act in 1965. This is estimated to have increased the normal level of male unemployment by no more than 20,000.

[2] see Cripps and Tarling [1974].

The larger part of the increase in total unemployment since 1973 has been due to a lengthening of the average time for which people remain unemployed; there has only been a relatively small increase in the number of people becoming unemployed each year[3]. For men the average duration of unemployment rose from 9 weeks in 1973 to 17 weeks in 1977; for women the corresponding figures were 5 weeks in 1973 and 11 weeks in 1977. Since 1973 there has been no additional financial incentive for people to remain unemployed for longer periods - nor does there appear to have been any 'learning effect', since the number of unemployed men who receive the earnings-related supplement has remained at about 40% of those unemployed for between 2 and 26 weeks (the period over which the supplement is payable). Given that survey evidence on attitudes and analysis of the numbers of long-term unemployed indicates no decline in the willingness to work and that on the basis of evidence given in the appendix, it seems impossible to believe that the increase in voluntary unemployment exceeded 100,000, or 10% of the increase in total unemployment in the last decade, we conclude that the large rise in unemployment must be explained by the lack of job opportunities and that most unemployment is involuntary.

2. Why has employment not increased?

In the fifteen-year period from 1951 to 1966 the total number of jobs increased by an average of over 150,000 a year; since then the number of jobs has fallen slightly. As we have seen, it was the failure to expand employment in line with a rising labour supply which has caused the rise in unemployment.

Fundamentally, the cause of stagnation in total employment was the slow growth of total output or GDP. Although there would not be much dispute that this was an important factor, there is considerable disagreement about the impact of productivity, job-saving measures, and changes in the sectoral pattern. This section examines the evidence and shows that the realtionship between growth of output and growth of employment has on the whole been very regular, with the following significant and well identified exceptions:

(*a*) 'shake-outs' costing a total of about 230,000 jobs in manufacturing industry in 1967 and 1972;

(*b*) fast productivity growth associated with the run-down of employment in agriculture and mining in the 1950s and 1960s;

(*c*) the loss of some 120,000 jobs between the mid-1960s and the early 1970s as a result of productivity agreements in electricity supply and the railways as well as mechanisation and pit closures in the mining industry;

(*d*) the temporary effect of SET on employment in services, reversed when SET was withdrawn;

(*e*) the effect of a shift to subcontracting in construction, which was, however, a statistical illusion if self-employment was taken into account; and

(*f*) the recent impact of job-saving and job creation measures which appear to have added some 350,000 jobs by mid-1977.

Our conclusion is that the growth of GDP is by far the most important determinant of total employment and that the underlying trends of productivity have not altered significantly in recent years. There has neither been any sudden surge of 'technological unemployment' nor any major slow-down in underlying productivity.

Table 3.2 shows changes in the number of jobs in each broad sector of the economy. Of these, changes in employment in agriculture and mining depended largely on mechanisation and reorganisation, while in the case of public services the relationship between output and employment has been almost exactly one-for-one as a matter of definition, by virtue of the way in which output is measured. In the other three sectors - manufacturing, other industries and private services - growth of employment varied by large amounts in different periods. Manufacturing and other industries, having provided over 1 million additional jobs between 1951 and 1966, were responsible for the loss of over $1\frac{1}{2}$ million jobs between 1966 and 1977. Employment in private services rose by $1\frac{1}{4}$ million up to 1966 and by little over $\frac{1}{2}$ million since then. The task to which we not turn is the explanation of changes in employment in these three latter sectors.

(*i*) *Manufacturing*

In the case of manufacturing industry the pace of productivity growth depends not so much on fundamental technological advance, relative to which actual practice normally lags far behind, but on the rate of investment, the pace of reorganisation of both management and production processes, and the spreading of overheads through high-volume production. All of these vary quite closely with the growth of output. Allowing for some lag in the adjustment of employment to variations in output, the level of employment, *E*, could, if trends were stable, be

Table 3.2. Changes in employment[(a)] by sector, 1951-77 (thousands)

	1951-66	1966-73	1973-77	1951-77
Agriculture	–426	–201	–61	–688
Mining and quarrying	–297	–206	–14	–517
Manufacturing	+802	–738	–479	–415
Other industries[(b)]	+370	–205	–201	–36
Private services[(c)]	+1344	+263	+271	+1878
Public services[(d)]	+558	+705	+385	+1648
Total employment	+2351	–382	–99	+1870

Notes:

(*a*) Including employers and self-employed.

(*b*) Construction; gas, electricity and water; transport and communications.

(*c*) Distribution; insurance, banking, finance and business services; miscellaneous services; professional and scientific services excluding educational services and medical and dental services

(*d*) Public administration and defence; educational services and medical and dental services; armed forces

[3] Most of this recent increase is among women, where the incidence of unemployment among younger women has increased. But younger women have a higher than average entitlement to benefit and hence more incentive to register as unemployed. The recent increase in the numbers of women registering is therefore plausibly explained by an increase propensity among women to register as unemployed.

predicted by an equation of the form

$$\ln E_t = a - bt + \sum_{i=0}^{n} w_i \ln Q_{t-i}$$

where a is a constant, b represents the growth of productivity expected when output, Q, is constant, and the lagged term Σw_i represents the effect (less than unity for the reasons just mentioned) of variations in the rate of growth of output.

This equation, estimated on annual data for 1955-73, performs as follows[4]:

$$\ln E_t = \underset{(14.0)}{6.37} - \underset{(5.7)}{0.022t} + \underset{(3.0)}{0.2420_t} + \underset{(5.1)}{0.429}\ Q_{t-1}$$

$$SE = 1.06\%, \bar{R}^2 = 0.84, \rho = 0.90$$

where the figures in brackets are t-ratios and ρ is the coefficient of serial correlation of residual errors. The equation therefore gives a good 'fit' with coefficients of the expected order of magnitude, the implied growth of productivity being 3.2% per year when output growth is 3% per year, with two-thirds of any variation in output growth being accommodated by adjustment of employment and one-third by a variation in productivity growth.

The very high coefficient of serial correlation implies that abnormal (unpredicted) changes in productivity tend to be permanent. When the pattern of residuals is examined, these are found to comprise a period of consistently slow productivity growth between 1958 and 1963 and 'shake-outs' or spurts of productivity in 1966-7 and 1971-2. The explanation for these two shake-outs is probably to be found in the high rate of investment in the 1960s combined with cyclical downswings in demand in 1967 and 1971, which encouraged scrapping of old plants.

The equation accurately predicts the large fall in manufacturing employment which occurred in 1974-75 (see Table 3.3). But employment has fallen 300,000 *less* than predicted since 1975. This may have been because of the temporary employment subsidy (TES) and other job-saving measures.

These results leave little room for a significant influence on manufacturing productivity and employment of any factors other than those already identified[5]. There is no evidence at all of accelerated 'labour-saving'. Nor, apparently, have the rise in fuel prices, low profits, or 'excessive' real wages had any marked effect unless low productivity in 1976 and 1977 (but not before) is attributed to these factors rather than to job-saving measures.

(ii) Other industries

Changes in total employment in construction, gas, electricity, water supply, transport and communications - here aggregated as 'other industries' - can be explained by a similar approach, provided that allowance is made for the identifiable effects of productivity agreements in electricity and the railways and the 'lump' in construction.

Our equation for employment, E (corrected for X, the number of jobs lost due to effects mentioned above[6]) again estimated on annual data for 1958-73, is

$$\ln (E_t + X_t) = \underset{(6.3)}{5.13} - \underset{(3.2)}{0.020t} + \underset{(2.8)}{0.333Q_t} + \underset{(1.9)}{0.209Q_{t-1}}$$

$$+\underset{(1.9)}{0.231Q_{t-2}}$$

$$SE = 0.80\%, \bar{R}^2 = 0.94, \rho = 0.91$$

This provides a close fit, implying trend productivity growth of 2.7% when output grows at 3%, with three-quarters of any variation in output growth being accommodated by adjustment of employment and only one-quarter by variation in productivity growth. The equation also predicts the 200,000 fall in employment in these industries since 1973 rather closely (see Table 3.3). Again, therefore, there is little scope for factors other than those mentioned above to have had any significant effect on employment.

Table 3.3. Actual and predicted[(a)] changes in sectoral employment, 1973-77 (thousands)

	1973-75	1975-77
Manufacturing		
Actual change	−343	−136
Predicted change	−264	−476
Discrepancy	−79	+340
Other industries		
Actual change	−74	−127
Predicted change	−106	−179
Discrepancy	+32	+52
Private services		
Actual change	+96	+138
Predicted change	+172	−214
Discrepancy	−76	+352

Note:

(a) Changes predicted by the deterministic part of the equations given in the text.

(iii) Private services

In service industries there is less scope for taking advantage of economies of scale when output expands, although overheads may be spread and the quality of service altered when real incomes or labour costs rise. We shall use an equation of the same form as those used above for manufacturing and other industries, although its interpretation is less clear, with an allowance for the effects of SET which, at the least, reduced part-time working in the first years after it was introduced. The equation estimated for 1956-73[7] is

$$\ln E_t = \underset{(3.3)}{4.94} - \underset{(1.5)}{0.018t} + \underset{(1.6)}{0.346 \ln Q_t} + \underset{(0.6)}{0.125 \ln Q_{t-1}}$$

[4] Further lagged terms are not significant.

[5] Some people have maintained that the recent increase in unemployment has been caused by real wages being too high. The results here for manufacturing, and those for other industries and services which follow, show that such a view cannot be sustained consistently unless one is prepared to deny that equations of the form used here provide a valid explanation of changes in employment up to 1973. If the validity of the equations in the pre-1973 period is denied, the onus is on people who hold such a view to put forward their alternative hypothesis and test it over the whole period before and since 1973.

[6] Estimates for construction based on the analysis carried out for the study *'The effects of SET: Final Report'* (DAE Occasional Paper 32). Estimates for electricity supply and the railways based on examination of manning relative to output over relevant periods.

[7] Employment estimates used do not include employment in private professional and scientific services, since it was not possible to identify separately the output associated with private employment in this sector.

$$+0.447 \ln Q_{t-2} \quad -0.031\, SET_t$$
$$(2.1) \qquad\qquad (1.8)$$

$SE = 1.04\%,\ \bar{R}^2 = 0.96,\ \rho = 0.72$

where SET is measured by an index of rates in force each year, taking a maximum value of unity.

The fit is again close, implying normal trend productivity growth of about 2% a year, with almost the whole of variations in output growth accommodated by adjustment of employment. The maximum effect of SET on productivity is estimated as 3%.

The pattern of residuals indicates relatively slow productivity growth in the early 1960s, when very large numbers of young people and married women were entering the labour force. Since 1973 employment has risen by 200,000, although the equation would have predicted a slight fall - the increase in actual employment being marked in 1977 (see Table 3.3). This may be attributed in part to 'job creation' subsidies, but we suspect the main reason is the very large supply of young people who would otherwise have remained unemployed. Private services have often acted as a partial buffer against unemployment in the past, notably in the 1930s, and continue to do so in many other countries where unemployment is high. However the employment provided, although it may occasion some improvement in quality of service, is largely at the expense of productivity and is therefore a form of 'concealed' unemployment.

The examination of employment in each sector confirms that the major influence is in each case the movement of output. The main reason for the shortfall of employment relative to labour supply has therefore been inadequate expansion of aggregate output or GDP. There is no evidence of a shift in relationships between output and employment other than the upward shift in employment caused by temporary job-saving and job-creation measures, and by the absorption of some unemployed young people in low productivity services. It therefore seems reasonable to expect that aggregate productivity would return to its long-run trend in the event of a recovery of output. On this basis it is possible to assess whether fast growth of output might secure a return to full employment.

3. Could sufficient jobs be created to restore full employment in the 1980s?

The argument presented so far implies that the possibility of a return to full employment depends mainly on whether it is possible to achieve sufficiently fast growth of GDP. In this section we examine the implications of fast growth of GDP for growth of output and employment in different sectors. This does not directly answer the fundamental question of what the main constraints of GDP growth are or how they could be overcome. But it will help to show whether or not the creation of a sufficient number of jobs is conceivable. The most important constraint, which we shall argue is the rate of expansion of manufacturing industry and its impact on the balance of trade, will be the subject of sections 4 and 5.

The specific hypothesis considered here is that the level of unemployment could be reduced to about ¾ million in 1985 if growth of GDP is maintained at 5% a year from now on. Projections of employment and unemployment corresponding to this hypothesis are set out in Table 3.4.

Table 3.4. Projected changes in employment and unemployment, 1977-85, assuming 5% a year growth in GDP (thousands)

	1977-85
Agriculture	−144
Mining	0
Manufacturing	+348
Other industries	+588
Private services	+817
Public services	+703
Total employment	+2344
Labour force	+1580
Unregistered unemployment	−200
Registered unemployment	−564

The labour force is expected to increase over the period by about 1½ million. This, together with a target reduction of registered unemployment by over ½ million, implying a reduction of unregistered unemployment of a similar amount, means that over 2¼ million additional jobs would have to be created to meet the target.

Some continuing but small fall in employment must be expected in agriculture, but employment in mining may now be stabilised and present plans for public expenditure probably imply an increase of nearly ¾ million in employment in public services and the armed forces. This leaves some 1¾ million jobs to be found in manufacturing, other industries and private services. The question is thus whether 5% a year growth of GDP could plausibly generate so many jobs in these sectors.

So far as private services and 'other industries' are concerned, the likely growth of output should be closely related to growth of GDP as a whole. Logarithmic correlations for 1960-73 yield $\bar{R}^2$ of 0.980 and 0.995 respectively with estimated elasticities of 1.05 and 1.20 for the two sectors. On the basis of these correlations, the growth of output to be expected between 1977 and 1985, if GDP grows at an average 4.8% a year from now on[8], would be 4.3% a year for private services and 5.9% a year for 'other industries'. Assuming that the employment–output relationships given in the previous section remain valid, these output growth rates would generate about 800,000 additional jobs in private services and 600,000 in 'other industries'.

These growth rates of output and employment are higher than have been achieved by either sector in the past (both averaged 3.1% a year output growth between 1951 and 1973). In the case of private services there are no obvious bottlenecks. It is conceivable that public utilities (e.g. electricity supply) might run into capacity constraints, but large supluses of capacity exist at present in most sectors included under the 'other industries' heading. Moreover many of them, notably construction, have recently shed large numbers of employees who could presumably be attracted back.

[8] 3½% 1977-78 and 5% a year between 1978 and 1985.

Assuming that private services and 'other industries' could keep pace with 5% a year growth of GDP, there remain nearly 1/2 million additional iobs to make up tne total number required; these would have to be found in manufacturing industry. To see whether this is conceivable, we first estimate the required growth of manufacturing output. In the past (1960-73) domestic demand for manufactures has correlated quite closely with GDP (showing an $\bar{R}^2$ of 0.972 in a logarithmic regression), with an elasticity of 1.35. The implied growth of demand with 5% a year growth of GDP is 6.8% a year. Manufacturing output will not necessarily keep pace with this growth of demand, nor is it essential that it should do so in the next few years, when rising North Sea oil benefits should make it possible to finance net imports. Projections of the various constituents of the balance of payments up to 1985 using the CEPG model show that the permissible deterioration in the net balance of trade in manufactures between 1977 and 1985 may be of the order of 15% of total manufacturing output in 1977. We therefore take the required growth of output to be 5.3% a year, or 1.5% a year less than the growth of demand for manufactures.

The employment–output relationship given in the previous section implies that if this growth rate of manufacturing output were actually achieved, then 350,000 additional jobs would actually be provided in manufacturing industries by 1985, making up the total of 2 1/4 million needed to reduce registered unemployment to 3/4 million.

Our conclusion is therefore that a return to at least much lower unemployment would be possible by the mid-1980s, provided that GDP growth could be maintained at 5% a year and that manufacturing industry grew at a rate consistent with a sustainable trade deficit - which we estimate to involve growth of manufactuing output at 5.3% a year.

4. Is a successful manufacturing sector essential?

The previous section suggested that manufacturing industries ought to provide some 350,000 out of the total of about 2 1/4 million additional jobs required to bring unemployment down well below 1 million by the mid-1980s. In the long run it may not be essential that manufacturing should provide jobs directly; for example if there were very fast growth of productivity in manufacturing, the whole economy might be expanded faster, providing more jobs in other sectors. What is absolutely necessary, however, is that manufacturing output should grow fast enough relative to GDP to prevent the emergence of an unmanageable trade deficit. This requires that the manufacturing sector should be successful not only in expanding its capacity but also in maintaining its share of home and overseas markets, so that the capacity is used to hold down imports and raise exports.

This section suggests why the contribution of manufacturing to the balance of trade is so critical.

Table 3.5 provides an analysis of the current account balance of payments in 1977, with comparative figures for 1960 to give an indication of the past trend. The main point to note is that the importance of manufactures has increased, not fallen. Not only do exports of manufactures account for one half of all foreign exchange earnings, as they did in the past, but imports of manufactures have now risen to account for 40% of all foreign exchange expenditures. The second most important item is trade in food, raw materials and fuels. Shipping and civil aviation tie for third place with other services, each accounting for only about 10% of total credits and debits. Trade in manufactures is over four times as large in value as receipts and payments for shipping and aviation or for other services. On the export side other sectors have not performed significantly better than manufactures. On the import side the only large offset to penetration by manufactured imports has been the relatively slow growth of imports of raw materials.

Table 3.5. Sources and uses of foreign exchange[a], 1960 and 1977

	Sources (%)[b]		Uses (%)[c]	
	1960	1977	1960	1977
Raw materials[d]	9.1	10.9	43.3	28.1
Manufactures	52.2	54.4	23.3	41.7
Shipping and civil aviation	12.2	9.7	12.0	9.3
Services	11.4	13.4	10.6	8.2
Interest, profit and dividends	11.0	8.1	7.0	7.5
Transfers	1.7	1.5	3.0	4.1
Unallocated	2.4	2.0	0.8	1.1
Total	100.0	100.0	100.0	100.0

Notes:
(a) Balance of payments on current account.
(b) Percent of total exports and invisible credits.
(c) Percent of total imports and invisible debits.
(d) Food, drink, tobacco, basic materials and fuel.

The net balance of trade in manufactures is potentially volatile because about 30% of all domestic consumption and investment expenditure is on manufactured products. There is no strong tendency for this proportion to fall as the economy grows. Table 3.6 shows that the share of fast-growing services in

Table 3.6. Growth in real expenditure by consumers on services, 1966-76 (average growth rate, % per year)

Total consumers' expenditure on all goods and services at 1970 prices	1.9
Total consumers' expenditure on services	1.9
of which:	
Communications services (postal, telephone and telegraph)	5.5
Entertainment and recreational services	5.0
Running cost of motor vehicles	4.5
Insurance	3.2
Private non-profit making bodies	2.8
Maintenance, repair and improvement by owner occupiers	2.0
Betting and gaming	1.0
Catering	−0.8
Hairdressing	−1.5
Other services	−2.1
Domestic services	−2.5
Laundries	−6.6

private consumption expenditure has been fully offset by the relative decline of other services. The correlation of demand for manufactures with GDP mentioned in the previous section (p.28) showed an elasticity considerably greater than unity, implying that faster growth of the economy as a whole has tended to be associated with a higher share of manufactures in total demand.

At present values, a 10% increase in total domestic demand would typically involve an increase of about £5,500 million in purchases of manufactures, and even if the import proportion remained unchanged this would cause an increase of at least £2,500 million in imports of manufactures. In the past, the import proportion has steadily risen, and it has risen faster when domestic demand expanded faster. Trade in services is simply too small for it to be conceivable that an increase in net exports of services could make up for the rise in imports of manufactures which would occur when GDP expands fast, unless it is matched by a strong performance from the domestic manufacturing sector.

5. How can the process of de-industrialisation in the UK be reversed?

The relative decline of manufacturing in the UK can be assessed by various measures, such as growth of its output and employment relative to that in other countries or in other domestic sectors. We have already indicated that the criterion most directly relevant to prospects for full employment is the net balance of trade in manufactures which is, or would be, achieved at a full-employment level of GDP. This in turn depends on the value of exports of manufactures and on the propensity to import manufactures, which in turn depend on the shares of UK manufacturing industry in home and overseas markets. Since 1960 the UK share of world exports of manufacturers has fallen from 16½% to 9¼%[9] while the share of domestic manufacturers in the home market has fallen from 87% to 59%[10]. The estimate in Chapter 2 of this *Review* is that if past trends continue, the loss of market shares will force GDP growth to be held down to an average of 2% a year between now and 1985, despite North Sea oil, causing a continuing rise in unemployment.

The reasons for the decline of UK industry relative to competitors are much disputed. Our view is that the decline should be seen as a cumulative, interlocking process, in which a weak balance of trade has caused slow growth of aggregate demand, resulting in low investment and limiting opportunities for development of new products and increased productivity. The consequent deterioration in competitive power kept the balance of trade weak and perpetuated stagnation of aggregate demand[11].

It is unlikely that the UK could break out of this process of decline by policies designed to hold down real wages and raise profits or by reducing overmanning and closing down unsuccessful plants.

The ratio of wage costs to product prices is largely determined by manufacturers themselves, since increases in money wages are invariably passed on into prices. Moreover the profit mark-up has remained virtually constant, apart from the short-run effects of variations in capacity utilisation[12]. The most effective policy for changing the money costs and profits of UK manufacturers relative to those of overseas competitors has been 'real' devaluation of the exchange rate for sterling (i.e. devaluation in excess of relative inflation in the UK). But there are limits to how far devaluation can be pushed, because of the inflationary pressures which it generates[13]. Estimates of the quantitative effects of devaluation on exports and imports imply that the improvement yielded even by large exchange rate changes is insufficient to reverse the UK's trend decline[14].

Nor are factory closures and reductions in manning likely to solve the problem. The UK has achieved large closures in certain industries - notably shipbuilding and electrical engineering - but this did not lead to a recovery of those industries. There is no obvious evidence that industries which have been 'saved' have performed worse, in terms of exports and imports, than those where collapses have been allowed to proceed.

Nor have grants and financial incentives had any marked impact on aggregate industrial performance. It is true that the effect is much harder to trace than that of devaluation, because aids and incentives have varied less discretely than the 'real' exchange rate, and it might be that the loss of markets by UK industry would have proceeded significantly faster in the absence of such incentives. But companies already pay very little tax (total Corporation tax paid by all companies and financial institutions was only £1.4 billion in 1976, or about 1% of GDP) while grants and subsidies to private companes total approaching £1 billion a year. The cost of reversing industrial decline by means of financial incentives alone would almost certainly be prohibitive. Moreover, some existing subsidies are already being challenged by the European Commission on the grounds that they lead to unfair competition.

In our view the only method by which the process of cumulative industrial decline can be arrested is through demand management policies which guarantee sustained fast expansion of domestic markets, combined with financial incentives or controls to ensure that this is matched by investment and modernisation in both public and private industry. A regime of general import restrictions is necessary in order to fulfil the first condition - sustained fast growth of domestic demand (the analysis supporting this contention is set out in Chapter 2 of this *Review*). Restriction of imports can also help to fulfil the second condition - planned investment and modernisation - if it is operated in such a way as to guarantee home sales in particular markets as an incentive to the reorganisation of corresponding production sectors.

The necessity for assured growth of markets is very well illustrated by the experience of manufacturing enterprises in the public sector during the present recession. British Steel, for example, has been forced to

[9] UK exports as a proportion of exports by 11 principal exporting countries *(National Institute Economic Review)*.

[10] Home market defined as final domestic sales; the domestic share measured as the total home market less imports of manufactures exluding imports of manufactures incorporated into exports (CEPG estimates).

[11] Cripps and Tarling [1974A].

[12] See K. J. Coutts, Short-run variations in company profits, Chapter 6 of this *Review*.

[13] See Godley and May [1977].

[14] See Fetherston, Moore and Rhodes [1977].

delay modernisation and has incurred huge financial losses because of collapse of its markets and continuing import penetration. Its sales have fallen below 20 million tons compared with a target capacity which it had been hoped to achieve for the early 1980s of 30-35 million tons. Any public enterprise which invests to meet ambitious long-term output targets, whether for steel, shipbuilding, aircraft, or motor vehicles, will risk heavy losses and deteriorating cost competitiveness so long as markets remain depressed.

Many objections to import restrictions have been advanced. The only really significant one seems to us to be the problem of conflict with allies and international institutions. However, if their refusal to sanction import restrictions is the major obstacle to industrial and economic recovery in Britain, this should at least be made plain and the matter argued out on that basis.

In conclusion, therefore, we argue that the only way to achieve an expansion of aggregate demand sufficient to reduce unemployment is to reverse the process of de-industrialisation. Import restriction is an essential part of demand management policy designed to achieve this, because of the need to prevent a deterioration in the balance of trade and to secure steady growth of markets for domestic producers. The role of industrial policy operating in both the public and private sectors is to complement demand management policies by encouraging increases in investment to expand capacity sufficiently when demand increases.

APPENDIX
EVIDENCE AND ESTIMATES OF THE VOLUNTARY INCREASE IN UNEMPLOYMENT

by Roger Tarling

There may be said to be a voluntary increase in unemployment if for given labour market conditions more people choose to become unemployed, or if those already unemployed choose to remain unemployed for longer periods of time[15]. It has been argued that increased social security benefits may have induced a voluntary increase in unemployment because the cost of unemployment in terms of forgone earnings is reduced. It has also been suggested that there may have been a voluntary increase in unemployment resulting from a more general change in attitudes towards work, not necessarily associated with the financial inducement of higher benefits.

Most analyses which have discussed the effects of improved benefits have sought to assess their importance as part of an explanation of why unemployment rose relative to vacancies after 1966. The methods used became more sophisticated over time (see, for example, Gujarati [1970], Mackay and Reid [1972], Bowers *et al.* [1972] and Evans [1977]). The later analyses conclude that the rise in unemployment was due largely to other factors, but the Redundancy Payments Act of 1965 and the earnings related supplement (ERS) to unemployment benefit introduced in 1966 may have increased the normal level of male unemployment by about 70,000 in total. This result is in accordance with the views of a Department of Employment working party (Department of Employment [1976]).

Much larger estimates of the voluntary increase in voluntary unemployment were derived by Parkin [1977] in connection with his work on the Phillips curve. His equations suggested that about 300,000 of the increase in registered unemployment up to 1974 was voluntary and he believed it could be attributed to increases in the benefit/earnings ratio in the period from 1965 to 1974.

There is some evidence on the attitude towards work among the unemployed from surveys of unemployment, most notably the survey carried out by Daniel [1974] and those by the Department of Employment [1966], [1974], [1977]. These surveys do not provide evidence to discriminate between the effects of improved social security benefits and other causes of a change in attitudes.

In the first section below, evidence is provided on benefits payable to the unemployed. We conclude that there has been no significant increase in total benefit entitlement relative to earnings since 1970. Thus there was no further inducement for workers to become voluntarily unemployed. The second section considers how improved benefits might affect the number of people who become unemployed and the duration of unemployment. The third section shows that there is no evidence that more people are *becoming* unemployed voluntarily in recent years. But it is possible that those who become unemployed are staying on the unemployment register longer as a result of the increased benefits. The fourth section shows that an increasing number of unemployed people are 'somewhat unenthusiastic' about work, but such people represented a lower proportion of total unemployment in 1976 than in 1973. We conclude that no more than 150,000 people at the outside could be regarded as voluntarily unemployed out of a total

[15] In this appendix, we shall not consider the wider Keynesian definition of 'voluntary unemployment'.

Table 3A.1. Benefit-earnings ratios for married couples with no children[a]

October/November[b]	Average weekly earnings likely to be obtained by the unemployed[c]		Benefits relative to average net earnings		
	Gross	Net of tax and NI	Unemployment benefit		Supplementary benefit Scale rate + rent
			Flat rate	Flat rate + earnings related[d]	
1960	9.86	8.90	0.449	0.449	0.596
1961	10.25	9.17	0.504	0.504	0.612
1962	10.67	9.51	0.486	0.486	0.629
1963	11.26	10.12	0.539	0.539	0.642
1964	11.89	10.58	0.515	0.515	0.621
1965	12.79	11.11	0.585	0.585	0.695
1966	13.62	11.69	0.556	0.684	0.705
1967	14.13	11.95	0.611	0.757	0.739
1968	15.26	12.72	0.574	0.727	0.737
1969	16.12	13.26	0.611	0.796	0.749
1970	18.10	14.66	0.553	0.737	0.739
1971	19.88	15.98	0.607	0.814	0.749
1972	21.86	18.27	0.597	0.816	0.750
1973	25.00	20.31	0.586	0.761	0.737
1974	30.42	23.94	0.581	0.758	0.712
1975	36.82	28.34	0.635	0.750[e]	0.762
1976	40.99	31.61	0.661	0.818[e]	0.793
Period averages:					
1960-65			0.513	0.513	0.632
1966-71			0.585	0.752	0.736
1972-76			0.612	0.781	0.751

Notes:

(a) Benefit-earnings ratios for people likely to obtain earnings equal to the average for manual employees are provided for different household types in DHSS Social Security Statistics (for example p.228 of the 1975 volume).

(b) Where benefits were changed in November the new rate has been used.

(c) Estimated figure for October 1973 based on DE survey into the characteristics of the unemployed (adjusted from June to October): estimates for other years obtained by assuming that the average earnings of the unemployed remain at the same point in the distribution of manual earnings as observed in 1973 (i.e. about 80% of the lowest decile).

(d) ERS calculated using earlier October earnings (as an estimate of relevant tax year): reckonable earnings are gross earnings in the previous tax year up to 1972 and in the year ended 18 months previously after 1972.

(e) These entitlements were subject to the 'wage stop' since total benefit exceeded 85% of reckonable earnings: the prior entitlements to earnings related supplement would have given ratios of 0.823 in 1975 and 0.880 in 1976.

register of 1½ million people, all of whom would be responding to increased benefits, and that any estimate is in any case hypothetical.

(i) The rise in benefits payable to the unemployed

Table 3A.1 shows how unemployment benefits have changed since 1960 for a married couple with no children. The second column shows the average earnings likely to be obtained by those people currently unemployed, net of tax and national insurance contributions[16]. The last three columns show the benefits to which a husband who had such an earnings record would be entitled when unemployed, expressed as a proportion of his net earnings when employed. The third column shows the flat rate unemployment benefit. The earnings related supplement (introduced in October 1966), calculated on the basis of earnings in a previous tax year and payable for 26 weeks after the first two weeks of unemployment, is added to the flat rate element to give total unemployment benefit, shown in the fourth column. The final column shows the scale rate of supplementary benefit to which the family could be entitled[17], including an allowance for rent, in the event of unemployment lasting more than a year.

Flat rate unemployment benefit has risen from 50% of likely net earnings in employment in the early 1960s to over 66% in 1976, having being held at around 60% for most of the late 1960s and early 1970s. The introduction of the earnings related supplement in 1966 boosted total unemployment benefit by about 14% of net earnings in the first few years of operation. Following the wage explosion of 1969/70, it came to add 20% of net earnings to the total entitlement, bringing the average total unemployment benefit to 80% of net earnings. For single people, the total benefit is significantly lower, while for a married couple with two children it has in general been slightly higher than shown in the table.

It would be quite possible for benefits to rise to 100% of likely net earnings, especially for a married couple with children, were it not for a 'wage stop' to unemployment benefit entitlement. This restricts the total entitlement to 85% of reckonable earnings for the purposes of the calculation of ERS, any excess being deducted from the ERS actually paid.

[16]Unemployed people have contributions credited to them.

[17]Before 1966, this is the scale rate of National Assistance.

Between 1966 and 1972, reckonable earnings were those for the tax year ending before the May prior to the commencement of the spell of unemployment in question. From 1973 onwards, the 'wage stop' was made more restrictive, by defining reckonable earnings as those in the tax year ending before the January prior to the commencement of the spell. This pushed reckonable earnings back by 12 months (except for spells of unemployment beginning between January and May), effectively reducing them by the previous year's inflation. Since 1973, when rates of inflation have been well into double figures, this made the 'wage stop' much more restrictive. In the examples shown in the table, entitlement is reduced by £2 per week in 1975 and 1976 because of the 'wage stop'.

Thus the introduction of the earnings related supplement to unemployment benefit did increase total unemployment benefit relative to net earnings by about 20 percentage points for the average unemployed man. All of this increase had occurred by 1970, since when the 'wage stop' has operated in years when entitlement for the average person exceeded about 80% of net earnings likely to be obtained in employment.

A number of the unemployed are entitled to receive much higher benefits relative to net earnings than the average. In 1973, a DE survey of the characteristics of the unemployed analysed individuals according to benefit received and the likely gross wage to be obtained in employment. After making allowance for deductions from the gross wage, it appears unlikely that as many as 10% of the sample were in receipt of benefit equal to likely net earnings.

We conclude, therefore, that the inducement to become unemployed or to remain unemployed did increase between 1966 and 1970, but that since then it has not increased, nor have benefits exceeded 80% of net expected earnings for most people. To assess the impact which these changes may have had on the numbers unemployed, it is necessary to consider the nature of conceivable responses to such an inducement.

(ii) The effect of improved benefits on the number of unemployed

The analysis of how benefits may affect unemployment is usually based on assumptions about how people search for jobs. Individuals are assumed to search through the vacancies available, waiting until they find one with an acceptable wage. There are costs to waiting, measured mainly in terms of forgone earnings, but these are largely compensated for by social security payments. The financial benefits of a longer wait derive from the assumption that it may, hopefully, result in a higher wage. If benefits are increased relative to earnings, it pays people to forgo more earnings and wait longer for a good job.

The introduction of ERS could have encouraged an individual already unemployed to extend his spell of unemployment by anything up to 26 weeks, since the supplement is payable for that length of time. The Redundancy Payments Act provided for a lump sum (and a regular payment) at the beginning of a spell of unemployment following redundancy, paid instead of the normal unemployment benefit. This too could have encouraged longer spells of unemployment.

Higher benefits, especially the ERS, might encourage more people to become unemployed as well as encouraging longer spells of unemployment. People can search for new jobs while they are still employed as well as when unemployed, but assuming that it is easier to search whilst unemployed, some people may be induced to become unemployed when unemployment benefits are raised relative to net earnings. Moreover some people do not register as unemployed between jobs because they expect to find a new job quickly: an increase in benefits may encourage more of these people to register.

The impact of improved benefits could be to increase both the flow of new registrants and the average duration of unemployment. The effects on both flows and duration may vary through time. The effect on the flow would be greater when more people voluntarily quit their jobs but smaller when job opportunities were more plentiful. Since, historically, voluntary quitting varies with the number of job opportunities, these two factors offset each other. The increase in duration of unemployment will have a larger effect when more people become unemployed, whether voluntarily or involuntarily, and the increase in average duration itself should be greater when job opportunities decrease and individuals have more difficulty in finding an acceptable job[18].

The system of benefits does not encourage very long-term unemployment. After 26 weeks ERS is no longer payable, although the flat rate benefit remains and there may be the option of claiming supplementary allowance: when entitlement to unemployment benefit expires, generally after 12 months, it is possible to claim up to the scale rate for supplementary benefit[19]. Strictly, a successful claim for supplementary benefit depends on proven incapacity for work or proven willingness to work, although such subjective criteria may be hard to enforce.

The most 'rational' way to exploit the availability of benefits depends on optimising both the duration and the frequency of unemployment spells. Optimum duration is achieved by remaining unemployed as long as benefits are payable at a high enough level compared to net earnings. Eventually it becomes necessary to be employed again in order to regenerate the contribution record which determines entitlement to benefit. Since this regeneration requires a spell of employment of at least 18 months, and since benefits are at a maximum for 26 weeks, this approach would involve taking a 'state-financed holiday' of 6 months not more than once every two years.

(iii) The effect on stocks and flows of the unemployed

The stock of unemployment at a particular time includes people who have already been unemployed for varying lengths of time: some will soon leave and others will remain unemployed for some considerable time afterwards. Only if each person who leaves after a spell of x weeks is replaced by a new inflow who will spend x weeks as unemployed will the total stock remain unchanged. But if two new people were to sign on the register, or the new person were to remain on the register for more than x weeks, there would be a rise

[18]The formal models of job search are rather unhelpful in this case, since they are primarily concerned with equilibrium unemployment rather than its cyclical changes. It has been assumed here that the proportion of 'better' jobs does not alter as the number of job opportunities alters.

[19]After 2 years, the ordinary scale rate increases to a long-term scale rate.

Table 3A.2. Stocks and flows of the unemployed in Great Britain since 1960

	Annual average number of wholly unemployed[a] (thousands)		Numbers unemployed for 2-26 weeks[b] (thousands)		Numbers in receipt of earnings related supplement (c) (thousands)		Annual inflow to unemployment[d][f] (millions)		Estimated average duration of spells ending in year[e][f] (weeks)	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1960	243	94	114	54	–	–	(1.82)	..	(5.5)	..
1961	222	83	105	47	–	–	..	..	..	..
1962	314	105	171	64	–	–	..	..	..	..
1963	383	120	196	69	–	–	(1.95)	..	(8.2)	..
1964	273	88	124	48	–	–	(1.87)	..	(6.1)	..
1965	236	73	109	40	–	—	..	..	..	..
1966	255	68	126	37	(54)	(4)	(2.18)	..	(5.9)	..
1967	413	96	220	54	84	7	2.99	1.13	7.1	4.4
1968	453	85	231	47	89	6	3.01	1.03	7.7	4.2
1969	453	78	230	44	84	6	3.02	0.97	7.7	4.2
1970	485	82	245	46	96	7	2.97	0.95	8.4	4.5
1971	625	112	332	65	130	12	2.97	0.96	11.6	6.0
1972	686	130	334	74	128	14	2.69	0.93	12.1	6.5
1973	488	93	207	46	78	12	2.58	0.91	9.1	4.9
1974	490	91	238	49	88	12	2.84	1.02	9.6	4.9
1975	722	169	396	109	162	28	3.05	1.28	14.1	7.8
1976	941	282	468	172	(199)	(50)	2.92	1.48	16.5	10.5
1977	976	347	469	200	..	..	2.92	1.65	17.1	11.2

Sources: Department of Employment Gazettes and DHSS Social Security Statistics.

Notes:

(a) Excluding school leavers and adult students.

(b) Derived using average proportions obtained from the April and October analyses of duration for men and women (aged 18 and over).

(c) Derived using average proportions obtained from the 5% samples taken by DHSS in May and November each year; in 1966, November only and, in 1976, May only.

(d) Flows to employment offices, excluding those registering at Careers Offices and, since 1971, adult students.

(e) Derived by dividing the average weekly outflow each year into the stock of unemployed defined on a basis consistent with the flow coverage.

(f) Estimates for 1960, 1963, 1964 and 1966 are taken from Cripps and Tarling [1974].

in the numbers counted as unemployed at some future date. Thus both the numbers of people becoming unemployed (the inflow) and the average duration of spells experienced contribute to the total numbers counted as unemployed[20].

Table 3A.2 shows estimates of the annual average level of unemployment, the numbers unemployed for 2-26 weeks, the numbers in receipt of ERS, the annual inflow to unemployment and the average duration of unemployment spells. The first three columns show the stock of unemployment and some of its components and the final two columns give estimates of the two behavioural variables, inflow and duration, which determine the stock.

The effect of benefit changes on flows into unemployment appears to have been negligible over the period since 1966 for which official estimates have been available. Except for increases in the flow of women in the last two years, inflows have remained at or below their 1967-71 levels. Official estimates of flows before 1967 are not available, but an independent estimate [Cripps and Tarling, 1974] suggested that there had been a secular increase in inflows of men around 1966. Changes in the duration structure of the unemployed suggested that much of the additional inflow comprised people who expected to experience short spells, indicating that there may have been an initial impact of improved benefits on flows as some of those who left employment came onto the unemployment register for a short period instead of going directly into other jobs. The recent increase in inflows of women cannot be explained as a response to improved benefits because benefit levels have not recently risen relative to net earnings.[21]

The report of the Department of Employment working party (Department of Employment [1976]) included hypothetical estimates of the effect of ERS on the number of men unemployed. The estimate did not include the contribution that any increase in flows onto the unemployment register would make to the stock of unemployed, because of a lack of information, and referred only to the contribution made by an increase in the average duration of spells by people in receipt of benefit. Their estimate was based on the fact that the numbers receiving ERS rarely exceeded 100,000 in any month for which numbers were recorded between 1966 and 1970; by assuming that the biggest plausible response was that individuals would double their average duration, a maximum estimate of the effect on the stock was obtained as 50,000 (100,000 ÷ 2)[22]. This was felt to be

[20] The way in which unemployment changes through time has been discussed in detail elsewhere: see, for example, Fowler [1968] and Cripps and Tarling [1974].

[21] The increased inflow of women can be explained by a change in the propensity among women to register as unemployed: see n.(7) to Table 3.1

[22] If the inflow had risen by as much as 200,000 as a result of improved benefits and all those involved remained on the register for the average length of time spent by recipients of ERS, the DE estimate could be increased to 60,000.

Table 3A.3. Results from DE surveys of the characteristics of the unemployed (% of the register, classified by ease of finding work)

Survey: June	Should get work without difficulty/ good, fair prospects	Will find difficulty because of poor prospects					
		Lack of local opportunity & experience/ skill not appropriate to employer	Age	Physical & mental condition	Attitude to work	Other	Total
1964[a]	23.2	18.9	20.2	19.3	9.4	9.2	100
1973[b]	26.3	15.1	16.2	16.2	15.6	10.1	100
1976[b]	29.5	27.6	7.2	10.3	13.5	11.9	100
[a]	32.9	30.4	0.6	8.2	14.8	13.1	100

Notes:
[a] for all people in the sample
[b] for those seeking long-term, full-time work.

consistent with the 60,000 increase in the numbers of men unemployed for 2-26 weeks between 1962 and late 1967. If we apply the same procedure to the information for later years, we obtain estimates of 40,000 in 1973 and 100,000 in 1977. But, as suggested above, people might have increased their average duration by less than 100% in the good times of 1973 and by more in 1976 when jobs were scarce. Suppose that the responses were a 50% and 200% increase in average duration, respectively. Then the revised estimates would be 26,000 in 1973 and 130,000 in 1976.

In the DE report no estimate was given for an effect on female unemployment. Since a much lower proportion of women are eligible for benefit, particularly for ERS, it was not considered plausible to assert that there had been any significant effect. However, by 1976, 50,000 women were in receipt of ERS and, more significantly, the proportion of those unemployed for between 2 and 26 weeks who were in receipt of ERS has increased to 30%. This is not necessarily the result of a greater proportion of women having been induced to pay a full National Insurance contribution in order to gain entitlement[23]. There has been an increase in the number of women aged 20-34 who are in the labour force and have entitlement to benefit at full rates, because they have either not married or not exercised their option to contract out when married. If this is the explanation, then the recent increase in numbers receiving ERS has very little to do with the increased benefit.

The maximum effect of the Redundancy Payments Act was estimated in the DE report to be 20,000. The numbers in receipt of payments have not increased since then (remaining around 20,000 per month) and the average payment remains at about 25% of annual average manual earnings. In total, therefore, an outside estimate of the effect of ERS and redundancy payments on unemployment in 1976 would not exceed 150,000, and this estimate is entirely hypothetical.

(iv) A change in the attitude towards work

In the previous section attention was confined to the possible effects of increased benefits, particularly ERS and redundancy payments. It has been suggested that there has been a more general change in the attitude towards work. Any argument that the rise in unemployment has been voluntary depends on subjective judgment. Up to this point in the discussion we have attempted to demonstrate that the weight of objective evidence is against the voluntary increase being of major significance, in so far as we are able to describe the mechanisms and put upper limits on their conceivable effects. A general shift in attitude could, however, have almost any effect one likes to assume. In this section, we assess evidence on characteristics of the unemployed which could be associated with a general deterioration in the attitude towards work.

Apart from isolated surveys, each of which has been partial, there is one source of comprehensive information on characteristics of the unemployed. This is a series of surveys carried out by the Department of Employment in 1964, 1973 and 1976. The surveys record some objective characteristics of the unemployed and also incorporate subjective views of local employment officers on less tangible factors. A comparison of the three surveys is provided in Table 3A.3.

The assessment of prospects of obtaining work was similar in 1973 to that for 1964. Both were years when labour demand was high. The most noticeable difference in the estimates is that by 1973 there were more who would find difficulty because of their attitude to work. By 1976, when labour demand had decreased dramatically, more people were judged to have good or fair prospects. For those who were judged to have poor prospects, limited local opportunities were the main reason. Age apparently ceased to be an important factor, as did physical and/or mental condition, nor was there any increase in the proportion who would find difficulty because of their attitude to work. As Table 3A.4 shows, the proportion of unemployed people reported as being somewhat unenthusiastic fell from 33% in 1973 to 26% in 1976. This is only to be expected when the numbers of unemployed increase dramatically. The proportion who had poor prospects (for reasons including attitude to work) fell both among those who were keen and among those who were 'somewhat unenthusiastic' about work. The proportion of those with at least

[23] The percentage of married women employees paying a full contribution was 4.9 in 1965 and 25.4 in 1974.

Table 3A.4. Attitude to work

(percentages)

Survey [a]	Keen				Somewhat unenthusiastic			
	Prospects good/fair	Reasonable or limited locally	Poor	All	Prospects good/fair	Reasonable or limited locally	Poor	All
1973	38		29	67	2		31	33
1976	28.5	24.4	21.1	74	0.9	1.1	24.0	26

Sources:
Department of Employment [1966], [1974] and [1977] (follow-up September 1977).
Note:
[a] Attitude not distinguished in 1964 Survey.

Table 3A.5. Cyclical turning points in the numbers unemployed for more than a year

High point		Subsequent low point		Period of decline	Low point as % of preceding high
date	number in thousands	date	number in thousands	(months)	
June 1953	33.6	June 1956	20.1	36	60
March 1960	63.7	June 1961	46.7	15	73
October 1963	77.1	July 1966	44.8	33	58
October 1972	177.6	July 1974	123.9	21	70

reasonable prospects who were also keen to work increased from 38% to 53%. The proportion who had at least reasonable prospects but who were somewhat unenthusiastic remained constant at a mere 2%.

Other results from these surveys tell a consistent story, and it was found from follow-up surveys that 60% of those assessed as having at least reasonable prospects of finding employment had in fact done so within 6 months. Taking the surveys at their face value, an outside estimate of those who may be unemployed because of their attitude to work (somewhat unenthusiastic) would be about 20% in 1964[24], 33% in 1973 and 26% in 1976. The levels of unemployment in June (the survey month), of these years were 313,000, 575,000 and 1,332,000 respectively. This suggests that the number who were 'somewhat unenthusiastic' rose from 60,000 in 1964 to 190,000 in 1973 and further increased to 350,000 in 1976. But since many studies of unemployed individuals have shown that people become discouraged as the spell of unemployment lengthens, the increasing number reported as being 'somewhat unenthusiastic' could have been caused by the fact that jobs became more difficult to obtain. Even in a recessionary period, many of these people nevertheless get back into employment; the follow-up survey in 1976 indicated that within 6 months 33% of the 350,000 (i.e. 120,000) had found a job.

Any increase in unemployment due to a changed attitude towards work would be expected to show as an increase in the number reported as being 'somewhat unenthusiastic'. We have however already presented evidence relevant to an assessment of the numbers who might be taking 'state-financed' holidays. The evidence presented on flows quite strongly rejects the proposition that many people could be voluntarily increasing the frequency of their spells of unemployment.

The proposition that there has been an increase in the number of permanent 'dropouts' has not yet been considered. Such an increase would have a negligible effect on inflows to unemployment, but would be observed as an increase in the numbers of long-term unemployed.

The numbers who had been unemployed for at least a year have increased from 20,000 in June 1956 to 324,000 in October 1977, with 200,000 of this increase occurring since mid-1974. Historically, the number unemployed for more than a year has been considerably less at low levels of unemployment than at high levels of unemployment: the low and high points in the number of these 'long-term' unemployed are shown in Table 3A.5.

The numbers of long-term unemployed have increased at each successive high point, between the low points of 1956 and 1961 and between the low points of 1966 and 1974. But, because these people are among the first to be made unemployed when demand for labour declines and among the last to find work when demand improves, a 'stop-go' cyclical pattern tends to increase the numbers of long-term unemployed, a process which occurs more rapidly the shorter are the cyclical phases of 'go' and the longer are the cyclical phases of 'stop'. This is confirmed in Table 3A.5, where it is shown that the longer is the 'go' phase (the period of decline in the number of long-term unemployed) the smaller is the low point as a percentage of the preceeding high point. Thus we find an increase in the low point between 1956 and 1961, not much change by 1966 and an increase to 1974

[24] A guess based on the relationship between those who had poor prospects due to their attitude to work and those who were said to be 'somewhat unenthusiastic' about work in 1973 and 1976.

which could be very large, because of the absence of any significant recovery in labour demand between 1966 and 1972. On the basis of the increase between 1956 and 1961, one could expect at least a doubling of the low point between 1966 and 1974 if the balance of 'stop' to 'go' had been the same, and more than a doubling given that there had been more 'stop'. This leaves very little room for an increase in voluntary 'hard core' unemployment[25].

(v) Conclusion

There is no *positive* evidence that a large proportion of the numbers unemployed may be regarded as voluntary. What evidence there is suggests that very few people have become voluntarily unemployed because of a change in attitude towards work and that the number who have extended their spell of unemployment in response to higher benefits is most unlikely to have exceeded 150,000 by 1976. Certainly, an increase in voluntary unemployment cannot be a major part of the explanation of the large rise in total unemployment.

If improved benefits have increased voluntary unemployment, this is an effect which, in some respects at least, was a desired outcome of the introduction of earnings related supplements and redundancy payments. That people made unemployed, especially those who are made unemployed involuntarily, should receive assistance to engage in a thorough job search should commend the measures rather than be a source of criticism. If the economy is expanded sufficiently and job opportunities increase, then any such voluntary extensions of unemployment need not take place to the same extent, since acceptable jobs will be more readily available. Thus, in periods of relatively full employment, it is likely that much of any voluntary unemployment will disappear.

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[25] It may be observed as a corollary that three years of expansion between 1978 and 1981, such as experienced between 1953 and 1956 or between 1963 and 1966, might only reduce the number of long-term unemployed by 40%, or 125,000, by 1981.