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The Economic Geography of Recession in the UK;

the early 1980s and historical perspectives

(3 volumes, this being volume 3)

by Colin Stamford Crouch

Submitted in 1989 for the degree of PhD at the University of Durham (Department of Geography).

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- 6 JUN 1990

Abstract

This thesis presents an analysis of slump in the U.K. economy, with the main attention given to the early 1980s. The slump is seen not as an isolated incident but as the culmination of a series of severe recessions; after the slump a prolonged phase of steady growth and rising employment is normal. This particular interpretation of slump is at the centre of a re-examination of the concept of a 50 year Kondratieff cycle in the economy. Investigation of this cycle is based not on the usual method of trying to find broad empirical regularities in economic time series, but rather on attempting to find what types of economic conditions logically follow on from other types of economic condition over a long time span. The attempt is made to reinterpret British economic history from 1815 to the present using this framework of analysis, a task involving synthesis and reinterpretation of existing accounts, supported by statistical material on national income, employment and unemployment.

A closer examination is made of spatial patterns of employment change and of unemployment in Britain from the First World War to date, using primarily officially published annual statistics on employment, and monthly statistics on unemployment. Attention is concentrated mainly on phases of downswing in the long cycle (1918-1932, 1966-1983), with detailed attention being given, with the help of unpublished Census of Employment statistics, to the period from 1971 to 1981, although there is also a comparative examination of spatial labour markets during periods of upswing, both with less than full employment (1932-39), and with full employment (1945-66). An attempt is also made to clarify the confused question of the geography of production and employment prior to 1914. In this "geographical" part of the work attention is given to a detailed unravelling of core-periphery distinctions in the British economy, at both the urban-rural scale and the north-south scale. It is hoped by concentrating attention on single year change to identify the precise economic conditions under which significant reorientations of the space economy take place (with, most importantly, a very sharp distinction being drawn between slump and post-slump periods) thereby avoiding overgeneralised pictures derived from the comparison of distant points in time.

(Colin Crouch, 1989, *The Economic Geography of Recession in the UK; the early 1980s and historical perspectives;* Durham University PhD thesis).

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Chapter 8 The Census of Employment; 1978 and 1981[1]

8.1 Introduction

Throughout most of the duration of the research, heavy reliance has necessarily been placed on the monthly unemployment count in the analysis of labour market changes at the local and regional levels during the slump. Analysis of this type is undoubtedly useful, and indispensable in trying to provide a time-profile of slump, but provides no direct evidence of levels of employment change. The 1981 Census of Employment presents such evidence, but the length of the time interval between this Census and the previous Census in 1978 means that while detailed information at the minimum list heading level is available for employment levels in each county for June 1978 and September 1981, this information is not available for any intervening dates. The continuance of a commitment to an *Annual* Census of Employment, as took place between 1971 and 1978, would have considerably enhanced the possibilities of uncovering the detailed mechanisms of slump, and the contrasts between various phases of slump. Even so, if it had been absolutely necessary to have Censuses of Employment only at three year intervals rather than at one year intervals, it would have been far more convenient if the Censuses had taken place in 1979, 1982 and 1985 rather than in 1978, 1981 and 1984. The period between 1979 and 1982 could be conveniently categorised as one of "slump", with no non-slump phases included, while the period between 1982 and 1985 could be categorised as one of "late slump and early recovery", with probably a considerably modified economic geography when compared with the geography of slump. The dates actually available mean that the "geography of slump", as analysed below, incorporates also a year of non-slump (1978-79), which on occasions makes conclusions difficult to draw. It is assumed however that between 1978 and 1981 the dominant economic geography is that of slump. It is quite likely, though, that the various elements which may be detected of expanded employment in the service sector may have been concentrated in the pre-slump year of 1978-9 rather than in the slump itself.

Despite all these deficiencies, no serious geography of slump can be written without using this data source, provided of course that the data had been released at the time of writing. For this reason, the current discussion of slump has been extended to cover the results of the 1981 Census of Employment, even though it has only been at a relatively late stage in the preparation of this work (April 1984) that such information has become available at the county or local scale. The analysis of year by year patterns of employment change through the 1970s,

in chapter 6 above, was conducted at an even later stage, in order to broaden the historical context of the discussion of slump. For reasons of space, various previously examined topics in the geography of slump, such as an analysis of unemployment change by town across the slump as a whole, are omitted from this final presentation. Neither has any detailed use been made here of the 1984 Census of Employment, the results of which became available only at a very late stage of the preparation of the text; clearly there is scope for some updating.

It should, in fairness to previous writers, be noted that the bulk of the existing surveys of the geography of slump, or aspects of the geography of slump, were written before the release of detailed figures for the 1981 Census of Employment.[2]

Before examining in more detail the geographical aspects of slump, an attempt is made to present a revision of official estimates of the total number of employees in employment at various stages during the slump, on the basis of the 1981 Census of Employment. It is considered that the officially published figures are deficient in a number of respects, as discussed below.

Between 1978 and 1981, a cumulative error of 737,000 jobs, representing an underestimate of true employment levels, had developed in the official estimates, which of course became revealed only when the Census of Employment results had been officially processed. Estimates for manufacturing employment may be taken as reasonably accurate, with a shortfall in the estimates of employment of only 52,000 in a period in which 1.2 million jobs were lost. It is only because such estimates for manufacturing may be taken, provisionally, as satisfactorily accurate that any reliance has been placed upon them in chapter 7 above. Estimates for service sector employment have been much less accurate, and are responsible for the bulk of the cumulative error.[3] It has been suggested in the *Gazette*[4] that the main problem in estimates in the service sector is that "whilst the information from the sample of establishments used in the provisional series provides a good guide to trends to employment in existing establishments, it is unable to provide an adequate basis for allowing for the creation of new establishments or the demise of existing ones", the problem being accentuated by the large number of small businesses, and by implication the high birth and death rates of businesses, in the service sector. Attempts have been made to correct for underestimation of employment in the service sector subsequent to 1981, but it would appear from Table 8.1 that the main method used to deal with the underestimation problem has been to divide the shortfall in the estimates as evenly as possible across time periods, so that a shortfall of 217,000 is attributed to the year 1978-79, a further 224,000 to

1979-80, and another 212,000 to 1980-81. Given the unevenness of economic conditions within this period, such an allocation appears highly questionable.

A set of alternative estimates is presented in Table 8.2 with no pretence at complete accuracy but rather with the more modest suggestion that these figures would be more reliable than those officially presented. Changes in unemployment rates are used to calibrate the scale of employment change.

Between June 1977 and June 1978 national unemployment fell by 4,000, from 1,450,100 to 1,446,100 while employment rose from 22,619,000 to 22,777,000, an increase of 0.7%. To have kept unemployment exactly the same numerically, employment in June 1978 would have been 22,773,000. The "natural rate" of growth of employment is thus taken as 22,773,000 ÷ 22,619,000, that is 1.00681, or +0.68% per annum. The actual rate of growth of employment is estimated by adding the "natural rate" in percentage terms to the percentage point increase in unemployment. Estimates for 1979 and 1980 made on this basis are presented in Table 8.2. A figure is also given, in brackets, for June 1981 but this is not to be taken as any sort of estimate of employment (which would actually have been about 300,000 lower than the figure given) since the severe slump conditions of the period 1980-81 led to rapid increases in both measured and concealed unemployment, and by using official unemployment figures the change in the labour force accounted for by concealed unemployment is not incorporated into the calculations. The attempt to measure the level of concealed unemployment is itself a major problem (chapter 3.5), but the increase of concealed unemployment which is implied here is roughly in accordance with levels provided in the independent calculations of chapter 3.

The author's estimates suggest a smaller growth in employment than given by official figures for 1978-9, and a smaller drop in employment for 1979-80, at the beginning of slump (-0.5% against -0.8%). It would be tempting to try to provide separate employment estimates for each region for each year, but this would present considerable methodological difficulties in that it would imply assuming various relationships which it is being attempted to demonstrate. The discussion in chapter 7 above has tended to concentrate, when regional employment levels are being considered, on changes of employment in production industries, which has largely eliminated the need to provide estimates, either overt or implicit, of changing levels of employment in the service sector.

It would undoubtedly be possible to provide more accurate estimates than those given officially, at national and regional levels for given times, through successively more refined procedures. This is hardly

essential for the work in the current chapter.

Table 8.3 shows levels of employment change by county between 1978 and 1981, and shows a considerable diversity of experience. At one extreme, over 12% of existing jobs were lost in Cleveland, Mid Glamorgan and Tyne and Wear, and at the other extreme, employment increased by nearly 10% in the Grampian region of Scotland. While it is hardly surprising that most of the urban, industrial counties of the periphery had particularly large falls in employment, what is more surprising is the extent to which several counties actually showed increases in employment.[5] Most of these counties were in Southern England, with the Scottish regions providing the remainder. The presence of employment increase during the 1978-81 period does not automatically provide proof that employment was increasing during the slump, since a year previous to the slump is also incorporated into the figures, but it is reasonable to assume that counties with particularly large increases of employment between 1978 and 1981 had increases of employment during the slump itself, as well as in 1978-79.

Table 8.4 pursues the matter further. It is assumed, for the purposes of illustration, that the pattern of employment change in 1978-79 was geographically similar to that in 1977-78, but slightly more favourable across the board. On the basis of Table 8.4, it would appear that employment was increasing during the slump in Hampshire, West Sussex, East Sussex, Surrey and Buckinghamshire in Southern England, and in Highlands, Borders, Dumfries and Galloway, Grampian, and the Island Areas in Scotland. In the English cases, the tendency toward expansion carried over from the 1970s was strong enough to over-ride the depressive effects of slump. The Scottish case is more complicated, and will be discussed further in section 8.9 below. The impact of the North Sea oil industry undoubtedly lay behind the large increases in employment in the Grampian region and the Island Areas, but other factors were involved in other parts of Scotland. Perhaps the most important *general* point to make is that while a slump is a far-reaching national and international economic event, not all geographical areas, and indeed not all nation states,[6] show net declines in employment during a slump.

The analysis of the economic geography of the 1970s in chapter 6, using the Annual Census of Employment, has tended to concentrate on the extremes of the range of employment change in any particular year, looking to see, for example, which regions and counties have been most affected by particular recessions (e.g. 1974-76) and which sectors within these counties are responsible for such extreme effects. This is the most efficient method for providing a brief survey of each year, which was all that was attempted in chapter 6, but for more detailed analysis of a

specific time period the whole range of experiences needs to be considered. To make the data manageable, some form of classification scheme is required, in order to be able to point more efficiently to significant aspects of similarity and contrast between counties. Any such classification scheme is not, or should not be, an end in itself, but rather is intended as a spring-board for deeper analysis.

Table 8.3 provides the raw material for such a classification, ranking counties by percentage rates of employment change, and showing those components of this change which are attributable to the sectoral composition of the economy (structural shift) and those components which are attributable to performances in each sector which are better or worse than average (differential shift). Thus the job loss in Cleveland (-12.7%) may be divided into a national component (-5.2%) reflecting the rate of job loss nationally, a structural shift (-3.7%) reflecting the fact that Cleveland's industrial mix, and particularly a high concentration of employment in iron and steel, caused significant extra problems for the local economy, and a differential shift (-3.9%) reflecting extra severe problems caused by a faster than average rate of job loss within sectors in the local economy. It is important to recognise that, by definition, the average structural shift and the average differential shift are each zero, allowing ready appreciation of whether a particular county is relatively favoured or disfavoured in some respect. The use of shift share analysis has been criticised (e.g. Richardson 1978 pp.203-206) and defended (notably in Fothergill and Gudgin 1979a). Richardson's criticism would appear however th say more about his own neo-classical methodological preferences than about the usefulness of shift-share analysis. He notes, for example, that

> "Several studies have suggested that the differential shift components are highly unstable over time, *a death-blow to the value of the technique as a projection tool.* Even worse, the dissenting researchers found that the components were stable in some industries, but unstable in others, with little clue to determine which industries fell into which category a priori" (Richardson 1978, p.205, emphasis added).

There is an implicit assumption that employment change can be predicted, thus projected on the basis of a knowledge of past changes. Underlying this, or possibly following on from it, is the assumption that changes take place in mechanical and repetitive fashion. This network of assumptions may be described, according to context, as neo-classical or positivist.[8] Any detailed historical analysis of important patterns of economic change (e.g. chapters 4 to 8 here) will show that the most significant patterns of change are *not* mechanically repetitive but instead

may be highly disjointed, with considerable elements of irreversible structural change. If, in the example given above, the components of a shift-share analysis are stable in some industries, but unstable in others, this would suggest that the shift-share analysis has uncovered important elements of possibly irreversible structural change in a regional economy, for example a phase of intense decline in a local industry.

Economic change is highly uneven through time and spece. If a technique identifies that unevenness, that is a point in the technique's favour; it is not an adequate criticism to complain that shift-share techniques fail to product results which suggest smoothness of economic change through space and time.

The use of shift-share analysis is of considerable help in understanding patterns of economic change. The problems of abuse are those of any other reputable but not foolproof technique, and arise for example when a researcher uses past data not to understand historical change but rather to provide projections, or when a researcher conflutes description and explanation. Shift-share analysis is used extensively in this section, and helps identify the link between patterns of aggregate change and patterns of causality.

As far as the classification scheme below is concerned, the two main bases of the classification are the level of total change in employment and the pattern of shifts. The level of employment change is taken as the primary basis for classification, and the pattern of shifts is taken as the secondary basis.

8.2 An Outline Classification of Counties Based on Response to Slump

8.2(i) Method of Analysis

There are various prominent breaks in the distribution of the rate of employment change shown in Table 8.3; the distribution is not continuous throughout the range. A recognition of these natural breaks in the distribution indicates that it could be useful, in studying the geography of slump, to produce an outline classification of counties based on response to slump.

The classification of data is not, or should not be, an end in itself, but rather an intermediate stage in the analysis of a complicated data set, providing some initial order out of a chaotic mass of statistics. Once such a classification has been made, detailed analysis can proceed. Three main types of examination may be said to proceed directly from the classification system; elements of each type are used in the analysis below. These forms of examination are:

(a) *Within-group comparisons* The degree of the degree of homogeneity or otherwise within the group; the (approximate) determination of the degree to which certain aspects of change in a local economy are due to local peculiarities, or to the general characteristics of the type of local economy which is present.

(b) *Between-group comparisons* What detailed features differentiate one group from another? In many respects, this is perhaps the most important question raised in any classification scheme.

(c) *Comparison of classifications* For example, how an empirically derived classification varies from one based on a priori notions, such as a classification of employment change based on degrees of urbanisation.[9] A flexible classification scheme, as used here, allows questions of the relationship between degrees of urbanisation and patterns of economic change to be posed from a variety of perspectives; an a priori classification scheme often allows for only a limited degree of hypothesis testing and is liable to obscure much local detail.

The taxonomic stage is thus a prelude to the explanatory stage. In furthering the analysis, a more detailed examination of local differences in industrial structure, and of local patterns of differential shifts, would be required. Some basic procedures are listed below.

(1) Calculation of the proportional manufacturing shift in each county, that part of the structural shift accounted for by the proportion of the county's total employment in manufacturing at the earlier date, regardless of sector.

(2) Calculation of the residual structural shift in manufacturing, and allocation of elements of that shift to individual MLHs. The residual structural shift is the total structural shift in manufacturing, minus the proportional structural shift, and indicates the extent to which the sectoral composition of the local manufacturing industry is an element of additional weakness.

(3) If there is a significant non-zero differential shift in manufacturing, isolate sectors which account for that shift. It is generally important to consider whether a large negative differential shift in a county results from a pattern of isolated but very large job losses, resulting in the negative differential shift being concentrated in a few minimum list headings, or whether it results from generally poor local performance across a wide range of industrial sectors, in which case a large number of minimum list headings would have moderately large negative differential shifts.

(4) Differential shifts in services may be considered in much the same way as in (3).

This basic set of procedures is applied to employment statistics for individual counties, but there is considerable scope for cross-county comparisons to be made, using the framework provided by the classification scheme.

In developing the classification scheme, the most important step is to identify the main breaks in the distribution of rates of employment change shown in Table 8.3. This leads to the identification of five basic groups, which are highly unequal in size. The next stage in the classification would then be to sub-divide the larger of these groups, in order to provide small groups of about four or five counties which can be examined in more detail. Firstly, however, the main groups need to be established.

Perhaps the most important break in the distribution in Table 8.3 occurs between counties ranked 18 (Staffordshire, employment change -7.16%) and 19/20 (Cornwall and Dyfed, employment change -5.81%, compared with a national average of -5.21%). There is thus a highly distinct group of counties with declines in employment considerably greater than the national average; this group may be termed group 1. The question of possible sub-division of group 1 is to be considered later. The spatial distribution of group 1 counties is of interest (Fig 8.1). All these counties except Northamptonshire are in Wales, the West Midlands, Northern England (N, NW, YH) or Scotland. There is a continuous belt of major employment decline stretching from the West Midlands Metropolitan County, through Staffordshire and into what might be called the northern metropolitan industrial belt (Clwyd, Cheshire, Merseyside, Greater

Manchester, West Yorkshire, South Yorkshire and Humberside). Decline was also intense, indeed on the whole more intense, in the outer peripheral coalfield zones of South Wales (West Glamorgan, Mid Glamorgan, Gwent), North East England (Tyne and Wear, Durham, Cleveland, Northumberland) and West Central Scotland (Strathclyde), which also tended to be, along with Lancashire, the most depressed areas in the slump of the early 1930s. As the map (Fig 8.1) shows, these were isolated peripheral zones of intense decline rather than part of the main belt of severe but more modest decline.

A second group of counties may also be identified, with the rate of job loss running close to the national average. The break at the upper end of group 2 (between Dyfed and Staffordshire) has already been noted. There is also a clear break at the lower end of the distribution, between Fife (-4.46%) and Lincolnshire (-3.99%). The dominant feature of the economic performance of these counties is a worse than average sectoral composition of employment (negative structural shift) combined with better than average performance within sectors (positive differential shift). The positive and negative shifts largely cancel each other out, with the result that the rate of employment change remains close to the national average. This pattern occurs in eight out of the eleven counties ranked from 19 to 29, and thus is a distinct group feature. A ninth county, Shropshire, represents the *only* case of a county maintaining average changes in employment through both the structural and differential shift remaining neutral. Shropshire, for want of a more convenient alternative, is classed with group 2. In Essex, the pattern of shifts is almost neutral, but the structural shift is slightly but distinctly positive, in contrast with the negative shifts in the remaining group 2 counties. Closer examination of Table 8.3 suggests that in its pattern of shifts, Essex more closely resembles other East Coast counties such as Lincolnshire and Norfolk, in having a positive structural shift and a neutral differential shift, although the structural shift is less pronounced in Essex than in the other counties. This suggests that Essex should be regarded as an outlier from group 3 (to be discussed) rather than as part of group 2. Cornwall has a pattern of economic performance which is almost completely the reverse of that of other group 2 counties, with a strong positive structural shift and a strong negative differential shift. This suggests that Cornwall cannot legitimately be regarded as part of group 2, and is better grouped with the Isle of Wight and other counties in group 3.

Group 2 may thus be regarded as comprising nine counties, as listed in Table 8.5. In general, these may be regarded as comprising those parts of the main urban industrial belts which did not suffer the heavy

job losses of group 1. There is a prticularly strong East Midlands presence in this group, especially if Bedfordshire is regarded like its neighbour Northamptonshire as part of the southern East Midlands rather than as part of the outer South East. Later analysis (section 8.3) suggests that if the effects of the Corby steel closure were eliminated from the calculation, Northamptonshire would also fall into this group, not surprisingly given the geography of the group. For the most part group 2 may be regarded as being a group of industrial counties with medium levels of urbanisation outside the South and outside the main Northern metropolitan belt, with the East Midlands and East Scotland being well represented, and with Lancashire also being found in this group.

Three more groups, 3, 4 and 5, may also be distinguished on the patterns of shifts. Group 3 counties are in many respects the converse of group 2 counties in that they have large positive structural shifts, along with differential shifts which are generally negative, but generally much weaker than the positive shifts, leading to a more favourable than average employment performances. The nine counties included are listed in Table 8.5. This group is exceptionally heterogenous, it being hard to point to close similarities between Greater London and Gwynedd for example, but it can be suggested that three distinct and reasonably homogeneous subgroups may be noted:

(a) "Southern cities" (Greater London, Avon, South Glamorgan)

(b) "Resort counties" (Gwynedd, Cornwall, Isle of Wight)

and (c) the East Coast (Essex, Norfolk, Lincolnshire)

Group 4 counties, of which there are five (Table 8.5), are characterised by negative structural shifts, yet very strong positive differential shifts, so that the rate of employment decline has been considerably below the national average. If group 2 may be regarded as the part of the manufacturing belt of medium urbanisation, group 4 may be regarded as the less urbanised part of the British manufacturing belt.

Group 5 consists of counties with positive structural shifts (with two exceptions, Cambridgeshire and Borders) and also positive differential shifts, which in some cases are extremely strong. These counties have, by definition therefore, better than average employment performances, and in many cases have actually shown increases in employment during the slump. Southern England, outside the metropolis, dominates this large group, with various of the regions of Scotland also represented.

Table 8.5 presents the preliminary classification of counties which has been described above. Table 8.6 shows the average shifts for each of the groups and illustrates how distinct each group is. Groups 1, 2 and 4,

representing Britain's industrial belt, all have broadly similar structural shifts, but clearly distinct differential shifts. Groups 3 and 5 also have broadly similar structural shifts and clearly distinct differential shifts.

The validity of the classification is suggested by the ease with which it was made, and the relatively small degree of overlap. This classification can hardly be regarded as final in that firstly, the groups are too uneven in size, with groups 1 and 5 especially needing to be subdivided and secondly, some of the groups (1, 3 and 5 especially) are far from homogeneous. Section 8.2(ii) below considers in more detail the second stage of the classification process, which leads to the sub-groups identified in Table 8.7, a table which represents the starting point for the county by county analysis later in this chapter.

8.2(ii) Detailed Structures in the Classification

(a) Group 1

Group 1 was divided into four sub-groups by inspection of Table 8.3. The least favoured group, 1a, showed highly unfavourable structural shifts and also highly unfavourable differential shifts, particularly (as it turned out) in the tertiary sector. The five counties in this group all, except for Mid Glamorgan, suffered from concentrations of employment, and employment loss, in the iron and steel industry, and all are included in the seven counties with the worst percentage losses in employment over the period. The fact that not all counties in this group are steel closure counties, while various counties in group 1c have had substantial steel closures, necessitates some form of inter-group comparisons to see why some steel closure counties differed in their economic performances from others. One initial point of comparison is that group 1a steel closure counties showed far less favourable differential shifts in the tertiary sector than steel closure counties in group 1c (Northamptonshire, South Yorkshire, West Glamorgan, Gwent) even though the overall rate of job loss might have been fairly similar. In considering the question of negative differential shifts in the service sector in group 1a, the question of the local service sector multiplier is undoubtedly important.

Group 1b consists of counties with neutral structural shifts but extremely unfavourable differential shifts. In many respects this is the most distinctive and homogeneous grouping in the whole classification scheme, consisting as it does of three conurbations (Tyne and Wear, Merseyside, Strathclyde) with particularly long-standing economic problems, and with records of heavy job loss considerably pre-dating the slump.[10] It should be emphasised perhaps that the severity of employment decline over the slump and the previous period has been in no sense due to an unfavourable sectoral composition of employment and has been almost entirely due to the unfavourable position of these highly urbanised peripheral centres in employment shifts *within* individual sectors and *within* individual corporations. Greater Manchester, nominally placed in group 1d, shares various common features with group 1b counties, and in later discussion is considered alongside them. However, the large-scale presence of the cotton textile and clothing industries implies a certain degree of sectoral concentration of weaknesses, while the adverse differential shifts, although severe, were far less severe than in Tyne and Wear, Merseyside or Strathclyde.

Group 1c is a more varied group, consisting of counties with highly adverse structural shifts, which dominate differential shifts.

The sectoral composition of these adverse shifts varies considerably, although in all except two cases the iron and steel/automobile complex accounts for a large proportion of the adverse structural shift. The two exceptions are Staffordshire, with pottery (MLH 462) accounting for 47% of the net structural shift (-4,600 out of -9,700), and West Yorkshire in which a variety of textile and clothing related industries explain the bulk of the negative structural shift.[11] These two counties are centres of concentration in two industries particularly hard hit by recession.

The general feature of all seven counties is that while they have had particularly unfavourable industrial structures, their level of economic performance has been on the whole no worse than would be expected from their sectoral compositions. The West Midlands and West Glamorgan have had fairly large negative differential shifts, and indeed it was a marginal decision whether to allocate West Glamorgan to group 1a or 1c, but these shifts were still fairly low by group 1 standards. Most group 1c counties indeed show positive differential shifts.

Another point worth noting is that the conurbations in this group (West Yorkshire, South Yorkshire, West Midlands) show only a weak tendency towards negative differential shifts, in contrast with conurbations in group 1b (Tyne and Wear, Merseyside, Strathclyde). This is another illustration (cf chapter 6 above) of the way that urban economic *function* rather than mere conurbational *status* needs to be considered in examining the decline of the peripheral conurbations. In one set (Merseyside, etc.), the weakness of the conurbation is not explicable in terms of sectoral factors, but instead needs to be considered more in terms of the marginal position of employment in each of these conurbations in any corporate economic strategy.[12] In the other set (West Yorkshire, etc.) the weakness is seen as primarily due to the vulnerability of certain industries, usually precisely those industries whose historical tendency to "agglomerate"[13] in the same district during the 19th century was responsible for the early development of the peripheral conurbations.[14]

This leaves group 1d, a miscellaneous group of three counties (Northumberland, Greater Manchester, Cheshire) with moderately negative structural shifts and moderately negative differential shifts. Examination of Table 8.7 shows that this is an unusual combination; counties in group 1 show either strongly negative structural shifts (groups 1a, 1c) or neutral structural shifts with very strong negative differential shifts. Counties with moderately negative structural shifts tend to have moderately positive differential shifts (group 2); these counties tend to be highly industrialised, but with a looser urban structure than the conurbations, and are thus moderately favoured by the

general urban-rural shift in manufacturing industry.[15]

It has already been suggested that Greater Manchester has obvious affinities with the group 1b counties (Tyne and Wear, Merseyside, Strathclyde). It would also appear that Cheshire has obvious affinities with group 2 counties (Lancashire, Leicestershire, Derbyshire, etc.). Later, more detailed analysis (section 8.4 below) suggests that the large negative differential shift in the service sector in Cheshire, shown in Table 8.7, probably results from an under-recording of employment in education, rather than from any real job losses. This leaves Northumberland isolated in the classification scheme. Figures for employment change in Northumberland reflect the statistical aggregation of two different types of local economy; a relatively prosperous rural north and a coalfield industrial belt in the south, subject to substantial industrial job losses (sections 8.4, 8.9 below).

Group 1d may be a weak grouping, therefore, with little internal coherence, but groups 1a, 1b and 1c are much stronger groupings.

(b) Groups 2, 3 and 4

Group 2 consists of counties with a moderately low negative structural shift, implying a high degree of concentration of employment in manufacturing but not in its more vulnerable sectors, combined with a positive differential shift. The sub-division of group 2 is based on whether the differential shift is dominated by tertiary industries (group 2a), or whether it is dominated by manufacturing (group 2b). There seems no obvious reason at the present stage of the analysis why these two sub-groups whould split so neatly, with for example Tayside appearing in one group and neighbouring Fife in the other. Detailed discussion of group 2 is accordingly deferred until analysis at the level of individual sectors is presented (section 8.6 below).

The outlines of the classification of sub-groups in group 3 has already been noted (Southern cities, resort counties, the East Coast). Group 3a might be regarded as the Southern antithesis to groups 1b; London, Cardiff and Bristol versus Glasgow, Newcastle and Liverpool. The southern "city counties" all have the following features in common: a strong positive structural shift (neutral in group 1b), a very slightly positive differential shift in manufacturing (strongly negative in group 1b) and a strong negative differential shift in tertiary sectors (similarly in group 1b). The positive structural shifts in these group 3a counties is largely due to the high proportion of service employment in these cities; these are "service cities" rather than "industrial cities". The Lothian region (group 5ba Edinburgh and surrounds) also

shares these structural characteristics, but shows distinctly favoural differential shifts, rather than the unfavourable shifts of group 3a, the difference being noticeable both in manufacturing and services. The comparison between the Lothian region and the Southern service cities is discussed in more detail in section 8.5 below.

A point which needs to be emphasised is that while these "service cities" had relatively low rates of job loss during the slump, this was not necessarily the case in the pre-slump years. The decline of employment in London during the 1970s has been much remarked on in chapter 6, but it should be noted that South Glamorgan, the one part of urban South Wales relatively unprotected by regional policy, also had substantial industrial job losses in the 1970s with manufacturing employment falling by 12,400 (29.2%) and total employment falling by 10,100 (5.6%), between 1971 and 1978. During the same period employment levels were stable in Avon and Lothian region. That London and South Glamorgan should show neutral differential shifts in manufacturing during the slump represents quite a substantial shift in the geography of recession.

Group 3b should not in any sense be regarded as an artificial grouping despite the great distances of these counties from each other and despite the statistical indicators for Gwynedd in Table 8.7 more closely matching those for the East Coast counties than those for Cornwall and the Isle of Wight. These counties all show low degrees of urbanisation, remoteness from major centres of population, with this remoteness due either to extreme peripherality or to insularity, high degrees of dependence on tourism and a high seasonality of employment, shown clearly in Table A10. The extent of the dependence on tourism is shown by percentages in employment in MLH 884 (hotels, other residential establishment) for June 1978. This is 10.0% on the Isle of Wight, and 6.6% and 7.4% in Cornwall and Gwynedd respectively. These figures are of course considerable underestimates of the proportion of employment associated with tourism. Comparable figures for the less urbanised parts of the East Coast counties are 2.1% for Norfolk and 2.0% for Lincolnshire, indicating a much lower degree of dependence on tourism. It is quite possible that the coastal strips of counties other than those in group 3b would show similar statistical characteristics (strong positive structural shift, erratic but generally strongly negative differential shift), but it is only in counties which are in effect almost wholly coastal strips (Cornwall, Isle of Wight), or coastal strip plus National Park (Gwynedd) in which these characteristics emerge clearly at the county level.

Group 3c represents a distinct geographical grouping, coastal East Anglia, despite the representation of three separate statistical

regions. The counties involved all have positive structural shifts, smaller in Essex, which is clearly within London's sphere of influence, than in the counties further north. They also all have neutral differential shifts. Suffolk (group $5aa_2$) showed a differential shift far more favourable than the other East Coast counties. One might expect that rates of employment change in East Suffolk would broadly conform to rates of employment change in Norfolk and Lincolnshire, while West Suffolk, on the edges of the Southern growth zone, would show more favourable employment trends. Analysis at the scale of the travel-to-work area supports this contention, with East Suffolk showing a decline of employment of 3.3%, and West Suffolk showing an increase in employment of 0.9%.[16]

Group 4 consists of 5 counties with particularly favourable differential shifts against a background of an unfavourable sectoral composition (neutral in the case of Powys). In all cases there is a strong positive differential shift in manufacturing and in three cases (Hereford and Worcester, Central Region, and Cumbria) a strong positive differential shift in services as well. Given the small number of counties in this group, a formal sub-division of this group seems unnecessary. In general, the group 4 counties represent the least urbanised parts of Britain's manufacturing belt, and are thus likely to be highly favoured by urban-rural shifts, despite unfavourable industrial structures. Warwickshire may perhaps be taken as a "special case", in that the post-1974 county is perhaps more accurately regarded as the outer, ruralised, part of the West Midlands industrial conurbation, rather than as an independent rural county. Patterns of economic change in the other group 4 counties (Hereford and Worcester, Powys, Cumbria, Central) are not influenced by the changing spatial organisation of the conurbation.

(c) Group 5

Group 5, a large group, consists of counties which have been relatively lightly affected by slump with usually strongly positive structural shifts and in most cases even more strongly positive differential shifts. All counties in this group are, except for North Yorkshire, either in Southern England or in Scotland. This suggests an obvious sub-division, between group 5a (Southern England, favoured counties) and group 5b (Scotland plus North Yorkshire, favoured counties).

Group 5a is still an unmanageably large group, consisting of 16 counties, covering a wide range of employment experience, from a fall in employment of 2.7% in Kent to a rise of 4.8% in Buckinghamshire. This

suggests a need for further sub-division, according to the rates of employment decline shown in Table 8.3. The largest of the sub-groups (5aa), of Southern counties with slight declines in employment, may itself be subdivided according to whether the favourable differential shift which is recorded takes place primarily in manufacturing (group $5aa_1$) or in tertiary industries (group $5aa_2$).

The details of the sub-groupings are as follows:

Group 5aa (8 counties) Declining employment during 1978-81 sub-divided into

Group $5aa_1$ (4 counties) High positive differential shift in manufacturing; small differential shift in tertiary sectors.

Group $5aa_2$ (4 counties) High positive differential shift in tertiary sectors; small differential shift in manufacturing.

Group 5ab (3 counties) Slight rise (about 1%) in employment between 1978 and 1981; employment probably fairly steady in the slump itself.

Group 5ac (5 counties) Large rises (over 2½%) in employment between 1978 and 1981, probably associated with rising employment during the slump itself.

Detailed comments about the geography of slump in the South of England are deferred to a later stage (section 8.8). It is noticeable, however, that there is a very strong zonation of patterns of employment change in the area around London. Greater London itself had a moderate rate of job loss, while counties to the south of London tended to show a high degree of employment growth, even during the slump itself. Counties to the west and north of London tended to have very stable levels of employment during the slump, but with a strong shift of employment from manufacturing to services, while counties to the east of London tended to show substantial job losses, but on a much smaller scale than counties outside Southern England. This pattern of zonation will be examined in more depth in section 8.8 below.

(d) Summary

64 counties in England, Wales and Scotland have now been classified into 16 groups, detailed in Table 8.7. As far as is possible, these groups are internally fairly homogeneous, even if the counties included are not necessarily adjacent to each other. Table 8.8 provides unweighted averages of the shift-share scores of each group of counties, and suggests various possibilities for further investigation. For

example, groups 2a, 2b and 4 show closely comparable patterns of structural shifts, but contrasting patterns in their differential shifts. Much the same can be said about groups 1a and 1c. The explanation of this variation in the differential shifts is clearly an important task. It is also necessary to consider such questions as why group 1b (neutral structural shift, severe negative differential shift) had a structure of employment change so clearly at variance with any other county or group of counties.

This type of question will be considered in more detail in the sections which follow. Discussion of events in the Midlands and periphery will tend to focus on questions of industrial and urban structure, while discussions of events in Southern England will tend to focus more on the question of zonation, and in particular on the question of how location with respect to London, both in terms of distance and direction, has tended to affect rates of employment change during the slump.

8.3 Steel Counties of Groups 1a and 1c[19]

(i) Industrial Job Losses

Employment fell by 10% or more between 1978 and 1981 in ten counties. Six of these counties (Humberside, Clwyd, Durham, Cleveland, West Glamorgan and Gwent) suffered from large scale job losses in the iron and steel industry. Northamptonshire and South Yorkshire also had high levels of job losses in iron and steel, which pushed the overall rate of job loss in these counties well above the national average, but without the 10% barrier being broken.

The eight counties listed above may be described as the "steel counties" of groups 1a and 1c. Other counties with unusually high rates of job loss, such as Mid Glamorgan, Tyne and Wear, Merseyside and the West Midlands will be discussed in later sections. As a point of clarification, the use of the term "steel counties" is not meant to imply that at the start of the period iron and steel making dominated the employment structure of these counties (the peoportion of employment in MLHs 311, 312, 313 and 341 ranging from 5.9% in Northamptonshire to 12.4% in Cleveland, and 12.8% in Gwent) but rather that the concentration of this highly vulnerable industry in the counties concerned was high enough to dominate patterns of job loss. Table 8.9 shows, for example, that job losses in the iron and steel sector directly accounted for over half the total net job loss in Clwyd, West Glamorgan and Gwent, and over one third of the total net job loss in Durham and South Yorkshire. These figures disregard any *indirect* job losses resulting from the decline of production in iron and steel.

As a rough guide to the problems that the decline of a local iron and steel industry might be expected to create for the local economy, every 4.1% of the total employment which was accounted for by MLH 311 (iron and steel, general) in 1978 would have been responsible for a negative structural shift of 1%, and thus, all other things being equal, an extra percentage point on the total job loss figures between 1978 and 1981. The presence of the iron and steel sector in the eight counties being discussed here was responsible for a negative structural shift of between about 1½% and 3%.

Table 8.9 differentiates between job losses in the steel sector and job losses in other sectors, for each of the eight steel counties. It may readily be seen that outside the steel sector, four of these counties (Clwyd, Northamptonshire, West Glamorgan and Gwent) had rates of job loss very close to the national average of 5.2%. There is an implication that were it not for the problems of the steel industry,

each of these counties would have had an "average" rate of job loss during the slump. It might be argued that the figures for employment in non-steel sectors should not be interpreted this way, in that they neglect the point that calculations should be made replacing the iron and steel sector with an "average" manufacturing sector of the same size, so that a representative industry-services ratio is maintained. On such an argument, the figures for job losses in non-steel sectors understate the "underlying" (non-steel) degree of vulnerability to recession of a particular area. It is suggested, however, that this effect is cancelled out by the fact that the figures for employment change in non-steel sectors include a substantial element of job losses in local services which are an indirect result of severe job losses in the iron and steel sector.[20]

It would seem that employment performances in the slump, and outside the iron and steel industry, were average in Gwent, West Glamorgan, Clwyd and Northamptonshire, slightly worse than average in South Yorkshire, and much worse than average in Durham, Humberside and Cleveland. Clearly, these last three counties showed considerable elements of industrial vulnerability outside the iron and steel industry, which need to be examined further. Attention concentrates here on the industrial sector; the question of service sector multipliers following a major industrial job loss will be considered later.

In County Durham, the job losses in iron and steel were concentrated in a relatively small area, namely Consett. It is to be expected that the rest of the county would also have severe industrial problems during the slump, given the problems faced by County Durham and other coalfield development areas, during the recession of the mid-1970s, and afterwards. In Consett travel-to-work area, employment fell by 33.6% between 1978 and 1981, compared with a fall of 10.2% in Darlington and South West Durham TTWA, 8.0% in Central Durham and 5.1% in Peterlee TTWA. Employment decline was particularly severe in the textiles sector, with 2,400 jobs, from a base figure of only 2,700, being lost in MLH 412 (spinning, doubling; cotton, flax systems). These job losses would appear to have taken place in 1978-79, before the onset of slump, rather than in the slump itself. The *Financial Times*, for example, notes the announcement of the running down and eventual closure of a Courtaulds textile factory at Spennymoor which employed 1,630 people in 1978 (*Financial Times* 28.10.78, 20.1.79) and 560 jobs in nylon lost at the Monsanto factory in Crook (*Financial Times* 10.3.79). This would seem to represent a continuation of the 1970s "crisis of the branch plant factory" rather than any feature specific to the slump.

Obviously, given the economic conditions of the time, there were

substantial but smaller industrial job losses in sectors other than iron and steel and textiles. There is little need in an account of this type to present details of job losses in local industries with "average" rates of job losses, even though such job losses would undoubtedly have added to the unemployment figures. The *dominant* industrial job losses, which explain why Durham had an unusually high rate of total job losses, were in iron and steel, and textiles.

In neighbouring Cleveland, a major centre of the iron and steel industry, the overall rate of job loss, at 12.7% between June 1978 and September 1981, was higher than in any other county, according to Table 8.3. As shown later in this section, though, official figures probably understate the degree of severity of job loss in another steel county, West Glamorgan, and it is quite possible that West Glamorgan in fact had a slightly higher rate of job loss than Cleveland. It would be easy to assume that Cleveland's unenviable position, which included having the highest unemployment rates in Great Britain,[21] was the result of an exceptionally heavy concentration of job losses in iron and steel. Table 8.9 shows, however, that such an assumption would oversimplify what was happening. There were severe job losses in the Cleveland iron and steel industry, but proportionally less severe than in other steel counties with comparable overall rates of job loss. In Cleveland, for example, 9,500 steel jobs were lost, a decline of 31.7%, compared with job losses of 10,500 (54.3%) in West Glamorgan and 9,600 (69.3%) in Durham. An important factor differentiating Cleveland from other depressed steel counties was not so much job loss *within* the steel sector, but rather job loss *outside* the steel sector. Even within the steel sector, job losses in Cleveland tended to be concentrated in industrial plant and steelwork, the construction branch of the steel industry classified under mechanical engineering (MLH 341), rather than in the actual manufacture of iron and steel. Thus, 4,900 jobs were lost in MLH 311 (iron and steel, general) representing a decline of 23.6%, which although heavy, was much less than the national average (39.5%). In industrial plant and steelwork, 4,100 out of a total of 6,800 jobs (60.7%) were lost, indicating a very sharp pattern of local contraction.

Outside the iron and steel industry, there were extremely heavy job losses in Cleveland in chemicals and construction. 5,500 chemicals jobs were lost, representing a fall of 20.7%. 9,000 construction jobs were lost, a fall of 37.3%. Even under the conditions prevailing in 1980 and 1981, such a severe decline of employment in construction is unusual, the more so in that various time lag effects meant that nationally much of the slump-induced decline of employment in construction took place after September 1981, and hence is not recorded in 1981 Census

of Employment figures.[23] It would seem likely that much of the large scale job losses recorded in the Cleveland construction industry resulted from the completion of specific large scale industrial construction projects. The reclamation of land for industrial purposes at Seal Sands, on the River Tees, was a major source of new employment in the early and mid 1970s, but it might well be the case that the effective completion of this project in the later 1970s would have been a major source of job loss. It might well also be the case that such an extreme measured drop in employment reflects data inaccuracies.

It would seem that Cleveland's exceptionally severe industrial problems in the slump resulted not simply from a crisis in iron and steel, but rather a more general crisis in heavy industries, which affected iron and steel manufacture, industrial plant and steelwork, chemicals and construction. Cleveland's problems in this respect have been longstanding; any area whose economic growth has been so strongly dependent on heavy industries, and particularly on the processing of raw materials, will be highly vulnerable when such industries go into decline. Heavy industries often tend to be extremely cyclically volatile; the experiences of the 1930s in steel and heavy engineering, including shipbuilding, illustrate this point (chapter 4 above). In the steel industry, large scale job losses in Cleveland can be traced throughout the late 1970s; the slump itself actually showed a *decrease* in the number of jobs lost per annum in this sector (chapter 6.8(iii) above). In the chemicals industry, dominated by a few large firms (notably ICI) operating extensive industrial complexes, the reasons for the unusual severity of employment decline in Cleveland, when compared with elsewhere, probably mirror the reasons for the unusual concentration of job losses in the vehicles industry in the West Midlands in the mid-1970s recession (chapter 6.7(ii) above).[24] It is much easier to reorganise and rationalise production in a large multi-function industrial complex than in a single purpose unit; many more options are left open. In certain circumstances of recession, this leads to the rate of job loss being far higher in the multi-function complex than elsewhere. This factor worked to the disadvantage of employment levels in the Cleveland chemicals industry throughout much of the 1970s, as well as during the slump.

Humberside also showed an unusually high rate of job loss outside the iron and steel industry (Table 8.9). A note of caution must instantly be added in that the Census of Employment indicates a fall of employment of 3,100 jobs (11.9%) in educational services, resulting in a differential shift of -1,900. This decline of employment may have taken place, but it seems anomalously large. It is more likely that the measured decline in employment in this sector was due to inconsistencies

in the Census of Employment. Analysis of the complete run of Census of Employment statistics has shown that employment figures for education are much less reliable than for other sectors. It is quite possible to find, for example, instances in the 1970s in which employment in education in a particular county is recorded as increasing by a quarter in a particular year, and decreasing by a corresponding amount in the following year, a time series which seems highly unlikely in a sector in which national cyclical variations in employment are relatively slight. In any particular year, there might be several anomalies in the figures for employment in education; the cases of West Glamorgan, Cheshire, Buckinghamshire, etc. will be noted later.

If a major anomaly is suspected, the obvious procedure would be to use a set of employment figures in which the differential shift for employment in education has been disregarded. If such a procedure is followed for Humberside, employment figures for the county in 1981 would need to be increased by 1,900, leaving the measured rate of job loss at 10.6%, instead of 11.2% (all industries and services). For the series given in Table 8.9 (all industries and services excluding iron and steel) the measured rate of job loss would stand at 8.7% instead of 9.3% once this correction procedure has been carried out. The economy of Humberside was undoubtedly highly depressed during the slump, but the Census of Employment figures perhaps overstate slightly the extent of this depression.

Turning to the question of "real" employment change in Humberside, this county also suffered, as with Cleveland, from substantial job losses in chemicals and construction, although the problem was on a slightly smaller scale. In addition to the 8,100 iron and steel jobs lost, employment declined by 2,100 (14.8%) in chemicals, representing a differential shift of -1,000, and by 4,700 (21.0%) in construction, a differential shift of -2,900. There were also substantial job losses in MLH 214 (Bacon curing, meat and fish products), in which employment declined by 2,100 (22.2%), and in shipbuilding, where employment declined by 1,900 (47.3%), and motor vehicle manufacture, where employment declined by 1,700 (35.9%). The problems faced by Humberside were largely, but not exclusively, the problems of decline in heavy industries, such as steel, chemicals and shipbuilding, rather than in the light industries, such as the port based food, drink and tobacco industry. Despite the job losses in MLH 214 indicated above, presumably related to difficulties in the fishing industry,[25] employment in other food, drink and tobacco sectors on Humberside remained steady, falling by only 4.

Durham, Cleveland and Humberside thus all showed substantial elements of industrial vulnerability outside the iron and steel sector.

In Durham, the rate of decline of employment in iron and steel was sufficient to create a substantial negative differential shift (-9,600; -4.4% of the 1978 workforce). The same also applied to Clwyd, which had a differential shift in iron and steel of -8,800, or 6.9% of the workforce. Differential shifts in iron and steel were broadly neutral in Humberside and Cleveland, but strong negative differential shifts in chemicals and construction led to the total differential shift being strongly negative. All four of these counties were thus classified in group 1a (strong negative structural shifts; strong negative differential shifts) rather than group 1c (strong negative structural shifts; neutral differential shifts).

The employment figures for West Glamorgan, which indicate a strong positive differential shift in the service sector (Table 8.7), give cause for suspicion, however. One would expect that a region with a very severe decline in manufacturing employment would show a strong *negative* differential shift in services (as noted in Humberside, Clwyd, Durham, Cleveland and Gwent) rather than a strong positive differential shift; the downward multiplier is an important factor during a time of recession. A closer examination shows that the Census of Employment assesses employment in education as having increased from 12,200 in 1978 to 16,100 in 1981, representing a differential shift of +4,400, or +2.8% of the county's employment total. This is clearly an unrealistic figure, given the doubts already expressed about the accuracy of Census of Employment figures for education. Were one to disregard the measured differential shift in education, the differential shift in services in West Glamorgan would be assessed at -1.2% instead of +1.6%, a figure more in line with those of other steel counties, and the total differential shift would stand at -4.7% instead of -1.9% (Table 8.7). The total number of jobs lost would be recalculated to stand at 22,300 instead of 17,900, a fall of 13.9% instead of 11.8%

It would seem, therefore, that job loss during the slump was more severe in West Glamorgan than in any other county in Britain. Job loss in neighbouring Mid Glamorgan was also unusually severe, with employment declining by 12.5% between June 1978 and September 1981, while, further east, job losses in the iron and steel industry were largely responsible for employment in Gwent falling by 10.0%. There was thus a belt of exceptionally severe employment decline running through the coalfields of South Wales. It was fortunate for South Wales that employment was relatively stable in the service-based economy of South Glamorgan (Cardiff, etc.) otherwise unemployment by September 1981 would probably have been around 20% in these counties, instead of around 16%; Cleveland, without a relatively prosperous urban labour market in the vicinity,

had 19.2% unemployment in September 1981.

The South Wales economy will be discussed in more detail later (section 8.4). For the present, it can be noted that job losses in West Glamorgan were severe, not only in iron and steel, but also in various "regional policy industries". Employment fell, for example, by 1,700 in toys, games, etc. (MLH 494), by 1,500 in motor vehicle manufacture, and by 1,200 in cans and metal boxes (MLH 395).

A common feature of all the steel counties, except for South Yorkshire and Northamptonshire, is that they show strong negative differential shifts in the service sector. In South Yorkshire, a deliberate policy by the local authority of expanding the local economy[26] was undoubtedly largely responsible for this unexpectedly favourable performance in the service sector, with for example employment rising by 3,400 in local government service (MLH 906) and 1,300 in road passenger transport (MLH 702), accounting for a differential shift of 7,300, or 1.3% of the 1978 employment total. Job creation by local authorities can clearly have a statistically noticeable effect. In the case of Northamptonshire, adjacency to the Southern England zone of service sector growth (section 8.8 below) would undoubtedly be an important factor in counter-acting the depressive effects of steel job losses on the local service sector.

(ii) Multiplier effects

The information published in the Census of Employment makes it possible to make an estimate of service sector multipliers following major local industrial job loss. The general consensus is that a multiplier of around 1.2 to 1.4 is involved,[27] although clearly much depends on the time interval being used and on the size of the area examined. In addition it is often difficult to distinguish between "active" job loss and "passive" job loss resulting from the fall in local incomes created by active job loss. Construction plays an ambiguous role here, with it being arguable that some element of construction work is "basic" (e.g. factory building) and some "passive" (changes in housebuilding resulting from changes in income and employment). The analysis which follows tends to suggest that construction employment should be regarded as basic, as this leaves the multiplier relatively stable on cross-sectional comparisons; the causal relationship would appear to be that employment change in manufacturing and construction affects employment change in services rather than that employment change in manufacturing affects employment change in construction and services. Construction activity represents an autonomous element of investment and

production rather than simply a servicing of income, thus is a basic activity. Neither should it be forgotten that many of the early works on the multiplier, notably the classic paper by Kahn (1931), used construction activity funded publicly as the investment decision on which multiplier analysis was based.[28]

There are clearly several possible reasons, often completely unconnected with industrial change, why employment levels in the service sector should change. For this reason attention needs to be concentrated on the extent to which employment change in the service sector is, through reasons of industrial job loss, faster than would otherwise be expected. This implies the need to use differential shifts, rather than total employment change, as the basis for calculation. In the manufacturing sector the differential shift must not be disaggregated; in calculating multipliers the relevant point is not whether job loss in the steel industry was faster in town A than in town B, but rather the extent to which manufacturing jobs were being lost faster than the national average in town A.

A note of caution also needs to be added, in that industry-service multipliers are legitimately calculable only if job losses in the manufacturing sector are sufficient to *dominate* the local labour market, such that even if there are autonomous local shifts in service sector employment (for example, new government offices) these are likely to be relatively slight in comparison with autonomous employment shifts in the industrial sector. Clearly if a travel to work area showed a differential shift of -50 in manufacturing, it would be foolish to attempt to calculate an industry-service multiplier based solely on the experiences of this local area; a differential shift of say -5,000 provides a more secure basis for calculation.

Table 8.10 lists differential shifts for manufacturing, construction and services for each of five steel towns or ex-steel towns with differential shifts in manufacturing of -2,000 or worse. Each of these towns, apart from Corby, is in the periphery, and so is virtually unaffected by decentralisation of Southern based service sector employment; this would tend to make the negative differential shift in the service sector slightly more severe, than would otherwise have been the case, thus inflating figures for the multiplier slightly. Perhaps surprisingly, Corby had a service sector multiplier closely aligned to those of the peripheral steel towns; there is little apparent sign of a favourable "Southern England effect."

Table 8.10 shows measured multipliers ranging from 1.19 in Consett and Scunthorpe to 1.35 on Teesside and 1.38 in Port Talbot. Shotton and Corby with multipliers of 1.30 and 1.28 respectively, are intermediate

cases. These are not final multipliers, in the sense that service sector jobs might still be destroyed, or not created, in late 1981 and 1982 as a result of industrial job losses in 1980 and early 1981. It is noticeable that the steel towns with the low multipliers, Consett and Scunthorpe (also Corby) are free-standing towns; they are relatively distant, and have a relatively low degree of dependence on, nearby large cities. In contrast, Port Talbot may be regarded as a satellite of Swansea while Shotton is, in service sector terms, in the shadow of both Merseyside and Chester. In either of these cases a "super-multiplier" effect might well be involved when service sector employers in deciding how best to cover a sub-regional market, concentrate their attentions on a relatively undepressed large town (Swansea, Chester) rather than an extremely depressed small industrial town (Port Talbot, Shotton). Teesside, the other steel closure town with a high employment multiplier, is in effect a small industrial conurbation, and through the late 1970s shared the same problems as other industrial conurbations, such as Tyneside, in terms of sharply falling industrial employment and declining population. The comparatively high multiplier on Teesside reflects the delayed impact of job losses in the late 1970s (which were severe; see chapter 6.8(viii)) as well as the impact of job losses in 1980 and early 1981. It might well be the case that the Teesside multiplier of 1.35 is closer to the final multiplier than the figures of about 1.2 in the free-standing steel towns. This is because Teesside figures represent both the "second round" effects of one generation of closures and the "first round" effects of another generation, while the figures for Consett and Scunthorpe represent merely the "first round" effects of the 1980 generation of closures.[29]

Thus a long term industry-service multiplier of between 1.3 and 1.5 would appear to be indicated. It needs to be emphasised that these multipliers incorporate not just named service sector jobs which are lost as a result of industrial contraction, but also an allowance for jobs which might have been created in the event of "normal" rates of industrial job loss, but which were not in fact created as a result of the fall in local demand following industrial job losses.

It also needs to be emphasised that a clear distinction is drawn between linkage effects and multiplier effects. Linkage effects refer essentially to contractions of local industrial employment resulting from a fall in payments to suppliers while multiplier effects refer to contractions in local service sector employment as a result of contractions in industrial wages. If linkage and multiplier effects are combined, a decline of employment in a major local exporting industry at the head of the linkage chain would have to multiplied by perhaps st least 1.5,

maybe rather more, to determine the total long term job loss. This is considerably in excess of the upper estimate of about 1.15 suggested by Brownrigg (1980), but is in line with earlier estimates.[30] One very important factor neglected by Brownrigg is that major industrial job losses can considerably affect the migration balance of a local labour market; between 1978 and 1981, for example, each extra percentage point of job loss in a county with rates of job loss higher than the national average resulted in an extra increase of unemployment of only about half a percentage point (chapter 7.2; Fig 7.3). This implies very substantial changes in the size of the local population as a result of major job losses; in effect, for every two additional jobs lost one person becomes unemployed locally and another person leaves the district.[31] Given the importance of this effect, it is naive to assume, as Brownrigg does, that the loss of local income as a result of a major job loss incident would be merely the change in the number employed multiplied by the difference between wages and benefits. To this has to be added the number of induced migrants multiplied by the benefit level, and the expenditure per time period out of the accumulated savings of those who have left the local area.[32] Brownrigg makes further questionable assumptions, notably that industrial job losses will increase rather than reduce the level of local public sector services; the erosion of the local tax base is surely the dominant factor here, leading to major negative differential shifts in "public administration and defence" in all the steel towns being considered.[33] The most important omission, however, is neglect of the economic impact of recession-induced migration.

This section has been largely exploratory, indicating that Census of Employment data can usefully be used to evaluate the multiplier effects of industrial employment change. Analysis has concentrated on travel to work areas with major steel closures or cutbacks, yet analysis on a broader spatial scale is also possible. In the industrial regions (all regions except SE, EA, SW) manufacturing employment fell by 19.4% between 1978 and 1981, compared with a national average fall of 16.8%; this represents a differential shift of -126,000. In construction the differential shift in the industrial regions was -20,000, with a fall in employment of 13.8% compared with a national average of 11.0%. In services, where employment nationally increased by 1.8%, employment in the industrial regions increased by 1.2%, a differential shift of -39,000. This implies an industry-service multiplier of 1.27, almost identical to the average multiplier of 1.28 registered for the six steel towns in Table 8.10. This is a remarkable result suggesting that industrial multiplier effects lie behind many of the large-scale spatial differences in patterns of employment change in the service sector.

Table 8.11 carries the analysis a stage further, calculating multipliers on a region by region basis. These figures may be interpreted in two ways. In one sense the result is disappointing in that the regional multipliers are often highly unstable; for example Scotland had a differential shift in industry of -21,000 jobs but a differential shift in services of +22,000 jobs. In another sense, assuming that the calculated national multiplier is broadly correct (it applies for Southern England in total, the industrial regions in total, and major steel closure towns in total) the possibility arises of separating that part of the service sector differential shift due to multiplier factors from that part of the service sector differential shift due to other factors. It can be seen, for example, that the large positive differential shifts in the service sector in South East England (see also Table 8.7) are statistically explicable simply in terms of multiplier effects. In Scotland, however, service sector employment in 1981 was 28,000 higher than expected; the rise of the North Sea oil industry, representing primary production rather than manufacturing, is clearly an important factor creating its own service sector multiplier effects (section 8.9 below). Service sector trends were worse than might have been expected, given the rate of industrial job loss, in Yorkshire and Humberside and the Northern Region, and to a lesser extent in the North West. It is quite possible that these represent "second round" multiplier effects from the job losses and population decline of major urban areas in the late 1970s.[34]

Changes in service sector employment levels are, in both theoretical and practical terms, extremely complex to deal with. In general, a loose labour market will tend to stimulate employment expansion in the service sector (chapter 6.9 above), but phases of active industrial recession will cut demand for services and thus slow down this expansion. Thus service sector employment rises substantially during a period of high unemployment, but this expansion is faster in regions with relatively low unemployment than in regions of high unemployment and active industrial job loss.

To understand the spatial dimension of employment change in the service sector it is necessary to consider multiplier effects. Two methodological points need to be considered. Firstly, to calculate multipliers from sectoral employment data it is essential to work in terms of differential shifts rather than in terms of total employment change. Secondly, population effects need to be considered. It is quite possible that the direct effects of industrial closure on local income and on secondary employment work their way through the system fairly quickly, but that the indirect effects resulting from recession-induced depopulation take considerably longer to work through the system. Two questions seem to

need further research, firstly the stability or otherwise of the value of the multiplier under different economic conditions, and secondly the detailed time profile of induced job losses or gains following a major primary employment shift.

8.4 Groups 1a, 1c and 1d - non-steel counties.

The iron and steel industry dominated job losses in several counties, notably in Wales and North East England. This industry was in especially severe decline during the slump, but was not the only industry in recession deep enough to dominate job losses in certain counties. Table 8.7 shows, under group 1c, three counties with substantially higher than average rates of job loss as a result primarily of sectoral composition. These are the West Midlands (Metropolitan County), West Yorkshire and Staffordshire. In addition, Mid Glamorgan, in group 1a, had both a highly unfavourable structural shift (adverse sectoral composition) and also a strongly unfavourable differential shift, indicating worse than average performances within sectors. Three counties in group 1d (Northumberland, Greater Manchester and Cheshire) showed moderately unfavourable structural shifts and moderately unfavourable differential shifts, although closer examination shows that the relatively poor performance indicated for Cheshire is illusory, being the result of inaccurate recording of employment levels in the education sector.

The group 1c counties are examined first. There is an obvious link to be drawn between the West Midlands, West Yorkshire and the steel county of South Yorkshire. Each of these counties is highly urbanised, with a substantially higher than average rate of job loss during the slump. They are differentiated from other industrial conurbations, which also had higher than average rates of job loss, in that their vulnerability was primarily due to the large-scale presence of industries in severe decline (vehicles in the West Midlands, iron and steel in South Yorkshire, textiles and clothing in West Yorkshire) rather than to any process by which employment in a sector tends to decline more rapidly in conurbations than elsewhere. The conurbations of group 1b (Tyne and Wear, Merseyside, Strathclyde) represent the opposite type of conurbation, with neutral structural shifts but strongly adverse differential shifts; these conurbations will be discussed in section 8.5 below. Greater Manchester represents an intermediate case, with the major local presence of a textile and clothing industry leading to a moderately strong negative structural shift being present (as with West Yorkshire, etc.), but with fairly strongly adverse differential shifts also posing a problem (as with Merseyside, etc.).

This form of systematic differentiation between conurbations indicates that it would be misleading to suggest that the reason conurbations have had fast rates of employment decline was simply because of their high degree of urbanisation.[34] There was more in common between

the industrial performances during the slump of, for example, Staffordshire and South Yorkshire, or Gwent and the West Midlands, than between West Yorkshire and Merseyside.

The central feature requiring attention when examining job losses in the West Midlands conurbation, South Yorkshire and West Yorkshire concerns not so much the status of these areas as conurbations, but rather the status of these areas as specialised industrial areas. These areas came to be conurbations not through any abstract process of urbanisation, as implied for example in Robson (1973), but rather through the development of specific industries (chapter 9 below). A central feature of Britain's 19th century industrial geography was the strong tendency for expanding industries to "agglomerate" in particular coalfield locations.[35] This agglomerative tendency in particular industries was itself a major force behind urban development, though neglected in Robson's (1973) discussion, and led to the development of a complicated urban structure, with conurbations and smaller settlement groupings developing according to the dynamic potential of their major industries. While the 19th century industries have tended to decline in relative importance during the 20th century, the old industrial specialisations can still be clearly detected in the employment structure of late 20th century towns, cities or conurbations, unless of course that industry had already declined to relative unimportance.

Various consequences of this, as they concern the recent geography of recession, may be noted. Firstly, the industrial structure of many old industrial areas is still heavily weighted to older industries. This applies more to conurbations than to specialised coal production areas, such as County Durham, where the older industry has largely disappeared, leaving a "rejuvenated", but still vulnerable, industrial structure. Secondly, it would be unrealistic to expect older, 19th century industries, to show rates of employment growth as favourable as those of younger, 20th century industries. The older industries are too far along the product life cycle for this to happen more than occasionally. In periods of decline, the older industries would be expected, in the long run, to show faster rates of job loss than the younger industries.[36]

As a result of the two tendencies noted above, there is the likelihood that various older industrial areas, which may or may not be conurbations, might have substantially faster than average rates of job loss during a recession, as a result of the concentration of employment in older industries with faster than average rates of decline. The case of South Yorkshire, with its traditional speciality in the fine steel industry, has already been briefly noted in section 8.3 above. It should perhaps be noted, however, that this county's job losses in the metal

industry were expressed not just in the iron and steel sector, in which 16,800 jobs were lost between 1978 and 1981 (Table 8.9), but also in the metal goods industries (thus, manufacture using metals) in which 14,800 jobs were lost, a decline of 30.2%, representing a differential shift of -6,000, or -1.1% of total 1978 employment.

In West Yorkshire, the clothing and textile industries were in substantial decline, as they had been through much of the 1970s. Table 8.12, constructed on the same basis as Table 8.9, shows that about a quarter of total employment in the clothing and textile industries disappeared between 1978 and 1981. This sector accounted for about an eighth of the county's total employment in 1978. These magnitudes were sufficient to have a substantial impact on the total measured rate of employment change. Table 8.12 shows, however, the rate of job loss in sectors outside textiles and clothing was apparently more severe than the national average rate of job loss. Table 8.7 indicates a substantial negative differential shift (-1.7% of total 1978 employment) in the service sector, but the Census of Employment figures are open to question. In education, employment was recorded as falling by 13,100, or 18.6%, resulting in a differential shift of -10,000. This seems unrealistically high. Furthermore, one would wish to know in more detail whether a fall of employment of 6,300 (31.1%) in MLH899 (other services) represented a genuine fall in employment or not. If the employment figures for West Yorkshire are recalculated to exclude the negative differential shift in education (some of which, but not all, is probably genuine), the measured rate of employment loss in West Yorkshire falls from 9.5% to 8.4%, and in sectors outside clothing and textiles, from 7.3% to 6.2%, or 5.8% if the measured fall in employment in MLHs 899 and 998 (unclassified by industry) are disregarded. It seems that the measured differential shift in services in West Yorkshire, which appears as -1.7% of the county's 1978 employment total, is highly unreliable; a figure of +0.4% would be produced if three sectors (MLHs 872, 899 and 998) are removed from the calculation.

Table 8.7 suggests at first as though West Yorkshire was hit unusually severely by the slump, with a measured job loss of 9.5%, compared with the national average of 5.2%. It would seem that this gap is exaggerated through imperfections in the data source. Undoubtedly West Yorkshire lost employment more quickly than the national average, but the main reason for this was not any large-scale urban-rural shift, but rather that West Yorkshire was handicapped by a significant concentration of employment in the declining wool textile and clothing industries as indicated by an unusually severe adverse structural shift in manufacturing.

Job losses in the slump were also exceptionally severe in the West Midlands conurbation, with a fall of employment of 11.8% in the Metropolitan County, a decline fully comparable with that found in the depressed steel counties (Table 8.7). If one accepts the case (chapter 6.7(ii) above) that the administrative Metropolitan County, by being so strictly limited to the continuous built-up area, understates the true extent of the conurbation, and that the inclusion of Warwickshire (post-1974 county) would be required to provide a more satisfactory definition of the conurbation, a total loss of employment of 10.8% is indicated, which is still unusually high. The problem was primarily that the sectoral composition of the West Midlands economy, with large concentrations of employment in vehicles, metal manufacture and other metal industries, was exceptionally vulnerable to slump.[37] Table 8.7 shows that only Gwent had an industrial structure as unfavourable in its sectoral composition as the West Midlands county; by comparison, even Clwyd, Cleveland and West Yorkshire had favourable industrial structures. The West Midlands county also had a slightly unfavourable differential shift, most clearly marked in manufacturing. This perhaps can be explained by a conjunction of two factors; an unusually adverse sectoral composition of the industrial economy resulting in faster than average decline of employment in capital goods industries and components manufactures (differential shifts totalled -5,600 in metal industries n.e.s. and -6,400 in mechanical engineering other than agricultural machinery), and a suburbanisation of industry from the Metropolitan County to the Warwickshire fringe of the conurbation.[38] In manufacturing, the Metropolitan County had a differential shift of -13,000, compared with +7,900 in Warwickshire, a combination of figures suggesting that both tendencies were operative. In motor vehicle manufacture, the suburbanisation of production was at its most intense, with a differential shift of +100 in the Metropolitan County, and of +4,900 in Warwickshire, where employment *increased* from 11,400 to 13,200. Employment in the West Midlands vehicles industry actually decreased less quickly in percentage terms than in the rest of Britain during the slump; this is in sharp contrast with the experience of the 1974-76 recession, when the vehicles industry was still decentralising, with employment in the West Midlands falling significantly more quickly than elsewhere (chapter 6.7(ii) above).

Three provincial conurbations, the West Midlands, West Yorkshire, and South Yorkshire, have been identified as having significantly higher than average rates of job loss during the slump, not because of any faster than average rate of decline *within* sectors (the urban-rural shift) but rather because these conurbations have, through their history, developed sizeable concentrations of employment in industries which were

later to become vulnerable to recession and slump. This general picture does not apply to all conurbations, but it applies to some. The structural shift in manufacturing may in principle be divided into two components; firstly, a proportional component based on the proportion of total employment accounted for by manufacturing in an area without regard to sector, and secondly, a sectoral component which measures the extent to which the manufacturing base is weighted to sectors with faster or slower than average rates of employment decline. The sectoral component of the manufacturing structural shift totalled -2.89% in the West Midlands, -2.73% in West Yorkshire, and -2.73% in South Yorkshire, on a base figure of 1978 total employment. Thus, in each of these counties, nearly 3% *extra* of the total 1978 employment base had been lost by September 1981 simply as a result of the industrial structure of these conurbations being weighted to sectors of faster than average decline.

Non-conurbations can also have similar problems. Many of the industrialised counties of medium urbanisation had rates of job loss in the slump at around the national average. These counties, for example Lancashire, Derbyshire, Shropshire and Leicestershire, are discussed in section 8.6 below, which covers counties classified in group 2. Other counties, however, had significantly higher than average rates of job loss as a result, at least in part, of a concentration of employment in the less favoured industries. The question of the iron and steel industry has already been discussed, with respect to, for example, Northamptonshire, Gwent, Durham and Clwyd. In Staffordshire, the problem was mainly one of heavy job losses in the pottery industry, which, as chapter 6.7(vii) above has noted, was also deeply depressed just before the slump. Between 1978 and 1981, 10,200 jobs were lost in this sector, a fall of 24.8%. About one ninth of the county's employment base accounted for over one third of the total net job losses. In other sectors, employment fell by 5.0%, at around the national average, and in line with neighbouring counties such as Shropshire and Derbyshire.

The problem in Mid Glamorgan was in many respects more complex, and certainly far more severe. Indeed the problem of employment decline *throughout* the South Wales "regional policy belt" was very severe. To say "extremely severe" would in historical terms be an exaggeration, since this zone suffered even more intense job loss during the 1929-32 slump (chapter 4.3 above). It is important to examine why South Wales, and also North East England, suffered unusually high rates of job loss in *both* slumps, despite prolonged phases of accelerated industrial growth, encouraged by regional policy incentives, in the intervening period.

The basic problem was that it was often the new, incoming industrial jobs that were vulnerable to recession. In the specialised

coalfield areas, the decline of the coal industry, both before the war and from the late 1950s, left these industrial areas with only a very thin industrial base. New industries had to be encouraged. The iron and steel industry was an obvious candidate for expansion in the depressed areas in that, after the inter-war slump and during the long boom, it was a rapidly expanding industry but one for which each new plant would require a large workforce, which would generally only be available in an industrial area with a slack labour market.[39] From the point of view of the depressed areas, a single industrial location decision could create thousands of jobs. Major new steelworks were opened at Ebbw Vale in the late 1930s and at Llanwern in 1958, in each case with a high degree of state involvement in the locational decision process.[40] The iron and steel industry is, however, extremely cyclically volatile, with a strong tendency for employment to decline sharply during recessions, and to increase substantially during upswings. This tendency was clearly noticeable in the sharp cyclical swings of the 1930s. Employment in the sector increased substantially during the long boom, but tended to decline sharply in the downswing, in part as a result of the normal accelerator mechanism (output fluctuating more sharply in capital goods than in consumer goods), but also, critically, because of the deteriorating international competitive position of the British steel industry.

The steel factor explains much of the intensity of recession in Gwent and West Glamorgan, but not in Mid Glamorgan, where metal manufacture was relatively unimportant. The problem here, as in the mid-1970s, was the crisis of the branch plant factory. The economic record of the 1960s and 1970s shows a considerable influx of new employment in a variety of lighter industries in South Wales, and also in the coalfields of North East England (chapter 6 above). This influx was able, for a while, to absorb the bulk of the job losses resulting from the decline of coal mining. In the specialised coalfields (rapidly becoming ex-coalfields), manufacturing employment increased through both prosperities and recessions, with growth being particularly rapid in the boom year of 1972-73. The recession of 1974-76 was particularly severe, however, and as earlier discussion shows (chapter 6.7 above), had its most intense effects in the regional policy belts. Two factors seem particularly important; firstly, that within a national economy in severe industrial recession, job losses are more likely to take place at branch plant factories engaged essentially in routine production designed to meet upturns in demand than in core region factories which tend to fulfil a wider variety of functions, and secondly, that low wage locations in the third world were becoming increasingly attractive locations for routine production, once the technical conditions were appropriate for this internationalisation

of production.

The crisis of the light industrial branch plant factory was probably no less significant in the slump than in the 1974-76 recession, but tended to dominate the geography of recession rather less during the slump than in the earlier period. This is largely because the exceptional intensity of the slump created very intense problems in heavier industrial sectors, most notably iron and steel, and vehicle manufacture, which themselves had a dominant effect on the geography of recession. If however the problems of the branch plant areas were not dominant features at the national scale, because of the intensity and generality of recession, they could certainly be highly important at the local scale, as the experience of Mid Glamorgan testifies.

Mid Glamorgan represents perhaps the purest example at the county scale of a "branch plant economy", with the earlier industrial base being heavily dependent on the coal industry, and with poor internal communications, restricted by the topography of the valleys, meaning firstly that service industries tend to be weakly developed, Cardiff being the main focal point for the service sector, and secondly that the area was more suited to the establishment of a large number of medium sized factories rather than a few large factories.[40] Table 8.14 shows that 115 manufacturing establishments were opened in Mid Glamorgan by firms new to the area between 1966 and 1975, with the creation of 12,000 jobs. This figure, which does not include employment in branch plant factories of an earlier regional policy vintage, accounted for 6.5% of the 1978 total employment level in the county. There was also substantial branch plant employment, although not quite on the same scale, in Gwent and West Glamorgan. South Glamorgan (Cardiff, etc.) having been far less depressed than the rest of South Wales, has traditionally been a low priority area in regional policy terms, has attracted far less of the incoming industrial employment, and has been far less prone to recession when the slump came (section 8.7 below).

In Mid Glamorgan especially the new branch plant employment has been highly vulnerable. Given the industrial structure of the area, it is possible to point to a whole series of medium sized job losses (Table 8.13) but relatively few large-scale job losses. *Financial Times* reports give only one instance of a plant shedding more than 1,000 employees during the period, this being the Hoover electrical appliances factory at Merthyr Tydfil. The smaller scale job losses, however, had a substantial cumulative effect.

The economy of South Wales was hit very severely during the slump, both by large scale job losses in iron and steel, and also by a series of job losses in branch plant factories. North East England had much the

same profile in many respects, with the iron and steel factor being equally strong, although it would seem that the problems in the region's branch plants were not quite so severe as in South Wales. It has already been shown (section 8.3 above) that County Durham had a somewhat higher than average rate of job loss, even outside the iron and steel sector. Employment figures for Northumberland broadly match those for Durham, once the iron and steel sector has been allowed for. No further detailed comment for Northumberland is required, save to note that 1,400 out of 1,600 jobs were lost in MLH 492 (linoleum, plastic floor-covering etc.), presumably representing a branch plant factory, while 800 jobs were created in a local expansion in coal mining.

Two counties from groups 1a, 1c and 1d remain to be discussed. These are Greater Manchester and Cheshire. Discussion of Greater Manchester is deferred to the next section, when comparisons are made with the group 1b counties of Merseyside, Tyne and Wear, and Strathclyde. For Cheshire, there are data problems. It is perhaps surprising that Cheshire should be shown as having a significantly higher than average rate of job loss when other counties in the manufacturing heartland with a similar degree of urbanisation show rates of job loss clustered around the national average. Census of Employment figures, however, show a decline in employment in educational services from 29,900 to 18,500, representing a differential shift of -10,100, or 2.8% of the employment total. A measured drop in employment of over a third in this sector seems suspiciously high, given that nationally education was a highly stable sector in employment terms. It is likely that there was a substantial degree of local under-recording in this sector in 1981. If figures for the differential shift in education were to be removed from the calculations, Cheshire would have a rate of job loss of 5.5%, close to the national average, with a shift-share profile representative of group 2b counties.

Clearly there is need for more attention to be given, when conducting future Censuses of Employment, to the question of the accuracy of figures in the education sector. Table 8.15 identifies the counties in which employment figures for education appear most likely to be inaccurate, and recalculates overall rates of job loss, disregarding the differential shift in educational services. It would of course be possible to reconstruct the classification developed in Table 8.3, replacing questionable differential shifts in the education sector with neutral differential shifts. This would present a slight anachronism as the main data problems came to light only after the classification system had already been developed; Table 8.3 indicates the raw statistical material actually available to the author at the time of calculation.

It is found that some counties, for example Cheshire, are misclassified; such problems are best tackled in detailed group by group discussion.

Minor data problems aside, the present section and the previous section show clearly that during the slump many industrial counties had much higher rates of job loss than the national average simply because their industrial employment base was weighted towards manufacturing industries with faster than average rates of job loss. Steel producing counties were the most conspicuous examples of this problem, yet counties with a high concentration of employment in vehicles (West Midlands Metropolitan County), textiles (West Yorkshire, Greater Manchester) and pottery (Staffordshire) had high rates of job loss as a result of sectoral vulnerability. These problems, though severe, were not quite as severe as in the 1930s slump, when insured employment in Glamorgan fell by 23.9% between 1929 and 1931, and in Durham by 20.2% (Beck 1951; see also Table 4.19) although the differences are not great if it is remembered that the inter-war Unemployment Insurance scheme was weighted towards the cyclically more vulnerable sectors.[41] If particular industries are in any way vulnerable, the onset of slump will mercilessly expose the problems of those industries, and lead to large-scale destruction of employment in places where the vulnerable industries are major employers. As a result, many counties lost around 10% of their employment between 1979 and late 1981, and perhaps approaching 20% by mid-1983 (Table 8.16). At a more local scale there were plenty of "towns that were murdered"[42] in the early 1980s.

8.5 Four Peripheral Conurbations: Merseyside, Tyne and Wear, Strathclyde and Greater Manchester.

The "typical" case of an area with faster than average rates of employment decline during the slump would be that of an area with an unfavourable sectoral composition of employment, and an unfavourable or neutral differential shift. All the counties considered so far, in groups 1a, 1c and 1d come into this category.

The three counties of group 1b, however, conspicuously do not fit such a generalisation. These counties each had a much higher than average rate of job loss, over twice as high as the national average in two cases, yet none of these counties had a sectoral composition of employment which was unfavourable. The problem of each county was a considerably higher than average rate of job loss *within* sectors, both in manufacturing and in services.

Group 1b was a very straightforward group to identify during the classification process, and furthermore represents a highly distinctive set of counties. Each county is a conurbation lying in the "shadow" of the main London-Manchester-Leeds urban belt. The problems that these counties faced was not simply that they were conurbations, but also that they were relatively remote conurbations. Even during the long boom, the Strathclyde, Tyne and Wear, and Merseyside conurbations had conspicuously higher unemployment rates than the more central conurbations (chapter 5.5 above). It is not simply the size of conurbations that matters; it is also a question of relative location. The more central of the provincial conurbations also had high rates of job loss during the slump, but this was due largely to the intensity of problems within vulnerable and locally dominant industrial sectors, rather than to any general anti-conurbation bias.

In examining the question of the urban-rural shift during the slump, or in earlier periods, a three-fold classification of the conurbations is helpful, giving

(1) Greater London

(2) The "central" conurbations (West Midlands, Greater Manchester, West Yorkshire, South Yorkshire)

(3) The "shadow zone" conurbations (Merseyside, Strathclyde, Tyne and Wear).

It would be hard to speak of a strong urban-rural shift against the central conurbations; when sectoral composition is taken into account, these conurbations have tended to fare little worse than the national average. The main exception to this generalisation is that the West Midlands conurbation tended to have strong negative differential shifts in

the vehicles sector through much of the 1970s, but this was due more to the decentralisation of car production, *often to other conurbations*, than to the type of urban-rural shift outlined by Fothergill and Gudgin (1982). If one goes back further in time, the vehicles sector would have been responsible for a large structural shift in favour of the West Midlands; sometimes employment structure, including a high density of industrialisation, can work in favour of the conurbations.

The question arises of whether the industrial employment decline of London and of the "shadow zone" conurbations, fits the theory of urban-rural shift developed by Fothergill and Gudgin (1982, 1983). This, it will be remembered, suggests that industrial development in the conurbations is inhibited by lack of space to expand, and that with a fixed amount of land available for manufacturing, and with a tendency for technical developments to lead to an increase of floor-space per worker, industrial employment will inevitably decline. As far as London is concerned, scepticism about this interpretation was expressed in chapter 6.6 above, it being argued that it was overheating of the London land economy, rather than simply physical shortage of land, that was squeezing London's industrial employment. This is perhaps a subtle difference, and in many respects the land shortage argument represents a useful first approximation to understanding London's long-standing and severe decline in industrial employment. On either interpretation, one of the main effects of slump was to reduce the pressure on industrial floor-space in London, allowing firms to conduct a higher proportion of their total production activities in London than would otherwise have been the case.

The situation in the "shadow zone" presented a strong contrast. Here the problem was not so much that there was a shortage of land, or of land at the right price, to carry out desired industrial expansion, although this would undoubtedly have been important in certain instances, but rather, and more simply, that these conurbations were in long-term industrial decline, and were losing many of their main traditional employers. The creation of *new* manufacturing employment in these peripheral conurbations has also been unusually slow when compared with other industrial counties (section 8.6 below) but this is to be explained more in terms of the general local climate of chronic industrial decline, which discourages new investment, than to land shortage. Furthermore the pace of such industrial decline intensified during the slump. To understand the intensity of employment decline in these conurbations during the slump it is necessary to consider aspects of their employment history.

Table 8.17 presents a summary shift-share analysis by conurbation

between 1971 and 1978. The same three-fold division of the conurbations highlighted for the 1978-81 period can be seen in the experiences of the earlier period. The central conurbations each had highly unfavourable structural shifts, but in more cases neutral or favourable differential shifts. Decentralisation in the car industry, however, led to the West Midlands having an unfavourable differential shift. The differential shift against the West Midlands in the 1970s should not be exaggerated though; in proportional terms it was far less severe than in London or Merseyside. London had a favourable structural shift, but a highly unfavourable differential shift. In the shadow zone, Tyne and Wear, Strathclyde and Merseyside each had broadly neutral structural shifts, far less unfavourable than in the central conurbations, but strongly unfavourable differential shifts, which were, however, less marked on Tyne and Wear than in Strathclyde or Merseyside. Allowing for differences in time intervals in the shift-share analyses, the magnitudes of the structural and differential shifts for the provincial conurbations are for the most part not too dissimilar in the 1971-78 period and the 1978-81 period.[43] Patterns are less clear, however, prior to 1971 (Table 8.18). The Glasgow and Tyneside conurbations had highly unfavourable patterns of shifts between 1959 and 1971, but no more unfavourable than in the textile conurbations of Greater Manchester and West Yorkshire. Merseyside had moderately unfavourable shifts between 1959 and 1971, although it is possibly that this merely meant that a severe underlying weakness was being concealed by the large scale development of the car industry in the area. Keeble (1976 p.183-185) notes that employment in the Merseyside motor vehicle industry increased from 1,500 in 1959 to 33,000 in 1971. If this increase were to be removed from the statistics, the differential shift for Merseyside during this period would stand at -9.4% (instead of -5.1%) and the total shift would stand at -8.1% (instead of -3.7%), fully in line with the performances of the other conurbations of the shadow zone.

The Merseyside, Tyne and Wear, and Strathclyde conurbations have been economically vulnerable for a considerable time, despite regional policy assistance. In earlier years, both sectoral and locational factors have been responsible for this, but since the early 1970s, the locational factor (position, urban status) has been more important. It is perhaps accidental that structural shifts have been neutral, rather than strongly negative, in these three conurbations, both during the 1970s and during the slump. Merseyside's most important industry, the food, drink and tobacco industry, is one in which the level of demand is highly resistant to the business cycle; even the unemployed still need to eat. During a period of large-scale industrial decline, a substantial food, drink and

tobacco industry is, in sectoral terms, a stabilising factor, even though there has been a general long-term drift away from Merseyside in this industry, noted in chapter 6.7(vi) above.

In Strathclyde, and Tyne and Wear, the situation has been more that the basic heavy industries of these conurbations, notably coal (especially on Tyne and Wear) and shipbuilding were in severe decline up to the late 1960s, at a time in which employment in other industrial sectors had been basically stable, but that during the 1970s and early 1980s, decline in these industries was actually less severe than in other industrial sectors. As a result, the structural shift in these conurbations moved from being strongly negative in 1959-71 to being broadly neutral thereafter. The presence of a substantial iron and steel industry in Strathclyde, employing 24,200 in 1978, meant, however, that the overall structural shift on Strathclyde was slightly negative in the 1978-81 period, although to a far lesser extent than in the central conurbations.

Patterns of job loss during the slump in these three conurbations need now to be considered more directly. Table 8.7 shows Tyne and Wear[44] as having suffered a 12.0% fall in employment between 1978 and 1981, with an exceptionally severe (-4.2%) adverse differential shift in the tertiary sector, compared with a +0.9% differential shift between 1971 and 1978. During the 1970s, the Tyne and Wear economy was being largely propped up by expansion in the public sector services, while industrial trends were unfavourable, despite regional policy. In the three minimum list headings educational services, national government services and local government services, 16,200 jobs, or 3.2% of 1971 total employment, were created between 1971 and 1978, resulting in a differential shift of +6,600 or +1.3%. This expansion came to a halt in the slump, however, and was replaced by contraction. Census of Employment figures suggest a loss of 10,000 jobs (24.9%) in educational services, and 5,900 jobs (27.3%) in local government service, resulting in a combined differential shift of -11,000 jobs, or 2.2% of 1978 total employment. These figures should be regarded with extreme suspicion, especially as it has already been indicated (Fig 7.3) that Tyne and Wear had shown an unusually small increase in unemployment in relation to the size of the measured drop in employment. If these figures were to be disregarded, the measured fall in employment in Tyne and Wear would stand at 9.8% instead of 12.0%, and the differential shift in the tertiary sector would stand at -2.0%, instead of -4.2%. The measured fall of employment in MLH 886, public houses, also seems abnormally large, standing at -3,000 jobs or -32.0%

It is probable that over half the measured negative differential shift in the tertiary sector in Tyne and Wear resulted from measurement

errors. The construction industry was responsible for much of the other half, with a fall in employment of 6,600 jobs (19.9%), resulting in a differential shift -0.8% of total 1978 employment. Employment also fell sharply in coal mining, with 6,100 jobs (38.2%) being lost, a differential shift of -0.9%. In the manufacturing sector, the main adverse differential shifts were to be found in the various engineering sectors, with a differential shift of -5,100 in mechanical engineering (-1.0% of total 1978 employment), of -1,500 (-0.3%) in electrical engineering, and of -1,400 (-0.3%) in marine engineering.

There is a strong suggestion here that a dominant factor behind the depth of industrial crisis in peripheral conurbations, at least insofar as Tyne and Wear is concerned, is the decline of the importance of the conurbation as an engineering centre. In Tyne and Wear, this was particularly apparent during the slump in mechanical engineering, but between 1971 and 1978, the main problems had been in electrical engineering, with a total differential shift of -6,500, or -1.3% of total 1971 employment.

Strathclyde shows, in many respects, a similar type of problem.[45] Between 1978 and 1981, the differential shift in mechanical engineering was -10,700, or -1.1% of 1978 total employment. Between 1971 and 1978, Strathclyde had a differential shift of -4,500 (-0.4%) in mechanical engineering, and -6,000 (-0.6%) in electrical and instrument engineering. Although there are clear parallels here with Tyne and Wear, job losses in other manufacturing sectors in Strathclyde during the slump were in many cases much more severe than in Tyne and Wear. Most importantly, 8,500 jobs were lost in iron and steel, although this actually represented a slight *positive* differential shift, and 9,400 jobs were lost in motor vehicle manufacture, a differential shift of -5,700, or -0.6%. 6,400 jobs were lost in chemicals, a differential shift of -0.4%, while 4,900 jobs were lost in electrical engineering, a differential shift of -0.3%.

The problems of the Clydeside conurbation and of Tyne and Wear can be seen in the context of the problems that an industrial conurbation at the heart of a depressed and peripheral industrial region would face. Employment figures for Strathclyde may be regarded as covering a whole industrial region (West Central Scotland) rather than simply its central conurbation. Employment figures for Tyne and Wear, however, cover only the central conurbation of the North Eastern industrial region; one also needs to consider southern Northumberland, County Durham and Cleveland.

In order to understand what was happening in the slump in the Clydeside and Tyne and Wear conurbations, it is necessary to consider what had been happening in the surrounding industrial regions. If the dominant factor in the problems of these conurbations was a simple

urban-rural shift in the context of recession, one would expect considerably faster than average rates of job loss in the conurbation than in the surrounding region. If, however, the dominant factor was that a process of general industrial decline in a region was having a severe effect on the industrial "nerve centre" of the region, then more even patterns of employment change might be expected. Examination of the 1978 and 1981 employment figures suggest that, during the slump at least, the latter explanation is more appropriate. Allowing for probable inaccuracies, already noted, in employment figures in the service sector in Tyne and Wear, one can suggest that employment in Tyne and Wear fell by 9.8% between 1978 and 1981. This compared with larger declines of 11.6% in Durham and 12.7% in Cleveland. In Strathclyde region, employment fell by 9.6% between 1978 and 1981. The decline of employment in Glasgow, at 9.1%, was considerably less than in outlying parts of the region; employment fell, for example, by 16.9% in Irvine, 15.7% in Paisley, 12.5% in Kilmarnock, 11.6% in Dumbarton and 10.5% in North Lanarkshire. One would probably wish to consider Paisley as part of the Clydeside conurbation, and perhaps other centres, but Ayrshire towns such as Kilmarnock and Irvine, while undoubtedly part of the West Central Scotland industrial region, are no more part of the Clydeside conurbation than Durham is part of the Tyneside conurbation.[46]

Job losses on Clydeside and in Tyne and Wear were undoubtedly severe during the slump, but this was due not simply to the very high degree of urbanisation in these areas, but rather to the fact that these areas were at the heart of regions of industrial decline. In earlier periods, the main industries of these conurbations, notably shipbuilding and coal, were in severe decline, resulting in large-scale job losses. It can perhaps be regarded as accidental that these industries were not in especially severe decline nationally, when compared with other industries, during the slump; this "accident" led to the structural shifts in these conurbations being neutral in 1978-81, rather than strongly negative, as in earlier years. Differential shifts were strongly negative in Strathclyde and in Tyne and Wear. In Tyne and Wear this would probably reflect in part a reduced demand in service industries in the main service centre of a region of industrial decline. Allowing for probable inaccuracies in figures for service sector employment in Tyne and Wear, the differential shift in the service sector in this county was in line with that registered for Durham and Cleveland. In the manufacturing sector, there were substantial negative differential shifts in mechanical engineering. It has already been noted (chapter 6.5(iii)(b)) that the central conurbation of an industrial region tends to have high proportions of employment in mechanical engineering, the

conurbation being perhaps the best centre to serve the regional market for capital goods. If, however, the region enters a spiral of severe industrial decline, this is likely to create considerable problems for the capital goods industries of the conurbation, problems which will be registered in a negative differential shift in the engineering industries. In Strathclyde, the situation was complicated by a substantial reorientation of production in the Scottish economy as a whole, with the balance shifting sharply from west to east. This general tendency will be discussed later, in section 8.9 below. Strong negative differential shifts in the engineering sectors suggest that Strathclyde's general industrial decline was reflected by worse than average performances in the capital goods sector.

There are thus quite strong comparisons to be drawn between Strathclyde and Tyne and Wear. Aggregate statistics, as shown in Table 8.7, would appear to suggest that Merseyside, another conurbation in the shadow zone, had a broadly similar bype of economic performance during the slump. A closer examination, however, shows various underlying differences. The differential shift in manufacturing on Merseyside stood at -19,500 between 1978 and 1981, representing 3.1% of total 1978 employment. This differential shift would be still less favourable were it not for a differential shift of +1,700 in motor vehicle manufacture. The recession on Merseyside was concentrated not so much in mechanical engineering, as in Tyne and Wear, and Strathclyde, but rather in electrical engineering, in which employment fell from 26,900 to 17,900, a fall of 34.0% in a sector in which employment nationally declined by 10.1%. This represented a differential shift of -5,200, or 0.8% of 1978 total employment. Such a degree of job loss clearly implies a large number of factory closures, or near-closures; in five out of nine minimum list headings, employment fell by over 40%. Employment also fell sharply, by 5,400 or 32.0%, in the glass industry, with a differential shift of -2,200 (-0.4%). This, however, was a traditional industry of an outlying town in the conurbation (St. Helens), rather than a branch plant industry in the city. Another traditional industry, shipbuilding, was undergoing severe decline in Merseyside with 2,800 jobs (36.5%) being lost, a differential shift of -1,400 (-0.2%). Other large-scale job losses are clearly identifiable in individual minimum list headings, with for example 1,300 jobs being lost in man made fibres, 1,500 jobs lost in printing and publishing of periodicals, 2,400 jobs lost in packaging products, 1,700 jobs lost in rubber, and lesser losses in other sectors. In each case, the jobs were lost from a small employment base, and in some cases, notably man-made fibres, where 4 jobs remained in 1981, the sector was virtually eliminated

locally. It would seem, given the diverse nature of these sectors, and given the heavy level of employment decline in electrical engineering, that the exceptionally severe problems of manufacturing employment decline in Merseyside represented the crisis of the branch plant factory in the setting of a conurbation.[48] Merseyside's problem was not simply that it was a conurbation; other conurbations with a comparably high rate of job loss either had vulnerable sectoral compositions of employment (West Midlands, West Yorkshire) or were handicapped by being situated in a region of unusually severe industrial decline (Clydeside, Tyne and Wear). Neither of these cases applies with any strength to Merseyside.

In broad terms, there are many points of resemblance between the Merseyside economy and, for example, the South Wales economy. At the simplest, vulnerable industrial economies were being propped up during the 1960s and 1970s by new incoming industries, which however, and virtually by definition, tended to be branch plant factories rather than core factories. These newer industries themselves became highly vulnerable to recession at a later date, leading to a strong "echo" of earlier regional problems. When examined in more detail, the earlier problem in South Wales had been the decline in coal mining, and the solution attempted was to bring in a mixture of light industries to occupy labour across a large number of small mining towns. On Merseyside the problems in the long boom were more complex, with a combination of aspects of decline in older, port-based industries, a lack of indigenous development of newer industries (a problem characteristic of conurbations in peripheral areas) and a relatively high rate of unemployment due in part to a high natural demographic growth rate. The large labour reserves implicit in a city of higher than average unemployment, combined with high priority regional policy status, were a big attraction to large-scale industrial employers, notably in the car industry, but there was also considerable inward movement of medium sized employers. Throughout much of the 1970s and 1980s, however, the Merseyside economy was affected severely by the concentration of employment in large branch plant factories which were vulnerable to job loss, and by the low rate of indigenous growth. Obviously, the problem was not precisely the same as in Mid Glamorgan, but there are strong parallels. In some respects the parallels with Cleveland were closer.

Greater Manchester, in group 1d, is the only peripheral conurbation which has not yet been discussed. Table 8.7 shows a mildly unfavourable structural shift, and an unfavourable differential shift, especially in manufacturing. The aggregate shift-share figures for Greater Manchester fall half-way between those of the group 1b

conurbations (Merseyside, etc.) where negative differential shifts dominate, and those of group 1c conurbations (West Yorkshire, etc.) where negative structural shifts dominate, and industry-specific weaknesses are of critical importance. The main factor behind the negative structural shift in Greater Manchester was, as might be expected, the high concentration of employment in textiles and clothing. In particular, the structural shift resulting from the presence of the cotton industry (MLHs 412, 413), rather than an "average" manufacturing industry, stood at -0.7% of total 1978 employment and thus accounted for about half the county's negative structural shift.

The patterns of differential shifts in Greater Manchester's manufacturing sector were perhaps more complicated. In explaining a differential shift of -23,500 jobs, or 2.0% of Greater Manchester's total 1978 employment, five main facets need to be noted. Firstly, there was a differential shift of -6,400 (-0.6% of total 1978 employment) in the textiles and clothing sectors. The weaknesses of traditional Manchester industries, as shown both in structural shifts and in differential shifts, represented the main reason why Greater Manchester had a significantly higher than average rate of job loss during the slump. Secondly, as with other industrial conurbations set in a context of industrial decline, there was a large negative differential shift (-3,900, or -0.4%) in mechanical engineering.[49] Thirdly, fourthly and fifthly, there were substantial adverse differential shifts in food, drink and tobacco (-5,600 or -0.5%), chemicals (-3,000 or -0.3%) and motor vehicles (-2,700 or -0.3%). These five sectors between them account for Greater Manchester's negative differential shift in manufacturing. There is perhaps a trace of suspicion that the negative differential shift in chemicals is exaggerated, in that the negative differential shifts in MLHs 271 general chemicals (-2,000) and 272 pharmaceutical chemicals (-1,100) almost exactly match the positive differential shifts in these sectors (+1,900 and +1,300 respectively) in neighbouring Cheshire. This possibly indicates a minor and unnotified change in the boundaries of travel-to-work areas with a noticeable effect on aggregate county employment statistics; other instances of this phenomenon may also be detected.[50] Even allowing for this query, however, Greater Manchester had substantial negative differential shifts in textiles and clothing, mechanical engineering, food, drink and tobacco, and motor vehicles.

In summary, three out of the seven peripheral conurbations were severely affected by slump because of the vulnerability of their dominant industries; vehicles in the West Midlands, textiles and clothing in West Yorkshire, and iron and steel in South Yorkshire. Greater Manchester, with a high proportion of employment in textiles and clothing, also had

this problem to some extent. In Strathclyde and in Tyne and Wear the main traditional industries (shipbuilding, coal mining, various heavy engineering industries) had been in employment decline even during the later stages of the long boom, and this decline continued in the late 1960s and early 1970s. After 1973, though, the national rate of job loss in other industries started to catch up with, and sometimes overtake, the rate of job loss in the older industries, removing much of the negative structural shifts of these conurbations. The main cities of these conurbations attracted relatively little branch plant movement, which instead was directed largely to new towns on the outer fringes of the conurbation (e.g. Washington, East Kilbride), or existing smaller towns outside. When the slump came the "crisis of the branch plant factory" was strongly marked in these satellite towns, while the problems faced by the main cities can to a large extent be traced to the effects of a decline in the demand for capital goods in the main engineering centre of each region as a result of intense industrial depression in the region as a whole. It is particularly noticeable that while strong negative differential shifts can readily be traced in each of Glasgow and Newcastle, each of these cities lost jobs less quickly than the surrounding industrial region. The basic problem of Merseyside was the problem of the branch plant economy on the scale of the conurbation, just as Mid Glamorgan's problem was the problem of the branch plant factory at the scale of the small town. In each case a different type of branch plant factory is involved, but the end effect remains one of severe decline.

The urban dimension is of course present in the industrial decline of each of these conurbations, yet is expressed in often radically different ways. While all the industrial conurbations had high rates of job loss during the slump, this was more because they were densely industrialised than because they were densely urbanised. Indeed the most severe cases of industrial decline in the slump were often, though not always, to be found in smaller industrial towns, whether on the fringes of the conurbation, or at a remove. Furthermore, not all conurbations had high rates of job loss during the slump; London had a low rate of job loss, as did other major service centres such as Edinburgh and Cardiff. These service-based cities will be discussed in section 8.7 below. Firstly though it is necessary to complete the survey of industrial Britain by examining those industrial counties which were relatively lightly affected by slump.

8.6 Group 2 and Group 4 Counties

Between June 1978 and September 1981, employment in the UK declined by 5.21%. The decline of employment in 11 out of 63 counties was within one percentage point of this figure, with a fairly substantial gap between these counties and both the counties with higher rates of job loss and those with lower rates of job loss (Table 8.3). There would thus appear to be a fairly distinct group of counties with "average" degrees of response to recession. Had there been a more smoothly continuous statistical distribution of rates of employment change, and had the counties with even rates of employment change been evenly divided between North, Midlands and South, then perhaps there might be some justification for dealing with counties rather briefly, with possibly the implicit suggestion that there is little one can do with the average but to behold its averageness.

In fact, counties with an "average" response to slump tended to be of a particular type. Nine out of eleven had unfavourable structural shifts and favourable differential shifts. If one accepts that Cheshire is recorded as having a higher than average rate of job loss merely because of misenumeration in the education sector (Table 8.15), this figure rises to ten out of twelve. In addition, Northamptonshire, Corby excepted, showed similar characteristics.[51]

In a deindustrialising economy, whether in a cyclical upswing or a cyclical downswing, the main reason why an area is likely to have an unfavourable structural shift, even if only moderately unfavourable, is a high proportion of employment in production industries. Thus the nine group 2 counties with negative structural shifts and average rates of job loss are all part of what might be regarded as "industrial Britain", although marginally so in the case of Dyfed. While an industrial county will tend to have a negative structural shift, there is no automatic reason why such a county should also have a negative differential shift. A county with a negative structural shift and a negative differential shift would by definition be a county of worse than average employment performance, and would be classified under group 1. A county with a negative differential shift and a moderately strong positive differential shift would have an average rate of job loss and be classified under group 2. If, however, the positive differential shift were to be particularly strong, a lower than average rate of job loss would result; five counties of industrial Britain (Powys, Hereford and Worcester, Warwickshire, Central and Cumbria) are classified under group 4.

Thus groups 1, 2 and 4 cover the basic range of experience of employment change in industrial Britain. Bedfordshire, with 27,000

employed in the motor vehicles industry in 1978, is the only county in the three Southern regions to be classified as part of industrial Britain in this respect. By far the major part of the Midlands and periphery is classified as part of industrial Britain though; the exceptions at the county scale are the service-based national capitals of South Glamorgan (Cardiff, etc.) and Lothian (Edinburgh, etc.) and also various less urbanised centres in Scotland (along with North Yorkshire), which in many cases showed employment growth during the slump. In non-industrial Britain, the only two counties to have exceeded or closely approached the national average rate of job loss were Cornwall and Essex. In Cornwall, the volatility of employment in the highly seasonal tourist industry is perhaps an important complicating factor.[52] In Essex, a relatively weak positive differential shift in the service sector, when comparison is made with other counties in Southern England, was partly responsible for the rate of job loss being only slightly below average.

When discussing the geography of employment change during the slump, perhaps the main distinction to be drawn is between industrial Britain, concentrated mainly in the Midlands and periphery, with above average or average rates of job loss, and non-industrial Britain, chiefly in Southern England, with below average rates of job loss. When discussing the counties of group 2, it is not so much "average" counties which are being considered but rather tha relatively less disfavoured parts of industrial Britain.

Before considering further the patterns of employment change in group 2, a minor statistical point needs to be resolved. It appears from Table 8.7 that unlike all other group 2 counties, Shropshire had a neutral structural shift and a neutral differential shift, rather than a strongly negative structural shift and a positive differential shift. This seems to be an artificial result. Nationally there were several instances of a reclassification of activity from other sectors into MLH 334 (industrial engines), which apparently, though not in reality, had rising employment during the slump. Shropshire already had 2,900 jobs in this sector, resulting in an artificially created structural shift of +1,500, or +1.1% of 1978 employment. The registered differential shift in manufacturing needs to be correspondingly reduced. If one makes allowances for this, the real structural shift for Shropshire would probably be around -1.3% (-4.4% in manufacturing) and the differential shift around +1.0% (-0.7% in manufacturing). These figures are much more in line with those for other counties in group 2a. Caution is often required when interpreting official statistics.

Turning to "real" economic features, the main distinction to be

drawn between group 2a counties and group 2b counties is that 2b counties (Nottinghamshire, Lancashire, Fife, Leicestershire) have strong positive differential shifts in manufacturing but not in the tertiary sector, while 2a counties (Shropshire, Tayside, Dyfed, Bedfordshire, Derbyshire) have strong positive differential shifts in the tertiary sector but not in manufacturing. Counties with strong positive differential shifts in both manufacturing and tertiary industries, such as Hereford and Worcester, Central and Cumbria, would be classified under group 4. It is proposed to discuss each of these groups separately.

(a) Group 2b counties; favourable differential shifts in manufacturing

There is of course no automatic reason why a traditional industrial centre should have a negative differential shift in manufacturing employment, although in practive the long-term tendency for industries to develop faster in the South than in the North will tend to result in a bias towards negative differential shifts in the older industrial areas, especially when regional policy is not a strong factor. Thus, in the group 1 counties, only three out of seventeen (Cheshire excluded) had positive differential shifts in manufacturing. Twelve out of fifteen counties in groups 2 and 4 (Cheshire included) had positive differential shifts in manufacturing, but these tended to be numerically relatively slight when compared with the negative differential shifts in group 1 counties.[53] In group 2a, any negative differential shifts in manufacturing tend to be slight, the one exception being Bedfordshire, which had severe problems in the vehicles industry.[54]

Thus group 2 and group 4 counties have more favourable differential shifts in manufacturing than group 1 counties. One way of proceeding with this analysis would be to isolate major negative differential shifts in individual sectors in each county, and to show that these tended to be smaller in group 2 counties and group 4 counties than in group 1 counties. This however provides only a partial picture. Chapter 6 above introduced the idea of splitting total employment change in manufacturing by county into components of job loss and components of employment increase. While it may be true that between 1978 and 1981 employment nationally declined substantially in almost all manufacturing MLHs, and while almost all localities showed net employment decline across manufacturing as a whole, there was nevertheless considerable expansion in individual sectors in individual places. While this degree of expansion would of course be slight by historical standards, nevertheless such expansions would account in a three year period for an

increase of perhaps 2% in 1978 total employment levels in industrial counties. Given the intensity of depression in manufacturing during the slump, it is likely that any such increases in employment will tend to represent the maturing of pre-1979 investment decisions rather than any new investment originated in the slump years. Faced with a slump, firms may decide that it is preferable to bring new investment into production, and scrap older vintages of investment, perhaps located elsewhere, rather than to halt all expansion plans and concentrate production at existing locations, using earlier investment. In that there is some new investment, and employment growth in particular localities, during a period of overall job loss, one might be tempted to follow Massey and Meegan (1982) and describe this pattern as one of "technical change and job loss". This, however would probably be misleading; Massey and Meegan make no real distinction between ex ante intentions and ex post outcomes, and tend to infer intentions from data on outcomes; if there is employment growth in a particular locality during a period of general job loss, it is inferred that the decision to invest has been at least partially responsible for the job loss. It seems more likely, however, that investment decisions were taken, and at least partially operationalised, during the 1976-79 upswing, without full foresight as to the severity of the forthcoming slump, and that when the slump came it necessitated large-scale job losses, with the geography of job loss being influenced by the varying degrees of efficiency of the production assets which were in existence at the time.

Table 8.19 indicates elements of manufacturing employment growth in industrial Britain during the slump. The conurbations of group 1b (Merseyside, Strathclyde and Tyne and Wear) each showed a remarkably low degree of job creation in manufacturing, which when compared with less urbanised industrial counties accounted for perhaps a percentage point in the negative differential shift in manufacturing. Other conurbations also had low rates of job creation in manufacturing, but not quite to the same extent. Outside the conurbations, there tended to be strong elements of job creation in group 4 counties (Powys, Central, Cumbria, Warwickshire, Hereford and Worcester) and moderately strong elements of job creation in non-conurbations in group 1 (e.g. Mid Glamorgan, Gwent, Humberside, Northumberland), despite severe incidences of job loss, and in group 2b (Leicestershire, Nottinghamshire, Lancashire, Fife, Cheshire[55]). This is in partial accordance with the type of urban-rural shift suggested by Fothergill and Gudgin (1982), but it is very much a secondary feature of the geography of slump, rather than a primary feature; indeed it was possibly no more than a secondary feature of the geography of earlier cyclical phases.

There would appear to be little systematic difference between the counties in group 2b (Leicestershire, Lancashire, etc.) and the non-metropolitan counties of group 1 (Clwyd, Staffordshire, etc.) in terms of employment creation in manufacturing. The main differentiating feature is in terms of jobs *lost*. Three main components of this may be noted. Firstly, although group 2b counties had proportions of employment in industry which were comparable to those of the more depressed group 1a and 1c counties, this manufacturing employment tended to be concentrated in less immediately vulnerable sectors, hosiery and knitwear (in Nottinghamshire and Leicestershire) or shipbuilding (in Fife) rather than in, for example, iron and steel, vehicles or pottery. It is true that Lancashire had large concentrations of employment in the vulnerable cotton and motor vehicles industries, but this was balanced by a large concentration of employment in the relatively recession-free aerospace industry. Secondly, group 2b counties had relatively low rates of job loss in the manufacturing sector, even once the structural effect has been accounted for. Neither Nottinghamshire, Leicestershire nor Fife had a differential shift worse than -1,000 in any minimum list heading.[56] In contrast, Humberside and Staffordshire each had differential shifts of worse than -1,000 in five minimum list headings, but despite this had relatively slight total negative differential shifts in manufacturing.[57] Counties with exceptionally severe negative differential shifts in manufacturing, such as Clwyd and Durham, generally had differential shifts of -3,000 or worse in certain vulnerable sectors. Thirdly, group 2b counties avoided the intense negative differential shifts in services which resulted from the multiplier effects of large-scale industrial job loss in group 1a counties.

Thus group 2b counties avoided worse than average rates of job loss primarily because their industrial structure was relatively safe given the context of the time.

In this generalisation, Lancashire is a partial exception. The job losses in the textiles industry were particularly severe, with 13,000 jobs being lost in MLHs 411-413 representing 2.5% of Lancashire's total employment, and 54.3% of local employment in these sectors. This was a sharper percentage decline than in the 1929-31 slump in the cotton industry. Between 1978 and 1981, employment in Lancashire and Greater Manchester in MLHs 412 and 413 (the cotton industry) fell by 47.6%, while the decline between 1929 and 1931 in the North West region was "only" 33.4% (Beck 1951, Table 14(10). The far higher initial employment level in the cotton industry (428,000 in 1929, compared with 53,000 in 1978) meant that decline of the cotton industry had a far stronger regional impact in the inter-war slump than in the recent slump. The

difference between the two sets of employment figures gives some indication of why employment growth in the North West has been so slow in the intervening period.

Employment decline was also severe in the Lancashire motor vehicles industry, with 4,000 jobs (21.5%) being lost, but this actually represented a positive differential shift of 1,100. Given that employment in the aerospace sector (MLH 383) increased by 2,900 (14.4%) during the same period, with a differential shift of +1,800, the vehicles sector as a whole in Lancashire can actually be regarded as a stabilising factor. Employment in Lancashire also increased by 3,200 (76.5%) in ordnance and small arms (MLH 342). Without the effects of employment growth in defence related sectors, new manufacturing employment growth (Table 8.19) would possibly have been as low as in Greater Manchester, while the differential shift in manufacturing would have been neutral, not positive.

Other group 2b counties showed more diverse patterns of fresh growth in manufacturing employment during the slump. For example, in Leicestershire 2,200 jobs were created in fruit and vegetable products (MLH 218), and 1,100 jobs in industrial plant and steelwork (MLH 341),[58] while in Nottinghamshire 1,500 jobs were created in pharmaceuticals (MLH 272), a long established local industry (Boots), in each case offsetting a substantial element of job loss in textiles, clothing and, in Leicestershire, footwear. In Northamptonshire, classified in group 1 solely as a result of the 6,000 jobs lost in iron and steel (although a further 4,000 jobs were lost in footwear), employment increased by 800 in industrial engines (MLH 334) and by slightly less than 500 in each of aluminium and aluminium alloys (MLH 321), metal-working machine tools (MLH 332) and plastic products n.e.s. (MLH 496). In Fife, with a much smaller manufacturing base level, 500 jobs were created in computers and 600 in aluminium.[59] It may seem almost perverse to discuss elements of manufacturing employment growth in the context of slump, yet industrial areas which show relatively low rates of job loss in their traditional sectors, and which are capable of generating new industrial employment on a relatively large scale, even at a time of slump, probably face better long term prospects than industrial areas with very heavy job losses and the need for external stimulus to regenerate the local industrial base.

(b) Group 2a counties

The group 2b counties kept their rates of job loss close to the national average largely on account of the relative security of their

industrial bases; these counties generally escaped the worst of the blizzard of industrial job losses. The manufacturing sector in group 2a counties (Shropshire, Tayside, Dyfed, Bedfordshire, Derbyshire) was not quite so secure, and as a result job losses tended to be slightly above the national average. Each of these counties, however, had a favourable differential shift in the service sector, which helped stabilise their positions.

Bedfordshire is perhaps best considered separately, since unlike the other counties in the group it is situated on the fringes of the London outer metropolitan zone, and is thus affected by the various rounds of reorganisation of the London space economy, discussed in the context of the slump in section 8.8 below. A differential shift of +3.9% in the tertiary sector is exceptional in the context of industrial Britain, but is merely normal for a county on the outer fringe of the South East. If it had not been for this accident of location, the rate of job loss in Bedfordshire would perhaps have matched that of Strathclyde or South Yorkshire, rather than Nottinghamshire or Derbyshire. Bedfordshire's main industrial problem was the weakness of a single key sector, motor vehicles, in which employment fell from 26,900 to 16,600, representing a structural shift of -5,900 (-2.9% of total 1978 employment) and a differential shift of -2,900 (-1.4% of total 1978 employment). Were it not for the problems of the vehicles sector, Bedfordshire would probably have found itself classified in group 5ab, along with the neighbouring counties of Hertfordshire and Oxfordshire. In a sense, however, Bedfordshire's industrial problems can themselves be regarded as an indirect result of location, in that the county is situated in the middle of the West Midlands-London "vehicle belt" and attracted considerable investment in an industry which was later to prove highly vulnerable.

Bedfordshire, despite severe job losses in the motor vehicle sector, actually had a fairly high rate of job creation in locally expanding manufacturing sectors, as Table 8.19 shows. Other counties in group 2a, however, showed low levels of job creation, with Tayside and Dyfed, two relatively lightly urbanised counties, showing lower rates of job creation in manufacturing than the Greater Manchester conurbation. Quite possibly remoteness is an important differentiating factor; in industrial counties outside the conurbations, rates of job creation in manufacturing tend to be higher within a Midlands/East Wales/Lancashire/Yorkshire zone than in more remote areas. In Wales in particular, there was a sharp distinction between an East Wales zone (Clwyd, Powys, Gwent, Mid Glamorgan) with relatively high rates of manufacturing job creation and a West Wales zone (West Glamorgan, Dyfed) where there was very little job creation in manufacturing. It would seem that any policy

attempt to regenerate the Welsh industrial economy would do well to concentrate on East Wales, rather than on West Wales which probably has less growth potential.[60] Moving northwards from the central industrial belt, Durham and Cleveland each had relatively low rates of new job creation in manufacturing, while Strathclyde had an exceptionally low rate of new job creation, even for a conurbation. Tayside quite possibly shared a similar form of weakness.

The relative lack of new job creation in manufacturing in group 2a counties is a factor accounting for part of the differences in differential shifts in manufacturing between 2a and 2b counties. In addition, and perhaps more importantly, group 2a counties tended to be rather more vulnerable to job losses than group 2b counties.

One might have expected, by reasons of geography and economic structure, to find Derbyshire in group 2b rather than group 2a. The differential shift in manufacturing is far less positive than would be expected on these grounds. There are three main reasons for this. Firstly, Derbyshire had a very large job loss, which does not appear to be identifiable from *Financial Times* reports, in abrasives and building materials n.e.s. (MLH 469). 3,200 jobs were lost, accounting for a differential shift of -2,200, or 0.59% of Derbyshire's total employment. Secondly, the fact that employment remained merely steady in Derbyshire's sizeable aerospace industry, rather than expanding as in the rest of Britain, led to a differential shift of -1,000 (-0.26%) in this sector. Derbyshire's employment performance in this sector, had it taken place in virtually any other sector, would have led to a large *positive* differential shift. Thirdly, Derbyshire's record on expansion of industrial employment is far inferior to the records of group 2b East Midlands counties. The differences shown in Table 8.19 might not appear to be large, but of the 7,396 jobs regarded as being "created" in manufacturing in Derbyshire, 1,909 were in MLH 334 Industrial engines, quite probably representing a reclassification from another industry, such as metal goods n.e.s. Discounting these jobs would lead to a measured rate of industrial job creation of 1.50%, lower than that of Greater Manchester.

In Shropshire, the motor vehicle industry accounts for a large part of the negative differential shift in manufacturing, a loss of 3,200 jobs from a base figure of 6,900 representing a differential shift of -1,300, or -1.02% of total 1978 employment. If it is accepted that much of the negative differential shift in manufacturing recorded in Table 8.7 is artificial, arising from a reclassification (see earlier discussion), the problems of the vehicle industry account for the whole of the "genuine" negative differential shift.

Dyfed had major job losses in iron and steel (employment down from 4,400 to 2,300 in MLH 311) and in motor vehicles (employment down from 5,400 to 4,300). This pattern of job loss shows that Dyfed, despite its high degree of rurality, shared many of the structural weaknesses of other parts of South Wales, and also the West Midlands conurbation. Differential shifts in iron and steel and in vehicles were in total neutral, as in the case of other manufacturing sectors in total. Dyfed's relatively low density of industrialisation may have helped the county avoid the large negative differential shifts registered by West Glamorgan or Mid Glamorgan, yet in the context of an industrial region in severe decline there is little sign that Dyfed's rurality gave a positive boost to industrial production.

The industrial performances in each of these counties was much as would be expected given the highly adverse economic conditions of the time, although Bedfordshire had a faster than average rate of job loss in the vehicles industry. The conundrum still remains though of why these counties with neutral differential shifts in manufacturing had high positive differential shifts in the tertiary sector, while group 2b counties with high positive differential shifts in manufacturing (Nottinghamshire, Lancashire, Fife, Leicestershire) had neutral differential shifts in the tertiary sector. This is not the type of result one would expect from multiplier theory.

In two cases, measurement errors in educational services (see Table 8.13) are largely responsible for the apparent positive differential shift in the tertiary sector. In Tayside a differential shift of +3,900, or 2.4% of total 1978 employment, was recorded in this sector, while in Derbyshire a differential shift of +4,000, or 1.1% of total 1978 employment, was recorded. These almost certainly represent under-recording in 1978 rather than a genuine increase in employment. In reality it seems that Tayside had a high *negative* differential shift in the tertiary sector, rather than a high positive differential shift, and had a high rate of total job loss rather than an average rate. Tayside had heavy job losses in jute, a traditional industry (-2,100 jobs), in construction (-2,100 jobs), and in watches and clocks (-1,700 jobs). In Derbyshire, elimination of the statistical anomaly in the educational sector halves the differential shift in the tertiary sector rather than removes it altogether. There are signs that as in neighbouring South Yorkshire, though to a lesser extent, the local authority made a deliberate attempt to maintain a high level of employment in government services. In Derbyshire employment in MLH 906 fell by less than a hundred, representing a differential shift of +2,400, or +0.6% of total 1978 employment. In South Yorkshire employment in this sector increased by 3,400, a

differential shift of +5,400, or +1.0% of total 1978 employment. It is hoped that these figures are reliable, although in some instances employment figures for local government appear questionable.

In Shropshire there were high positive differential shifts in retailing (+500 in retail distribution of food and drink; +1,200 in other retail distribution) representing in total 1.3% of 1978 employment, and most of the measured differential shift in tertiary industries in the county. Attention here needs to be drawn to Shropshire's urban structure, dominated by small and medium sized towns in a largely rural setting, and by Telford, one of the "new cities" designated in the new towns programme of the 1960s and 1970s.[61] Under conditions of slump the long-term drift to small and medium towns, and the expansion of such towns, is more strongly expressed in services than in manufacturing (see later discussion), while in the development of a new town retail provision often lags behind population expansion, leading to possibilities of "catching up" in later years.[62]

Dyfed was another rural county with a positive differential shift in the service sector (compare also Hereford and Worcester, North Yorkshire, Borders, Dumfries and Galloway, etc.), although relatively slight. Most rural and semi-rural counties, even outside Southern England, had considerably higher positive differential shifts in services, for example Hereford and Worcester, Cumbria, North Yorkshire, and the more rural of the Scottish regions. It would appear that while the service sector in Dyfed remained relatively healthy during the slump, employment levels in the service sector would have been even higher were it not for problems in the manufacturing sector in which employment fell by 22.8%.. It should also be noted in passing that while Powys and the Island Areas of Scotland each showed negative differential shifts in the tertiary sector, these negative differential shifts were recorded in construction rather than services. In Powys a differential shift of -800 (-2.8%) was registered in construction, leaving a residual differential shift of +1.5% in services. In the Island Areas, where the ending of the construction phase of the North Sea oil boom was a critical factor, the differential shift in construction was -2,200 (-9.1%), leaving a residual differential shift of +7.2%. Gwynedd was the only other rural county outside Southern England to show a negative differential shift in the tertiary sector; this chiefly resulted from faster than average job losses in construction (differential shift of -2.3%), although a negative differential shift of -1,000 (-1.4%) was registered in hotels and other residential establishments (MLH 884) and in restaurants, cafes, snack bars. Areas which specialised in tourism would have been adversely affected by the unusually low level of demand

among the industrial working class, and by high exchange rates discouraging foreign tourists.[63] Mostly, however, more rural counties showed strong positive differential shifts in services, and Dyfed was no exception.

The differential shift in the tertiary sector in Bedfordshire (+3.9%) appears exceptionally high in the context of industrialised counties, yet in the context of Southern England such a differential shift is not unusually high. Patterns of employment change in the service sector in Southern England are discussed in section 8.8 below.

Group 2a counties were highly diverse, but had in common negative structural shifts, and broadly neutral differential shifts in manufacturing. The positive differential shifts in the tertiary sector can variously be ascribed to favourable location (Bedfordshire), to a favourable urban structure (Dyfed, Shropshire) or to measurement error in educational services (Tayside, Derbyshire).

(c) Group 4 counties

Four counties in group 4 with strong negative structural shifts had even stronger positive differential shifts, and hence low rates of job loss during the slump. These were Hereford and Worcester, Warwickshire, Central Region and Cumbria. In addition, the Borders Region also had a strong negative structural shift, but an exceptionally strong positive differential shift (+12.7%), resulting in substantial increases in employment during the slump; neighbouring Dumfries and Galloway also had an exceptionally strong positive differential shift, but with a neutral structural shift. Powys and North Yorkshire each had broadly neutral structural shifts and strongly positive differential shifts, and in consequence a low rate of employment decline during the slump.

There are many contrasts between the counties listed above, but all of them are in the Midlands or periphery and all of them are relatively lightly urbanised, or in some cases strongly rural. In some cases there is a strong negative structural shift, indicating an employment structure weighted towards manufacturing, while in other cases the structural shift is neutral indicating not a service sector economy but rather a rural economy with a reasonable balance of industrial and service sector employment. For present purposes these counties may be regarded as the most favoured, or least vulnerable, parts of industrial Britain.

Table 8.20 indicates differential shifts in manufacturing in both numerical and percentage terms and shows that while the negative differential shifts were very large in some of the conurbations (-32,500

in Strathclyde, -23,500 in Greater Manchester, -19,500 in Merseyside) those in the more rural of the counties listed above were small in absolute terms, despite the often spectacular percentage figures; +1,200 in Borders, +1,100 in Powys, +2,300 in Dumfries and Galloway, and +2,700 in North Yorkshire. To place these figures in context, West Yorkshire had a differential shift in manufacturing of +6,800. While more rural counties in industrial Britain tended to have positive differential shifts and more densely urbanised counties tended to have negative differential shifts, there are clearly some significant exceptions to this generalisation. Furthermore, the positive differential shifts in manufacturing in less urbanised counties in industrial Britain were considerably outweighed by negative differential shifts in more urbanised counties. Conversely, in Southern England, Greater London had a neutral differential shift in manufacturing while less urbanised counties, and indeed also some highly urbanised counties such as Hampshire, tended to have fairly strong positive differential shifts. While there was an urban-rural dimension to spatial patterns of industrial employment change in the slump, the North-South dimension was far stronger, with manufacturing job loss being considerably more severe in the Midlands and periphery than in Southern England.[64] These differences are even more clear cut when manufacturing employment alone, rather than total employment, is considered (Table 8.21). While some of the more industrialised parts of Southern England (Greater London, Essex, Kent, Oxfordshire, Wiltshire) had rates of industrial job loss around the national average of 15% between 1978 and 1981, and Bedfordshire lost more than 20% of its industrial employment, most counties in Southern England had a rate of industrial job loss of less than 10%. A few of the more rural counties in the periphery had low rates of job loss in manufacturing, and Dumfries and Galloway and the Island Areas even registered employment growth in manufacturing, but the experiences of other relatively rural counties such as Northumberland (17.4% of manufacturing jobs lost), Dyfed (22.8%) and Clwyd (27.7%) shows clearly that more rural counties did not always escape the industrial recession lightly.

Thus great care needs to be taken in interpreting the differentiation between groups 1, 2 and 4 in urban-rural terms. Some relatively rural counties were industrially extremely vulnerable, with the crisis of the branch plant factory being important in Northumberland (compare Mid Glamorgan), steel job losses in Clwyd being on a very large scale, and various problems in the steel and vehicles industries being significant in Dyfed. The counties of group 4 would for the most part have escaped these difficulties. There is however very little internal

coherence in group 4.

Warwickshire is statistically an artificial unit, consisting of the area just to the south of Birmingham, beyond the continuous built up area, and the area surrounding Coventry (apart from a narrow rural strip linking Coventry and Birmingham), without including Coventry itself. Warwickshire's industrial structure closely resembles that of the West Midlands, and indeed Warwickshire can legitimately be regarded as part of the outer semi-rural fringe of the West Midlands conurbation, rather than a free-standing rural area. Clearly industrial growth takes place most readily on the uncongested outskirts of a conurbation rather than in the congested core, and if core and outskirts are in different counties, then on average there would be a strong negative differential shift in the core county and a strong positive differential shift in the suburban county. Motor vehicle manufacturing, which accounted for a differential shift of +4,900 in Warwickshire (3.3% of total 1978 employment), also accounted for a differential shift of 118 (+0.0%) in the Metropolitan County. Indeed employment in motor vehicles in Warwickshire actually increased, according to Census of Employment figures, by 1,800 between 1978 and 1981. Such suburbanisation within a conurbation should not be regarded as a genuine urban-rural shift.

In passing it should be noted that the unexpected negative differential shift in the Warwickshire service sector appears to be the result of a statistical anomaly, with medical and dental services (MLH 874) showing a differential shift of -6,300 (-4.2%) in Warwickshire and +9,500 (+0.7%) in the Metropolitan County.[65] If one adjusts for this, it would appear that Warwickshire actually showed an increase in employment between 1978 and 1981.

Hereford and Worcester also includes part of the West Midlands suburban fringe, and had high concentrations of employment in metal industries n.e.s. (MLH 399) and in carpets (MLH 419), the traditional industry of Kidderminster. These two industries between them accounted for a structural shift of -5,900 (-7.8%), although differential shifts in these sectors were neutral. This sectoral composition of employment explains the negative structural shift in the county, while the positive differential shift may be explained by some combination of urban fringe effects, rurality (in the South and West of the county) and location at the edge of the Southern England core.[66] The differential shift in manufacturing was spread very widely across sectors; out of a total differential shift of +6,500 no single MLH had a differential shift of more than +800.[67]

Cumbria showed a contrasting employment profile, with the large differential shifts in manufacturing accounted for by a new soap and

detergents factory (MLH 275), with employment in the sector increasing from 70 to 2,100, and by the relative stability of employment in the local shipbuilding and marine engineering sector, a traditional local industry. These sectors between them accounted for a differential shift of +4,000 (+2.2%), with differential shifts in other manufacturing sectors being, in total effect, neutral. A substantial iron and steel industry was in part responsible for the large negative structural shift in manufacturing.

The positive differential shift in manufacturing in Central Region was due largely to an increase in employment in general chemicals (MLH 271) from 2,700 to 4,300, a differential shift of +1,900 (+1.7%). This can probably be regarded as a side effect of North Sea oil; British Petroleum has a large petrochemicals plant in Grangemouth.

Of the counties discussed in group 4, only Powys had a "purely" rural profile, with suburban fringe effects being non-existent, and without major gains of employment in the (urban) chemicals sector. Manufacturing employment fell from 5,800 to 5,600; the base figure of 5,800 is so small, however, as to be of little significance at other than the local level. For the record, 600 jobs were lost in vehicles, while 300 jobs were gained in the clothing industry.

Powys apart, relatively low rates of job loss in group 4 counties represent not so much the effects of rurality, but rather suburban fringe effects, revealed at the county level only as a result of the West Midlands Metropolitan County's boundaries being too tight, or the effects of major employment growth in a particular industry, the chemicals industry which was relatively undepressed during the slump.

8.7 The Service-Based Conurbations; London, Edinburgh, Cardiff and Bristol

(a) The Nature of a Core Economy

The discussion so far has concentrated on what might be termed "industrial Britain", and indeed it was industrial Britain that was most severely affected by slump. Not all of Britain, nor even all of urban Britain, could be described as industrial; indeed by far the largest city in Britain, London, is only relatively lightly industrialised, given its size of population, and has developed as a result of its service sector activities.[68] At a rather smaller scale, Cardiff, Edinburgh and Bristol are also primarily service-based cities which, although not as large as the industrial conurbations, have avoided the sharp decline in economic fortunes of the major industrial centres. Three out of four of these cities are capital cities, and thus important administrative centres, while all four cities are important financial and trading centres. Furthermore, and this is the justification for dealing with them together in the present chapter, they all showed remarkably similar responses to slump. Thus Greater London, Avon (Bristol and surrounds) and South Glamorgan (Cardiff and surrounds) are each classified under group 3a with an employment decline of about 3½% between 1978 and 1981, very strongly positive structural shifts, neutral differential shifts in manufacturing and negative differential shifts in the tertiary sector (Table 8.7).[69] Lothian region has a broadly similar profile, except that a major expansion of employment in brewing (see section 8.9 below) gave a substantial positive differential shift in manufacturing, while there was also a slight positive differential shift in services. As a result the overall drop in employment in the Lothian region during the slump was very slight (-1.4% between 1978 and 1981).

These similarities in employment profiles exist despite quite considerable differences in regional setting. Greater London and Avon are both situated in Southern England, where job loss during the slump was relatively slight, and show higher rates of job loss than surrounding counties. In such cases a notion of urban-rural shift may be invoked, with densely urbanised counties in the core regions having systematically less favourable employment trends than less densely urbanised counties. It should not be forgotten, however, that a substantial part of the relatively favourable growth of the less urbanised counties of the core is the result not so much of the *decline* of London, but the increased geographical *spread* of London. While Greater London and Avon are areas of relatively high job loss in a regional setting of low job loss, South

Glamorgan with an almost identical rate of job loss is a county of relatively low job loss in a regional setting of very high job loss. In Scotland spatial patterns of employment change were highly complex (see section 8.9 below), but in terms of the central Scotland urban belt, rates of job loss in Lothian region were slight.

Perhaps the most important point to be made about the "service cities" is that unlike the industrial cities they avoided the worst effects of slump. If comparison is made with West Yorkshire, South Yorkshire, Greater Manchester and the West Midlands conurbation, rather than with Tyne and Wear, Strathclyde, and Merseyside, then at one level of analysis the difference is simply one of sectoral composition; in terms of shift-share analysis the differential shift in both sets of county is broadly similar, while structural shifts are strongly divergent as a result of differences in the industry/service weighting at a time of intense industrial recession. These differences in the industry/service ratio and the structural shifts are also apparent in less urbanised counties when North and South are compared.

In general the service-based economy of the South has fared better in slump than the industrial economy of the periphery, but the peripheral semi-conurbations of South Glamorgan and Lothian are in this respect more "Southern" than "Northern". Cardiff, although situated in a declining industrial region, is a service-based city relatively close to Bristol and other parts of Southern England; Edinburgh, however, is geographically remote from other service-based economies.

The question arises of how to conceptualise the geographical service/industrial split. An old-fashioned method, now largely discarded, is to see industry as the export "base" of the region and service sector employment as responding wholly passively to changes in "base" employment.[70] Undoubtedly employment in *parts* of the service sector do respond passively to changes in industrial employment, which makes it possible to calculate multiplier effects of industrial job loss (section 8.3 above), but such a conceptualisation makes it very difficult to see why certain regional economies should be *dominated* by the service sector.[71] Base-multiplier theory would tend to suggest that the industry-service employment ratio would not vary significantly over space.

Neither is it satisfactory to suggest, as Damesick (1987) does, that the fundamental split is between a de-industrialised North and a post-industrial South. If the word "post-industrial" is to have any analytical meaning, the economy being described as post-industrial must once have been industrial, but must have, at a later stage, relied on the non-industrial economy as the main motor of growth. The economy of London was, it is suggested, never industrial in the first place, so it

can hardly be regarded as post-industrial at present. If the word "post-industrial" is being used loosely to mean simply "service-based", then the London economy has always been post-industrial, certainly since the rise of London as an international financial centre.

It is more satisfactory to examine the situation in terms of core and periphery, and to note explicitly that an essential component of a core economy is the extraction of surplus value arising from physical production elsewhere.[72] The most obvious paths of extraction are as follows:

(a) through the political system; taxes collected nationally to support a political system centred on the capital city;[73]

(b) through trade;

(c) through finance.

These considerations, when taken together, suggest that the core economy is necessarily a service-based economy. This applies whatever the state of economic development of the country involved. Under certain economic conditions, industrial development is attracted to the core, but this is not automatic; much depends on the geographical distribution of raw materials, the technology of production, the degree of local infrastructural development, and the degree of access to international transport routes, particularly waterways. In Britain, 19th century industrial development was drawn to the peripheral regions, while in the 20th century the pull has been towards the core regions, yet with the core regions of Southern England having a lower proportion of employees in industrial employment than the Midland or peripheral regions.

Core and periphery may be defined at a variety of spatial scales, most notably first world/third world, core region/peripheral region and town/country. It hardly needs to be emphasised that on the broadest level the British economy is very much a core economy, whatever might have been happening to its industrial base in the years being discussed here. Indeed, if the argument above is followed, the fate of Britain's industrial base is in many contexts of secondary importance in Britain's development as a world core capitalist economy. Yet Britain is not simply a core economy, and there is a danger that if finance is given a higher priority than industry a loss of industrial production may result which is quantitatively greater than any increase in extraction of surplus value from the rest of the world.[74] This problem was particularly acute in the decades leading up to 1914,[75] and remains a problem in the 1980s.

Internally, core and periphery may be defined at either the regional or the urban scale. London is by far the largest core, and possibly the dominant spatial economic tendency of the 20th century has been the tendency for the London regional economy to expand geographically so that

virtually the whole of Southern England may be regarded as part of the London-centred core. In the 19th century most of Southern England was an under-urbanised agricultural backwater, not a core at all (chapter 9).

Obviously towns, cities and conurbations outside Southern England also have core functions, yet such is the dominance of London that when examined at the UK scale these cities often have, in effect, core functions only at the regional scale. These core functions protect the major cities against certain aspects of decline during recession, but set against this the peripheral cities may be shown to have, for a variety of reasons, exceptionally vulnerable industrial structures (sections 8.4, 8.5 above). As a result of intense industrial decline, large cities outside Southern England tended to have had severe declines of employment during the slump, except where the industrial base was relatively small and the "core" service base particularly strong. It can be added that had the service base not been extremely well-developed, places such as Cardiff and Edinburgh would be towns, not cities; many smaller towns in the peripheral regions were relatively unscathed by slump. The only other peripheral *city* not to show a major employment decline during the slump was Aberdeen, and here the rise of the oil industry was the crucial factor (section 8.9 below).

Southern England will be discussed in more detail in section 8.8 below, with much attention being given, inevitably, to the relationship between London and the rest of Southern England. In the present section, some more detailed comparisons of the structure of employment change in the four "service city" counties is to follow.

(b) London

London during the 1970s experienced severe job loss, led by the manufacturing sector, and depopulation as a result of this employment decline. Depopulation in the recent past is likely to lead to a current depletion in service sector employment, irrespective of whether such depopulation is still active. In this context it is not surprising that London should have had a large negative differential shift in services (-2.3% of total 1978 employment), or that in the distribution sector London should have had a differential shift of -19,300 (-0.5% of total 1978 employment). National government service showed a differential shift of -13,100, indicating a continuation of the decentralisation of the Civil Service, while medical and dental services showed a differential shift of -9,400. Many of the higher order private sector services showed both employment growth and strong negative differential shifts as some of the core functions of the London economy continued to

decentralise, though without greatly diminishing London's dominance. In banking, insurance and finance,[76] and accountancy and legal services, employment in London increased by 37,500 (8.3%) between 1978 and 1981. This represented a structural shift of +2.2% of total 1978 employment, but a differential shift of -0.5%.

It has to be emphasised therefore that the business core of the London economy, which accounted for about an eighth of London's total employment in 1978, was healthily expanding its employment base even during the slump, although there were some signs of decentralisation. In part this reflects the strong weighting of economic policy towards the type of policy favoured by City interests (dear money, whether in terms of interest rates, money supply, or exchange rates) rather than the types of policy favoured by industry (cheap money; low rates of interest and low exchange rates). In a capitalist economy there is a perpetual conflict of interest between finance capital and the industrial sector, and in Britain there has been a long-standing and much noted tendency, resulting in part from the physical and social closeness of the City and Whitehall, for economic policy to be dominated by the interests of finance capital.[77] Rarely has this thrust in policy been pursued with such dogmatism and extremism as in the early Thatcher years; the City's survival and prosperity through the slump was based on the same factors that caused industrial devastation in areas further from the centre of power.[78] Quite obviously there is a perpetual dilemma in economic policy, which becomes acute when events are not running smoothly; if one operates a City-based policy, industrial production is endangered more than is necessary, while if one conducts an industrially based economic policy there is a danger that "confidence in the City" will be jeopardised. In terms of maximising national production and national employment, the requirement is that economic policy needs to be orientated towards industry rather than towards finance, the reverse of the dominant direction in economic policy presently, and indeed in the last hundred years. What is clearly not satisfactory is that the state should intervene massively in the economy to restructure the economy in favour of financial capitalism, and then claim that this interventionism represents "market forces" and that if industry declines it is the result of a failure to respond to market forces. Such a policy may consolidate and develop the role of London as a core capitalist economy at the world scale, but it increases the relative peripheralisation of the industrial regions. Overall, the national economy loses more than it gains from the City bias in economic policy.

This, it seems, gets quite close to the heart of the political economy of the regional problem in Britain, and indeed to the problem of

deindustrialisation. At the centre of the capitalist system lies the extraction of surplus value through specifically economic institutions (rather than, say, through political, religious or kinship institutions).[79] Early attention (e.g. Marx) concentrated on the role of the capitalist industrial organisation in extracting surplus value, and indeed the creation of surplus value relies ultimately on physical production. Yet the story does not end at the level of the producing firm; indeed the dominant mechanism through which wealth is accumulated in the capitalist system is through the extraction of surplus value by *non-producing* economic organisations, through finance and trade,, and through portfolio investment rather than through direct investment.[80] Agglomeration of such organisations produces a core surplus-extracting economy. The periphery is then left to fare as best it can. At the international scale a low productivity country whose economy is restructured to meet the needs of international capitalism may well find that the leakage of surplus value to core capitalist economies will seriously reduce the availability of economic resources for development according to indigenous needs; the process of underdevelopment. At the national scale the problem is not so much one of underdevelopment, but rather that of the peripheralisation of production activities. It is important to recognise that the dominance of a national capitalist economy at the world scale relies initially to a large extent on the existence of an indigenous production economy of relatively high productivity so that, for example, Britain's Industrial Revolution and move to 19th century world economic dominance went hand in hand. The problem of deindustrialisation in an advanced economy results not so much from the weakness of the economy but from the persistent policy of attempting to reinforce the undoubted strength of the financial capitalist sector of the economy at the expense of leaving production to fend for itself in an increasingly competitive world. Deindustrialisation is seen as a result not of weakness but of overvaluation of the importance of "core" financial activity, though once deindustrialisation is under way it itself becomes a source of economic vulnerability, leading to any cyclical downswing being very severely felt. The further that deindustrialisation progresses, the less likely it is that production activities can lead any prolonged upswing, and the more likely it is that restructuring of the economy will favour the financial sector during the upswing, consolidating and extending the power of the core regions, but leading to relative stagnation in the industrial periphery. Recovery is thus partial, rather than general. This can be seen very clearly in post-slump Britain.

There are thus fundamental conflicts of interest between London based financial capitalism and industrial capitalism, which tends to

dominate economic life in large parts of the periphery. What is good for London is not necessarily good, and indeed can often be actively harmful, for the rest of the country; structures designed to maximise gains in the financial sector will tend not to be those that maximise national income and employment. This can be seen very clearly in the slump of the early 1980s.

The clash of interests is between the London *power base* and the periphery, not between the London people in general and the periphery, or London employment in general and peripheral employment in general. Neither of course does it mean that if something is good for the City it is automatically bad for industry, or that if something is bad for the City it is automatically good for industry; this would be to commit the same logical error as arguing that if increased industrial investment, output and employment boost profits they are necessarily harmful to labour.[81]

There has been considerable restructuring of capitalism since the 1960s, and during the 1970s one of its main victims was industrial employment in London. This process may be seen most clearly in the boom year of 1972-73 when a major Government reflation lead to very sharp inflation in the paper value of various forms of asset, and particularly urban land. Associated with a national increase in industrial production there was considerable industrial decline in London as industrial sites were bought and sold to capitalise on high land values. Asset stripping, the process by which small firms were bought up by financial interests and then had their more valuable assets sold off, was already becoming common by the time of the land boom,[82] but record land prices undoubtedly helped accelerate the process.

By the 1980s, however, London's industrial decline had slowed down; despite the slump, manufacturing employment in London had fallen by only 4.1% per annum between 1978 and 1981 compared with a fall of 4.3% per annum, during cyclically much more favourable conditions, between 1971 and 1978. Furthermore, in contrast with the 1970s phase of London's deindustrialisation, job loss was unevenly distributed between sectors; one of the most remarkable features of London's industrial employment change in the 1970s was the way in which all industrial sectors in London lost jobs at approximately the same rate, whatever was happening to these industries nationally (Table 6.27). During the slump, however, the most severe job losses were concentrated in what might be regarded as traditional inner city industries. In furniture, employment fell by 8,000 (26.8%), representing a differential shift of -5,100, while in clothing and footwear employment fell by 14,100 (31.5%), a differential shift of -3,100. These two sectors between them more than accounted for

London's negative differential shift in manufacturing of -1,700.[83]

In mechanical engineering, London's employment levels during the slump *increased* by 3,400 (+4.1%), a differential shift of +13,900 (+0.4%). This is a remarkable result. Earlier discussion, in chapter 6.5(iii), has shown that mechanical engineering is an industry which tends to be concentrated in the main conurbation of any industrial region, and has shown furthermore that a leading component of manufacturing decline in the main cities in depressed industrial regions has been a sharp downturn in mechanical engineering. A common conjunction in both Scotland and North East England has been for employment in mechanical engineering to decline extremely sharply in the main city (Glasgow, Newcastle/Gateshead), with job loss in other industrial sectors often tending to be far sharper outside the city than inside. This process, resulting from a generally depressed level of demand for capital goods at the regional scale, cannot be seen in purely urban terms; the question of *regional* economic structure is involved. What was happening in London presented a complete contrast; as in the peripheral cities, though to a lesser extent, mechanical engineering accounted for a relatively large proportion of industrial employment, but during a time of slump, employment in this sector increased, rather than decreased sharply. An increase of 4.1% (London) is set against decreases of -27.3% (Tyne and Wear) or -32.4% (Strathclyde). As far as London is concerned, the increase in employment in mechanical engineering even during the slump is indicative of considerable industrial stability in South East England as a whole; it is not just the case that elements of industrial vulnerability (e.g. large steelworks or textile mills) were relatively lacking, but also that parts, perhaps more advanced parts, of the South Eastern industrial economy were continuing to make progress, despite the slump. Furthermore, the 1970s squeeze on London's industry, which affected mechanical engineering as severely as other sectors, was at last coming to a close, implying favourable post-slump prospects for London's manufacturing base (provided land prices could be kept under control[84]).

Electrical engineering, perhaps the most dynamic of London's post-war manufacturing industries, showed a slight negative differential shift, although this was mainly due to employment remaining merely steady, rather than expanding, in radio, radar and electronic capital goods (MLH 367), in which there was a differential shift of -6,600. Whether this can be regarded as decentralisation is, on the basis of Census of Employment figures, unclear. Overall, though, London's industrial performances were relatively favourable in engineering, and particularly in mechanical engineering, while some of the small scale traditional inner city industries (clothing; furniture) were in deep trouble.

(c) Avon, South Glamorgan, Lothians

London has received the most attention here, because it is the largest and most important economy of those being discussed. Attention now turns, briefly, to the other "service cities".

In Avon there was sharp employment decline in paper, printing and publishing, with employment falling by 5,000 (27.5%), a differential shift of -3,200 (0.8% of total 1978 employment). 4,500 jobs were lost in the various paper manufacture industries (MLHs 481-484), while the more gradual decline of employment in printing and publishing also represented a considerable negative differential shift (-1,100). This industry appears to have been increasingly focused on the South East, and centralising rather than decentralising. There were also heavy job losses in the traditional port-based industry of food, drink and tobacco, with employment falling by 3,800 (19.0%). In the context of slump this is not an outstandingly high rate of job loss, but given that employment tends to be highly cyclically stable in this industry (chapter 7.3), a quite large differential shift, of -2,200 (-0.6%) is involved. Comment has already been made, in the Merseyside context (chapter 6.7(vi)) of a general shift from west to east in this industry.

Employment in a "traditional" Bristol industry of a more recent vintage, aerospace, was more favourably placed, with an increase in employment of 1,300 representing a structural shift of +2,500 (+0.6%), and a very small positive differential shift. The aerospace sector was only slightly affected by slump, while the motor vehicle industry was deeply affected nationally. Despite this, employment in motor vehicles in Avon increased by 300, a differential shift of +1,200. Thus, in the manufacturing sector a strong performance in vehicles compensated in part for weak performances in food, drink and tobacco, and in paper, printing and publishing.

In the service sector, a differential shift of -2,000 (-0.5%) in education is probably the result of under-enumeration in 1981 (Table 8.15). This accounts for nearly half the measured negative differential shift in services in Avon; a differential shift of -2,300 in retail distribution of food and drink accounts for most of the rest.

In South Glamorgan, 2,600 jobs were lost in iron and steel (general), out of a 1978 level of employment of 4,800, a differential shift of -700 (-0.4%). In other industrial sectors, the dominant employment profile in South Glamorgan was almost the reverse of that in Avon, with heavy job losses (-800; -45.3%) in vehicles, and even job losses in aerospace, but employment growth (+300 jobs; +6.2%) in food, drink and tobacco, with 900 jobs being created in bread and flour confectionery. Furthermore,

while 900 jobs were lost in rubber, many other manufacturing industries showed small increases in employment. Overall, South Glamorgan had a rate of industrial job loss closely in line with the national average. The fact that employment decreased by less than the national average during the slump was due to the unusually low proportion (17.8%) of South Glamorgan's total 1978 employment that was accounted for by manufacturing; in other urban peripheral counties, a figure of over 30% would have been typical (Table 8.20). This heavy weighting towards the service sector was due not only to Cardiff's role as a national capital city and service centre, but also to the effects of regional policy; Cardiff remained an unassisted area throughout the "regional policy boom", while other parts of South Wales received considerable policy assistance, with the result that not only were large numbers of new jobs attracted to South Wales, they were also in effect diverted *away* from Cardiff and towards other centres in the region (Table 8.14).[85] In addition, industrial job losses in South Glamorgan in the 1970s were severe, with manufacturing employment falling by 29.2% between 1971 and 1978, major industrial job losses not being concealed by any significant influx of new employment. One of the ironies of regional policy is shown very clearly here; Cardiff and its local surrounds escaped the worst effects of slump, in part precisely because it had *not* been assisted by regional policy, while elsewhere in South Wales employment declined sharply because of the vulnerability of earlier generations of incoming industry. The problem was not regional policy as such, but rather that regional policy, in concentrating its attention so exclusively on the industrial sector, concentrated attention on a sector which was likely to be cyclically vulnerable and, as events turned out, vulnerable to a prolonged industrial downturn.[86]

According to raw Census of Employment data, the Lothian region, with a total job loss of 1.4% between 1978 and 1981, escaped from slump even more successfully than Avon, Greater London and South Glamorgan, where rates of job loss were 3.1%, 3.7% and 3.9% respectively. Attention needs to be drawn, though, to an apparent differential shift of +3,100 in education (Table 8.13). This almost certainly represents under-enumeration in 1978, rather than any genuine employment change. Ignoring this differential shift, employment change in the Lothian Region can be calculated as being -2.4%, rather than -1.4%. This still represents a better performance than in the other "service city" counties, a performance which was greatly bolstered by an increase in employment from 2,200 to 5,800 in brewing and malting, and by increases in employment, against national trends, in construction (+700 jobs, a differential shift of +2,300). There were, not surprisingly, elements of industrial

vulnerability, notably in motor vehicles (employment down by 2,100, or 31.0%) and in coal mining (employment down 1,900, or 21.8%). In services, negative differential shifts dominated, and indeed 3,300 jobs were lost in hotels, other residential establishments, and public houses (MLHs 884, 886). Overall, the Lothian Region's economic performance was better than that of the other three counties being discussed, but this is due more to jobs created in the brewing industry than to any more general Edinburgh revival. In section 8.9 below, scepticism is expressed as to whether the favourable employment figures in many of the Scottish regions can be attributed to a more general "Eastern Scottish" revival, rather than to the specific effects of North Sea oil or rural regeneration. The difference in employment performance between Edinburgh and London, Bristol or Cardiff is not great enough either to be presented as unambiguous evidence of a relative revival in Scotland.

As far as the "service city" counties as a whole are concerned, perhaps the main common feature is quite simply that having a high percentage of service sector employment insulated each county from the worst effects of slump. Furthermore, there is a general long-term drift from large cities to smaller towns and cities in service sector employment, in part following population redistribution, and as a result the service cities tended to show negative differential shifts in services.

8.8 Southern England

One point of view is that since the slump affected Southern England relatively slightly there is relatively little to be gained by a detailed study of patterns of employment change in Southern England during the slump. This perspective might well have been tenable during the slump itself, as attention was attracted, not surprisingly, to patterns of job losses in the industrial regions,[87] yet hindsight suggests that it is important to establish what was happening in Southern England at the time. There are two main reasons for this. Firstly, as 1981 Census of Employment data became available it soon became clear that there were significant patterns of zonation in rates of employment change in Southern England, as reflected in Table 8.7. Secondly, and even more importantly, the experience of post-slump recovery was spatially extremely uneven, with recovery being strong in Southern England but patchy elsewhere. Projecting this experience back a few years, the question needs to be asked of whether Southern England was consolidating its core economic functions during the slump, despite industrial collapse elsewhere. Undoubtedly there has been a massive restructuring of British capitalism during the 1980s with a significant expansion and consolidation of "core" capitalist functions (the extraction and circulation of surplus value) but an abandonment to market forces of the "peripheral" capitalist functions (physical production). In response to the economic crises of the 1970s and early 1980s, and to the need to escape from this trajectory of crisis, the British economy has become more a capitalist economy, less an industrial economy. It is of interest to determine whether signs of this renewal of finance capitalism can be identified in the record of employment change during the slump.

In contrast with industrial Britain, the dominant factor behind the geography of employment change in the South during the slump was not the presence or absence of vulnerable industries, but rather the spatial relationship of different areas to the London core. Examination of Table 8.7 suggests a four-fold grouping based on distance and direction from London. Thus,

(a) *Greater London* (group 3a)
Declining employment, worse than the regional average but, in strong contrast with the 1970s, a better employment performance than the national average.

(b) *The commuter belt* (groups 5ab and 5ac: Buckinghamshire, Surrey, East Sussex, West Sussex, Hampshire, Cambridgeshire, Hertfordshire, Oxfordshire, in descending order of employment gain).

All gaining in employment during the 1978-81 period, with rises in employment during the slump itself in the first six counties, and possibly also in Cambridgeshire and Hertfordshire (section 8.1).

(c) *Western fringe* (group $5aa_1$, more favoured counties in group $5aa_2$, plus Avon (3a): Berkshire, Dorset, Gloucestershire, Wiltshire, Devon, Somerset, Avon).
All showing only slight decreases in employment between 1978 and 1981, with the first five counties listed having employment changes ranging from -0.2% to -0.7%.

(d) *Eastern fringe* (group 3c, less favoured counties in group $5aa_2$: Suffolk, Kent, Norfolk, Lincolnshire, Essex).
The least favoured group of counties (London excluded) in the South, with employment changes ranging from -2.0% in Suffolk to -4.8% in Essex.

This grouping fits all counties in the South except for the "tourist counties" of Cornwall and the Isle of Wight (combined employment in 1978 of 165,000), two counties which it is not proposed to examine in detail.[88] It should also be noted that the above classification is based solely on unadjusted Census of Employment data; there appear to be significant inaccuracies in this data source, which lead to employment growth in Berkshire having been understated, and in Buckinghamshire and Cambrideshire having been overstated (Table 8.16).[89] These data problems all relate to the education sector in which data omissions are often detectable. In addition, boundary changes would appear to have shifted part of Harlow (Essex) TTWA and Hertford TTWA, artificially inflating the 1981 employment total for Hertfordshire and deflating the employment total for Essex.[90] Once all these minor inconsistencies have been allowed for, Berkshire may be regarded as part of the "commuter belt" and Hertfordshire, possibly also Cambridgeshire,[91] as part of the "eastern fringe" (Table 8.22).

There are quite marked contrasts between the zonation of employment change during the slump and the zonation of employment change during the 1970s, as can be seen from Table 8.23. In effect, the basic theme in the economic geography of Southern England between the 1930s and the 1970s has been that of growth and decentralisation. During the 1930s the bulk of this decentralisation was to the suburbs of London, with significant industrial development taking place in the North Western quadrant. There was also a spread of this growth to towns just outside London, slight in London terms but highly significant in local terms. Employment growth in the more rural "outer South" was much slower than the national average. In the post-war years the main zone of

conspicuous employment growth during the long cycle upswing was to the north of London, beyond the Green Belt, at a radius of between about 20 and 35 miles (about 30-55km). Most of the Southern New Towns were situated in this zone, as well as the vehicle-producing centre of Luton. During the late 1960s and the 1970s there was a conspicuous outward shift in the zone of fastest growth, with the "golden arc" coming to be situated in a zone between 50 and 80 miles (80-130km) from London. An arc with a 60 mile radius would pass through southern Suffolk, south Cambridgeshire, outer Bedfordshire, Buckinghamshire and Berkshire, and then through Oxfordshire, mid-Hampshire and West Sussex. These counties, with the exception of Oxfordshire (where the car industry was severely hit by recession) and with the addition of Gloucestershire, showed the fastest employment growth rates in Southern England during the 1970s. An important asymmetry needs to be noted; counties outside the "golden arc" (notably Gloucestershire, Dorset, Norfolk, Lincolnshire, Devon, Wiltshire and Somerset) tended to have high rates of employment growth, while counties inside the "golden arc" (notably Surrey, Hertfordshire and Essex) tended to have rather lower employment growth rates, although still considerably higher than in the UK as a whole. In Greater London employment was in rapid decline.[92]

These waves of decentralisation were, even during the 1970s, industrially led, although service sector employment also increased substantially in the recipient areas, both through the general national expansion of the service sector, and through local multiplier effects. Areas which have been in the path of decentralising industry have, not surprisingly, higher proportions of their employment total in manufacturing than other counties. Thus in 1978 manufacturing accounted for 43.4% of total employment in Bedfordshire, 37.0% in Hertfordshire, 34.7% in Buckinghamshire and 33.5% in Essex, but only 26.3% in West Sussex, 25.3% in East Sussex and 18.7% in East Sussex. This compares with a national average of 32.0% and a figure of 20.9% for Greater London. Clearly some parts of South East England are strongly industrialised, even though the service sector is dominant at the regional scale.

In the early 1980s the collapse of industrial production meant that decentralisation as an active force could be largely discounted (although the effects of some late 1970s investment plans would still have been working their way through the system), while recession-induced job loss would have become an important factor. While industrial employment in Southern England would have been less vulnerable than industrial employment elsewhere, even when differences in sectoral composition have been taken into account (as shown by the generally strong positive differential shifts in Southern counties in Table 8.7),

within the context of Southern England highly industrialised counties have been more prone to job loss than less industrialised counties. Thus counties which had earlier received waves of incoming industry now found themselves industrially vulnerable. Some of the most conspicuous examples of this were in the new towns.[93]

Summarising, one can note that the outer South (the eastern and western fringes described earlier) had, in the Southern context, relatively high rates of job loss in part precisely because of earlier industrial growth. Table 8.23 shows that each of the fringe counties was increasing in employment even during the relatively depressed years between 1973 and 1977, but was decreasing in employment between 1978 and 1981. In the western fringe employment increased by 0.8% per annum between 1973 and 1977 but decreased by 0.4% per annum between 1978 and 1981. In the eastern fringe there was a slightly sharper turnaround, with employment increasing by 0.8% per annum between 1973 and 1977 and falling by 1.1% per annum between 1978 and 1981. This is not too unsurprising given that the 1979-82 recession was much more severe than the 1974-76 recession. What is more surprising, however, is that employment in the commuter belt increased more quickly during the slump (+0.8% per annum) than in the mid-1970s recession (+0.7% per annum). The course of events in the commuter belt needs to be examined more closely. Analysis here needs to be conducted at a finer scale than the county since for present purposes counties are large and awkwardly shaped. For example, while one can hardly doubt that the whole of Surrey should be included in the commuter belt, counties such as Buckinghamshire and Berkshire radiate out from London, and thus incorporate both inner commuter belt and outer ring. It is more satisfactory to reconstitute the inner commuter belt and the outer ring at the level of the travel to work area. The definition of the commuter belt is extended to cover not only the "pure" commuter belt, but also more industrial areas within the same travelling distance from London.

Table 8.24 carries out such an exercise and is very revealing about patterns of employment change in London and its surrounds, especially when examined in conjunction with Table 8.25, which indicates patterns of employment change in manufacturing and in services for each zone. It is also fortunate that London is a large enough city for official statistics to show the distinction between the central city (central business district, or "office and shop" zone) and the inner city (the "inner industrial perimeter").

Within London, employment declined, with the decline of employment in the inner city being slightly faster than the national average and the decline of employment in the suburbs being slightly slower than the

national average. The decline of employment in central London was slight. It needs to be remembered though that these are statistics based on workplace rather than on residence, and that on a residential basis both inner London and outer London would have had smaller percentage reductions in employment than the figures suggest.

Just outside London, the commuter belt may be divided fairly readily into an inner ring and an outer ring, and between north and south. Table 8.24 indicates that, taken as a whole, employment was stable both in the inner ring (up to 40 miles from London) and in the outer ring (40-70 miles from London). In contrast with the 1970s, distance from London was not a major factor determining rates of employment change. Direction, however, was important. In both inner and outer rings, employment increased by 2½% in the south and decreased by 2½% in the north. It needs to be noted in this context that towns on the south bank of the Thames, downstream of London (Chatham, Sheerness and Sittingbourne TTWAs) are regarded as part of the northern belt, indicating a basic difference; the northern belt is more heavily industrialised than the southern belt. Table 8.25 shows that in the southern belt there were 2½ service jobs to every manufacturing job, while in the northern belt there were only 1½ service jobs to every manufacturing job. In earlier years, areas to the north of London had growth faster than areas to the south of London precisely because of the industrialisation of the northern belt, this being the part of London's surrounds best orientated for serving national markets and for developing linkages with industries in other regions. The Thames estuary was another obvious focus of industrial development.

Schematically, therefore, it is possible to identify two main phases of growth and decline. In phase 1, growth was concentrated primarily in manufacturing, to the north of London and along the Thames. In phase 2, manufacturing employment declined sharply, adversely affecting the growth areas of phase 1, while service sector employment grew rapidly. Overall, employment performance during the 1980s slump was more favourable in precisely those areas to the south which had avoided phase 1 industrialisation. In general, the industrialised areas of Southern England were more successful at avoiding the worst effects of recession than were the industrialised areas of the periphery, being based on industries of a more recent vintage, although the decline of the motor industry complicates the question, especially in Bedfordshire and Oxfordshire.[94]

Table 8.25 shows that 83,000 manufacturing jobs were lost in the northern surrounds of London (including northern Kent) at a rate of

job loss only slightly below the national average of 15%. In Oxfordshire, 10,900 jobs were lost in the motor vehicles industry, although in other manufacturing sectors there was a net employment gain of 2,400. In Bedfordshire, 10,300 jobs were lost in motor vehicles, and there were also another 8,400 jobs lost in other manufacturing sectors. In Kent, 5,800 jobs were lost in shipbuilding, shiprepairing and marine engineering as a result of the phasing out of the Naval Dockyard at Chatham.[95] A further 4,500 jobs were lost in motor vehicles, and 3,800 jobs were lost in paper and board (MLHs 481, 482). In Hertfordshire 4,100 jobs were lost in paper and board and in stationery (MLHs 485, 486, 489). In Essex 5,400 jobs were lost in chemicals and in lubricating oils and greases (MLHs 263 to 279). These vulnerable clusters accounted for about half the total manufacturing job losses in the northern belt. The only conspicuously vulnerable clusters in the southern belt were in Hampshire, where 4,000 jobs were lost in shipbuilding and in marine engineering, and 2,500 jobs were lost in chemicals; the higher rate of manufacturing job loss in the Southern outer ring than in the Southern inner ring (Table 8.25) reflects these problems in Hampshire's coastal industries.

The general impression given when examining industrial employment figures for South East England is for there to be occasional clusters of heavy job loss in some manufacturing industries, relatively stable employment levels in other manufacturing industries, and sometimes some quite significant employment gains. Many of the most significant employment gains were in radio, radar and electronic capital goods, in which employment increased by 3,600 in Hampshire, 3,100 in Hertfordshire, by 2,100 in Dorset, by 1,600 in Kent, by 1,200 in Surrey, by 800 in Berkshire, all at a time of industrial slump. Undoubtedly this often represents technologically highly sophisticated production; one would wish to know however to what extent this extra production was for military use and to what extent it was for purely civilian use, something which cannot be ascertained at the MLH level.[96] Other, generally slightly smaller, gains in employment may be detected in other parts of the electrical engineering sector, and in aerospace.[97] It seems that during the slump the South East continued to consolidate its position in high technology manufacturing industries, partially compensating for substantial job losses in vehicles, paper, printing and publishing, and various coastal and estuarine industries. In the industrial regions the concentration of employment in high technology industries was far less pronounced, and provided far less of a cushioning effect than in the South East.

At a broad scale, and leaving much local detail blurred, manufacturing job loss was high (over 10%) in London and the northern belt, but low (under 10%) in the southern belt; there was a distinct north-south patterning. In services there was a contrasting picture, with a slight decline of employment in London itself, an increase in employment of 4.3% in the inner ring (both north and south) and an increase in employment of just over 7½% in the outer ring (both north and south). More detailed figures are presented in Table 8.26.

Such a high degree of symmetry is remarkable, and suggests the possibility of an elegant and simple explanation of spatial patterns of employment change in the service sector in Southern England. Unfortunately the detailed result is spurious; the normal problem in social science research is that imperfections in the data source might well obscure an underlying regular patterning, but here it is the imperfections in the data source which *create*, by chance, the regular patterning. In education, a differential shift of +7.800 (4.1% of total 1978 employment in all sectors) was indicated for Buckinghamshire by the Census of Employment, with Milton Keynes accounting for the bulk of this differential shift.[98] The differential shift of +5,200 in education in Cambridgeshire was attributable to Peterborough rather than to Cambridge, and so is not incorporated in Table 8.25. In Berkshire a differential shift of -3,300 was recorded, despite positive differential shifts in neighbouring counties. Also, there appears to have been a major reclassification in Berkshire, with employment apparently falling by 3,000 in "central offices not allocable elsewhere" (MLH 866) and rising by 5,600 in electronic computers (MLH 366). The growth of service sector employment would thus seem to be overstated by about 7,000 in Buckinghamshire and understated by about 7,000 in Berkshire. It was also temporarily suspected that there was a major reclassification between industries and services in Hampshire, where employment rose, according to the Census of Employment, by 2,700 in radio, radar and electronic capital goods (MLH 367), and fell by 3,000 in research and development services (MLH 876). Figures at the local area level show however that Portsmouth had an increase in employment of 2,900 in MLH 367, with a decline of employment of only 400 in MLH 876, suggesting that what is involved is not a simple reclassification. Any reclassification that has taken place has been *within* the service sector, with employment being shown as falling by 3,000 in research and development services and rising by 2,600 in "other professional and scientific services" (MLH 879).

Minor data imperfections such as these are frustrating for the researcher but do not significantly detract from the enormous importance of the Census of Employment as a basic source of labour market statistics.

As far as the issue being discussed is concerned, *detailed* examination of the available statistics does not uphold the conclusions implicit in Table 8.25 that orientation with respect to London has negligible effects on the rate of growth of service sector employment. When one takes into account the point that employment growth in the service sector has been underenumerated in the southern belt and overenumerated in the northern belt, then service sector employment can be seen to have grown more quickly in the southern commuter belt than in the northern commuter belt. These differences are slight, and certainly no more than could be explained in terms of industry/service multiplier effects, the northern commuter belt having been more seriously affected than the southern commuter belt by industrial decline.

The point still remains, though, that the outer ring has been significantly more favoured than the inner ring in terms of service sector growth, this not being explicable in terms of industrial multiplier effects as industrial decline in the outer ring was more severe than in the inner ring.

Strategically the most important employment growth in the core regions has been in what might be termed the "core services",[99] services which may often be regarded as being on the "active" side of any multiplier equation rather than on the "passive" side. Surrey, perhaps the most prosperous of the commuter counties, presents the clearest profile of this type of emergent service sector economy, with 3,200 jobs created in research and development (MLH 876), 3,000 jobs created in "other professional and scientific services" (MLH 879), 1,200 jobs in insurance, 1,100 in postal services and telecommunications (MLH 708), 1,100 in property owning and managing (MLH 863) and 1,200 in "other services" (MLH 899). Just across the county boundary, 1,800 jobs were created in air transport (MLH 707) in West Sussex, a differential shift of +1,200, which indicate the increasing importance of Gatwick Airport; 1,300 jobs were also created in this sector in Bedfordshire (Luton Airport), and 3,400 jobs were created in East Sussex. These jobs reflect in part the increasing economic dominance of the core regions, and in part the difficulty of continued traffic expansion at London's main airport at Heathrow.

There were major increases in employment in the financial sector in Hampshire (+2,600 jobs in insurance),[100] in Essex (+1,800 jobs in banking and bill discounting; +1,000 jobs in property owning and managing), in Hertfordshire (+1,100 jobs in insurance), and in Sussex (+1,000 jobs in insurance), as well as in Surrey. Even larger increases in employment were registered in several counties in research and development (MLH 876), in "other professional and scientific services " (MLH 879) and "other

services" (MLH 899), indicating the dominance of the core regions in high technology [101] as well as in the financial sector. In research and development, 3,200 jobs were created in Surrey, 1,900 in Oxfordshire and 1,300 in Kent. In other professional and scientific services, 3,000 jobs were created in Surrey and 1,300 in Kent. In "other services", in cases where no obvious reclassification can be detected, 3,400 jobs were created in Hertfordshire,[102] 2,700 jobs in Oxfordshire, 1,800 jobs in Kent and 1,200 jobs in Surrey.

Major expansions of employment in various localities could also be detected in national government service (MLH 901). Employment in this sector expanded by 4,300 in Kent, by 3,100 in Hampshire, by 1,200 in Bedfordshire and by 1,000 in Berkshire. National government is very much a core region activity, yet there is considerable potential for the geographical dispersion of employment in this sector. There was much decentralisation of government offices to the peripheral regions in the 1960s and 1970s,[103] but this decentralisation programme was effectively abandoned in the early 1980s. Some of the decentralised offices showed increases in employment during the slump, but the greatest increases in employment took place in the commuter belt, precisely the parts of England which had the least need for increased employment during the slump. An important policy question arises, which is particularly relevant in the circumstances of the late 1980s, by which time post-slump recovery has led to severe overheating in the South East economy while simultaneously there has remained high unemployment in the periphery. A major programme of government office decentralisation to regions of high unemployment would create much needed employment in the periphery, release office space in the core, reduce the pressure of demand on housing in the core, and would allow the Government to sell property in high cost regions and buy cheaper property in low cost regions. Such a course of action would also set an example to the private sector.

As things stood in the early 1980s, and indeed as they probably still stand, there was noticeable expansion of employment in "core" service sectors in Southern England, but this employment growth was concentrated very much in the South East rather than in the outer South. There were relatively few instances of large-scale employment growth between 1978 and 1981 in finance, in research and development or in national government services in the various counties of East Anglia and the South West. As a result, such counties had relatively modest differential shifts in the tertiary sector, the one major exception being Wiltshire, which had a differential shift in construction of +2,100 jobs, and differential shifts of +1,300 in insurance (following an increase in employment of 1,400) and of +1,100 in medical and dental services

(following an increase in employment of 1,700 jobs). Many counties in the commuter belt also showed substantial increases in employment in the medical and dental sector; whether this is due to a concentration of more specialised medical activities in core regions, or to various multiplier effects (more prosperous areas gaining services, more depressed areas losing services) is not clear.[104]

The basic characteristics of employment change in Southern England between 1978 and 1981 may now be summarised. London had, in the context of the time, relatively mild job loss; much worse could have been feared from the experiences of the 1970s. Manufacturing employment declined sharply in outer London, while employment by manufacturing firms in central London, in many cases representing head offices rather than production centres, increased. Employment in services in London declined slightly, in part as a response to earlier population decline, and in part because employment in "core" service activity tended to take place preferentially in the commuter belt, rather than in London itself, which is congested and a high cost location.

Outside London, the rate of industrial job loss tended to be medium to low, although some areas were vulnerable, particularly if the motor industry was a major employer. Service sector employment continued to expand, in part because of the general looseness of the labour market (chapter 6.9 above), and in part because service sector expansion was not inhibited by extremely heavy industrial job losses, as would have been the case in much of industrial Britain. In the outer South, service sector expansion was moderately strong, with expansion tending to be led by "local services", while in the inner South, service sector expansion was even stronger, as the effects of expansion in "core" services were added on to the effects of expansion in "local" services. The most favoured growth zone around London was that part of the commuter belt to the south and west of London, from Berkshire to west Kent, in which industrial job loss was relatively slight and service sector growth particularly vigorous.

A final point needs to be added. It would be a mistake to assume that decentralisation from London to the commuter belt represented an urban-*rural* shift. Much of this expansion actually took place in cities and large towns. In Portsmouth employment increased by 6,500 (3.5%) while in Southampton employment increased by 6,200 (2.5%); these cities between them accounted for five sixths of Hampshire's total increase in employment. Brighton, another coastal city in the commuter belt, increased its employment by 3,600 (2.8%), while several other, usually smaller, towns each had increases in employment of over 2,400, namely Tunbridge Wells (+4,800; +6.0%), Guildford (+3,600; +3.9%), Reading

(+3,200; +1.9%), Basingstoke (+2,800; +6.0%), Crawley (+2,500; +1.6%) and Maidstone (+2,400; +3.0%). The new town of Milton Keynes increased its employment by perhaps 7,000 (about 15%), but questionable figures for the education sector make the true total difficult to assess.[107] The dominant process is not so much one of London's surplus growth spreading into rural areas, but rather one of London's surplus growth latching on to existing urban structures, often already highly developed, outside London.

8.9 Scotland, and Rural Northern England

Between 1978 and 1981 employment fell by 9.6% in Strathclyde region but *increased* by 9.9% in Grampian region. This range in economic performance is greater than for the whole of England and Wales. While the vitality of the Grampian economy is to be explained chiefly by the growth to maturity of the North Sea oil industry, and the spur to activity given by the "second oil shock" of 1980,[108] all the more rural administrative regions of Scotland showed substantial increases in employment (Table 8.7). In addition Lothian region, sheltered to some extent by its concentration of employment in the higher order services, but with more favourable differential shifts than structurally similar counties in England and Wales (Greater London, South Glamorgan and Avon; see section 8.6 above), showed only a very slight net decline in employment during the slump.

There was thus a very strong duality in economic performance in Scotland during the slump, with Strathclyde being extremely depressed and the rest of Scotland escaping relatively lightly from slump. Given this duality it is difficult to write meaningfully about the Scottish economy as a whole, although one may note that positive differential shifts in the rest of Scotland (hereafter referred to, for simplicity, as Eastern Scotland) slightly outweighed negative differential shifts in Strathclyde (Table 8.26). In terms both of differential shifts and of total employment change Scotland performed very slightly better than the British average.

It is not intended to discuss Strathclyde in detail here, given the earlier discussion in section 8.5. Strathclyde had a highly depressed regional economy, yet other sub-regional economies fared worse, most notably the coalfield and steel zone of North East England, inner South Wales (excluding Cardiff) and the West Midlands conurbation, each of which had a rate of job loss about two percentage points greater than that of Strathlyde, with a size of workforce slightly greater than Strathclyde in each of North East England and the West Midlands, and about half the size in inner South Wales. In addition, Greater Manchester suffered a degree of recession roughly similar to that of Strathclyde, and had a similarly sized workforce, while neighbouring Merseyside, with a population about half the size, lost jobs slightly more quickly than Strathclyde. Thus the basic economic problems faced by Strathclyde were of about the same intensity, or slightly less, as those faced by the less favoured urban economies of England and Wales.

A more interesting question theoretically is whether it is possible to speak of a resurgence of the "Eastern Scottish" economy and

if so, whether this resurgence can be held to be in any sense independent of the rise of North Sea oil. This question needs to be tackled from two different directions, by comparisons with English and Welsh local economies of similar basic structures, and by comparisons with pre-slump performance. Only if it is possible to detect unusually favourable performances on *both* counts can one legitimately point to a slump-based resurgence in parts of the Scottish economy.

The question of North Sea oil must firstly be considered. The main onshore centre of this industry is Aberdeen, the one large city in Grampian Region, where employment increased by 16,800 (13.2%) between 1978 and 1981. Since employment in the Grampian Region as a whole increased by only 17,700 (9.9%), it is clear that it was North Sea oil, rather than any rural resurgence, which dominated employment trends. About a third of the new jobs (5,900) were in "petroleum and natural gas" (MLH 104), with a further 1,100 jobs being created in "mineral oil refining" (MLH 262). In addition the 600 jobs created in shipbuilding and repairing (MLH 371), and quite probably the 1,000 jobs gained in "mechanical engineering n.e.s." and "metal industries n.e.s." (MLHs 349, 399) may be attributed to the North Sea oil industry.[108] These employment gains total 8,600, leaving 9,100 new jobs unaccounted for. Of these, 1,400 new jobs (net) were created in construction, while employment increased by 2,500 in the distributive trades, by 1,200 in postal services and telecommunications, by 1,500 in local government and by 1,100 in medical and dental services. Even the rise in employment of 2,100 in educational services might be genuine, in the context of a rising local population, rather than the result of mis-enumeration. This employment growth in the new oil related industries and in the service sector outweighed the considerable job losses in food, drink and tobacco, totalling 3,500, of which 2,400 were in "bacon curing, meat and fish products" (MLH 214), probably indicating the problems of the fishing industry; employment in fishing itself fell by 500, a drop of slightly over a third, a proportional decline similar to that found in food, drink and tobacco.

Clearly this major decline in traditional occupations, combined with an even sharper increase in new occupations, led to considerable changes in local labour market structure. In the oil industry, recruitment was carried out on a national basis rather than a local basis, whether employment in managerial and technical positions is being considered, or whether more general employment on oil rigs is being considered. Indeed a typical pattern of employment on oil rigs would be a week on duty followed by a week off duty, with the off duty periods being spent at the worker's home town, often a considerable distance from

Aberdeen. It is not immediately clear how readily workers squeezed out of traditional industries could be reabsorbed into the new industries, although nautical skills among ex-fishermen would presumably be a labour market asset. In any case, the extent to which new oil-related jobs induced high levels of immigration, when seen in place of work terms, ensured that unemployment would rise, though relatively slightly, during the slump.

It ought in principle to be possible to calculate an industry/service multiplier for the Grampian Region, on the lines suggested in section 8.3(ii) above. This, it will be remembered, gives a *general* industry-service multiplier, not an indication of specific secondary employment effects of expansion in the oil industry. In the Index of Production industries employment in Great Britain decreased by 14.8% between 1978 and 1981, but *increased* by 8.4% in the Grampian Region; this represented a differential shift of +15,000 in the Grampian Region. In services, the Grampian Region had a differential shift of +11,420. This represents a multiplier of 1.76, somewhat higher than the values of around 1.4 indicated in the main steel closure areas (section 8.3(ii) above). Quite possibly the differential shift in the service sector overestimates the extent of the increase in "passive" employment, in that education services had a (possibly spurious) differential shift of +2,700, and in that the increase in employment of 1,800 in postal services and telecommunications and in air transport (MLHs 706 and 707) could perhaps be regarded as "active", as an element of industrial change, rather than as "passive". The evidence is not clear enough to indicate strong *systematic* differences between upward and downward multipliers, although further investigation would be welcome.[109]

Clearly the strong expansion of the Grampian economy during the slump is oil-based. Less spectacular cases of oil-related increases in employment may also be noted in other Scottish regions, although in some cases oil-related employment would actually have *declined* as a result of the end of the construction phase of the oil boom and the upswing of the production phase of the oil boom. In the Island Areas (with particular reference to the Shetlands) the 1970s construction boom ended abruptly with the loss of 2,700 jobs; the earlier effects of North Sea oil on an extremely rural economy had meant that in 1978 construction accounted for 22.0% of total employment in the Island Areas. The fading of this element in the oil boom outweighed the 700 jobs created in petroleum and natural gas (MLH 104). In the Highlands 600 jobs were lost in oil rig construction.[110] In the Central Region employment in the chemicals industry increased by 2,200 (of which 1,600 jobs were created in MLH 271, general chemicals), probably mostly representing petrochemicals rather than inorganic

chemicals. In Strathclyde 500 jobs were created in petroleum and natural gas, presumably mainly office jobs, but this is a very small figure when set against the 88,000 manufacturing jobs which were lost.

Only in the Grampian Region and the Central Region (indirectly, via the chemicals industry) did the North Sea oil boom have a significant positive effect on employment levels. Thus the apparent "East Scottish" resurgence can hardly be explained totally by the North Sea oil factor. County by county comparisons show however that the more urbanised of the rest of the Scottish regions (outside Strathclyde) had economic performances comparable with those of English and Welsh counties of similar degrees of urbanisation. Tayside had a higher than average rate of job loss, with Dundee facing severe problems although Perth was relatively little affected by slump.[111] The rate of job loss was, for an industrial area, relatively but not abnormally low, with employment growth in the electronics sector helping to create stability. In the Lothian Region, the rate of job loss was apparently somewhat lower than in Greater London, Avon and South Glamorgan, the other counties dominated by service cities. One must regard with suspicion though the differential shift of +3,000 (1.0% of total 1978 employment) in education; removing this differential shift would halve the gap in the rate of employment change between Edinburgh and the other service cities. As shown in section 8.7 above, the favourable employment performance in manufacturing is to be explained chiefly by the creation of 3,600 new jobs in the brewing industry.

The impression given is that in those Scottish regions of medium to medium-high urbanisation which were not affected by the new oil jobs, employment performances during the slump were slightly but not greatly better than in corresponding counties in England. The parts of Scotland in which there were major growths of employment independent of the oil industry were the highly rural areas, and in particular the Island Areas, the Highlands, Dumfries and Galloway, and the Borders. In each of these cases there were strong positive differential shifts in both manufacturing and services, and a strong overall *growth* in employment despite the slump.[112]

It would seem therefore that there was not so much a general "Eastern Scottish" resurgence, but rather an oil boom centred on Aberdeen and a Scottish *rural* resurgence. Two questions need to be asked: what were the structures of employment change in the Scottish rural areas? and, was this resurgence a purely Scottish phenomenon, or could it also be noted in parts of England and Wales?

Perhaps the normal type of profile for a relatively favoured rural area, noted already for Powys (section 8.6), is for there to be a large number of moderate positive differential shifts in both industry and services, rather than a small number of large positive differential shifts; the

typical unit of new rural industrialisation is after all the small factory rather than, for example, the large integrated steelworks. At a time of slump though, rural employment growth in the service sector tends to be quantitatively more significant than growth in the industrial sector.

In the Highland Region, 600 jobs were lost in oil rig construction and 700 jobs were gained in construction, while between 90 and 150 jobs were gained in each of "bacon curing, meat and fish products", metal-working machine tools, scientific and industrial instruments, and "metal industries n.e.s.". In the service sector, 600 jobs were created in distribution. This would appear to be a fairly typical rural profile, with total employment increasing by 1,400. It is noteworthy, though, that 600 jobs were lost in hotels, restaurants, etc. (MLHs 884, 885), indicating problems in the tourist industry, also felt by Cornwall, Gwynedd and the Isle of Wight.[113]

In the Island Areas, total employment increased by 600, despite the loss of 2,700 construction jobs (see earlier discussion). About 1,200 jobs were created in oil related industries (assuming that the gain of 500 jobs in industrial plant and steelworth is oil related; the remaining jobs were created in "petroleum and natural gas"). A further 100 jobs were created in hosiery and other knitted goods, adding to the positive differential shift in manufacturing. The most significant gains, perhaps, were in services; 500 jobs were gained in local government, and 600 jobs gained in transport and communication, reflecting perhaps the needs generated by the coming of the oil industry, with a further 400 jobs gained in distribution. Most of this new economic activity would have taken place in the Shetlands rather than the Orkneys or Western Isles.

In the Borders Region, 1,300 jobs were lost in the traditional woollen and worsted industry, although employment remained stable, with a differential shift of +900, in hosiery and other knitted goods, and 200 jobs were created in "other textile industries" (MLH 429). No other industrial sector had a large increase in employment, but 900 jobs were created in distribution, 300 in local government and 500 in health and dental services.

In Dumfries and Galloway, manufacturing employment actually expanded as 700 jobs were created in textile finishing along with 400 jobs created in woollen and worsted, and 300 jobs created in cans and metal boxes, more than compensating for the 600 jobs lost in clothing and footwear. This considerably reinforced the gains in employment in the service sector (+600 jobs in distribution, +700 jobs in central government services etc.).

The general impression given by these highly rural counties is that industrial employment was relatively stable during the slump, while the service sector was chiefly responsible for *growth* in employment. In the

Shetlands, though, the North Sea oil factor probably led to a significant increase in manufacturing employment.

The question needs to be considered of whether this type of rural resurgence took place *outside* Scotland to any extent. This rural growth has to be placed in context, though; Tunbridge Wells TTWA, in the Kent commuter belt, had an increase in employment of 4,800, greater than that for the Borders and Dumfries and Galloway combined; there were several other towns around London which also had substantial increases in employment.

There are no English counties as wholly rural as the Scottish regions which have just been discussed; all that it is possible to do is construct some English rural pseudo-counties from contiguous rural travel-to-work areas. In this way "counties" such as "Northumbria" and "Lakeland" can be constructed; to this it is possible to add 'Mid West Wales". Table 8.27 shows that each of these rural counties, and especially Lakeland, showed substantial increases in employment, although slightly slower than in rural Scotland. In broad terms, though, the employment growth in rural Scotland is replicated in rural Northern England and Central Wales.

A more surprising result, perhaps, is to be found in North Yorkshire. When this county is divided into its constitutent travel to work areas it is found that the more rural north of the county was a zone of job loss, that the tourist zone to the east of the county (Scarborough, Bridlington) was also shedding jobs, but that the moderately urbanised south of the county was a zone of considerable employment growth, with employment increasing by 5,200 or 3.7%. In centres such as York, Harrogate and Ripon the role of the service sector could be expected to be particularly important, while the development of a new coalfield, with the creation of 1,900 jobs, would have had considerable impact on the area around Selby.

If one examines a lightly urbanised county in detail, it can often be found that the normal urban-rural shift is reversed, and that it is often the larger urban centres in rural settings which have the fastest rates of increase in employment. Aberdeen, when compared with the rest of the Grampian region, is obviously a special case, but as in North Yorkshire, the fastest growth of employment in "Lakeland" and in Dumfries and Galloway is in the towns, Whitehaven and Dumfries respectively.[114] Thus the most substantial growth of employment in a predominantly rural area is not generally to be found "in the middle of nowhere", but rather in small and medium towns, maybe with an industrial base, servicing the rural area.[115] In Southern England, the rapid growth of medium sized towns such as Exeter (+3,000 jobs; +5.6%) or Cheltenham (+3,000 jobs; +4.2%) provide corresponding

examples. There is an element of urban-rural shift involved, but it is not the case that one could say that throughout the size range the smaller the settlement is, the better the growth prospects are. There seems to be a break in the distribution at around the size of the small to medium town. Within a predominantly rural area, towns probably tend to be more favoured, in employment growth terms, than villages. Furthermore, it is not just the size of town which matters, but also its setting. A small town like Dumfries, set in a rural area, has good chances of showing considerable economic expansion, while a similarly sized town such as Irvine set in a declining industrial region is liable to suffer extremely heavy rates of job loss. Small towns do very well in a rural setting, or in the setting of a prosperous regional economy, but do very badly in times of recession in a depressed regional economy, with rates of job loss perhaps even worse than in the large cities. It has already been pointed out (section 8.5) that Glasgow lost jobs less quickly than smaller towns surrounding Glasgow during the slump years. Such results are perverse if one is accustomed to thinking in terms of a smooth continuous urban-rural shift; the important question, however, is not that of size but rather that of economic structure.

Scotland has a highly complex regional economic structure with the country effectively being divisible into a highly depressed West Central industrial economy and a relatively prosperous Eastern Scottish economy benefiting from the favourable effects of North Sea oil, the general stability of employment in Edinburgh, and substantial employment increases in rural areas. It is perhaps surprising that the difference in economic performance between West and East should be so great; Scotland's "average" performance during the slump was the result of averaging two highly divergent sets of economic performance.

8.10 Conclusion: The Geography of Slump

There was a time during the mid-1970s when it appeared to many commentators as though traditional regional patterns of employment change were dissolving and that the periphery was economically keeping pace in the core.[116] In retrospect this appears as a conjunction of contingent factors rather than any genuine long term shift. In the North, the pace of job loss in coal mining was slowing down while the growth of regional policy factories was still a potent force; in the South congestion costs were seriously squeezing employment levels in London, while the motor industry was decentralising from its West Midlands base on a large scale, even at times of recession. Such equality as there was may be interpreted as equality in decline rather than equality in growth; industrial employment was falling while unemployment was trending upwards.[117]

Then from about 1977 more traditional patterns of change started to reassert themselves. The North felt recessions strongly and upswings weakly, the West Midlands felt both recessions and upswings strongly, and the South (plus perhaps the East Midlands) felt upswing strongly and recession weakly. During the slump total employment across large parts of industrial Britain fell by about 15% or 20% (Table 8.16), while remaining relatively steady in the South. After the slump employment increased substantially in Southern England and the Midlands, while employment growth remained patchy in the peripheral regions, increasing in some regions where major new investments had been undertaken (for example the new Nissan factory near Sunderland) but continuing to fall in other parts of the industrial periphery. This type of pattern, in one form or another, has been recognisable since the early 1920s (with the single but important exception that the peripheral regions showed substantial industrial employment growth between 1932 and 1939), and so in many respects the economic geography of the late 1970s and 1980s fits a standard pattern. In the early 1980s the industrial recession was exceptionally intense; the industrial North has been affected, as in earlier recessions, but with an intensity not seen since the early 1930s. In the late 1980s the situation has been startlingly reminiscent of that of the late 1950s and early 1960s with employment growth booming in the South, creating considerable congestion costs (which are often expressed as windfall gains for those happening to be owning scarce assets), while employment in the industrial periphery has, on average, been static. The main contrast is that unemployment was slightly over 1% in the early 1960s boom, but slightly over 10% in the late 1980s. In any other political climate within the range of recent British experience the economic and social case for a strong regional policy would be regarded as overwhelming.

The problem is not that of slowing the southern growth engine, but rather that of transplanting some of the growth of the South to the North, easing some of the frictions in the South, and creating centres of sustainable growth in the North. British regional policy faces two perennial problems, the problem of combating industrial decline in the traditional industrial regions during any downswing, and the problem of not letting any boom get out of hand in the South during the upswing. It is almost certain that the problem of regional imbalances in the British economy will never be fully solved and that the drift to the South will continue indefinitely; such imbalances can be kept within reasonable bounds however with an intelligently operated regional policy. To ignore the problem would be to compound the problem. Already this problem has been neglected for far too long, leaving a legacy from the early 1980s of an impoverished and deindustrialised North, and a legacy from the mid to late 1980s of a badly overheated South. One must not discount the possibility, either, that the overheating of the southern economy will become so intense that a collapse in employment, specific to South East England, will occur as for many employers the high region-specific costs of production (wages, property prices, etc.) will overload the system, setting up possibilities of chain reactions among employers. The London economy was clearly overheating during much of the 1960s and 1970s, leading to industrial job losses on a very large scale; unless such a problem is anticipated quickly it is possible that another, even more severe, round of London-based recession will occur when the boom gets out of control.

The slump was unusual not for its geography, but for its intensity, severe even/the standards of earlier long cycle slumps, and extremely severe by the standards of all other post-1945 recessions. Indeed the slump in the UK was, as a result of several policy mistakes, unnecessarily severe (chapter 7.1 above). Earlier, less severe, recessions had tended to pick out weaker elements in the industrial structure, causing irreversible job losses, but had relatively minor and reversible effects on other industrial structures. In the late 1950s and 1960s for example the impact of recession was felt strongly in shipbuilding, coal and textiles, but relatively weakly in other sectors. Recessions started to become more acute in the late 1960s, with construction also being severely affected. In the 1970-72 recession, job losses in coal mining, shipbuilding and construction were not as heavy as in the late 1960s, but mechanical engineering, metal manufacture and textiles each lost 10% of their employment base in two years. In the 1974-76 recession perhaps the most striking element of industrial vulnerability was expressed in functional terms rather than in sectoral terms; the crisis of the branch plant factory. Typically the rationale for developing branch plant factories in the peripheral regions was to expand facilities for routine production

in an environment with relatively low wages and readily available labour; at around this stage it was becoming technically feasible, and economically advantageous, to switch this type of production to third world locations. The recession in "heavier" industries such as steel, chemicals, and shipbuilding was not especially severe when set against job losses in "light" industries such as electrical engineering and textiles, although rates of job loss were often still high. After 1976, however, it was becoming clear that the heavier industries were still highly vulnerable despite the weak general cyclical upturn, and major programmes of job losses in these industries, notably in steel and shipbuilding, were under way before the slump set in.

This is a highly condensed and selective summary of the analysis presented in chapter 6, but it makes the point that particular recessions affected particular industries to an extent beyond that which can be explained in terms of a purely temporary cyclical downturn in expectations. The slump though was so severe that *all* industries were permanently affected. It was not the case any longer that firms, in seeing sales say 2% below anticipated levels, temporarily cutback by a corresponding amount in the next round of production, while preparing to gain lost ground in the next downturn. With economic conditions dictating a fall in production of perhaps 10% to 20% across a very wide range of sectors, job losses in such sectors were likely to be both severe and irreversible. Extremely severe rates of job loss (over 10% in two years) were felt not in isolated industries, but in iron and steel, in vehicles, in textiles and clothing, in mechanical engineering, in metal goods, in construction, and indeed in virtually *every* industrial sector.

In the economic collapse of 1980 and 1981 virtually the whole of the industrial sector was severely affected, and consequently virtually the whole of industrial Britain was severely affected. There were extremely heavy job losses in iron and steel, sometimes marking the end of the local industry, in several steel towns. In the vehicles industry the area round Birmingham was severely affected, with there also being major job losses in other vehicle producing centres, even in Southern England. Lancashire, Greater Manchester and West Yorkshire were affected, yet again, by deep recession in textiles, while in Staffordshire the problems of the pottery industry continued and intensified. The decline of Strathclyde and Tyne and Wear as centres of heavy industry continued, while the vulnerability of regional policy branch plant factories continued to be a problem in the South Wales and North East England coalfields and on Merseyside. To all this must be added industrial problems of a lesser order in many other spatial/sectoral complexes.[118]

The account in this chapter and in chapter 7 covers the events of 1980 and 1981, when industrial job loss was most intense. In this

concluding section, though, the emphasis is not so much on recalling and summarising the earlier analysis, but rather on trying to place the geography of 1980 and 1981 into a longer term context. It has already been noted that the slump was in many respects an intensification of earlier recessions; the implications of what happened in 1980 and 1981, with respect to later developments, now need to be considered.

It needs to be remembered that the slump did not end in September 1981, the date of the Census of Employment. Job loss continued to be severe, though on a lesser scale, through 1982, and the economy did not show much sign of picking up until at least 1983. To appreciate the effects of the slump as a whole, comparison needs to be made between the Census of Employment results of 1978 and 1984, as summarised in Table 8.16.. One would prefer to compare figures for 1979 and 1983, but the Census of Employment was not conducted in these years.

The most obvious feature is that the collapse in employment in Cleveland and West Glamorgan continued after 1981, so that each county lost about a quarter of its employment base in six years. In such circumstances the word "collapse" is no exaggeration. These are counties already identified as having had severe problems in the steel industry in the earlier part of the slump.

Fortunately the other depressed industrial counties did not suffer from such a heavy rate of job loss after 1981, but it is also highly noticeable that each of the peripheral industrial conurbations except West Yorkshire lost a further 5 to 10% of its employment base between 1981 and 1984 (compare tables 8.3 and 8.16), with employment falling by between 15% and 20% between 1978 and 1984. Each of these local economies had been in trouble in the 1970s (chapter 6; see especially Table 6.29), but the slump intensified these problems considerably. In employment terms, Mid Glamorgan showed a similar cyclical profile.

Six counties showed job losses of between 10% and 15% between 1978 and 1984. In five of these cases (West Midlands, Gwent, Durham, Humberside, West Yorkshire) job losses had been severe in 1980 and 1981, but with employment levels stabilising thereafter.

The counties with job losses ranging from 3% to 9.9% were a fairly mixed group, but consisted mostly of counties with moderate rates of job loss between 1978 and 1981 and fairly stable employment levels thereafter. It is noticeable, however, that one rural county (Clwyd) was recovering successfully from heavy job losses in steel, while the gains made between 1978 and 1981 in parts of rural Scotland did not persist after 1981.

Half the counties in Britain were only lightly affected by slump, and a quarter of the counties actually showed employment growth during the slump. In the cases of Northamptonshire, Staffordshire and Northumberland this indicated a very rapid recovery from job losses in 1980 and 1981.[119]

In most cases, however, these represented counties in which the industrial base was only lightly affected by slump, and in which employment growth in the service sector could continue, delayed slightly perhaps, but otherwise unaffected by slump. Most of these counties, particularly among those with net employment growth, were situated in Southern England although many of the rural counties of the periphery (e.g. Powys, North Yorkshire) were similarly favoured, and the oil boom in Aberdeen continued as before.

Quite clearly there was considerable polarisation of economic performance during the slump; "two Britains", to use the journalistic shorthand. In Southern England, in the early 1980s as in the early 1930s, the slump acted merely as a temporary check to growth; as soon as economic depression lifted, rapid growth could resume. In the great industrial cities of the North, in the valleys of South Wales, the damage caused by slump has been severe and possibly irretrievable. In these areas, perhaps a sixth of the total employment base has disappeared in the span of a single severe recession. Even if these counties were to be especially favoured in any cyclical upturn, it would still take a very long time before the damage of the early 1980s, could possibly be patched up, yet one of the long-standing problems faced by major cities is that they tend to be relatively unattractive areas for new industrial investment, making employment slow to pick up during any cyclical upswing. For the foreseeable future, therefore, the prospect for much of Britain is one of mass unemployment, inner city decay, heavy youth unemployment, leading to chronic skill shortages among the workforce, and youthful frustration which may well at times break out in violence. In such areas public sector services will tend to decline in quality as the local tax base is continually eroded, while substantial net emigration, leading to depopulation will continue. The decline of older industrial areas, whether in the cities or on smaller coalfield towns, has been seen before, even at times of relatively low unemployment. When national unemployment is low, however, emigration from relatively depressed areas is usually sufficient to keep the labour market in some sort of balance, without mass unemployment accumulating in the industrial areas. In the mid to late 1970s, and even more in the 1980s, the problem is that industrial decline in the older areas has taken place in a context of high national unemployment, meaning that there are relatively few jobs in the South to attract migrating workers from the North. In such circumstances labour market equilibration does not work and unemployment accumulates in areas which have lost jobs.

Any economic geography of Britain in, say, 1988 needs to consider both the geography of the early 1980s slump and the geography of the late 1980s revival. Often memories are short and the problems being faced

by the North are attributed not to the extremely severe, and as yet unrepaired, damage done to the local economic fabric by the slump, but rather to a shortage of "enterprise culture", a failure to share in the "Thatcherite boom".[120] If the damage done by a recession is *permanent*, however, its effects will still be felt during a subsequent boom; this point should never be ignored.

The course of the North-South divide through the 1980s may be summarised as follows:

North	Early 1980s	Sharply declining employment
	Late 1980s	Static employment
South	Early 1980s	Steady employment
	Late 1980s	Rapidly rising employment.

This summary is given statistical backing in Table A5.

A comparison may readily be made with the course of the North-South divide through the 1930s:

North	Early 1930s	Sharply declining employment
	Late 1930s	Rapidly rising employment
South	Early 1930s	Steady employment
	Late 1930s	Rapidly rising employment.

The magnitudes of change involved are not dissimilar, so the main geographical contrast between two slump-recovery decades is that in the 1930s the industrial North shared fully in the post-slump recovery, although starting from a high level of unemployment, while in the 1980s the industrial North was largely excluded from the post-slump recovery. To the present author the vigour of post-slump recovery in the South comes as no surprise; since at least the 1920s the Southern economy has tended, with occasional exceptions, to expand rapidly in any cyclical recovery, and to maintain stable levels of employment in any recession, even during a slump recession, while any post-slump cyclical upswing can be expected to be particularly prolonged and intense, especially in the South. What is far more surprising is the slowness of recovery in the North; the author's own projections, dating from about 1981 and 1982, was that during any post-slump recovery employment would be likely to expand substantially in the North as well as in the South, leading to unemployment being substantially below 2,000,000 by the late 1980s *without* any need for the Government to massage the figures. Such projections were made at a time when it seemed very unlikely that a Conservative Government would be returned to power at the next election,[121] but in principle it was considered that such a recovery ought to take

place whichever party was in power. Whatever damage is inflicted by slump, a post-slump recovery provides splendid opportunities for regenerating the productive base of the economy. When set against the opportunities which have been available, the Government's economic record since 1983 has been at best disappointing.

The problem can be diagnosed quite simply. According to the latest available figures at the time of typing (*Gazette*, June 1988), seasonally adjusted employment in production industries (excluding construction) *fell* by 576,000 (9.5%) between June 1983 and March 1988. That industrial employment should *fall* by 2% per annum during a strong cyclical upswing is indeed remarkable; these continued job losses have been sufficient to nullify the net employment gains in banking, insurance and finance. Despite all the gloss of a consumer led boom, deindustrialisation continues apace, leading to continued problems in the industrial regions. Yet had industrial employment remained merely stable during the cyclical upswing, unemployment nationally would have been perhaps 2 percentage points lower than is actually the case, while a relatively modest increase in industrial employment of 1% per annum would have led to unemployment being perhaps 3 points lower. With massaged figures and a firm industrial upswing, unemployment rates could have been reduced to 6% nationally!

Quite clearly the industrial problem has still not been solved, and industrial employment has continued to drain away. The problem becomes still more urgent if examined from a balance of payments perspective (Table 8.28). Historically, the structure of the British economy has been such that balance of payments deficits have been recorded in food and raw materials, while surpluses have been recorded in manufactures and in "invisibles". As Table 8.28 shows, this pattern of trade persisted through to the late 1970s. By the end of the 1970s, the UK was starting to become a net exporter of oil rather than a net importer, a shift which led to a considerable improvement to the balance of payments position in the first half of the 1980s. Indeed, were it not for North Sea oil, it seems likely that the British economy would have suffered acute balance of payments problems as early as 1982 or 1983, considerably prolonging and intensifying the effects of slump. The non-oil balance of payments stood at +£3,200m in 1981, -£600m in 1982, -£3,600m in 1983, and -£5,700m by 1988 (all figures at current prices).

Thus the growth of the North Sea oil industry helped conceal a considerable disintegration of the trading structure of the British economy in other sectors. The Conservative Government has been extremely lucky that the massive investment in the North Sea oil industry under the 1974-79 Labour Government actually started to bear fruit in the early

1980s, providing a windfall gain to offset the wholesale destruction of the industrial economy in the early 1980s, and concealing the underlying weakness of the British economy in the mid to late 1980s. The "underlying weakness" has of course been in the manufacturing sector.

By 1977 and 1978, the weakness of manufacturing industry was a source of considerable concern, (e.g. Singh 1977, Bacon and Eltis 1978, Blackaby 1979), with doubts being expressed as to whether the industrial sector was strong enough to generate an export surplus sufficient to bring the overall balance of payments into balance. In 1978 the manufacturing sector provided a payments surplus of £5,900m, or +3.5% of Gross Domestic Product. This trading surplus persisted into the slump, despite unprecedentedly severe recession in the manufacturing sector; levels of demand were so low that the demand for imports was hit as severely as the demand for home products.[122] By the end of the slump, so much industrial capacity had been destroyed and so little new capacity had been built up that the industrial sector was in no position to expand sufficiently to meet an upturn in world demand. Manufacturing exports increased, but not nearly as quickly as manufacturing imports increased. In 1983, for the first time in at least 200 years, the UK showed a balance of payments deficit in manufactures. By 1984 this deficit had reached -£3,900m, or -1.2% of GDP. This deficit decreased slightly as the Government's battle against the National Union of Mineworkers (regarded by the Chancellor of the Exchequer as an "investment") helped to depress economic activity. In 1986 and 1987, however, the Government launched a consumer boom and the manufacturing deficit in 1986 reached -£5,500m, or -1.6% of GDP. A swing of -5% of GDP in the balance of payments performance of manufacturing represents not a transition to a post-industrial society but rather a severe and unnecessary weakening of the industrial sector. Obviously a balance of payments deficit in manufacturing of -£5,000m per annum represents an atypically high figure, created by a consumer-led boom, yet even under less overheated economic conditions the long-term damage of the early 1980s has been so severe that there is little prospect, *without a highly active Government industrial policy*, of achieving balance of payments parity in the manufacturing sector. Furthermore, North Sea oil revenues cannot be maintained at high levels indefinitely, partly because reserves will eventually become depleted, and partly because the oil prices of the early 1980s were perhaps artificially high; indeed, as Table 8.28 shows, when oil prices fell in 1986, the balance of payments surplus in oil halved. Given the severe deterioration of the balance of payments performance of manufacturing industry, all it takes to create a balance of payments crisis is for oil revenues to fall; thus it happened that in

1986, 1987 and 1988 the balance of payments went out of control.

One would expect the Government to respond that a rapidly increasing surplus in invisible trade both compensates for these industrial problems, and provides a pointer for the way the economy is to develop in the future. With such a viewpoint, it would matter little what the balance of industrial trade is, so long as profitability is high, and a large surplus is made on invisible trade. Certainly the increase in this surplus from £1,700 million in 1982 to £8,100 million in 1987 is in many ways impressive, and indeed central to the boom in Southern England. This increase is dominated by financial services, rather than by transport or travel. Indeed, despite the almost obsessive emphasis given to tourism by the Department of Employment,[123] leisure travel provided a balance of payments surplus to Britain up to 1980, and an increasingly severe balance of payments deficit after 1980, a similar profile to manufacturing industry.[124] In contrast, net overseas earnings of United Kingdom financial institutions increased from £1,700 million in 1979 to £3,900 million in 1982 to £9,300 million in 1987, a very rapid increase, even if inflation is taken into account.[125]

Undoubtedly, in terms of "the City" the Government has done very well economically. This, however, is an unduly narrow perspective. Firstly, the improvement in the balance of payments performance in invisibles is smaller than the deterioration in the balance of payments performance of manufactures. Secondly, the types of economic policy which are in the interests of the City are often extremely unfavourable to industry; there is a strong implication that the decline in the balance of payments performance in manufacturing, and indeed part of the decline in manufacturing employment, might well be a consequence of, and an expense to be set against, the improved balance of payments performance in the City. Thirdly, the *overseas* earnings of the City are by implication based ultimately on foreign physical production, rather than on domestic production; relatively little support to British physical production is given in this way.

In a post-slump conjuncture, rapid economic expansion is, in an advanced economy, not only possible but also probable. A boom is likely to take place independently of Government policy; the *form* of the boom, however, is strongly dependent on policy factors. In Germany in the 1930s it was guns before butter; in the USA of the 1930s, the New Deal was brought into operation; in the UK of the 1980s it is a case of the City before industry. The release of new productive possibilities gives the state considerable scope to divert the course of economic change into directions favoured by the political ideology of the party in power; furthermore such changes are accompanied by historically high rates of

growth, so that the economic policies being followed may always be presented as successful. Yet if underlying economic conditions are such that a high growth rate will be achieved whatever policy is followed, then short-term growth rates do not present a decisive criterion of whether the policies which have been followed are good policies, indifferent policies or bad policies. An assessment of structural changes is more important, with particular reference firstly to whether post-slump recovery has solved the problems of the preceding slump and long cycle downswing, and secondly, to whether structural changes in the post-slump recovery provide the basis for stable future growth. On either count the answer must be no; the charges against the Thatcher Government's handling of the economy are firstly that as a direct result of Government economic policy the slump of the early 1980s has been unnecessarily severe and unemployment unnecessarily high, and secondly that the opportunities presented by North Sea oil and by the post-slump recovery have been recklessly squandered in favour of short term profit.

The damage occasioned by slump has been recounted in some detail in this chapter and the preceding chapter; a collapse of industrial investment and output, a collapse of industrial employment, unemployment increasing by about 2,000,000, and a severe blight being imposed on the prospects of large parts of urban industrial Britain. Industrial output by 1986 had at last just exceeded 1979 levels, while manufacturing investment in 1987 was still about 10% below 1979 levels, and industrial employment was much lower at the end of the slump than at the beginning of the slump, and continued to decline thereafter. Unemployment remains stubbornly high; the unemployment figures continued to rise between 1983 and 1986, and fell thereafter only in the context of an artificial boom, accompanied by a dangerous balance of payments deficit. Furthermore, as indicated in chapter 7 (note 84), most of the drop in the official unemployment total has been attributable to administrative changes, designed to coincide with this artificial boom, and to make it appear as though recovery has been stronger than is actually the case. Britain's peripheral areas, despite several years of post-slump recovery, still face severe economic problems. These continued problems represent, as MacInnes (1987) notes, not the major restructuring of the productive economy claimed by the Government but a failure to restructure.

The long term prospects for the British economy cannot be regarded as favourable. Before the slump Singh (1977 p.128) defined an "efficient manufacturing sector" as one which "currently and potentially not only satisfies the demands of consumers at home, but is also able to sell enough of its products abroad to pay for the nation's import requirements." Singh's discussion was based on a situation in which manufacturing exports

exceeded manufacturing imports, with the problem being posed that the competitive weakening of British industry might well reduce this gap and endanger the balance of payments position, and in turn economic growth prospects. Since then the situation has worsened dramatically. On Singh's definition the British manufacturing sector, with imports greatly exceeding exports, is now extremely inefficient, and the question is whether the financial sector can generate big enough surpluses to pay for imports of manufactures and other goods. Before Thatcher, trade surpluses in manufactures and invisibles paid for Britain's import needs in food and raw materials. In the Thatcher years a situation has been developing in which trade surpluses in oil and invisibles have been required to pay for Britain's net import needs in food, non-oil raw materials *and manufactures*. Clearly the economy is being severely overstretched, with dangers of chronic balance of payments deficits, especially when trade surpluses on North Sea oil fade away, and with the possibility of severe recessions in the future as attention is given to dealing with the balance of payments problem. There are two main possible dangers. Firstly, there is the possibility that in a deteriorating financial climate at some unspecified date in the future the surplus on invisible trade will diminish, exposing the considerable trading deficit in visibles, leading to a major balance of payments deficit. Secondly and more subtly there is the probability that whenever future economic difficulties are encountered, City interests will point to the extent to which the UK's trading position depends on the City and will argue strongly for a pro-City economic policy, resolving the crisis in favour of the City and at the expense of physical production. The clash of interests between the City and industry, geographically expressed as the clash between the core and the periphery, has been a long-standing feature of the economic policy debate in Britain, with City interests generally prevailing. The situation now is even more unbalanced; at least in previous years manufacturing industry, with a considerable trading surplus, has been in a reasonably strong lobbying position, but how many Governments will in the future give priority in their policies to a sector recording persistent and large trading deficits?

Thus the problems of the peripheral areas have not been solved, and in some respects have even been intensified, by the post-slump recovery. A sustained upswing in industrial employment after the slump would not totally have repaired the damage caused to Britain's industrial areas by a Thatcher-intensified slump, but at least some genuine improvement would have been recorded. This however has not happened and industrial employment has continued to fall, leading to static employment levels and continued high unemployment in the periphery, even as the

South overheats. If industrial employment declines even through a strong cyclical upswing, though, what will happen during any future recession? This is a question which must give grave cause for concern in Britain's industrial areas. The slump added considerably to the intensity of the British regional problem and the post-slump period has merely changed the form of the problem rather than reduced the size of the inequality. It seems virtually certain that the British regional problem will continue to be severe, perhaps even more severe than at present, into the 21st century.

Table 8.1 Official Estimates of Numbers of UK Employees in Employment, June 1978 to September 1981, Before and After Publication of the 1981 Census of Employment

Year	Number of Employees in Employment		
	Estimate (000s) in *Gazette*, June 1982	Estimate (000s) in *Gazette*, December 1983	Cumulative shortfall (000s) (Difference between two estimates)
1978 (June)	22757	22777	20
1979 (June)	22920	23157	237
1980 (June)	22511	22972	461
1981 (June)	21198	21871	673
1981 (September)	21062	21799	737

Sources: as given.

Table 8.2 Author's Own Estimate of Number of UK Employees in Employment, June 1978 to June 1981, Calibrated using Changes in the Unemployment Rate

Year	Estimated employment (000s)	Estimated employment minus estimate in *Gazette*, Dec. 1983 (000s)	Percentage change in employment over previous year	
			(a) Author's estimate	(b) Official estimate
1978 (June)	22777 (*Gazette*)	-	+0.6	+0.6
1979 (June)	23046	-111	+1.2	+1.6
1980 (June)	22926	-46	-0.5	-0.8
[1981 (June)	22119]			

Sources as given.

For methods of estimation see text, section 8.1

Table 8.3 Total Employment Change By County, 1978-81,
As Percentage of 1978 Employment; a Shift Share Analysis

	County	Total Change	Struc. shift	Diff. shift		County	Total Change	Struc. shift	Diff. shift
1	Cleveland	-12.72	-3.7	-3.9	34	Gtr London	-3.70	+3.7	-2.2
2	M Glamorgan	-12.51	-3.1	-4.2	35	Central	-3.49	-2.6	+4.3
3	Tyne & Wear	-12.05	+0.2	-7.0	36	Cumbria	-3.33	-2.3	+4.2
4	W Midlands	-11.76	-5.3	-1.3	37	Norfolk	-3.16	+1.8	+0.3
5	Clwyd	-11.67	-2.5	-3.9	38	Avon	-3.12	+3.0	-0.9
6	Durham	-11.56	-2.9	-3.5	39	Kent	-2.69	+1.0	+1.5
7	Humberside	-11.20	-1.9	-4.1	40	Powys	-2.58	-0.2	+2.8
8	W Glamorgan	-11.12	-4.0	-1.9	41	Warwickshire	-2.10	-2.0	+5.1
9	Merseyside	-10.96	+0.1	-5.9	42	Heref & Worc	-2.05	-1.9	+5.1
10	Gwent	-10.03	-5.3	+0.5	43	Suffolk	-1.99	+0.9	+2.4
11	Strathclyde	-9.65	-0.6	-3.8	44	Somerset	-1.79	+1.3	+2.2
12	W Yorkshire	-9.50	-3.6	-0.7	45	Lothians	-1.43	+2.9	+0.9
13	G Manchester	-9.31	-1.4	-2.7	46	N Yorkshire	-0.88	+0.9	+3.4
14	S Yorkshire	-8.77	-3.9	+0.4	47	Wiltshire	-0.69	+0.8	+3.7
15	Northampton.	-7.94	-2.9	+0.2	48	Devon	-0.66	+2.0	+2.6
16	Cheshire	-7.29	-1.5	-0.6	49	Gloucester.	-0.39	+1.4	+3.5
17	Northumb.	-7.18	-0.5	-1.5	50	Dorset	-0.33	+3.0	+1.9
18	Stafford.	-7.16	-2.6	+0.7	51	Berkshire	-0.21	+2.1	+2.9
19=	Cornwall	-5.81	+2.8	-3.4	52	Oxfordshire	+0.74	+0.1	+5.9
20	Dyfed	-5.81	-1.2	+0.6	53	Hertford.	+0.86	+1.6	+4.5
21	Tayside	-5.61	-1.1	+0.7	54	Cambridge.	+1.08	-1.1	+7.4
22	Derbyshire	-5.59	-3.0	+2.6	55	Highlands	+1.98	+1.7	+5.5
23	Leicester.	-5.54	-2.3	+2.0	56	Hampshire	+2.85	+1.7	+6.3
24	Lancashire	-5.52	-1.8	+1.5	57	West Sussex	+2.90	+3.9	+4.2
25	Shropshire	-5.50	-0.2	-0.1	58	East Sussex	+3.18	+4.0	+4.4
26	Bedfordshire	-5.04	-2.3	+2.5	59	Borders	+3.94	-3.6	+12.7
27	Essex	-4.77	+0.6	-0.1	60	Surrey	+4.05	+4.1	+5.2
28	Nottingham.	-4.74	-1.3	+1.7	61	Buckingham.	+4.82	+2.3	+7.7
29	Fife	-4.46	-1.8	+2.6	62	Dumf & Gall	+6.50	+0.2	+11.5
30	Lincolnshire	-3.99	+1.4	-0.1	63	Grampian	+9.88	+5.8	+9.3
31	S Glamorgan	-3.94	+2.3	-1.0					
32	Gwynedd	-3.86	+1.4	-0.0	55(a)	Isl. Areas	+2.58	+3.4	+4.4
33	Is of Wight	-3.73	+3.3	-1.8					

Source: Unpublished Census of Employment Data, 1978-1981.
Structural and differential shifts have been calculated as part of the National On-line Manpower Information System.

Table 8.4 Changes in Employment by County, 1977-81, For Counties With Increases in Employment Between 1978 and 1981

County	Percentage change in employment			
	1977-8	1978-81	1978-9 (est.)	1979-81 (est.)
Oxfordshire	+1.7	+0.7	+2.3	-1.6
Hertfordshire	+0.4	+0.9	+1.0	-0.1
Cambridgeshire	+0.5	+1.1	+1.1	+0.0
Highlands	-2.6	+2.0	-2.0	+4.0
Hampshire	+0.7	+2.8	+1.3	+1.5
West Sussex	+2.0	+2.9	+2.6	+0.3
East Sussex	+1.8	+3.2	+2.4	+0.8
Borders	-0.0	+3.9	+0.6	+3.3
Surrey	+1.0	+4.0	+1.6	+2.4
Buckinghamshire	+3.3	+4.8	+3.9	+0.9
Dumfries and Galloway	-2.1	+6.5	-1.5	+8.0
Grampian	+0.3	+9.9	+0.9	+9.0

These estimates are produced for illustrative purposes only, and do not claim to represent precise levels of employment change in 1978-9 and 1979-81. It is regarded as likely that the estimates for Southern England are reasonably representative, but it is considered that a large amount of the employment increase in Scotland allocated to the 1979-81 period might well have taken place in 1978-9.

Method of estimation:

Employment nationally is assumed to have risen by 1.2% in 1978-9, compared with 0.6% in 1977-8 (Table 8.2). Employment increase in each county has been assumed to have increased in line with this.

Source: Census of Employment 1977, 1978, 1981; unpublished county data.

Table 8.5 A Five Category Grouping of Counties According to Response to Slump

Group 1 - Employment change ranging from -7% to -13%
Predominantly negative shifts.

Counties: *Cleveland, Mid Glamorgan, Tyne and Wear, West Midlands, Clwyd, Durham, Humberside, West Glamorgan, Merseyside, Gwent, Strathclyde, West Yorkshire, Greater Manchester, South Yorkshire, Northamptonshire, Cheshire, Northumberland, Staffordshire* (18).

Group 2 - Employment change ranging from -4½% to -6%
Negative structural shifts, positive differential shifts.

Counties: *Dyfed, Tayside, Derbyshire, Leicestershire, Lancashire, Shropshire, Bedfordshire, Nottinghamshire, Fife* (9).

Group 3 - Employment change ranging from -3% to -4% (two outliers:- *Essex* -4.77%; *Cornwall* -5.81%)
Positive structural shifts, negative differential shifts.

Counties: *Cornwall, Essex, Lincolnshire, South Glamorgan, Gwynedd, Isle of Wight, Greater London, Norfolk, Avon* (9).

Group 4 - Employment change ranging from -2% to -3½%
Negative structural shifts, positive differential shifts.

Counties: *Central, Cumbria, Powys, Warwickshire, Hereford and Worcester* (5).

Group 5 - Employment change ranging from +10% to -2%
(one outlier: *Kent* -2.69%)
Predominantly positive shifts.

Counties: *Kent, Suffolk, Somerset, Lothians, North Yorkshire, Wiltshire, Devon, Gloucestershire, Dorset, Berkshire, Oxfordshire, Hertfordshire, Cambridgeshire, Highlands, Hampshire, West Sussex, East Sussex, Borders, Surrey, Buckinghamshire, Dumfries and Galloway, Grampian* (22 - also Island Areas).

Table 8.6 Unweighted Average Shifts for the Five Groups of Counties Shown in Table 8.5.

Group	Number of Counties	Total change in employment (%)	Structural shift (%)	Differential shift (%)
1	18	-10.1	-2.5	-2.4
2	9	-5.3	-1.7	+1.6
3	9	-3.8	+2.2	-0.7
4	5	-2.7	-1.8	+4.3
5	22	+1.4	+1.7	+4.9

Table 8.7 A Shift-Share Analysis of Employment Change by County, 1978-81, Subdivided into 16 Groups

Sub Group	County		Structural shift (%)				Differential shift (%)				Total change (%)
			Manuf	Tert	Prim	Total	Manuf	Tert	Prim	Total	
1a	Humberside	(YH)	-4.3	+2.6	-0.1	-1.9	-0.4	-3.4	-0.3	-4.1	-11.2
	Clwyd	(Wa)	-5.7	+3.3	-0.1	-2.5	-2.0	-1.8	-0.1	-3.9	-11.7
	Durham	(N)	-5.0	+2.4	-0.3	-2.9	-1.4	-1.8	-0.2	-3.5	-11.6
	Mid Glamorgan	(Wa)	-5.4	+2.6	-0.3	-3.1	-1.3	-2.1	-0.7	-4.2	-12.5
	Cleveland	(N)	-6.5	+2.8	+0.1	-3.7	+0.2	-3.8	-0.2	-3.9	-12.7
1b	Tyne and Wear	(N)	-2.9	+3.2	-0.1	+0.2	-1.9	-4.2	-0.9	-7.0	-12.0
	Merseyside	(NW)	-3.1	+3.2	-0.0	+0.1	-3.1	-2.7	-0.0	-5.9	-11.0
	Strathclyde	(Sc)	-3.9	+3.3	+0.0	-0.6	-3.3	-0.5	+0.0	-3.8	-9.6
1c	Staffordshire	(WM)	-4.5	+2.1	-0.2	-2.6	-0.4	+1.1	-0.1	+0.7	-7.2
	Northamptonshire	(EM)	-5.5	+2.7	-0.0	-2.9	-0.1	+0.4	-0.1	+0.2	-7.9
	West Yorkshire	(YH)	-6.5	+3.1	-0.1	-3.6	+0.8	-1.7	+0.2	-0.7	-9.5
	South Yorkshire	(YH)	-6.5	+2.8	-0.3	-3.9	-0.2	+0.2	+0.4	+0.4	-8.8
	West Glamorgan	(Wa)	-6.5	+2.6	-0.1	-4.0	-3.5	+1.6	+0.0	-1.9	-11.1
	West Midlands	(WM)	-7.8	+2.5	-0.0	-5.3	-1.0	-0.3	-0.0	-1.3	-11.8
	Gwent	(Wa)	-7.6	+2.4	-0.2	-5.3	+1.4	-1.5	+0.5	+0.5	-10.0
1d	Northumberland	(N)	-2.8	+2.8	-0.5	-0.5	-0.2	-2.5	+1.3	-1.5	-7.2
	Grt. Manchester	(NW)	-4.5	+3.1	-0.0	-1.4	-2.0	-0.6	-0.0	-2.7	-9.3
	Cheshire	(NW)	-4.0	+2.5	-0.0	-1.5	+0.7	-1.4	+0.1	-0.6	-7.3

Table 8.7 - continued

Sub Group	County		Structural shift (%)				Differential shift (%)				Total change (%)
			Manuf	Tert	Prim	Total	Manuf	Tert	Prim	Total	
2a	Shropshire	(WM)	-3.3	+3.3	-0.2	-0.2	-1.8	+1.8	-0.0	-0.1	-5.5
	Tayside	(Sc)	-4.4	+3.0	+0.3	-1.1	+0.0	+1.0	-0.3	+0.7	-5.6
	Dyfed	(Wa)	-3.8	+2.9	-0.4	-1.2	-0.1	+0.9	-0.2	+0.6	-5.8
	Bedfordshire	(SE)	-5.3	+3.1	-0.0	-2.3	-1.6	+3.9	+0.1	+2.5	-5.0
	Derbyshire	(EM)	-4.6	+1.8	-0.2	-3.0	+0.4	+1.9	+0.4	+2.6	-5.6
2b	Nottinghamshire	(EM)	-3.2	+2.3	-0.3	-1.3	+1.1	-0.0	+0.7	+1.7	-4.7
	Lancashire	(NW)	-4.9	+3.1	-0.0	-1.8	+1.3	+0.3	-0.1	+1.5	-5.5
	Fife	(Sc)	-3.8	+2.2	-0.2	-1.8	+2.7	+0.3	-0.5	+2.6	-4.5
	Leicestershire	(EM)	-4.8	+2.6	-0.1	-2.3	+2.4	-0.3	-0.1	+2.0	-5.5
3a	Greater London	(SE)	-1.5	+5.2	+0.1	+3.7	+0.0	-2.3	+0.0	-2.2	-3.7
	Avon	(SW)	-1.2	+4.3	-0.0	+3.0	+0.1	-1.3	+0.2	-0.9	-3.1
	South Glamorgan	(Wa)	-2.0	+4.4	-0.0	+2.3	+0.3	-1.2	-0.2	-1.0	-3.9
3b	Isle of Wight	(SE)	-0.1	+3.5	-0.1	+3.3	-2.5	+1.2	-0.4	-1.8	-3.7
	Cornwall	(SW)	-1.4	+4.1	+0.1	+2.8	-1.0	-2.3	-0.1	-3.4	-5.8
	Gwynedd	(Wa)	-2.1	+3.7	-0.1	+1.4	+1.0	-1.2	+0.1	-0.0	-3.9
3c	Norfolk	(EA)	-2.2	+3.9	+0.0	+1.8	+0.6	+0.2	-0.6	+0.3	-3.2
	Lincolnshire	(EM)	-1.5	+3.1	-0.2	+1.4	+0.0	-0.3	+0.2	-0.1	-4.0
	Essex	(SE)	-2.7	+3.3	-0.0	+0.6	-0.5	+0.5	-0.1	-0.1	-4.8
4	Powys	(Wa)	-3.3	+3.5	-0.4	-0.2	+3.7	-1.3	+0.3	+2.8	-2.6
	Heref & Worcester	(WM)	-4.7	+3.0	-0.2	-1.9	+2.9	+2.2	-0.1	+5.1	-2.0
	Warwickshire	(WM)	-5.1	+3.3	-0.1	-2.0	+5.3	-0.8	+0.5	+5.1	-2.1
	Central	(Sc)	-4.6	+2.1	-0.1	-2.6	+2.4	+2.2	-0.3	+4.3	-3.5
	Cumbria	(N)	-5.0	+2.8	-0.1	-2.3	+1.9	+2.1	+0.3	+4.2	-3.3

Table 8.7 - continued

Sub Group	County		Structural shift (%)				Differential shift (%)				Total change (%)
			Manuf	Tert	Prim	Total	Manuf	Tert	Prim	Total	
$5aa_1$	Dorset	(SW)	-1.4	+4.4	-0.1	+3.0	+1.7	+0.2	-0.0	+1.9	-0.3
	Berkshire	(SE)	-1.6	+3.7	-0.0	+2.1	+2.4	+0.7	-0.2	+2.9	-0.2
	Devon	(SW)	-2.2	+4.2	-0.1	+2.0	+2.7	-0.1	+0.0	+2.6	-0.7
	Somerset	(SW)	-2.4	+3.8	-0.1	+1.3	+1.2	+0.7	+0.2	+2.2	-1.8
$5aa_2$	Gloucestershire	(SW)	-1.9	+3.3	-0.1	+1.4	+0.9	+2.7	-0.1	+3.5	-0.4
	Kent	(SE)	-2.2	+3.3	-0.1	+1.0	-0.1	+1.8	-0.1	+1.5	-2.7
	Suffolk	(EA)	-2.5	+3.4	-0.0	+0.9	+0.8	+1.8	-0.3	+2.4	-2.0
	Wiltshire	(SW)	-2.9	+3.8	-0.1	+0.8	-1.3	+4.8	+0.2	+3.7	-0.7
5ab	Hertfordshire	(SE)	-1.9	+3.5	-0.0	+1.6	+0.5	+4.0	-0.0	+4.5	+0.9
	Oxfordshire	(SE)	-3.7	+3.9	-0.1	+0.1	+0.9	+5.1	-0.0	+5.9	+0.7
	Cambridgeshire	(EA)	-4.9	+4.0	-0.2	-1.1	+4.7	+2.8	-0.1	+7.4	+1.1
5ac	Surrey	(SE)	-1.0	+5.1	-0.0	+4.1	+0.6	+4.5	+0.1	+5.2	+4.0
	East Sussex	(SE)	-1.4	+5.5	-0.0	+4.0	+0.9	+3.4	+0.1	+4.4	+3.2
	West Sussex	(SE)	-0.9	+4.9	-0.1	+3.9	+1.6	+2.3	+0.3	+4.2	+2.9
	Buckinghamshire	(SE)	-2.2	+4.7	-0.1	+2.3	+1.6	+6.1	+0.0	+7.7	+4.8
	Hampshire	(SE)	-2.0	+3.8	-0.0	+1.7	+0.8	+5.6	-0.0	+6.3	+2.8
5ba	Lothian	(Sc)	-1.3	+4.3	-0.1	+2.9	+1.1	+0.2	-0.3	+0.9	-1.4
	North Yorkshire	(YH)	-2.4	+3.4	-0.2	+0.9	+1.2	+1.3	+1.0	+3.4	-0.9
5bb	Grampian	(Sc)	-2.2	+3.9	+4.1	+5.8	+2.3	+7.7	-0.8	+9.3	+9.9
	Island Areas	(Sc)	-1.1	+4.0	+0.5	+3.4	+3.3	-2.0	+3.2	+4.4	+2.6
	Highlands	(Sc)	-2.1	+3.9	-0.1	+1.7	+2.1	+3.2	+0.2	+5.5	+2.0
	Dumf & Galloway	(Sc)	-2.4	+2.9	-0.3	+0.2	+4.7	+6.6	+0.3	+11.5	+6.5
	Borders	(Sc)	-6.0	+2.8	-0.3	-3.6	+3.2	+8.6	+0.9	+12.7	+3.9

Source: Based on Census of Employment, 1978, 1981.

Table 8.8 Shift-Share Analysis of Employment Change by 16 Sub-Groups, 1978-81 (Unweighted averages)

Sub	Number of counties	Structural shift (%)				Differential Shift (%)				Total change (%)
		Manuf	Tert	Prim	Total	Manuf	Tert	Prim	Total	
1a	5	-5.4	+2.7	-0.1	-2.8	-1.0	-2.6	-0.3	-3.9	-11.6
1b	3	-3.3	+3.2	-0.0	-0.1	-2.8	-2.5	-0.3	-5.6	-10.9
1c	7	-6.5	+2.6	-0.1	-3.9	-0.4	-0.0	+0.1	-0.2	-9.5
1d	3	-3.8	+2.8	-0.2	-1.1	-0.5	-1.5	+0.5	-1.6	-7.9
2a	6	-4.3	+2.8	-0.1	-1.6	-0.6	+1.9	0.0	+1.3	-5.5
2b	4	-4.2	+2.6	-0.2	-1.8	+1.9	+0.1	0.0	+2.0	-5.3
3a	3	-1.6	+4.6	+0.0	+3.0	+0.1	-1.6	+0.0	-1.4	-3.6
3b	3	-1.2	+3.8	-0.0	+2.5	-0.8	-0.8	-0.1	-1.7	-4.5
3c	3	-2.1	+3.4	-0.1	+1.3	+0.0	+0.1	-0.2	+0.0	-4.0
4	5	-4.5	+2.9	-0.2	-1.8	+3.2	+0.9	+0.1	+4.3	-2.7
$5aa_1$	4	-1.9	-4.0	-0.1	+2.1	+2.0	+0.3	0.0	+2.4	-0.8
$5aa_2$	4	-2.4	+3.4	-0.1	+1.0	+0.1	+2.8	-0.1	+2.8	-1.4
5ab	3	-3.5	+3.7	-0.1	+0.2	+2.0	+4.0	-0.0	+5.9	+0.9
5ac	5	-1.5	+4.8	-0.0	+3.2	+1.1	+4.6	+0.1	+5.6	+3.5
5ba	2	-1.8	+3.8	-0.2	+1.9	+1.2	+0.8	+0.4	+2.2	-1.2
5bb	5	-3.0	+3.5	+0.8	+1.5	+3.1	+4.7	+0.8	+8.5	+5.0

Source: Based on Table 8.7

Table 8.9 Patterns of Employment Decline in Steel Counties, 1978-1981

	Employment Change (000s)		Employment Change (%)		Iron and steel emp. as % of total emp.	
	Iron and steel	Other	Iron and steel	Other	1978	1981
Cleveland	-9.4	-21.4	-31.2	-10.1	14.2	10.9
Clwyd	-8.8	-6.1	-65.0	-5.3	11.9	4.4
Durham	-9.6	-15.4	-69.3	-7.6	6.8	2.3
Humberside	-8.2	-18.5	-38.2	-9.3	7.0	4.8
West Glamorgan	-10.5	-7.4	-54.3	-5.2	13.6	6.6
Gwent	-9.1	-7.6	-42.8	-5.2	14.6	8.8
South Yorkshire	-16.8	-31.6	-32.8	-6.3	10.2	7.3
Northamptonshire	-4.1	-11.2	-43.2	-5.8	6.1	3.7

Source: Census of Employment, unpublished data.
See also Table 8.12.

If the evidence of Table 8.15 is taken into account, employment change in "other" sectors may be estimated at -11,800 (-8.3%) in West Glamorgan, and about -8,400 (-4.4%) in Northamptonshire.

Table 8.10 Industry-Service Multipliers in Towns with Major Job Losses in Steel, 1978-1981

Travel to work area	Differential shift in			
	(a) Manufacturing	(b) Construction	(c) Services	Multiplier (1+[(c)/(a+b)])
Consett	-5,912	-180	-1,153	1.189
Teesside	-5,061	-5,386	-3,628	1.347
Scunthorpe	-4,707	-2,073	-1,285	1.189
Shotton	-4,453	-551	-1,484	1.297
Corby	-4,096	-93	-1,184	1.283
Port Talbot	-2,123	-182	-885	1.384
Total	-26,352	-8,465	-9,619	1.276

Source: Census of Employment, unpublished data.

Differential shifts are calculated against national rates of employment change in manufacturing, construction and services. No attempt has been made to disaggregate to either the level of the SIC Order or to the Minimum List heading.

In cases where the differential shift in educational services has been so extreme as to be obviously unreliable, differential shifts for this sector have been ignored.

Table 8.11 Industry-Service Multiplier by Region, 1978-1981

	Differential Shift (000s)			Implied Multiplier	Residual growth in service sector employment, unaccounted for by multiplier of 1.27 (000s)
	Manuf.	Const.	Services		
SE	+92	+14	+30	1.28	+1
EA	+15	+1	+10	1.63	+6
SW	+16	+7	-1	0.96	-7
South				*1.27*	*-0*
WM	-50	-3	-5	1.09	+9
EM	+16	+4	+0	1.00	+5
YH	-21	-3	-21	1.88	-15
NW	-15	-5	-10	1.50	-5
N	-9	-9	-17	1.94	-12
Wa	-25	+0	-7	1.28	-0
Sc	-17	-4	+22	-0.05	+28
Industrial regions				*1.27*	*-0*

Source: Census of Employment

In many cases a large part of the residual component in the service sector can be explained by misenumeration in education (MLH 872). Table 8.16 suggests that growth of employment in education has possibly been overstated by about 11,000 in Scotland, and by about 5,000 in East Anglia, and has possibly been understated by about 12,000 in Yorkshire and Humberside, by about 10,000 in the North West and by about 8,000 in the Northern Region. Such figures are only approximations, but allowing for these data imperfections helps explain some of the erratic values in the "implied multiplier" column.

The consistency of the average multipliers indicated in Tables 8.10 and 8.11 is noteworthy; in each case a value of about 1.27 is indicated. This would appear to suggest that the service sector multiplier effects of industrial employment change are confined primarily to the local labour market area in which events of industrial employment change are taking place.

Table 8.12 Patterns of Employment Decline in Non-Steel Counties in Groups 1a and 1c, 1978-1981.

	Employment Change (000s)		Employment Change (%)		Employment of main industry as % of total emp.	
	Main industry	Other	Main industry	Other	1978	1981
(i) Textile counties						
West Yorkshire	-36.0	-46.7	-34.6	-6.1	11.9	8.0
Greater Manchester	-38.0	-69.3	-36.5	-6.6	9.0	6.3
(ii) Textiles, plus watches and clocks						
Tayside	-5.1	-7.8	-30.7	-5.4	10.3	7.6
(iii) Vehicles						
West Midlands	-45.4	-112.1	-29.2	-9.5	11.6	9.3
(iv) Pottery						
Staffordshire	-10.2	-16.5	-24.8	-5.0	11.0	8.9

Source: Census of Employment 1978, 1981

See also Table 8.9 for a corresponding analysis on steel counties. "Textiles" here is taken to refer to textiles, leather and fur goods, clothing and footwear.

Tayside is included in this Table as it would have been classed as part of group 1 were it not for an anomalous differential shift in the education sector (Table 8.15). This differential shift has been excluded in the present calculation. Figures for education in West Yorkshire are also regarded as unreliable; excluding differential shifts in this sector, employment change in "other" sectors may be estimated as -36,900 (-4.9%).

Table 8.13 Major Industrial Job Losses in Mid Glamorgan, 1978-1981

Firm, Location, Sector	Jobs at beginning of period	Jobs lost (total)
1 Hoover, *Merthyr Tydfil* (domestic electrical appliances)	5500	2300 (a)
2 Great Universal Stores (Polikoff), *Rhondda* (clothing)	1450	750
3 Revlon, *Maesteg* (toilet preparations)	1250	500
4 P. Leiner, *Treforest* (other chemical industries)	750	490
5 GEC, *Hirwaun* (radio and electronic components)	2000	350 (b)
6 Tube Investment (Helliwells), *Aberdare* (?)	315	315
7 Lin-Pac (Rosedale), *Bedwas* (plastic products, n.e.s.)	300	300
8 Triang (Pedigree), *Merthyr Tydfil* (toys, games, etc.)	300	300
9 Cambrian castings, *Aberdare* (motor vehicle manuf.)	240	240
10 Harris Economy *Bridgend* (metal working machine tools)	240	240
	12345	5785 (46.9%)

Source: *Financial Times*, as follows: 1, 30.11.78, 23.12.78, 28.8.79, 5.3.81; 2, 11.10.80; 3, 3.7.81; 4, 14.2.80, 25.3.80; 5, 18.5.78; 6, 30.8.80; 7, 12.10.79; 8, 11.12.78, 11.5.79; 9, 3.9.80; 10, 2.12.78.

(a) Jobs lost according to the Census of Employment (MLH 368). *Financial Times* reports suggest a total job loss of 1880.

(b) The Census of Employment suggests a total job loss in this sector of 1600, although GEC accounted for only about half the total employment in this sector. It is possible, though not certain, that GEC shed rather more jobs at Hirwaun than is indicated here.

Table 8.14 Manufacturing Jobs Created in South Wales, 1966-1975, by Firms New to The Area.

County	Number of establishments opened, 1966-1975	Employment created		
		Total	Per Establishment	As % of 1978 employment in manufacturing & coal mining
South Glamorgan	22	1650	75	5.3
Mid Glamorgan	115	12160	106	13.5
West Glamorgan	45	6400	142	10.2
Gwent	91	8550	94	11.8

Source: Alden 1977 p.292, based on unpublished official data. Also Census of Employment 1978. No account is taken here of jobs lost between 1975 and 1978 in establishments opened between 1966 and 1975.

Table 8.15 Apparently Anomalous Differential Shifts in the Education Sector, 1978-81

County	Differential Shift in Education			Total employment change (%)	
	000s	% of employment in MLH 872	Total	Including Diff. shift MLH 872	Excluding Diff. shift MLH 872
(i) Suspected Under-enumeration in 1978					
Buckinghamshire	+7.8	+38.9	+4.1	+4.8	+0.7
West Glamorgan	+4.4	+36.4	+2.8	-11.1	-13.9
Tayside	+3.9	+35.5	+2.3	-5.6	-7.9
Cambridgeshire	+5.2	+23.9	+2.5	+1.1	-1.4
Grampian	+2.6	+21.1	+1.5	+9.3	+7.8
Borders	+0.4	+15.6	+0.9	+3.9	+3.0
Derbyshire	+4.0	+12.5	+1.1	-5.6	-6.7
Central	+1.0	+11.5	+0.9	-3.5	-4.4
Lothian	+3.1	+10.3	+0.9	-1.4	-2.3
(ii) Suspected Under-enumeration in 1981					
Cheshire	-10.1	-33.6	-2.8	-7.3	-4.5
Tyne and Wear	-8.2	-20.3	-1.6	-12.0	-10.4
Northamptonshire	-2.8	-15.3	-1.3	-7.9	-6.6
West Yorkshire	-9.9	-14.0	-1.1	-9.5	-8.4
Leicestershire	-4.4	-13.7	-1.2	-5.5	-4.3
Cornwall	-1.5	-11.2	-1.2	-5.8	-4.6
Berkshire	-3.3	-10.7	-1.1	-0.2	+0.9
Essex	-4.4	-10.3	-0.9	-4.8	-3.9

Source: Census of Employment, 1978, 1981.

Differential shifts between +10.0% and +5.0% were recorded in Shropshire, Highland, Suffolk, Bedfordshire, Cleveland, Devon, Hampshire, East Sussex, Island Areas and Cumbria.

Differential shifts between -10.0% and -5.0% were recorded in Norfolk, Humberside, Lincolnshire, Nottinghamshire and Avon.

Table 8.16 Employment change by County 1978-1984

	County	Employment change (%)		County	Employment change (%)
1	West Glamorgan	-28.9	29	South Glamorgan	-2.7
2	Cleveland	-24.1	30	Cumbria	-2.2
3	Merseyside	-19.1	31	Leicestershire	-2.1
4	Mid Glamorgan	-18.6	32	Cornwall	-2.0
5	Tyne and Wear	-17.7	33	Essex/Herts.	-1.7
6	South Yorkshire	-16.2	34	Staffordshire	-1.5
7	Greater Manchester	-15.2	35	Lothian	-1.4
8	Strathclyde	-15.0	36	Shropshire	-1.3
9	West Midlands/Warks.	-14.9	37	Northamptonshire	-1.0
10	Gwent	-14.2	38	Kent/E. Sussex	-0.9
11	Durham	-13.0	39	Norfolk	-0.6
12	Tayside	-11.2	40	Dorset	-0.1
13	Humberside	-11.0	41	Northumberland	+0.2
14	West Yorkshire	-10.7	42	Hereford and Worcester	+0.4
15	Derbyshire	-9.9	43	Suffolk	+1.9
16	Dyfed	-9.2	44	Devon	+2.2
17	Lancashire	-8.6	45	Wiltshire	+2.5
18	Gwynedd	-7.7	46	Isle of Wight	+3.9
19	Clwyd	-6.8	47	Somerset	+4.2
20	Island Areas	-6.5	48	Hampshire	+5.2
21	Greater London	-5.5	49	North Yorkshire	+5.2
22	Lincolnshire	-5.0	50	Beds/Berks/Bucks	+5.7
23	Nottinghamshire	-5.0	51	Highland	+6.8
24	Fife	-4.6	52	West Sussex	+7.9
25	Avon	-4.3	53	Oxfordshire	+8.0
26	Gloucestershire	-4.3	54	Powys	+13.1
27	Borders/D & G	-4.1	55	Surrey	+14.5
28	Cheshire	-3.7	56	Cambridgeshire	+16.1
			57	Grampian	+19.8

Source: Census of Employment (1978); *Regional Trends* (1988 pp.38-39).

1978 figures are based on Jobcentre areas, while 1984 figures are based on local authority wards (*Regional Trends* 1988 p.145). This will lead to various minor errors. There would also appear to be various major discrepancies, and as a result some counties have been amalgamated in the above table. Separate scores, which are regarded as unreliable, are Bedfordshire, +3.7%; Berkshire, -3.7%; Buckinghamshire, +23.4%; Essex, +0.4%; Hertfordshire, -3.8%; Kent, -6.6%; East Sussex, +0.4%; West Midlands Metropolitan, -18.6%; Warwickshire, +18.1%. Figures for Central, -19.6%, have been suppressed; it is likely that rates of job loss in either Strathclyde or Lothian are understated in the above table.

The time interval between the two dates is 6.25 years. An average rate of employment decline of 4% per annum would give a total job loss of 22.5%, while an average rate of employment decline of 2½% per annum would give a total job loss of 14.6%.

Table 8.17 A Shift-Share Analysis of Employment Change in the Conurbations 1971-1978

County	Shift (000s)			Shift (As % of 1971 employment)		
	Structural	Diff.	Total	Structural	Diff.	Total
Tyne and Wear	-3.2	-9.7	-12.9	-0.6	-1.9	-2.5
Merseyside	+2.1	-67.0	-64.9	+0.3	-10.0	-9.7
Strathclyde	-7.5	-48.5	-56.0	-0.7	-4.8	-5.5
Greater Manchester	-30.4	-8.4	-38.8	-2.6	-0.7	-3.3
West Midlands	-31.7	-61.6	-93.3	-2.3	-4.4	-6.7
West Yorkshire	-35.5	+23.8	-11.6	-4.1	+2.8	-1.3
South Yorkshire	-21.3	+19.9	-2.6	-3.9	+3.7	-0.2
Greater London	+167.5	-548.0	-380.5	+4.3	-13.9	-9.6

Source: Census of Employment, unpublished data at MLH level.

Table 8.18 A Shift-Share Analysis of Employment Change in Conurbational Subregions, 1959-1971

Subregion	Shift (000s)			Shift (As % of 1959 emp.)		
	Struct.	Diff.	Total	Struct.	Diff.	Total
Industrial North-East(North)	-64.6	+21.0	-43.6	-9.9	+3.2	-6.6
Merseyside	+10.4	-36.6	-26.2	+1.5	-5.1	-3.7
Glasgow and West Central	-21.0	-57.6	-78.6	-2.0	-5.6	-7.6
Manchester	-31.4	-71.6	-103.0	-2.8	-6.4	-9.2
West Midlands Conurbation	+85.2	-119.8	-34.6	+7.4	-10.4	-3.0
West Yorkshire	-55.0	-3.1	-58.1	-6.5	-0.4	-6.9
South Yorkshire	+7.9	-16.3	-8.4	+2.4	-4.9	-2.5
London	+425.8	-885.0	-459.2	+9.4	-19.6	-10.2

Source: Based on Fothergill and Gudgin 1979a, pp.216-217 (shifts) and pp.208-209 (1959 total employment levels).

In calculating this table, the shifts presented by Fothergill and Gudgin for the separate periods 1959-1966 and 1966-1971 have been amalgamated.

Table 8.19 Elements of Manufacturing Employment Growth, Industrialised Counties 1978-1981.

County	Jobs created in manufacturing	As percentage of 1978 total employment
Humberside (1a)	9687	2.96
Clwyd (1a)	3658	2.86
Durham (1a)	3836	1.78
Mid Glamorgan (1a)	6365	3.42
Cleveland (1a)	4844	2.00
Merseyside (1b)	6823	1.10
Tyne and Wear (1b)	5876	1.16
Strathclyde (1b)	6785	0.69
Greater Manchester (1d)	19074	1.66
West Midlands (1c)	18206	1.36
West Yorkshire (1c)	11575	1.33
South Yorkshire (1c)	8172	1.48
Staffordshire (1c)	8553	2.30
West Glamorgan (1c)	1572	0.98
Gwent (1c)	5150	3.08
Northumberland (1d)	3042	3.29
Leicestershire (2b)	8336	2.33
Northamptonshire (1c)	5427	2.64
Nottinghamshire (2b)	8885	2.14
Cheshire (1d)	8205	2.30
Lancashire (2b)	13709	2.63
Fife (2b)	3487	2.79
Shropshire (2a)	3021	2.36
Tayside (2a)	2614	1.61
Dyfed (2a)	1705	1.62
Bedfordshire (2a)	5229	2.58
Derbyshire (2a)	7396	2.02
Powys (4)	1154	3.88
Hereford and Worcester(4)	5877	2.66
Warwickshire (4)	6768	4.52
Central (4)	5134	4.61
Cumbria (4)	5705	3.14

In metropolitan counties, plus Strathclyde, the job gains in all MLHs in manufacturing with increases in employment have been summed. In other counties, all increases of 50 or more have been summed. This difference in the method of calculation is intended to counteract to some extent the greater likelihood in larger... counties that any increase in employment in a particular factory will be outweighed by a job loss elsewhere in the same sector.

Figures for Fife assume a major reclassification of employment between the electronic computers sector and the electronic capital goods sector (see note 56). If this assumption is dropped, corresponding figures would be 5571 and 4.46%.

Table 8.20 Differential Shifts in Manufacturing, Industrial Britain

County	Differential (000s)	Shift (%)	County	Differential (000s)	Shift (%)
Warwickshire	+7.9	+5.3	Tayside	+0.0	+0.0
Dumf. & Galloway	+2.3	+4.7	Dyfed	-0.1	-0.1
Powys	+1.1	+3.7	Northamptonshire	-0.2	-0.1
Borders	+1.2	+3.2	South Yorkshire	-1.0	-0.2
Heref. & Worcester	+6.5	+2.9	Northumberland	-0.2	-0.2
Fife	+3.4	+2.7	Humberside	-1.3	-0.4
Leicestershire	+8.5	+2.4	Staffordshire	-1.3	-0.4
Central	+2.6	+2.4	West Midlands	-13.0	-1.0
Cumbria	+3.4	+1.9	Mid Glamorgan	-2.5	-1.3
Gwent	+2.4	+1.4	Durham	-3.1	-1.4
Lancashire	+6.7	+1.3	Shropshire	-2.3	-1.8
North Yorkshire	+2.7	+1.2	Tyne and Wear	-9.8	-1.9
Nottinghamshire	+4.5	+1.1	Greater Manchester	-23.5	-2.0
West Yorkshire	+6.8	+0.8	Clwyd	-2.6	-2.0
Cheshire	+2.4	+0.7	Merseyside	-19.5	-3.1
Derbyshire	+1.3	+0.4	Strathclyde	-32.5	-3.3
Cleveland	+0.6	+0.2	West Glamorgan	-5.7	-3.5

Source: Census of Employment (unpublished data). A county in "industrial Britain" is defined as one in the Midlands or periphery with a structural shift less favourable than +1.0%.

Table 8.21 Manufacturing Employment Change by County 1978-1981

County	Man. emp. change (%)	County	Man. emp. change (%)
West Glamorgan	-33.1	Greater London	-12.8
Clwyd	-27.7	Borders	-12.8
Strathclyde	-26.6	Gwynedd	-12.2
Merseyside	-24.3	Nottinghamshire	-11.8
Durham	-23.8	Central	-11.8
West Midlands (Met)	-23.2	Lincolnshire	-10.9
South Yorkshire	-23.0	Norfolk	-10.7
Mid Glamorgan	-22.9	Suffolk	-10.6
Dyfed	-22.8	Leicestershire	-10.6
Greater Manchester	-22.2	Hereford and Worcester	-10.3
Shropshire	-21.9	North Yorkshire	-10.3
Cleveland	-21.3	Avon	-9.2
Bedfordshire	-21.2	Hampshire	-9.1
Tayside	-20.9	Hertfordshire	-8.8
Gwent	-20.8	Somerset	-8.7
Tyne and Wear	-20.3	Fife	-8.3
West Yorkshire	-20.0	East Sussex	-8.1
Cornwall	-19.5	Gloucestershire	-7.9
Humberside	-19.2	Buckinghamshire	-7.2
Northamptonshire	-18.3	Surrey	-7.0
Wiltshire	-18.1	Lothian	-6.3
Northumberland	-17.4	Cambridgeshire	-5.8
Staffordshire	-16.3	Highlands	-5.3
Oxfordshire	-15.7	Warwickshire	-4.7
Isle of Wight	-15.5	Grampian	-4.5
South Glamorgan	-15.0	Dorset	-4.0
Derbyshire	-14.8	Powys	-2.8
Essex	-14.6	Devon	-2.7
Lancashire	-14.1	West Sussex	-2.4
Kent	-14.0	Berkshire	-2.3
Cheshire	-13.6	Dumfries and Galloway	+4.5
Cumbria	-13.3	Island Areas	+16.4

Source: Census of Employment, 1978, 1981.

Table 8.22 A Shift-Share Analysis of Southern England, Excluding Differential Shifts in the Educational Sector

County	Structural shift (%)	Differential shift (%) (excluding MLH 872)				Total change (%) (Excluding diff. shifts in MLH 872)
		Manuf.	Tertiary	Primary	Total	
(a) Greater London	+3.7	+0.0	*-2.4*	+0.0	*-2.3*	*-3.8*
(b) Surrey	+4.1	+0.6	*+4.1*	+0.1	*+4.8*	*+3.6*
East Sussex	+4.0	+0.9	*+2.9*	+0.1	*+3.9*	*+2.7*
West Sussex	+3.9	+1.6	*+2.2*	+0.3	*+4.1*	*+2.8*
Hampshire	+1.7	+0.8	*+5.1*	-0.0	*+5.8*	*+2.3*
Hertfordshire	+1.6	+0.5	*+3.7*	-0.0	*+4.2*	*+0.6*
Oxfordshire	+0.1	+0.9	*+4.8*	-0.0	*+5.6*	*+0.4*
Berkshire	+2.1	+2.4	*+1.8*	-0.2	*+4.0*	*+0.7*
Buckinghamshire	+2.3	+1.6	*+2.0*	+0.0	*+3.6*	*+0.7*
(c) Dorset	+3.0	+1.7	*+0.7*	-0.0	*+2.4*	*+0.2*
Gloucestershire	+1.4	+0.9	*+2.9*	-0.1	*+3.7*	*-0.2*
Devon	+2.0	+2.7	*-0.8*	+0.0	*+1.9*	*-1.4*
Wiltshire	+0.8	-1.3	*+4.5*	+0.2	*+3.4*	*-0.4*
Somerset	+1.3	+1.2	*+0.6*	+0.2	*+2.1*	*-2.0*
Avon	+3.0	+0.1	*-0.8*	+0.2	*-0.4*	*-2.6*
(d) Cambridgeshire	-1.1	+4.7	*+0.3*	-0.1	*+4.9*	*-1.4*
Suffolk	+0.9	+0.8	*+1.1*	-0.3	*+1.7*	*-2.7*
Kent	+1.0	-0.1	*+1.8*	-0.1	*+1.5*	*-2.7*
Norfolk	+1.8	+0.6	*+1.0*	-0.6	*+1.1*	*-2.4*
Lincolnshire	+1.4	+0.0	*+0.3*	+0.2	*+0.5*	*-3.4*
Essex	+0.6	-0.5	*+1.4*	-0.1	*+0.8*	*-4.0*

Source: Based on Tables 8.7 and 8.15. Unitalicised figures are those presented in Table 8.7 ; italicised figures are "hypothetical".

Table 8.23 Employment Change in the South of England, 1971-81

County	Group in Table 8.7	Employment change (% per annum) (1) 1971-78	(2) 1973-77 (recession)	(3) 1978-81 (pre-slump and slump)	(4) Change between 1973-77 and 1978-81 (3)-(2)
(a) Greater London	(3a)	-1.03	-1.49	-1.15	+0.34
(b) Buckinghamshire	(5ac)	+3.19	+2.52	+1.46	-1.06
Surrey	(5ac)	+0.52	+0.26	+1.23	+0.97
East Sussex	(5ac)	+0.64	-0.23	+0.97	+1.26
West Sussex	(5ac)	+2.17	+1.65	+0.88	-0.77
Hampshire	(5ac)	+1.71	+0.89	+0.87	-0.02
Cambridgeshire	(5ab)	+1.73	+1.28	+0.33	-0.95
Hertfordshire	(5ab)	+1.01	+0.61	+0.26	-0.35
Oxfordshire	(5ab)	+0.18	-1.49	+0.23	+1.72
(c) Berkshire	($5aa_1$)	+2.26	+2.04	-0.06	-2.10
Dorset	($5aa_1$)	+1.69	+1.07	-0.10	-1.17
Gloucestershire	($5aa_2$)	+1.94	+0.57	-0.12	-0.67
Devon	($5aa_1$)	+1.41	+0.31	-0.20	-0.53
Wiltshire	($5aa_2$)	+1.40	+0.85	-0.21	-1.06
Somerset	($5aa_1$)	+1.32	+0.47	-0.55	-1.02
Avon	(3a)	+0.56	+0.17	-0.97	-1.14
(d) Suffolk	($5aa_2$)	+1.67	+1.05	-0.62	-1.67
Kent	($5aa_2$)	+1.21	+0.99	-0.84	-1.83
Norfolk	(3c)	+1.57	+0.60	-0.98	-1.58
Lincolnshire	(3c)	+1.43	+1.10	-1.25	-2.35
Essex	(3c)	+1.05	+0.46	-1.49	-1.95
Group averages (weighted):					
(a) Greater London		-1.03	-1.49	-1.15	+0.34
(b) Commuter belt		+1.32	+0.67	+0.77	+0.10
(c) Western fringes		+1.45	+0.76	-0.38	-1.14
(d) Eastern fringes		+1.30	+0.80	-1.06	-1.86
UK		+0.42	-0.0	-1.34	-1.34

Table 8.23 (cont.)

Source: Annual Census of Employment 1971, 1973, 1977, 1978, 1981. As shown in Table 8.15, figures for employment change in the education sector are to be regarded as highly suspect in Buckinghamshire, Cambridge, Berkshire and Essex. Ignoring differential shifts in MLH 872 in these counties would produce annual rates of employment change between 1978 and 1981 (improvement or deterioration since 1973-77 shown in brackets) as follows: Buckinghamshire, +0.02% (-2.50%); Cambridgeshire, -0.43% (-1.71%); Berkshire, +0.27% (-1.77%); Essex, -1.19% (-1.65%).

Table 8.24 Employment Growth and Decline in London and Surrounds, 1978-81

Zone	Employment (000)		Change	
	1978	1981	(000)	(%)
Central London	1158.6	1147.5	-11.2	-1.0
Inner London	845.9	792.6	-53.3	-6.3
Outer London	1659.3	1588.1	-71.2	-4.3
Inner ring				
North	930.1	907.3	-22.8	-2.5
South	664.1	682.1	+18.0	+2.7
	1594.2	1589.4	-4.8	-0.3
Outer ring				
North	752.3	731.4	-20.8	-2.7
South	849.7	872.3	+22.6	+2.7
	1602.0	1603.7	+1.8	+0.1

Source: Census of Employment, 1978, 1981.

Zones used:

Central London: Amalgamated office areas of Westminster, City of London, Borough, St. Marylebone, Kings Cross

Inner London: ILEA, minus Central London (above)

Outer London: Outer London Education Authorities

Inner ring:

North: Slough, High Wycombe, Watford, St. Albans, Stevenage, Hertford & Harlow, Chelmsford, Southend, Chatham

South: Reading, Aldershot, Guildford, Crawley, Tunbridge Wells, Maidstone

Outer ring:

North: Oxford, Buckingham, Aylesbury, Luton, Milton Keynes, Bedford, Hitchin, Cambridge, Haverhill, Braintree, Colchester, Sheerness, Sittingbourne

South: Newbury, Andover, Basingstoke, Alton, Southampton, Portsmouth, Chichester, Worthing, Brighton, Eastbourne, Hastings, Cranbrook, Ashford

Table 8.25 Employment Growth and Decline in Manufacturing and Services in London and Surrounds, 1978-81

Zone	Manufacturing Employment (000s) 1978	1981	Change (000s)	(%)	Services Employment (000s) 1978	1981	Change (000s)	(%)
Central London	123.4	128.3	+5.0	+4.0	1002.3	991.7	-10.6	-1.1
Inner London	163.5	130.7	-32.8	-20.0	625.5	607.2	-18.3	-2.9
Outer London	482.0	411.5	-70.5	-14.6	1083.3	1081.9	-1.4	-0.1
Inner ring								
North	348.6	302.9	-45.7	-13.1	526.6	549.1	+22.5	+4.3
South	153.7	150.1	-3.6	-2.3	459.1	478.6	+19.5	+4.3
Outer ring								
North	252.8	215.6	-37.2	-14.7	443.6	477.5	+33.9	+7.6
South	232.1	212.9	-19.2	-8.3	551.7	594.0	+42.3	+7.7

Ratio of manufacturing employment to service employment in each zone:

Central London	1:	8.1	Inner ring (North)	1: 1.5
Inner London	1:	3.8	Inner ring (South)	1: 3.0
Outer London	1:	2.2	Outer ring (North)	1: 1.8
Inner ring	1:	2.0	Outer ring (South)	1: 2.4
Outer ring	1:	2.1		
North	1:	1.6		
South	1:	2.6		

Zones as defined in Table 8.24

Table 8.26 Differential Shifts in Employment Change in Scotland 1978-1981

Region		Differential shift 1978-1981 (000s)	(% of 1978 employment)
Grampian	(o)	+16.7	+9.3
Dumfries and Galloway	(r)	+5.8	+11.5
Borders	(r)	+4.9	+12.7
Central	(o)	+4.8	+4.3
Highlands	(r)	+3.9	+5.5
Fife		+3.2	+2.6
Lothian		+3.0	+0.9
Tayside		+1.2	+0.7
Island Areas	(r)	+1.1	+4.4
Strathclyde		-37.3	-3.8
Rest of Scotland		+44.5	
Scotland		+7.2	

Source: Census of Employment (unpublished data).

The structural shift in petroleum and natural gas (MLH 104) in the Grampian region stood at +7,600 (from an employment base of 3,700) representing a further 4.2% of 1978 employment.

Regions marked (o) will have had their employment totals in 1981 boosted by the boom in North Sea oil, while regions marked (r) are highly rural in nature.

Table 8.27 Employment Change in Scottish Rural Region and in Various Combinations of Travel-to-Work Areas in the Rest of Britain, 1978-1981

	Employment (Number) 1978	1981	Change Number	(%)
Borders Region	38329	39840	+1511	+3.9
Dumfries and Galloway Region	50003	53251	+3248	+6.5
Highlands Region	71161	72573	+1412	+2.0
Island Areas	24526	25159	+633	+2.6
"Northumbria" (Berwick, Alnwick, Haltwhistle, Hexham)	29532	29863	+331	+1.1
"Lakes" (Whitehaven, Keswick, Kendal, Penrith)	64181	66076	+1895	+3.0
"Mid West Wales" (Aberystwyth, Lampeter, Machynlleth, Llandeilo, Tywyn)	21269	21687	+418	+2.0
Southern North Yorkshire (Selby, York, Harrogate, Ripon, Malton, Bridlington, Scarborough)	176618	179832	+3214	+1.8
The same, excluding Bridlington and Scarborough	141726	146934	+5208	+3.7

Table 8.28 UK Balance of Payments, 1977-1988

All figures in £ million

Year	Visible trade: Oil	Other raw materials, food	Manufactures	TOTAL	Invisible trade	Current balance
1977	-2774	-5789	+5874	-2324	+2174	-150
1978	-1987	-5091	+5054	-1593	+2557	+964
1979	-737	-5694	+2690	-3398	+2902	-496
1980	+308	-4774	+5450	+1353	+1769	+3122
1981	+3106	-4733	+4575	+3350	+3586	+6936
1982	+4639	-5147	+2279	+2218	+2467	+4685
1983	+6972	-6120	-2361	-1075	+4907	+3832
1984	+6932	-7914	-4054	-4580	+6602	+2022
1985	+8101	-7757	-3121	-2346	+5683	+3337
1986	+4056	-7533	-5710	-8716	+8517	-199
1987	+4184	-7761	-7490	-10162	+7658	-2504
1988(Jan-July)	*+1621*	*n.a.*	*n.a.*	*-11038*	*+3064*	*-7973*

Source: *United Kingdom Balance of Payments 1988 Edition; British Business 2.9.88.*

1988 figures refer only to a 7 month period rather than a twelve month period; grossed up figures would show a balance of visible trade of -£18,900 million per annum, and a current balance of -£13,700 million per annum. If anything, the 1988 figures are slightly worse than this, in that the official series estimates the invisible balance as being £500 million per month from April to July yet in the previous three months the invisible balance averaged only £350 million.

(Since this table was compiled, balance of payments figures for the whole of 1988 have become available, showing a current balance deficit of £14,936m, and a visible balance deficit of £20,557m. 1989 figures are so far worse than 1988 figures.)

Notes to Chapter 8

1. At a late stage of this research, detailed figures for the 1984 Census of Employment will have become available. For reasons of time and space, no close analysis is made of the 1984 Census of Employment, although this is regarded as potentially a useful piece of research work. Table 8.16 summarises total employment change by county between 1978 and 1984.

2. See especially Martin (1982), Gudgin, Moore and Rhodes (1982), Townsend (1983), Regional Studies Association (1983). Gudgin et al used the official quarterly estimates for employment, and official unemployment figures, each published in the *Gazette*, to determine the degree of recession, while Martin (1982) used the redundancy rate as an indicator of the regional severity of recession. Townsend (1983) used a mixture of official redundancy statistics and *Financial Times* reports on named industrial closures or major job loss events. The survey by the Regional Studies Association (1983) provides very little useful empirical material on the geography of slump, confining itself to impressionistic regional surveys and a rather unsystematic use of unemployment figures.

3. These sectoral differences in the degree of accuracy of official employment estimates can present considerable difficulties in interpretation. For example, while early estimates of rates of industrial change by region were later proven to be reasonably accurate, and to identify the correct relative regional rates of change, there appeared to be an outlier in estimated rates of employment change in Scotland which could not be properly explained, it seemed, by any known economic process. Gillespie and Owen (1982a) assumed that this anomalous figure meant that Scotland had escaped relatively lightly from slump, and when the present author (Crouch 1982b) noted the likelihood of a mis-estimation, they insisted that these figures can be taken "as being no less reliable than any other of the Department of Employment's estimates." Yet the divergence between the estimates for Scotland and for all other regions was extremely large, to such an extent that a statistical anomaly was, at the time the only plausible explanation; any researcher exercising any proper caution would recognise this point and would refrain from drawing strong conclusions from a reading which is suspected to be inaccurate. Gillespie and Owen did not observe such caution.

   When Census of Employment figures were finally published, it was conclusively shown that the apparent relative advantage of Scotland in the service sector was indeed fictitious, as Crouch (1982b) had earlier argued. Ironically, though, figures for employment change in the Scottish sector were shown to be reasonably accurate; the estimates for employment in *all* other regions were shown to be major underestimates, though.

   Clearly in many ways this is a minor point, and is resurrected only to bring up a methodological issue, that it is unwise to treat quarterly employment *estimates* as precise enumerations of employment, and doubly unwise to draw strong conclusions *solely* on the basis of such estimates without eliminating the possibility of a substantial data error.

4. *Gazette* 1983 pp.242-244.

5. See also the discussion in Townsend (1986), based on data at the level of the travel-to-work area. It should be added that a minority of the increases registered by Townsend are possibly

spurious, with under-recording of employment in education in 1978 (see Table 8.15) and unannounced boundary changes between travel to work areas being the most frequent problems. For example, Kelso (Borders) showed an increase in employment of 54.4%, while neighbouring Eyemouth showed a decrease of 54.0%; combined Kelso/ Eyemouth figures show a decrease in employment of 8.6%.. An even more serious anomaly, as it concerns larger towns and affects rates of employment change at the county level, is that Hertford showed an increase in employment of 22.2%, while neighbouring Harlow (Essex) showed a decrease of 17.9%; combined figures show a decline of 2.9%.

6. The variety of international experience is perhaps best shown by tabulation of paid employment in non-agricultural activities:

	Employment (million) 1979	1982	Change (%)
(i) Advanced capitalist economies			
USA	89.8	89.6	-0.9
Japan	48.7	50.9	+4.6
UK	*22.8*	*21.1*	*-7.6*
West Germany	24.0	23.8	-1.1
France	17.7	17.8	+0.7
Italy	17.4	18.1	+4.1
Spain	7.6	7.1	-6.3
(ii) Eastern bloc			
USSR	98.8	102.7	+3.0
East Germany	7.4	7.5	+1.6
Czechoslovakia	6.2	6.4	+2.6
(iii) Newly industrialising countries			
South Korea (1980-82)	8.6	9.6	+11.8
Hong Kong	1.9	2.1	+11.6
Singapore	0.8	1.0	+13.7
Philippines	8.8	8.9	+1.0

Source: International Labour Office *Yearbook of Labour Statistics* 1987 pp.438-450.

This list is nowhere near comprehensive, and for slightly different purposes one might wish for figures either for total employment or for manufacturing employment (both available in the ILO *Yearbook*). Industrialisation generally continued at a fast pace in the newly industrialising countries, although the Philippines showed a definite slowing down in non-agricultural employment growth. Employment growth roughly matched population growth in the Eastern bloc.

In the advanced capitalist economies trends were highly divergent. Japan, which can alternatively be regarded as the economically most advanced of the Eastern Asian newly industrialising countries, still increased its industrial employment during the slump, outcompeting Western Europe and North America. Most Western European and North American economies showed stable or slowly

declining non-agricultural employment, this tending to decompose into falling industrial employment and rising service sector employment. It is important to remember that with rising populations, stable employment levels are not sufficient to prevent unemployment from rising.

Two Western European economies had very large drops in employment during the slump, Spain and the UK. In Spain the cyclical downturn in the tourist industry, which also affected demand for new construction, led to shrinkage of employment (-145,000 or -14.0% in construction; -31,000 or -2.0% in trade, restaurants and hotels). To this must be added the effects of industrial recession (416,000 jobs, or 13.6%, lost in manufacturing). All figures relate to 1979-82, and are derived from the ILO *Yearbook*.

The UK was the advanced economy most severely affected by slump, in part because of a poor competitive position before the slump, but perhaps more importantly because of the monetarist policies followed by the new Thatcher Government. All market economies in Europe (except for Portugal, Turkey, Greece, Finland, Iceland and San Marino) showed declines in manufacturing employment between 1979 and 1982, but the decline was much faster in the UK than elsewhere, as the following percentage changes show: UK -18.8%, Spain -13.6%, Belgium -10.3%, Ireland -8.4%, Sweden -7.8%, France -5.6%, West Germany -5.4%, Netherlands -5.2%, Austria -4.2%, Italy -2.5%, Switzerland -1.0%, Portugal +1.9%, Turkey +2.4%, Finland +2.5%, Greece +2.8%. The UK lost almost as many industrial jobs during the slump as the rest of Europe put together; the "Thatcher effect" is highly conspicuous.

7. Raw averages if numerical shifts are totalled, weighted averages if, as in Table 8.3, shifts are measured as a percentage of the local employment base.

8. Many attempts have been made in the social sciences to create a positivist social science, with emphasis on collecting quantifiable information, in alliance with a hypothesis testing approach. Arguments for, and critiques of, positivism are familiar territory to those acquainted with such disciplines as sociology (see especially Keat and Urry 1982) and human geography (see especially Gregory 1978). This debate is conducted on different terms in economics, where empirical neo-classical economics has been conducted on "positivist" lines before such methods ever became fashionable in most other social sciences; indeed neo-classical economics is, to many, perhaps most, positivist social scientists, the high point of social science. The basic objective of such approaches is the generation of law-like statements, whether through empirical work backed up by formal hypothesis testing or through deductive work. Little attention is paid, in the positivist orthodoxy, to explaining individual events except insofar as they can be subsumed under more general laws. For such an approach to work, background conditions need to be taken as stable.

Two propositions may be advanced; firstly that historical human societies are never stable but always in a state of flux, and secondly that it suits existing power structures to regard human societies as inherently stable, so that any disturbance within society can be regarded as basically unimportant. One can add a third proposition that although nature changes the laws of nature do not (whereas both society and the laws of society change). Insofar as social science is coopted by the powers that be, it is not surprising that a methodology should be developed for the social sciences on the basis of a rather restricted version of the methodology of the natural sciences, and that this methodology

should show both an ideological bias (when applied to the social sciences), and be incompetent to explain scientifically much that is happening in society. In economics, for example, the attempt to fit everything into a full employment equilibrium framework (a stable society) has seriously retarded scientific progress in the subject, while leaving ideological functions intact. The point being made in the text is that when the results of a shift-share analysis show economic instability, then that is the result of instability in the economic system and not, as suggested by Richardson (1968), of defects in the shift-share method.

9. For example Fothergill and Gudgin (1979b, 1982), Keeble (1980 p.962).

10. See chapter 6 above, also the discussion in section 8.5 below. For Glasgow see also Lever and Mather (1986), where it is emphasised that on a sector by sector basis Glasgow has for a long period had a rate of job loss considerably higher than the national average. For a discussion of Tyne and Wear, see Robinson, Wren and Goddard (1986 pp.4-25). For discussions of North East England, the industrial region of which Tyne and Wear is the dominant conurbation, see especially Hudson (1983, 1986), also Buswell, Champion and Townsend (1987).

11. Woollen and worsted (MLH 414) and men's and boys' tailored outerwear (MLH 442) accounted for 62% of the net structural shift in West Yorkshire between 1978 and 1981.

12. For Merseyside, see for example Townsend (1983 pp.94-96), Merseyside Socialist Research Group (1980). Section 8.5 argues that in many respects the severity of the problems that Merseyside faced were due not so much to Merseyside being a conurbation, but rather to Merseyside being a branch plant economy at the scale of the conurbation.

13. See Weber (1929 pp.124-174), and note 35 below.

14. See chapter 9 below. One point which needs emphasis is that while the peripheral cities were centres of rapid population and employment growth in the 19th century, they did not fully achieve the core status of London, core status being defined in terms of the power of the commercial and financial sector. While such cities as, for example, Liverpool often became powerful financial centres, they were outcompeted in time by the even more powerful London financial centre. Thus in the 19th century an important process was the growth of the great industrial cities, while in the 20th century the functional peripheralisation of the great industrial cities has been a serious problem.

15. See especially the discussion of the urban-rural shift in Fothergill and Gudgin (1982). Large parts of this chapter and of chapter 6 above may be taken as a running critique of Fothergill and Gudgin's work. This is not because the author thinks that Fothergill and Gudgin (1982) is a bad work; on the contrary, it is considered here to be in many respects possibly the best work on the British regional economy published during the years in which this thesis was prepared, presenting a clear case, making good use of official published statistics and setting out the arguments in such a way as to be potentially refutable. Fothergill and Gudgin raised genuinely new issues, and even if detailed examination of statistical material shows several weaknesses in their results and conclusions, at least the material is set out in such a way that constructive

debate is possible.

Fothergill and Gudgin draw attention to the urban-rural shift in manufacturing industry, the tendency in the late 20th century for manufacturing industry to drift away from old city-based locations as new investment takes place preferentially on less congested greenfield sites in small towns or semi-rural locations. They suggest also that the urban-rural shift has *dominated* spatial patterns of employment change, with core-periphery distinctions being relatively slight. It is on this particular point that the author parts company with Fothergill and Gudgin; the urban-rural shift is held to exist, but not to be dominant. In the context of the 1980s especially, and also in the late 1960s and 1970s, the geography of recession would appear to be dominant, with the critical conditions being which industries declined where, when and why. An important point being made in the text is that in many cases the big city locations show high rates of job loss through reasons which cannot be interpreted in terms of an urban-rural shift, notably the decline of traditional city based industries, e.g. textiles and clothing in West Yorkshire. Furthermore, if one goes back to the years of full employment before 1966, regional patterns of employment change were dominated by the North-South divide; many of the more rural areas of Southern England expanded their employment base as the London economy spread on to "green fields", yet less urbanised areas of the periphery often showed very limited employment growth (Table 5.7). One cannot say therefore that the urban-rural shift dominated employment trends in the long boom.

Fothergill and Gudgin's work is based primarily on the experience of the 1970s when it began to appear, as London's employment base declined rapidly and the West Midlands conurbation was hit by recession and industrial restructuring, that there was some degree of convergence at the North-South scale, and that the main spatial economic problems were occurring at the urban scale. This "convergence", as chapter 6 emphasises, was a temporary conjunction of events relying on such contingencies as a slowing down of employment decline in coal mining, high land prices in London, the decentralisation of the car industry and the continuation of regional policy. Furthermore, loosely urbanised counties in the periphery (e.g. Durham, Northumberland) were often more severely hit by the 1974-76 recession than the conurbations (e.g. Tyne and Wear). The hypothesis of the urban-rural shift might appear to cover much of the pattern of change at a very broad scale, yet there are far too many anomalies at a more detailed scale for the thesis of the dominance of the urban-rural shift to be acceptable.

What remains is that the urban-rural shift is important in some cases, but definitely should not be overestimated or ignored. Certainly there is a general tendency in Table 8.7 for differential shifts in peripheral counties to be negatively related to the degree of urbanisation, but this is a relatively minor factor in the geography of employment change. Both the presence or absence of vulnerable industries, and the core or peripheral location of a particular county are shown in this chapter to be more important determinants.

16. "East Suffolk" is taken as being comprised of Beccles, Halesworth, Ipswich, Leiston and Lowestoft travel to work areas; "West Suffolk" is taken as being comprised of Bury St. Edmunds, Haverhill, Newmarket and Sudbury travel to work areas.

17. See chapter 6.7 above.

18. This was the impression drawn during the early part of the analysis. Later writing (section 8.6(c) below) suggests that employment trends in Hereford and Worcester were boosted by suburbanisation from Birmingham. Kidderminster showed a decline in employment of 8.8%, largely as a result of problems faced by the carpet industry, but Redditch increased its employment by 2.0%. In general, the Worcester part of Hereford and Worcester showed stable or increasing employment (Redditch, as above; Worcester -0.3%; Evesham +7.2%), in line with Warwickshire, where the net employment decline registered relates solely to those parts of the Coventry travel to work area outside the metropolitan county. In contrast, the more remote Hereford part of the county showed employment decline (e.g. Hereford -2.9%, Leominster -7.8%; Ross on Wye -2.9%).

There were definite signs that even during the slump the West Midlands conurbation was expanding towards a southern "suburban" belt (see also note 38). This suburbanisation was far more prominent to the south and east of Birmingham than to the north and west primarily because the main national growth zones were to the south and east of Birmingham, and economic activity tends to orientate itself towards the growth areas.

19. As pointed out in chapter 7, note 42, this present analysis concerns itself only with the employment effects of steel closure and does not address the question of whether or not the policies being followed by the British Steel Corporation in the early 1980s were irrational, as suggested by Bryer, Brignall and Maunders (1982). It might well be the case that job losses in steel were, with respect to what was economically required, excessive. The present analysis, though, takes place on a different scale, looking at the economic effects of job losses in steel rather than the causes.

20. Job losses as a result of multiplier effects of employment decline in iron and steel, amounting to perhaps a third of the job losses in iron and steel, are incorporated into the figures for "all other sectors". In that the rate of job loss in iron and steel was about twice the average for manufacturing industry, an excess of job loss results in "all other sectors" (when compared with the situation in which steel is "replaced" with an "average" industry) of about one sixth of the total job loss in iron and steel, or about one eighteenth of the 1978 level of employment in iron and steel. This excess figure approximates to the national average rate of job loss (-5.2%).

21. In September 1981, with unemployment nationally standing at 12.4%, unemployment in Cleveland stood at 19.2%, slightly lower than the 19.8% recorded in Northern Ireland, but higher than the 18.6% of Merseyside, 17.9% of Clwyd, 17.1% of Strathclyde, 16.9% of Mid Glamorgan, etc. Of other British counties, only the Western Isles, with a size of workforce too low to make statistically meaningful comparisons, had a slightly higher rate of unemployment (20.7%).

Cleveland's unemployment problems persisted after the slump. The massaged figures for May 1988 (see chapter 7 note 84) still show an unemployment rate in Cleveland of 17.4%, compared with 19.0% in Northern Ireland, 17.9% in Merseyside, 15.9% in Strathclyde, 15.6% in Mid Glamorgan, 15.3% in South Yorkshire and 15.2% in Tyne and Wear. These figures exclude the self-employed and HM Forces from the base, unlike the national figures.

The stickiness of unemployment in Northern Ireland, and in some of the main industrial cities of Northern England, and in much

of South Wales, is the most discouraging feature of the labour economy in the last few years. Not only have these areas been severely hit by the deep recessions of the late 1970s and early 1980s, they have also been passed over by the subsequent recovery. One should not be misled by a few new city centre office blocks and shopping centres into imagining that there has been an economic renaissance in the industrial areas.

How should the severe problems of the depressed industrial cities and regions in the late 1980s and 1990s be tackled?

First and foremost, the dangerously lopsided economic policies followed by the Thatcher Government need to be reversed. In essence, the Government has in the last few years consistently followed a policy of restructuring the economy in favour of City interests, and in favour of the very wealthy, and has used the windfall of North Sea oil to cover the costs to the rest of the economy of this restructuring (section 8.10). No real attention, as opposed to cosmetic attention, has been given to rebuilding the industrial base, the general policy in the last few years having been to let industry find its "natural" levels of output and employment in the context of an economy in which production is no longer regarded as being of primary importance. The costs of such policies outweigh the benefits, and the costs are reflected in such features as continued mass unemployment in the North and a growingly acute balance of payments problems as a result of continued deindustrialisation, and despite historically very high surpluses in invisibles, and despite North Sea oil.

This reversal of national economic policies is essential if the industrial areas are to revive, and indeed if Britain is ever again to be able to class herself as a major industrial nation. The question of more explicitly spatial policies is more difficult. However a second priority would seem to be a radical restructuring of the space economy of the large regions. If unemployment rates are *persistently* high in the large industrial conurbations, there is an implication that the size of population of these conurbations needs to be scaled down to a more sustainable level. Certainly there is little evidence so far that conurbations are fruitful places to expand employment, the dominant evidence being that job creation is more effective in areas of medium urbanisation. In the long term a policy of encouraging vigorous growth in the medium sized and well situated towns of industrial regions seems to be most appropriate (note 67 below).

In the short term, however, unemployment at the local level in the big cities will still be severe. To deal with this, local authorities will need to be given encouragement, including financial encouragement, to engage in the process of job creation and training, whether directly or indirectly through investment in firms. A strengthening of the powers of local authorities is thus seen as important.

The persistence of extremely high unemployment rates in Northern Ireland, on Merseyside and on Clydeside, along the North East Coast and in South Wales is a major national problem, and indeed a national scandal in that nothing has been done about it in *six* years of economic upswing. One is aware of course that the policies suggested run completely contrary to those which have been adopted, and those which would even be contemplated by a Government of the present political hue, but this is not a retreat into impracticability, but rather an assertion that the Government's policies are a major part of the problem, not a part of the solution.

22. See discussion in chapter 7.3.

23. The possibility of data inaccuracies always needs to be borne in mind. Two main general problems may be noted, the possible reclassification of establishments from one minimum list heading to another (sometimes, but not always, reflecting a genuine change of activity, or a switch in the balance of activity in a complex plant), and various minor and unnotified geographical boundary changes. Clear instances of both types of inconsistency have been detected and noted in the text. Often industries which are vaguely described ("other ...", "industrial engines" etc.) are the most liable to reclassification.

There are also problems to be found within particular sectors. It is not totally clear why figures for education (MLH 872) should be so erratic (see Table 8.15); under-recording is common, though. There is some lesser degree of suspicion, also, about some of the figures recorded in the construction industry; the presence of many small firms, and the high degree of self-employment in the industry, can cause problems for any Census. It might well be that, in the case cited in the main text, the rate of job loss in construction in Cleveland was substantially less than actually stated; this is not, however, clear and the evidence is certainly not strong enough to justify immediately rejecting the Census of Employment result.

24. There would seem to be a general principle that the greater the degree of the geographical concentration of production, the greater the degree of rationalisation of production that is possible. The instances noted in the text refer to the activities of large firms which dominate production in particular centres; it may also happen, though, that a traditional specialised industrial economy dominated by small producers may be rationalised through a series of takeovers. Thus, of the longer term trends leading up to the very heavy job losses of the late 1970s, Townsend (1983 p.111) notes that "led by Courtaulds, Tootal, Carrington-Viyella and Vantona large corporations had bought out, rationalised and re-equipped most of the traditional cotton mills of Greater Manchester and Lancashire, and the rationalisation was now intensified."

A thinly disguised account of the events leading up to the establishment of one of the major chemicals works in Cleveland (ICI, Wilton) is presented in Luttrell (1962 vol 2, pp.626-635), as part of the most detailed existing study of industrial relocation in Britain during the long boom. Luttrell emphasises the many locational advantages of the Teesside area, in terms both of physical setting and resource availability, and also in terms of Government assistance through regional policy, and labour availability. A very large and capital-intensive complex soon developed, and while numerous jobs were created in the industry, the high existing degree of capital intensity in itself encouraged further rounds of increased capital intensification to maximise the competitive advantages of a large, complex, multifunctional site. In such conditions jobs can be lost on a large scale during any economic downturn, despite high productivity.

25. These difficulties, related in part to the earlier over-fishing of the North Sea and the resulting strict EEC quota system, may be seen more directly in the employment figures for MLH 003, fishing. In Humberside 800 jobs (28.9%) were lost in this sector in addition to the 2,100 jobs lost in MLH 214 (fish products, bacon curing and meat products). In the Grampian region 500 jobs (34.8%) were lost in fishing and 2,400 jobs (33.1%) lost in MLH 214. It is

regarded as no coincidence that Britain's two main fishing centres should show large negative differential shifts in MLH 214.

26. In the early 1980s South Yorkshire County Council and Sheffield City Council were quite prominent in such matters as campaigning against Government economic policies, setting up new public sector employment (through for example the expansion of public transport, operating with a cheap fares policy) to counteract some of the effects of industrial job loss, initiating along with some other Labour councils local assistance for industry along enterprise board principles, and so on. Such initiatives gained media attention; see also Chandler and Lawless (1985).

In view of the comments made in note 33, though, the possibility needs to be borne in mind that the apparent increase of employment in local government services (MLH 906) might be spurious. Yet even in making such a judgment, there is the complicating factor that a *large* increase in measured employment in a particular sector is more likely to be the result of a moderate genuine increase plus a spurious increase than the result of a genuine decrease plus a spurious increase; if the *genuine* trend is downwards, spurious increases, unless exceptionally large, would tend to be represented by a modest measured increase which ironically might well not arouse suspicion, rather than a large increase.

For the record, South Yorkshire showed an increase in employment of 3,400 (23.7%) in local government, while all other counties in Yorkshire and Humberside showed decreases of over 10%. The magnitudes involved would appear to suggest *both* misenumeration and local policy effects.

27. See notes 28 and 30.

An important distinction needs to be drawn between *multiplier* effects and *linkage* effects. Linkage effects refer to reduced expenditure by the declining industry on the products of other local industries (components, machinery, etc.), and may well lead to further *industrial* job loss. Multiplier effects refer basically to reduced spending in the local economy due to a reduction in wages, with the effects being mainly felt in the service sector. The practice being followed here is to attempt to exclude linkage effects from multiplier calculations; any multiplier figure which includes linkage effects is likely to be somewhat higher.

28. See also Kahn (1984 pp.91-104). The context in which Kahn's 1931 paper was written was of course one of slump and mass unemployment, with Kahn trying to place on a more theoretical footing the question of whether the Government, through a public works programme, could successfully intervene in the economy to reduce unemployment, and whether any increases in employment through a public works programme would be equilibriated out of existence (by investment simply being transferred from the public sector to the private sector), or whether such increases in employment would be *multiplied* as a result of the additional expenditure generated by additional primary employment. Kahn argued, on macroeconomic grounds, that "with the building of roads, funds are released from various sources at precisely the rate that is required to pay the cost of the roads" (Kahn 1931 p.174), thus that the total fund available for investment is flexible, not fixed (indeed, how otherwise could one comprehend fluctuations in investment through the business cycle?), and that the multiplier effect is therefore dominant.

Kahn suggested a multiplier of about 1½ (primary plus secondary changes in employment divided by primary changes), and that if anything the multiplier was likely to be higher than this, rather than lower. This is a rather higher figure than the value of 1.3 to 1.5 given in the current text, but it must be emphasised that the present work is using a much wider definition of primary employment change (total industrial employment change) than Kahn was using (employment resulting directly from a particular investment decision). The wide and the narrow concepts of primary employment change are both relevant, but to slightly different sets of problems.

29. Care must be taken to avoid too rigid a use of such terms as first round effects, second round effects, etc. It is easy, but somewhat misleading, to envisage a situation in which a short term multiplier of (1 + 1/K) is converted to a long term multiplier of (1 + 1/(K-1)), as follows (for K=4)

Round	0	1	2	3
Jobs lost (as fraction of primary losses)	1	$\frac{1}{4}$	$\frac{1}{16}$	$\frac{1}{64}$

with job losses totalling $1\frac{1}{3}$ the primary losses. The point is that by redefining the "length of the round" one changes the value of the final long term multiplier. If for example rounds 1 and 2 together are treated as the first round, with a job loss of 5/16 of the primary job loss, the long term multiplier would be calculated as $1\frac{5}{11}$ rather than $1\frac{1}{3}$.

The time profile of induced job losses following a primary job loss event is unclear, and undoubtedly further detailed research is desirable. This topic has some interest for business cycle analysis. The implication of lagged multipliers is that the rate of growth of consumer demand is likely to be below average for a period subsequent to major industrial job losses, affecting, at the national scale, both industries and services. These secondary depressive effects imply a delay to any cyclical recovery following major job losses, and indeed it is arguably only after the "secondary recession" is out of the way that a firm cyclical upturn is possible.

30. According to Brownrigg (1980 p.205) a downward multiplier value of 2.0 is routinely used in consultancy and planning estimates of decline. One would expect any bias to be towards an overestimate, in that it is prudent to plan for the worst case, rather than to find that secondary employment decline is significantly worse than had been anticipated. Retrospective analysis indicates a rather lower figure for the downward multiplier; in slump-based analysis, for example, a multiplier between 1.2 and 1.5 has been suggested in a 1983 Cleveland County Council report (cited in Hudson, Peck and Sadler 1985 pp.103, 115), following the decline of the steel industry. A similar 1984 study in Barnsley (cited in Hudson et al, p.115) suggested a multiplier of 1.21. These are broadly in line with the current findings.

Hudson, Peck and Sadler (1985), in estimating likely multiplier effects of projected job losses in coal mining in Easington, County Durham, suggest a much higher multiplier, more in line with the estimates cited by Brownrigg. The methods they use to estimate the multiplier are highly unreliable; they simply compare increases in unemployment in service industries with increases in unemployment in non-service industries (Hudson et al 1985 pp.114-115). This raises a number of methodological difficulties, not least the problem of inferring changes in employment from

changes in unemployment. No attempt is made to look more directly at changes in employment, and hence no particular credence should be given to this higher estimate (about 1.8) for the income multiplier.

Brown (1972 pp.190-192) suggests a radical difference between the values of the short-term multiplier, calculated on the basis of changes in money flow, and the long-term multiplier, calculated on the basis of longer-term changes in regional employment structure. A value of about 1.2 is indicated for the short term multiplier, and a value of about 1.8 is indicated for the long term multiplier. In calculating the long-term multiplier, Brown's basic procedure was to calculate employment change between 1921 and 1961 in service industries and in non-service industries, and expressing these as a percentage of 1921 *total* employment. From these a scatter diagram may be produced, the slope of the best fit line (which fits the data reasonably closely) indicating a multiplier of about 1.8. The method used by Brown for calculating the long term multiplier closely resembles that used in the text to calculate base-service multipliers for the period 1978-1981, yet the results differ considerably. Obviously not all the indirect effects of slump-based industrial job loss would have been felt by September 1981, and yet by the same token one might expect that longer term multiplier effects of the 1974-76 recession, and maybe even of earlier recessions, would still be working themselves out during the slump. This would especially be the case if, as suggested by Brown, there is a major difference between the short-term multiplier and the long-term multiplier. The argument in the text is that the calculated multiplier value of about 1.3 is not far short of the ultimate multiplier value, the only basic reason why it falls short being that because the slump was so much more severe than earlier recessions, the "unfinished" job losses resulting from multiplier effects for job losses in the slump are greater than job losses resulting from longer term multiplier effects derived from earlier recessions. Such effects would not seem to be sufficient to explain a gap between multipliers of 1.3 and 1.8.

A more subtle possibility is that spatial patterns of service sector employment change in any cyclical upswing reflect not only differential patterns of basic employment growth in the upswing, but also, and strongly, the patterns of relative prosperity established in the immediately preceding recession, and in earlier recessions. Such a process would be one of equilibriation, rather than one of direct causation. If a value of 1.3 represented the final value of the multiplier then this would imply sharp *increases* in the proportion of the population engaged in manufacturing in the more prosperous regions, and sharp decreases in the less prosperous regions; this polarisation does not seem to happen. One possibility that needs to be noted is a regionally differentiated Engel curve effect in which as incomes rise there is a short-term cross-sectional tendency for the proportion of expenditure on services to rise faster in high income, high growth regions, than in low income, low growth regions. This implies that service sector growth tends to be, in relative terms, attracted to prosperous regions and repelled from depressed regions during any cyclical upswing. It is possible that the difference between the short term multiplier and the "long term" multiplier thus chiefly lies in differential employment change during a cyclical upswing; a closer study of structures of employment change in a cyclical upswing following a deep recession would appear to be desirable.

31. These are net changes rather than gross changes, and various filtering processes will take place within the local labour market. Furthermore, it is not certain how stable this relationship, deduced from Table 7.3 for a slump period, is for a non-slump recession. It has already been pointed out in earlier chapters that during cyclical upswings migration patterns respond more to shortages of labour in more prosperous regions than to levels of residual unemployment in less prosperous regions; during recessions the relationships are less clear.

Given the indirect evidence on workforce migration in Table 7.3, and the evidence of multiplier effects in the text, the local labour market effects of a large job loss event in an industrial area may be summarised by a hypothetical example:

Jobs Lost:	3,000	as direct result of redundancies, closure, etc.
	+1,000	as indirect result, with 800 jobs lost as a result of the industry-service multiplier, and perhaps 200 industrial jobs (depending on the strength of local linkages of the firm responsible for the primary job losses) also disappearing.
	4,000	
Labour market results:	2,000	increase in unemployment
	2,000	net migration as result of job losses
	4,000	

Thus local increases in unemployment as a result of a major job loss decision in recession will tend to settle at about 2/3 of the number of primary jobs lost, while unemployment in the "rest of the economy" will tend to increase by about the same amount, if the experience of the early 1980s is to be taken as representative. In applying this result to a specific local situation it has to be remembered that unemployment may increase as a result of factors unconnected with the major job loss decision (e.g. the demographic influx of new entrants to the labour force, *independent* factory closures) so that the ratio of *total* local increases in unemployment to jobs lost in a single major event will tend to be rather higher than 2/3.

As illustrations consider the local labour markets of Shotton, Corby and Consett (see also Table 7.5). In Corby, unemployment stood at 2,088 in December 1979, 6,895 in September 1981 and 6,714 in September 1982, an increase in unemployment of approximately 4,700. Job losses in the steel industry totalled 6,500. In Consett unemployment about 5,000 jobs were lost through the closures of the British Steel works and the Ransome Hoffman Pollard factory, while unemployment increased by about 5,000. In Shotton unemployment increased by about 6,000, with job losses in steel making standing at about 8,500. In each of these relatively isolated "small town" travel to work areas, steel job losses and associated multiplier effects are primarily but not wholly responsible for the large increases in unemployment. The 2/3 ratio seems to hold reasonably well, though, at least as a rule of thumb.

The *timing* of the relevant labour market changes presents complications. In the early stages a mass redundancy might even boost the local service sector as redundancy money becomes readily

spent, so that there is a time lag before downward multiplier effects start to operate. Migration is a prolonged process, certainly not instantaneous, so various time lags are involved here as well. Since the downward effects on unemployment as a result of migration are perhaps twice as great as the upward effects on unemployment as a result of multiplier effects, the most likely occurrence is that unemployment will reach an early peak as a result of job loss, then settle downwards slightly. Clearly, at a time of recession, independent events could raise unemployment again, while any time "banding" of multiplier effects may also cause secondary rises in unemployment.

The overall conclusion, that the effects of multipliers on the unemployment rate are smaller than the effects of outward migration following a major job loss, is perhaps of considerable importance in attempting to predict how local labour markets will behave at a time of recession.

32. It is not clear whether the effects of selective migration on the multiplier have been properly considered. As a first approximation, the change in direct income resulting from a major job loss event will not be $E(w-b)$ (change in employment multiplied by the gap between take-home wages and benefit), but rather $E(w-(1-m)b)$, where m is the increment to outward net migration, as a proportion of the number of jobs lost, resulting from a major job loss event. The value of m depends on general labour market conditions; note 31 above implies a value of perhaps ½.

The effects of housing market changes on local income and the value of the multiplier are complex. Insofar as rent is paid locally, depressions in the level of rent have no overall effect on local income; if a worker's take-home pay is expressed as $d + r$ (where d stands for disposable income, thus take-home pay minus rent, and r stands for rent), and if $d + r$ is regarded as fixed, then a change in r will affect merely the distribution of income between landlord and tenant, not the total local income. The loss of rent through people moving away from the area is covered in w above, it being assumed that rent is paid out of current income rather than savings, while any housing benefits paid to unemployed workers are covered in b above, unless housing benefits are paid out of the *local* tax base. In the owner-occupied sector, the implications of major localised job losses are complex. Clearly such job losses will tend to depress house prices, and to the extent to which the expenditure of owner occupiers relates to the value of capital assets as well as to current income this will depress local expenditure. Yet there are also ways in which a local depression in house prices can actually *increase* local expenditure, especially if it should be the case that a slack demand for local housing merely increases the time it takes for occupied property to be sold, rather than leads to an increase in empty property. Thus if an emigrant sells at a depressed price and buys somewhere else at a non-depressed price, this will tend to reduce non-housing expenditure in the recipient area, while if an incomer sells at a non-depressed price and buys at a depressed price, this will tend to increase non-housing expenditure in the local area.

All this shows that the ramifications of job loss and migration on the local economy are complex.

A final point needs to be added. It is perhaps slightly unfair to Brownrigg (1980) to imply that he *completely* neglected the question of migration, as a close reading of his text shows that the matter is considered briefly in a footnote (Brownrigg 1980 pp.209-210), with Brownrigg acknowledging that migration effects

will tend to increase the value of the multiplier. Evidently though Brownrigg assumes the effects to be relatively small, insufficient to overturn his conclusions that employment multiplier effects are much smaller than is generally allowed for. This represents, it would seem, another case of an academic writer underestimating the significance of net migration flows in labour market analysis; see Green, Owen et al (1986) for another example, with Gordon (1986) providing a relevant critical comment. It cannot be emphasised too strongly that while *net* migration flows are small in relation to the total population they are large in relation to unemployment levels or to changes in employment, and are highly sensitive to labour market changes. Migration is not an optional extra, but is a very important component of the labour market response to primary employment change, and affects both employment and unemployment levels.

33. It appears, on further checking, that the claim in the text, while still being plausible, is not fully substantiable from Census of Employment data, in that there are some considerable erratics in figures for employment in national and local government service, with Shotton showing an apparent employment increase of 57%, and employment decreases of 55% and 31% being shown in Corby and Ebbw Vale respectively. At the time of writing the main text, the author had to hand only the figures for steel towns in the Northern region and Yorkshire and Humberside, and these indeed show consistent negative differential shifts (although in retrospect figures for Scunthorpe may be seen as anomalous). Despite first impressions, therefore, it has not been *conclusively* shown that in the cases being considered major job loss depresses employment in the public services (supply effects), rather than increases such employment (demand effects). The balance of probabilities would suggest, however, that the supply side effects dominate, though a closer examination is required.

In contrast with education, it is noticeable that anomalies in employment figures for national and local government are often conspicuous at the level of the travel to work area, but relatively inconspicuous at the county level. This might possibly be held to imply that some of the anomalies may have arisen from inconsistencies in the enumeration of county council activity across district council boundaries.

34. Annual estimates of population in each local authority area in England and Wales, updated to take account of the 1981 Census, have been published in *OPCS Monitor PP1 84/2* (March 1984), and updated in the annual *Population and Vital Statistics*. It is noticeable that major conurbations had both declining employment (chapter 6) and declining population in the 1970s, while other declining industrial areas (e.g. Cleveland) had stable population levels.

Between 1973 and 1978 population declined, according to the estimates, by 5.6% in Greater London, by 3.0% in the West Midlands Metropolitan County, by 0.7% in West Yorkshire, by 0.8% in South Yorkshire, by 2.6% in Greater Manchester, by 4.3% in Merseyside and by 2.3% in Tyne and Wear. Faster rates of decline can be measured in the major cities of each conurbation, e.g. 7.7% in Liverpool and 9.2% in Manchester. Undoubtedly these falling population figures reflect declining employment opportunities, including declining opportunities in the local service sector as a result of downward multipliers. The declining *population* figures though themselves imply a further period of relative decline in the local service sector, going beyond the immediate multiplier effect. To attempt to measure such effects, given the complexity of leads and lags and cyclical

movements involved, would be a complicated task.

35. The classic theoretical outline of 19th century agglomeration is Weber (1909/1929). Weber notes firstly that technical factors (notably the locations of raw materials and markets) delimit the feasible locations for production, and secondly that once the original locational framework has been developed, economic activity will tend to agglomerate in specified centres where a high level of economic activity is already taking place, thus facilitating new economic activity. Hence industrialisation and urbanisation were, in the 19th century, complementary processes. Indeed Weber in his introduction (pp.2-3) clearly indicates his intention to relate urbanisation to the geography of production.

Moving on to late 20th century conditions, industrial employment in major urban areas in advanced industrial economies has shown a marked industrial decline. How should this be conceptualised? Weber notes (pp.131-134) the possibility of "deglomeration" in which increased land costs make production more expensive for certain producers inside the agglomeration economy than outside. One can identify an urban-rural shift when deglomerative diseconomies for the city as a whole exceed agglomeration economies; indeed if the opportunity cost of producing in a congested city location rather than an open greenfield location is taken into account, the analysis of Fothergill and Gudgin (1982) follows Weber in important respects. Undoubtedly deglomeration effects are important in several instances, although the conclusion of the present author is that they are not as dominant as Fothergill and Gudgin suppose. What is involved is, in many cases, the geography of recession rather than the geography of deglomeration; older urban based industries decay under intensifying economic pressure, rather than decamp.

36. There may of course by significant exceptions in the short run, for example the high rates of job loss in electrical engineering in 1974-76, largely as a result of the "global shift" (Dicken 1986) of assembly production to low wage countries (chapter 6.7(i) above), and the high rates of job loss in the vehicles industry, largely as a result of competitive weakness, during the slump. During most recessions, including the slump, job losses tend to be faster overall in "old" industries (e.g. textiles, coal, iron and steel) than in "new" industries (e.g. electrical engineering).

37. A much more detailed account of recession and slump in the West Midlands conurbation is presented in Spencer et al (1986 especially pp.52-112). Emphasis there was placed on the relatively narrow range of industries and the high concentration of control of the local industrial economy by a relatively few corporations, most of which were in economic difficulties by the late 1970s. Added to the problem was the high degree of interlinkage between the industrial sectors of the West Midlands economy such that if there is a strong recession in the "downstream" part of the industrial economy, in this case vehicles, problems were created "upstream" (Spencer et al 1986, p.56). British Leyland was by this time in severe financial difficulties, with various rescue plans already having been undertaken in the 1970s and various rationalisation decisions being by 1979 imminent (Bhaskar 1979 pp.161-203).

The shift-share analysis presented in Spencer et al (1986 pp.59-62) is puzzling in that the results do not correspond with those in the present text, based on the NOMIS system, and using a Minimum List Heading disaggregation. Figures for employment change are identical, but the Spencer et al study indicates far greater

negative differential shifts, both in manufacturing (-42,300 compared with -13,000) and in total (-54,400 compared with -16,800) than does the present study. The difference is that the University of Birmingham study has conducted a shift share analysis on the basis of SIC *Orders* rather than Minimum List Headings. That this apparently trivial distinction can make a major difference can be shown by considering the vehicles sector:

	Differential shift on Order basis	Differential shift on MLH basis
380 Wheeled tractor manuf.	-5,200	-2,200
381 Motor vehicle manuf.	-8,200	+100
382 Motor cycle, pedal cycle, manuf.	-1,100	-700
383 Aerospace	+200	-3,800
384 Locomotive and railway track eq.	-100	-100
385 Railway carriages, etc.	+600	+200
	-13,800	-6,500

Conducting a shift-share analysis on an SIC Order basis ignores the point that the West Midlands not only has a high concentration of employment in the vehicles industry, it also has a high concentration of employment in the *more vulnerable parts* of the vehicle industry. In calculating a shift-share analysis, it is preferable if at all possible to use a fine disaggregation of the data; it is not clear whether the University of Birmingham team had data at the MLH level available.

There is also the rather strange comment in the Birmingham report that "the county's employment record is shown to have been better than the national one over 1971-8 but markedly worse over 1978-81" (Spencer et al 1986 p.61) when the figures presented instead show strong negative structural shifts and strong negative differential shifts for the *earlier* period, implying a considerably *worse* than average performance. Close analysis of the text appears to suggest that the relevant author in the Birmingham team believes that the national component measures whether a local area is performing better or worse than the national economy. If this is the case, this shows elementary misunderstanding of shift-share analysis since the national component refers to what is happening to *national* employment, with no reference to local deviations from national trends.

38. A crucial distinction, not made by Fothergill and Gudgin (1982) is here made between suburbanisation and the urban-rural shift proper. The point at issue is the definition of a conurbation. Standard geographical dictionaries (e.g. Johnston 1981, Clark 1985, Small and Witherick 1986) define "conurbation" in terms of a *continuous* built up area, often resulting from the coalescence of smaller settlements. Such a definition is unsatisfactory in three ways. Firstly it implies that the word "conurbation" is simply a long-winded word for "city". Secondly, most of the officially defined British conurbations would not be conurbations according to the dictionary definition, because of the presence of open space between several of the major towns of the conurbation (e.g. between Bradford and Leeds). Thirdly, as implied in the official definition, the area economically wholly dominated by a dense cluster of settlements is generally greater than the built-up area itself, consisting in part of rural infilling between towns, and in part of a semi-urban fringe on the edge of the main built-up zone.

It is very important to keep a conceptual distinction between the terms "city" and "conurbation", as outlined in chapter 6.4(iii) above. From this, a definition of suburbanisation arises; the

decentralisation of activity from the existing city as it stands to less urbanised parts of the conurbation, often but not exclusively at the edge of the conurbation. The term "urban-rural shift" is reserved for instances in which less urbanised areas away from the conurbation grow more quickly than the conurbation itself.

If a situation arises, as illustrated in the text, in which there is a large negative differential shift in zone 1, the existing city, an approximately equivalent positive differential shift in zone 2, a less urbanised zone immediately adjacent to the existing city, and a broadly neutral differential shift in zone 3, a less urbanised zone beyond zone 2, this would appear to represent strong evidence that zone 2 should be regarded as a "suburban" part of the conurbation. This applies to large parts of Warwickshire, Hereford and Worcester, and also to the commuter belt around London (section 8.8 below).

39. Comparable instances may be noted for the chemicals industry on Teesside (see Luttrell 1962 vol 2 pp.633-634) and the vehicles industry on Merseyside. Finding adequate labour supplies would have been a considerable problem for firms contemplating major investment projects at times of full employment.

40. For example, at June 1966 unemployment in Merseyside and Prescot Development District stood at 14,068 (2.3%). Higher unemployment rates were recorded in the Welsh Valleys, but with far smaller numbers being involved, and often spread across a large number of small towns and large villages, for example 1,182 (4.5%) in the Rhondda, 964 (4.1%) in Merthyr Tydfil, Dowlais and Treharris, 951 (3.6%) in Bargoed, Blackwood, Pontlottyn and Ystrad Mynach and 1,047 (2.6%) in Ebbw Vale, Abertillery, Brynmawr, Newbridge and Tredegar (all figures from *Gazette*, July 1966).

41. See Garside (1980 pp.9-61) and Buxton and MacKay (1977 pp.55-58).

Given that the coverage of the Unemployment Insurance scheme was weighted, before 1948, towards occupations with a relatively high risk of job loss, and excluded large parts of the service sector, any percentage rate of job loss recorded in the Unemployment Insurance statistics is likely to be exaggerated, to an unknown degree. As a working assumption, open to later amendment, one can suggest that employment levels remained broadly stable among the uninsured section of the population. The following calculations may then be made:

		County Durham		Glamorgan	
		1929	1931	1929	1931
Insured employment	(000s)	337.7	269.5	267.2	203.3
Uninsured employment	(000s)	190.0	190.0	199.7	199.7
Total employment	(000s)	527.7	459.5	466.9	403.0
Change	(%)	-12.8		-13.7	

Sources: Insured employment from Beck (1951 Table 17). Total employment from the 1931 Census. Uninsured employment calculated by subtraction.

These figures, which present a *minimum* rate of job loss, indicate a very slightly higher rate of job loss during the main part of the early 1930s slump than for the most depressed counties in the main part of the early 1980s slump. However, the assumption than uninsured employment remained relatively stable is not watertight in that:

(a) Multiplier effects need to be considered.

(b) The long-term consolidation of high income, non-insured, employment in the core regions, implying a negative differential shift in the periphery, also needs to be considered.

(c) Agriculture was an uninsured industry, liable to depression (see for example Whetham 1978 pp.226-240, especially p.236), although not to such a great extent as in other countries. Agricultural employment nationally fell by perhaps 7% between 1929 and 1931 (calculated from Whetham p.236), although this tended to affect rural counties in the East rather than the industrial areas.

(d) Workers aged between 14 and 16 were not insured, and although the youth labour market was, in contrast with current conditions, more resilient than the adult labour market, job losses might well be expected in this part of the uninsured sector.

If one suggests that, in Durham and Glamorgan at least, uninsured employment fell numerically by about a third of the fall in insured employment, then employment declines of 16.6% and 17.5% may be estimated for Durham and Glamorgan respectively. This "compromise estimate" still represents a significantly higher rate of job loss than in the corresponding stages of the early 1980s slump, yet with a much lesser gap than implied by the Unemployment Insurance statistics.

42. Reference is made here to Ellen Wilkinson MP's classic work on Jarrow, *The Town That Was Murdered* (Wilkinson 1939). Wilkinson refers not just to the shipbuilding depressions of the 1920s and 1930s, but also to the longer term history of industrialisation and deindustrialisation in Jarrow. The process of industrialisation was, as Wilkinson emphasises, not smooth, with intense industrial conflict both in the coal mines in the early 19th century and in the shipyards, and with cyclical fluctuations in shipbuilding being particularly severe. There was much poverty, even in the "good times", although of course poverty was endemic in the Victorian economy rather than specific to Jarrow.

Clearly such a book could have been written "of many other towns in Lancashire, in West Cumberland, in Scotland and South Wales. The outline would be the same. The human tragedy very similar. Only the details of the background would differ with the differences in the industry, cotton instead of shipbuilding, hematite instead of coal" (Wilkinson 1939 p.273). Such a book could still be written, about the rise and fall of a steel town such as Consett, an industrial new town such as Irvine, a coal town such as Mexborough or even a large city such as Middlesbrough or Liverpool. In the present text it is not possible, regrettably, to delve far into local history; all that can be provided is the synoptic view.

43. Thus, shifts per annum in thousands were as follows:

	Structural		Differential	
	1971-78	1978-81	1971-78	1978-81
Tyne and Wear	-0.5	+0.3	-1.4	-11.0
Strathclyde	+0.3	-1.9	-9.6	-11.5
Merseyside	-1.1	+0.2	-6.9	-11.2

(Sources: Table 8.17; Census of Employment 1978, 1981).

One would expect differential shifts to become more intense in a time of slump; allowing for this effect, only Tyne and Wear of the three conurbations noted had a really severe deterioration in its differential performance during the slump; in the other two cases negative differential shifts were firmly established before the slump.

44. See also Robinson, Wren and Goddard (1987 pp.4-25), where both the importance of expansion of public sector services in the 1970s in covering up the effects of industrial job loss, and the impact of recession after 1978, are stressed.

45. The decline of Clydeside's "heavy" industrial base in the 1960s and early 1970s has been noted by Lever and Mather (1986), along with the point that after 1978 employment in such sectors fell sharply nationally but even more sharply on Clydeside.

46. To some extent this point is made rhetorically, in that it is very difficult to make a definitive assessment of where the boundaries of a conurbation lie, especially in a region with a high density of industrialisation away from the main cities. Maybe it seems artificial to draw a distinction between the Clydeside conurbation and the rest of the West Central Scotland industrial region, when on a reasonably broadly based definition of the conurbation, only the Ayrshire towns, and arguably some of the towns on the lower Clyde (Greenock/Port Glasgow, Helensburgh, possibly Dumbarton) could be regarded as outside the conurbation. It seems artificial, for example, to draw a line across the narrow gap between East Kilbride, Hamilton, Motherwell on one side and Glasgow on the other, to provide a balance between the conurbation and the rest of the region. Possibly a large part of Strathclyde's severe regional problem is due to the extent to which industrial development has been compressed, through reasons of topography, into a relatively small area, leading to the effects of any urban-rural shift working strongly against the sub-region.

Strathclyde poses genuine problems for the researcher trying to untangle the separate effects of urban structure and of regional structure on economic change. Spatially, the conurbation is much smaller than the region, but the bulk of the land outside the conurbation is hilly, even mountainous, and sparsely settled. Economically, conurbation and region are virtually identical. Maybe it would make sense to adopt a different regional subdivision of Scotland, and instead of dividing between Strathclyde and the rest of Scotland, one could make the division between the South of Scotland (the Central Valley plus Fife and points south) and the North of Scotland (containing Dundee and Aberdeen, but otherwise fairly sparsely populated). Then one could interpret the "drift to the east", from the Clyde valley to the Forth Valley, as an intra-regional drift, towards less congested areas, rather than an inter-regional shift. If one compares the eastern and western parts of central Scotland, the fact that the Clydeside conurbation has been more severely affected than Edinburgh is not the result of Clydeside being more congested, but rather the result of Clydeside being heavily industrialised and Edinburgh being a service based economy.

47. The significance of earlier branch plant movement into Merseyside has been noted elsewhere (chapters 5 and 6 above, Keeble 1976, Rodgers 1980b). Indeed Rodgers, with an element of hyperbole, wrote of an "economic miracle" on Merseyside (see chapter 6 note 22),

when what was happening was basically that new employers moved in to fill a large vacuum in the job market resulting from employment decline in the port industries, plus a high natural demographic growth rate. This was at a time when nationally labour was scarce.

Bristow (1987 p.129) presents an oversimplified picture when he argues that "the specific causes of (Merseyside's) malaise centre on the postwar contraction of the port of Liverpool". This would be parallel to arguing that the problems of County Durham and of South Wales in the 1980s result from the decline of the coal industry. The problems of high unemployment in such areas result only to a limited extent from the decline of the traditional industries, but to a far greater extent to the decline of the incoming industries which replaced the traditional industries. Merseyside during the slump undoubtedly showed major employment decline in traditional industries, but to a lesser extent than, for example, Greater Manchester, West Yorkshire or South Yorkshire. Employment in Merseyside's port industries (MLH 705, 706) fell by 28.2% between 1978 and 1981, but the numerical fall in employment, at -5,900, was not much greater than in a single "new" industry, telegraph and telephone apparatus (MLH 363; -4,100, -42.6%).

The "crisis of the branch plant economy" represents a three stage process:

1 Decline of traditional industries
2 Replacement of old industries by new, incoming industries setting up branch plants
3 The decline of the branch plant industrial economy

By this means the depressed region problem transmits itself through time, even though at stage 2 it might well have appeared that the regional problem had been "solved". It is argued that despite considerable differences in urban setting, the three stage process above applies to Merseyside as much, or nearly as much, as to the coalfields of South Wales and North East England. The main difference is that the problems of the old exporting coalfields are predominantly of stage 3, while Merseyside has a complicated mix of stage 1 and stage 3 problems.

48. See note 46 above. Merseyside is regarded as being very much part of the North West regional economy; there seems to be no sensible way in which one could regard the North West as split into discrete Manchester and Merseyside regions. There is no real parallel with the Strathclyde case where the conurbation in effect is equivalent to the region.

49. Agricultural machinery (MLH 331) excluded.

Negative differential shifts in mechanical engineering were also prominent in Strathclyde (-9,100, or -0.9%), Tyne and Wear (-4,700, or -0.9%), West Yorkshire (-3,000, or -0.3%) and the West Midlands (-6,400, or -0.5%), but less prominent in regionally subdominant conurbations such as South Yorkshire (+1,300, +0.2%), Merseyside (-1,700, -0.3%) or Cleveland (-760, -0.3%). This is a clear reversal of patterns since the 1970-72 recession (chapter 6.5(iii) above) in which job losses in mechanical engineering were relatively slight in the main conurbations of the industrial regions, the traditional centres of the industry, but severe elsewhere. Clearly a decade of severe urban industrial decline has significantly eroded the strategic importance of the main regional conurbations insofar as the mechanical engineering industry is concerned.

50. Most obviously between Hertford/Harlow (note 90) and, within a single county, Kelso/Eyemouth. In these cases, it seems probable that a Jobcentre area, or a number of Jobcentre areas, have been transferred from one travel to work area to another. Some of the more subtle boundary changes are very difficult to detect and, as in the case noted in the text, rely on matching changes in individual MLHs in adjoining counties.

51. See Table 8.9, which shows that outside the iron and steel sector, employment fell by 5.8%, within the range of group 2 experience, rather than by 7.9% as actually recorded.

On a travel to work area basis, Corby had a drop in manufacturing employment of 6,700 (-43.2%), almost entirely accounted for by steel, and a decline in total employment of 8,100 (-29.5%). Elsewhere in the county, Northampton showed a "South Eastern" profile with very slight net job losses (-7.7% in manufacturing, -2.3% in total), while smaller centres showed an "East Midland" profile with moderate job losses. In Kettering, manufacturing employment fell by 15.5%, close to the national average despite the problems of the footwear industry, while total employment fell by 7.3%. In Wellingborough and Rushden manufacturing employment fell by 20.5% and total employment fell by 8.8%. Separate figures for Wellingborough and Rushden are subject to boundary reclassification; it is unlikely that an increase of 12.6% in service sector employment and a 3.6% increase in total employment in Wellingborough is compatible with a 20.5% decline in service sector employment, and a 26.0% decline in total employment in Rushden. It is possible that Northampton travel to work area has also been slightly affected by a realighment of boundaries and a "transfer" of employment from Wellingborough; to check this it would be necessary to attempt to find mismatches at the Minimum List Heading level (major employment increases in one area, major employment decline in a neighbouring area). This checking has not been done, since only a relatively minor point is involved.

52. See the more detailed discussion in note 63 below.

53. The differential shift in manufacturing stood at -32,500 in Strathclyde, -23,500 in Greater Manchester, -19,500 in Merseyside, -13,000 in the West Midlands County and -9,800 in Tyne and Wear. Positive differential shifts in Hereford and Worcester (+6,500) and Warwickshire (+7,900) cancel out the negative differential shift in the Metropolitan County; later discussion suggests that this indicates a process of suburbanisation of the West Midlands conurbation. In other group 4 counties, positive differential shifts are very slight in relation to the negative differential shifts in the conurbations noted above. Thus, Powys had a differential shift of +1,100, Central region one of +2,600 and Cumbria one of +3,400. Numerically high positive different shifts in manufacturing tended to be recorded in counties of medium urbanisation, e.g. +8,500 in Leicestershire and +6,700 in Lancashire.

54. In motor vehicle manufacturing (MLH 380) there were 26,900 jobs in Bedfordshire in 1978, but employment in this sector fell by 10,300 (-38.1%) between 1978 and 1981. In 1978 the vehicles sector accounted for nearly a third of Bedfordshire's total manufacturing employment.

55. Cheshire is taken here as being part of group 2b rather than as part of group 1, as indicated in Table 8.7, since underrecording of job loss in the education sector (Table 8.15) is held to have exaggerated the recorded rate of job loss.

56. It is assumed that there has been a reclassification in Leicestershire from industrial engines (MLH 334), where 800 jobs were recorded as lost, a differential shift of -1,300, to industrial plant and steelwork (MLH 341), where a growth of 1,100 jobs, representing a differential shift of +1,200, was recorded. In Fife, it is assumed that there has been a reclassification between electronic computers (MLH 366), with a recorded job loss of 2,100 and a differential shift of -2,800, and radio, radar and electronic capital goods, with a recorded growth of 2,600 jobs, and a differential shift of +2,600.

57. In Humberside the manufacturing sectors with differential shifts of -1,000 or worse were general chemicals (MLH 271) (-2,400 jobs, differential shift of -1,700), bacon curing, meat and fish products (MLH 214) (-2,100 jobs, differential shift of -1,400), "other machinery" (MLH 339) (-1,700 jobs, differential shift of -1,300), shipbuilding and ship repairing (MLH 371) (-1,900 jobs, differential shift of -1,200) and "other chemical industries" (MLH 279) (-1,400 jobs, differential shift of -1,100), although in this last case it is likely that there has been a reclassification from MLH 272, pharmaceutical chemicals. Many "smaller" industries showed employment growth and positive differential shifts.

In Staffordshire the following manufacturing sectors had differential shifts of worse than -1,000; pottery (MLH 462) (-10,200 jobs, differential shift of -3,400), "other machinery" (MLH 399) (-2,200 jobs, differential shift of -1,600), "other mechanical engineering n.e.s." (-1,500 jobs, differential shift of -1,500), brewing and malting (-1,800 jobs, differential shift of -1,500) and "other printing, publishing, bookbinding" (MLH 489) (-1,000 jobs, differential shift of -1,400). There were large positive differential shifts in several sectors, notably electrical machinery (MLH 361) (+1,100 jobs, differential shift of +2,300), "other electrical goods" (MLH 369) (+1,400 jobs, differential shift of +2,200) and metal working machine tools (MLH 332) (+1,900 jobs, differential shift of +2,000).

58. It is quite likely, but not certain, that the "growth" in MLH 341 resulted from a reclassification; see note 56 above. There seems no reason to doubt the far larger recorded growth in MLH 218.

59. The reclassification in Fife suggested in note 56 has been assumed, and the word "computers" has been used to refer to electronic computers or radio, radar and electronic capital goods. There can be very little doubt that such a reclassification has indeed taken place in the official figures, while there is rather more scope for doubt in the Leicestershire case (notes 56, 58).

60. Such a strategy is also suggested by Warren (1980d pp.357-359) who notes (p.357) that "there are undoubtedly superb growth prospects in the Cardiff-Chepstow lowland belt." The thinking behind such a suggestion is that spatial policy is likely to be far more effective if it runs with the tide, building up investment in the most favoured parts of each "problem region" rather than against the tide, trying to stem decline in declining areas. To try to direct investment to areas in which the long term decline has been heaviest increases the risk that investment and employment built up during an upswing will be destroyed a few recessions later. This should not be taken to preclude the possibility that some areas which have had particularly heavy job losses in some industries might well be suitable long term growth centres for other industries.

The experiences of the 1974-76 recession and the 1979-83 slump would appear to indicate that a policy of concentrating assistance on the *most* depressed areas does not solve the problem of the long run vulnerability of the depressed areas, but can instead often intensify the problem of cyclical vulnerability by attracting the development of factories which are often marginal to the firm involved and which are not deeply rooted in the local economy. Thus despite regional policy, and indeed partly *because* of the way that regional policy has functioned, spatial patterns of recession have been remarkably similar in the post-1929 and post-1979 slumps. In particular, South Wales and North East England were very badly affected by both slumps.

There is of course no simple cure for the regional problem, but at least attention ought to be given to this question of the accidental perpetuation of vulnerability. Fortunately, in any depressed industrial region one can usually identify a corridor with rather more favourable growth possibilities. Furthermore, such corridors will tend, under current conditions, to have relatively high unemployment rates as a result of migratory equilibriation so that to encourage the development of such corridors will not merely be pusing employment into areas which already have low unemployment. In South Wales, the possibilities of developing the north side of the Mouth of the Severn have been noted, by Warren (1980d) and others. In the North West it would make strategic sense to pay particular attention to the area to the South of Liverpool and Manchester, from perhaps Warrington to Chester and Crewe and including some of the southern suburbs of Manchester. In the North East the development of a Washington-Darlington corridor, perhaps even stretching south into North Yorkshire, would appear to offer the most secure geographical prospects for stable employment growth. As far as the major cities are concerned, it is difficult to suggest any other possibility than that they should find their own natural level of employment, with the provisos that firstly the attempt is made to generate employment in towns closer to the city, to facilitate migration and to help drain pools of unemployment, and secondly, and importantly, that local authorities are given greater powers to generate local employment, with substantial redistribution of resources from areas with low unemployment to areas with high unemployment.

61. Champion,Clegg and Davies (1977).

62. This time-lag is fairly well known; Schaffer (1972) gives some examples, mostly involving the provision of public services. Similar problems are involved almost anywhere where population is expanding very rapidly, for example London's new suburbs between the wars, London Dockland at present and large numbers of housing estates of various sizes.

In percentage terms the service sector in new towns will expand very rapidly in the early stages of development, yet numerically it might well happen that the main growth takes place significantly later.

63. No attempt is made to cover in detail employment change in tourist areas. One problem is that it can often be very difficult to separate out employment catering for a tourist market from employment catering for a local market; this is particularly a problem in retail distribution and in "other services" (MLH 899). Differential shifts in MLHs 884 and 885 (hotels, other residential establishments; restaurants, cafes and snack bars) appear to be a good indicator of the state of the domestic tourist industry,

indicating differences in economic performance between, for example, city centre restaurants and hotels, and seaside resort restaurants and hotels.

A summary of performances of these sectors in Cornwall, Gwynedd and the Isle of Wight, along with some other counties with a large tourist industry, is presented below.

County	Employment in MLHs 884,885 as % of county total(1978)	Differential shift 1978-8 (000s)	(% of total employment in county)
Cornwall	8.5	-1,300	-1.0
Gwynedd	9.2	-1,000	-1.4
Isle of Wight	12.0	-100	-0.3
Devon	5.8	-900	-0.3
West Sussex	3.2	-600	-0.3
East Sussex	4.1	+200	+0.1
North Yorkshire	4.9	-1,600	-0.7
Cumbria	3.8	+200	+0.1

The impression given is that a high concentration of employment in tourism in these counties was a drag on employment; rates of job loss in these MLHs were characteristically around 15%, the same rate as the decline of employment in manufacturing. It is true that the 1978 Census of Employment was taken in June while the 1981 Census was taken in September, but this does not seem to bias the results to any significant extent, in that both months are only slightly removed from the peak of the tourist season in late July and August.

Much publicity has been given by the Government to rising employment in the tourist sector since the slump, but the present author gains the impression that the main growth of employment and self-employment in hotels, guest houses, restaurants, etc., is often not so much in traditional resort centres but in various inland areas where the tourist industry had not firmly established itself by 1979.

64. It is difficult to produce a wholly satisfactory set of definitions for "urbanised", "less urbanised" and "rural" counties; for example, it is hard to agree with Keeble (1980c) that Cleveland should be regarded as a "less urbanised" county, though this classification follows from his definitions. At a crude conurbation/non-conurbation level, the following patterns of employment change in manufacturing between 1978 and 1981 are to be found:-

	% emp. change in manufacturing, 1978-81			
	South	Midlands	"North"	North-South shift
Conurbations	-12.8	-23.2	-22.8	*-10.0*
Non-conurbations	-10.2	-16.0	-15.8	*-5.6*
"Urban-rural" shift	*-2.6*	*-7.2*	*-7.0*	

Job loss in manufacturing was fastest in conurbations outside Southern England, then in non-conurbations outside Southern England, then in London, then in non-conurbations in Southern England. Thus North-South status was the primary determinant of employment change during the slump, and urban-rural status the secondary determinant. In terms of rates of employment change in manfuacturing, the Midlands were virtually indistinguishable from the North, once urban composition has been taken into account, though such results do not apply to the post-slump period (note 84 below).

65. This anomaly relates purely to medical and dental services; no other sector shows a large decline in employment in Warwickshire and a large increase in employment in the West Midlands Metropolitan County. It is quite possible that the anomaly results from differences in administrative zones used by the Department of Employment and the National Health Service, with in one year no correction being made for such differences.

66. At the level of the travel to work area, Kidderminster had a drop in employment of 8.8% between 1978 and 1981. In the south of the county employment either increased or stayed stable (+7.2% in Evesham, -0.3% in Worcester, +2.0% in Redditch). Gloucestershire, the county to the South, showed a job loss of 0.4%. In the rural west, the old Herefordshire, modest employment declines were recorded (-2.9% in Hereford, -2.9% in Ross-on-Wye, but +0.9% in Ledbury).

This suggests that Hereford and Worcester had, in common with Warwickshire, a "Southern England" profile of job loss in many respects. It was noticeable in 1980 that increases in unemployment in Hereford and Worcester were much slower than in the rest of the West Midlands region.

67. A reclassification from MLH 339 (other machinery) to MLH 337 (mechanical handling equipment) is assumed; the former MLH is shown as losing 1,300 jobs and the latter MLH as gaining 1,000 jobs. Otherwise the largest differential shift in Hereford and Worcester was in MLH 214 (bacon curing, meat and fish products) in which employment increased by 500, a differential shift of +800.

68. See the more detailed discussion in chapter 9.

69. The similarities in performance cannot be traced back convincingly to before the slump since two of the counties had favourable employment performances between 1971 and 1978, while the other two suffered severe job losses. The respective changes in employment were Avon, +4.0%; Lothian, +3.0%; South Glamorgan, -5.6%; Greater London, -7.0%. Specific reasons may be noted for the poor employment performance of the latter two counties, in that regional policy tended to divert employment *away* from the Cardiff area and into the more heavily assisted neighbouring counties, while the "land squeeze" in London was a potent factor. Yet when the slump came and the relative importance of these special factors weakened, all the service cities appeared to be fairly well insulated from slump.

70. In principle, export base theory is simple and, mostly, uncontroversial. The difficulties come with interpretation. There can be little doubt that exports have a favourable multiplier effect on non-exporting, local, economic activity, with the size of the multiplier depending on the rate of leakage of income as a result of purchases from outside the area made by those earning in the non-exporting sector. This is merely a standard macroeconomic result.

The problem with export base theory, as it has commonly been used, is indicated by the common usage of the term "base-*service*" multiplier (as in, for example, Pfouts 1960), with the implication that the service sector is essentially passive. As Lee (1984 pp.139-140) points out, this implication is also to be found in many standard works on the economic history of 18th and 19th century Britain, with the result that the *autonomous* development of the London service economy has been largely ignored in the literature.

The implications of seeing processes in terms of a base-service multiplier may readily be tabulated:

Basic		Local
Export industries	⟶	Industries producing for local consumption
	⟶	Services

The problem with export base theory, interpreted in base-service terms, is that it concentrates wholly on visible trade (the export and import of goods) but ignores invisible trade (the balance of payments on services, the repatriation of profits, etc.). This is a major omission. Indeed one could even define "core" and "periphery" in terms of whether the balance of invisible trade is in surplus (core) or in deficit (periphery) in the long run. Such a definition still has elements of approximation about it (for example, should an area with a heavy dependence on tourism necessarily be classified as a core area?), yet it is difficult to think of a way of defining core and periphery in a way which is both simple and comes closer to the economic essentials. On such a definition it is also possible for an area to be peripheral in national terms, but core in international terms. Special attention needs to be given, however, to the question of advanced industrial economies, notably West Germany and Japan, which have large balance of payments deficits on invisibles.

If one reinterprets export base theory in balance of payments terms, then the following tabulation can be produced:

Basic		Local
Export industries	⟶	Local industries
Exporting services	⟶	Local services

This tabulation is made purely on the basis of exports; the size of the multiplier depends on the rate of leakage of income, which in turn depends on the volume of imports (both visible and invisible) with respect to total income. Clearly the rate of leakage will tend to be higher, and the size of the multiplier lower, in areas with a deficit on invisibles, all other things being equal. If for example any profits from an industrial concern are repatriated away from the area (representing a deficit on invisible trade in that industry), any expenditure from those profits will tend to build up the local service sector not in the area of production but rather in the core region.

Thus invisibles need to be considered in any export base model, which has perhaps not been the case hitherto. An important result which has been demonstrated here is that core regions will tend to have higher proportions of employment in the service sector than peripheral regions, at whatever scale of analysis.

71. See above note, also Lee (1984). Table 9.10 shows for the late 19th century the great variability in the ratio of employment between basic industries and services. In London in 1881, basic industries accounted for 8.8% of total employment and services for 64.0%, while in Yorkshire's West Riding basic industries accounted for 47.2% of total employment and services for 32.4%.

72. Such a definition of "core" would be regarded as elementary by Marxian analysts, especially those working in a third world context, yet captures the basics of the core/periphery distinction far better than any "mainstream" definition, and indeed attempts to explain core-periphery distinctions in prosperity rather than simply to describe them. Merely to group together a set of contiguous fast growing regions or countries and to describe them as "core" does not particularly advance theoretical understanding; if however

"core" is defined in terms of extraction of surplus value from production elsewhere ("periphery"), then several ramifications arise.

One cannot begin to discuss in detail the implications of such an issue here, but an important parallel needs to be drawn between the modernisation/underdevelopment debate as it concerns third world economies, and what might in the British context be described as a modernisation/deindustrialisation debate. In third world terms "modernisers" (e.g. Rostow) argue that the problems of the third world economies arise from their failure to develop modern Western methods of production, and that the solution to their problems is to "modernise", to try to imitate the advances made by more successful economies. The "underdevelopers" (Frank, Amin, etc.) argue that the problems faced by third world countries arise chiefly from their subservience to the capitalist economies; there are several routes through which the core capitalist economies can ensure that to a large extent peripheral production takes place according to the interests of the core rather than according to the interests of the periphery, and indeed often involving the direct impoverishment of the periphery.

If this debate is transposed into terms relevant to the internal structure of the British economy, the debate becomes one of whether industrial job loss and slow industrial growth are signs of the "modernisation" of the economy (the post-industrial thesis) or of the "underdevelopment" of the economy (the deindustrialisation thesis). "underdevelopment" does not simply mean decline; instead it means the retardation of economic development as a result of the economic interests of core capital. Once this point is understood, it becomes clear that fast economic growth in the core is consistent either with a postindustrialisation-modernisation thesis or a deindustrialisation-underdevelopment thesis; the South's economic success most certainly does not refute the deindustrialisation thesis.

The question, empirically, is one of magnitudes. Manufacturing output declined by 17% between mid-1979 and mid-1981. Had there been stable employment and a modest productivity growth rate of 3% per annum, industrial output would have expanded by 6% in the same period. This represents an "output gap" of about a quarter of total potential output. The fact that the gap should be so large, and should have developed over such a short period, clearly indicates an industrial crisis affecting virtually all sectors of industry. Only the most fervent supporter of the post-industrialisation thesis could suggest that this was merely the winnowing out of old-fashioned sectors as a result of competition from more efficient sectors. Two points may immediately be made; firstly, why on such an interpretation should all the "more efficient" sectors be in services, where in any case the expansion in employment was modest during the slump? and secondly, why was industrial job loss reflected so clearly in rising unemployment?

A more reasonable interpretation is that the events of 1979-81 marked a major industrial crisis, affecting both strong and weak sectors. That manufacturing was far more severely affected than other sectors should not be taken to imply that manufacturing is a primitive sector when compared with services, but rather that the economic environment was structured in such a way as to penalise any activity requiring to borrow money for investment or for carrying out production, and requiring to sell in competition with foreign producers. The service sector was for the most part lightly affected by slump (although tourism appears to have been an exception) not because it was in any sense more sophisticated than the industrial sector but rather because it was more insulated

from outside events, in part precisely because of the orientation of Government policy. "Freedom for capital" is the protectionism of the City.

After the slump there is generally an intense boom (chapter 2 above) which obscures many of the facets of vulnerability. One often has to wait to the next recession to find out what is really going on. Deindustrialisation still seems to be a potentially severe underlying problem; all the much heralded advances in the financial sector cannot hide the facts that decimation of the industrial sector has severely weakened the British trading position, to an extent beyond the ability of invisibles to compensate for, and also that jobs are *still* being lost in manufacturing on a large scale.

73. In the context of contemporary Britain, this would refer most obviously to the siting of Parliament in London and the concentration of the Civil Service, the upper echelons especially, in and around London. As one moves further back in time, the significance of London as centre of the Royal Court acquires increasing significance.

Under modern capitalism the role of economic institutions in extracting and concentrating surplus value and establishing core status for certain local city economies has attracted the main attention, although obviously political questions apply also. In pre-capitalist economies it would appear that political centralisation, along with its associated economic implications, provided the main source of core status. Wallerstein (1974 p.15) notes of the political centralisation of empire in such circumstances that "Its strength lay in the fact that it guaranteed economic flows from the periphery to the centre by force (tribute and taxation) and by monopolistic advantages in trade. Its weakness lay in the fact that the bureaucracy made necessary by the political structure tended to absorb too much of the profit, especially as repression and exploitation bred revolt which increased military expenditure." Thus empires could grow along with the increasing political and economic power of the imperial core, but could also fade away as imperial control becomes too expensive. Wallerstein regards it as the central achievement of the capitalist system to have found the economic technology to transfer surplus from the periphery to the core without a cumbersome imperial political apparatus. Thus after the Second World War Britain, the declining imperial power, could still maintain core status despite (or perhaps because of) the loss of Empire, although the residual overmilitarisation of the economy still remains a retarding factor, and meanwhile the USA, the dominant political and economic power, could build up a highly informal empire, with little direct political control and much economic control. Even informal empire has its costs, though, as the political power of the imperial power has often to be established, in the absence of direct rule, by open or clandestine warfare.

The structure of core and periphery in the British economy cannot be adequately explained with some notion of Britain's imperial past, of how Empire consolidated and greatly expanded the political and economic core functions of London, and of how London perpetuated itself as a core economic centre even after the fall of Empire.

74. This question seems absolutely pivotal when trying to understand the structure of the British economy, and prospects for the British economy. Britain is, without a doubt, a core capitalist economy, but this centrality to the capitalist economic system depends on Britain's role as a financial centre, as a centre for

accumulating and circulating surplus value, rather than as an industrial centre. The role of the industrial sector in a core capitalist economy is open to question, or to make the point in another way, the industrial development of an advanced economy can be threatened by the economics of core capitalism. Deindustrialisation can be seen as a form of underdevelopment within an advanced capitalist economy, but precisely because it takes place *within* a capitalist country it threatens to pull down the economy of that country in a way in which third world underdevelopment could not. The voraciousness with which the core capitalist economy seeks to extract, circulate and skim off the surplus value created by physical production perpetually threatens to undermine that physical production on which it ultimately relies. Britain is now a long way down the path of economic self-destruction, with the extent of the problem being accentuated greatly since the late 1970s. During the 1970s and early 1980s the chief problem could be seen as one of industrial decline. This made economic steering more difficult and caused an unemployment increase. In the late 1980s the problem is not so much one of current industrial decline, but rather that the excessive decline of the earlier period has led to the economy being unbalanced, with the imbalance being most clearly shown in the balance of payments figures (Table 8.28). The industrial problem at present is not so much that the industrial sector is in danger of collapse (as of 1988 profits are high and investment is expanding) but rather that the industrial sector is too small, with little possibility of an autonomous expansion (that is one not based merely on a generalised expansion of demand) sufficient to balance the balance of payments and to reduce unemployment. The difference between an autonomous industrial expansion and an induced industrial expansion is of critical importance here. If expansion is *led* by industry, then there might be some hope of solving Britain's chronic economic problems. If however the route is one by which the Government boosts demand in the economy through a consumption boom, then obviously industry will expand as a result of the boom, *but so will imports*. If there is no autonomous industrial expansion to match the demand induced expansion, the result of even a modest consumer boom will be a balance of payments crisis. Furthermore, the smaller the industrial sector is the worse the trade crisis will tend to be.

75. There are seemingly interminable debates among economic historians along the lines of whether or not the late Victorian economy failed, on whether the heavy foreign investment of the period was good or bad for the national economy; see especially chapter 9.1 below. Clearly if one writes from the point of view of the rapidly expanding late Victorian and Edwardian bourgeoisie of Southern England, their prosperity enhanced by the wide range of investment opportunities abroad, then the decades leading up to 1914 would have appeared highly successful. Yet there was also an obverse to this picture of Edwardian prosperity, in that Britain's industrial supremacy was fast slipping, and the restructuring of industries and the development of new industries were slow. Relatively little attention was given to the renewal of the productive base, in contrast to the considerable attention being paid to industrial development in other countries; considerable attention was paid, however, to maintaining a climate in which the returns on foreign investment were high. There were undoubtedly major advances made in the development of London as a financial centre, but this was inevitably at the expense of the industrial areas to some extent; indeed chapter 9 below argues that many of the roots of the regional problem formed in this period, even if the "above ground" manifestations did not show until the 1920s. At the

national scale, there is considerable scope for debate on whether the late 19th and early 20th century restructuring in the economy was favourable or unfavourable in its effects, in the short term and in the long term. The answer one arrives at will depend largely on whether one gives primacy to the financial sector, and the need to maintain freedom of movement on capital so as to maximise returns to investment, or whether one gives primacy to the renewal and development of the productive base.

This century old issue has achieved new relevance in the mid to late 1980s, as once again economic policy has been directed very much towards Britain's role as a financial centre, with comparative neglect of her role as a centre of production. No doubt there will be more interminable debates in future generations about whether the Thatcherite economy failed or not, with various schools of orthodox, revisionist and radical thought developing according to political alignment. To all except the most Conservative strands of future opinion, looking back at such times across decades of severe balance of payments difficulties, low industrial investment, and slow growth when compared with competitor economies, it will no doubt appear strange how mainstream commentators in the late 1980s eulogised the success of the Thatcherite economy on the basis of an unsustainable cyclical boom following an unnecessarily severe slump. Attention will no doubt turn to more basic questions, such as the development of chronic and acute balance of payments deficits in manufacturing, resulting in part from the massive reduction in industrial capacity in 1980 and early 1981, and in part from the quite understandable caution over major new investment by industrialists in the years thereafter. Indeed one of the unusual features of the late 1980s boom is that high industrial profits have not been translated into high investment; it has made more financial sense, at times of high interest rates, for firms to hold onto money and purchase assets rather than to invest in productive equipment.

Above all, however, one would expect the future commentator to bemoan the wasting of North Sea oil. Britain shared in the post-slump boom, and did rather better, in consumption terms, than to share in the boom as a result of the additional effects of North Sea oil production. Yet while North Sea oil revenues have helped the Government boost consumption and create a certain element of prosperity (though in the midst of mass unemployment) there has been little sign of attention being given to the renewal of the productive base.

76. Excluding MLH 866, "central offices not elsewhere allocable".

77. Ingham (1984 especially pp.201-224) provides one of the most interesting recent discussions on the relationship between the City, industry, and the state. Before 1914 London was the "natural" financial capital of the world, yet this position was threatened by the major economic disruption of two world wars and the possibility ot the emergence of New York as the pre-eminent financial centre of the world (although this was in part, according to Ingham, blocked by the power of the American industrial bourgeoisie). After the First World War, the City needed protection. "In the face of massive economic problems, successive British governments have maintained the political conditions for the City's existence as an international centre; an open economy; a stable, high value currency; attractive interest rates for the holders of sterling. All three policies have invariably clashed with the plans to strengthen the productive economy." (Ingham 1984 p.224). Ingham notes a partial reversal of priorities by the post-1964 Labour

Government, with the setting up of the Department of Economic Affairs, yet this new direction was undermined by Treasury opposition (representing, in political terms, the City as opposed to industry) and by the fading of the post-war boom. Not enough attention was paid at that stage to the extent to which the City needed to be restructured to ensure that industrial modernisation was possible.

For the most part however British economic policy has been persistently weighted in Favour of the City rather than in favour of production. Ingham (1984 p.224) emphasises that "this situation cannot be explained simply as a consequence of the City's economic power in relation to the rest of the economy. Rather, the means by which commercial and wholesale banking capital have maintained their dominant position are to be found in enduring elements in the British state, civil society and financial system; that is, in the autonomous practices of the Bank of England and Treasury in monetary and fiscal matters; in the relative insulation of the dominant class from the industrial bourgeoisie; and in the continued institutional separation of finance and industry."

So the point is not simply that the City has dominated industry because it is stronger or more efficient; the point is rather that a strong alliance of interests has developed between the City and strategically critical echelons of the state, leading to a strong tendency for British economic policy to be weighted towards the dictates of the City. If such a process should continue for long enough, it is hardly surprising that eventually the City should become strong and industry weak; this is *not* a natural tendency, but rather a policy-induced tendency. Pollard (1982), in a sharply polemical work on the state of the British industrial economy (indeed it is difficult to see how one could write anything other than sharply about conditions in 1982), notes the persistent "contempt for production" in British economic policy-making and the preference for "symbols" before "reality", or monetary symbols before physical production, in setting policy goals. This in itself is indicative of the split between the City, dealing in symbols, and industry, dealing in production.

78. A simple tabulation makes this point fairly clearly.

Aspects of the early 1980s	Effects on City	Effects on industry
High interest rates	*Highly favourable;* lending becomes extremely profitable	*Highly unfavourable;* borrowing expensive, investment very expensive; pressure to destock
High exchange rates	*Highly favourable* sterling buys more on foreign markets	*Highly unfavourable* difficult to compete with foreign producers

If elements of a cyclical downturn are added to the above, and if the currency is far enough overvalued and interest rates excessive enough, then the potential exists for industrial devastation.

79. Attention is drawn here to Godelier's (1986) analysis of the base-superstructure question. Godelier notes that in much of the literature, both in anthropology and in other social sciences, the critical distinction between economic *functions* and economic *institutions* is lost, in part precisely because most influential social scientists come from a background, advanced capitalist societies, in which *economic* institutions (the firm, etc.) dominate

economic functioning. In pre-capitalist economies, Godelier argues, specifically economic institutions do not play a dominant role, but this does not mean that the economic functioning of society is anything other than at the centre of the structure of society; instead it means that economic functions tend to be carried out and allocated by dominant *non-economic* institutions. In that kinship, religious and political organisations are central to economic functioning, and in that economic relationships are not central to the mental structure of these institutions, natural limits would tend to be set to economic diversification and to the possibilities of core formation and relative peripheralisation. As economic activity became more "pure" and more dynamic the possibilities for multiple differentiation into core and periphery started to increase in strength.

One would thus expect patterns of core and periphery, of development and underdevelopment, to exist in pre-capitalist economic formations with urbanisation and economic growth taking place in the core, and with the core "underdeveloping" the periphery only insofar as the core can afford to maintain political, military or religious power over the periphery; under other circumstances the periphery is simply ignored and lags behind. The emergence of capitalism and thus of powerful *economic* institutions, increases the possibilities both of development and underdevelopment, of rapid progress in the core and of the possibility that economic development in the periphery is distorted (even if periodically accelerated) by the economic interests and economic and political power of the core.

80. Various subtly different meanings may be given to the terms direct investment and portfolio investment. If however one examines the situation from the viewpoint of production, investment may be seen as expenditure on equipment designed to enable production to take place (at certain levels of output, productivity, etc.). This process may be termed *direct* investment. Even in the case of direct investment it often happens that the investing organisation cannot raise the required money purely from internal sources, and has to rely on raising money from outsiders who in effect build up assets in the organisation concerned. This use of financial power to build up assets in productive organisations may be termed *portfolio* investment. In the case of direct investment, the rationale for investment is set by the productive needs of the organisation (and an industrial firm which fails to invest will soon diminish in importance) while in the case of portfolio investment the search is for the company which appears safest, has the best prospects for generating profits, or which appears to be ripest for a takeover bid, so that speculative gains may be forseen. There is obvious scope for tension here.

81. Thus the battle between capital and labour is not a "zero sum game" or a fixed sum game; indeed one can go further and suggest that if either capital or labour treated class conflict as a zero sum game in which the destruction of the other side is a prerequisite for one's own side's material gain then the most likely result is a deterioration in the conditions of production. Yet if such a deterioration is possible then the game does not have a fixed sum; furthermore if one round of the game has a low sum then this increases the likelihood that the next round will have a low sum through a change in the sets of payoffs. An economy in which class conflict is pursued over-vigorously either by capital or by labour is likely to be an unsuccessful economy.

Neither, however, is the model of a harmony of economic interests particularly convincing. Firstly there are undoubtedly

situations in which there is a zero sum game; each time a worker's wage is cut by £10, profits increase by £10. Secondly, and at the macro-level, sets of outcomes which maximise the total payoff do not necessarily maximise the payoffs of particular groups, or to state the matter conversely, the outcome favoured by particular groups may well not be the outcome that maximises social welfare. Various forms of inter-class and intra-class conflicts of interest may result, most notably:

(1) Total income is maximised when there is full employment, and labour's income is maximised when there is full employment; capitalist income tends to be maximised at *less* than full employment.

(2) The conditions which maximise profits in the financial sector are likely to be significantly different from the conditions which maximise profits in the production sector; one side desires dear money, high exchange rates, etc., while the other side desires cheap money, low exchange rates, etc.

(3) The conditions which maximise employment are likely to be significantly different from the conditions which maximise incomes for individual workers in employment.

Conflict (1) is derived from Keynes's (1936) theory of effective demand, with class categories introduced. Conflict (3) is a genuine conflict, but one which tends to be much exaggerated ("one man's pay increase is another man's job loss") by apologists for the capitalist class. Conflict (2) raises some very interesting questions for an economy in which the interests of financial capitalism are held to be paramount. Firstly, the state of the economy at which total profits are maximised is indeterminate; depending on the shapes of the relevant curves it could be at the point favoured by finance capital, at the point favoured by industrial capital, or at some intermediate point. Secondly, the point at which profits in the financial sector are maximised represents a level of production below that at which industrial profits are maximised, and even further below that at which industrial production and employment are maximised. This implies a very genuine conflict of interest between industrial labour and financial capital, less direct than the conflict between industrial labour and industrial capital, but no less strong for being indirect.

Two polar forms of analysis of political economy may be noted, the harmony of interests approach (which naturally tends to assume full employment) and the pure class conflict approach, in which capital and labour are pitted against each other with other forms of conflict being secondary. The harmony approach tends to assume that the economic welfare of any particular group is maximised at a point at which the economic welfare of all is maximised; the present approach, developed from Keynesian roots, is that there are persistent conflicts between the interests of particular groups and the general interest, conflicts which are embedded in the economic system and do not disappear under "equilibrium".

82. See chapter 6.6(i).

83. Some of the problems faced by inner London industries during the slump are depicted in Harrison's portrait of Hackney in the early 1980s (Harrison 1983 pp.52-92).

There was also a strong negative differential shift (-6,600) in Greater London in radio, radar and electronic capital goods (MLH 367), but this reflects more a failure of this sector to expand in London than any substantial job losses; employment fell

from 23,300 to 22,600. In other parts of the electrical engineering industry differential shifts were, in total, slightly negative (-1,900).

84. As events turned out, a combination of rapid expansion in the core services and slow recovery in the industrial sector meant that one of the most conspicuous features of the post-slump recovery was a massive boom in house and land prices in London and the South East, gradually rippling out into neighbouring regions. One would expect that this would have led to yet another squeeze on industrial employment in London. No detailed breakdown of employment change through the land boom is available at present (late 1988), but the following estimates for manufacturing employment change between 1983 and 1988 are of interest.

Region	Employment change in manufacturing, March 1983 - March 1988		
	(000s)	(%)	(% per annum)
Greater London	-109	-17.7	-3.8
Rest of South East	-79	-8.5	-1.8
EA	+34	+19.0	+3.5
SW	-7	-1.9	-0.4
WM	-30	-4.2	-0.8
EM	+1	+0.2	+0.0
YH	-67	-13.1	-2.8
NW	-102	-14.5	-3.1
N	-35	-11.2	-2.5
Wa	-4	-1.9	-0.4
Sc	-64	-14.2	-3.0
GB	*-461*	*-8.4*	*-1.7*

Source: *Gazette, Historical Supplement* February 1987, and August 1988).

Much has been made of the boom and the overheating of the South East economy, yet this boom clearly has not spread to the industrial sector. After the slump, as well as before the slump, London has been Britain's main centre of industrial job loss. The rest of the South East, before the slump a major generator of industrial employment and during the slump an area largely immune from major job losses, now has slightly faster than average rates of employment decline in manufacturing. Thus the boom in the South has the effect of squeezing out industrial employment rather than encouraging job creation in manufacturing.

Three main implications of the boom may be noted.
(1) To continue industrial production on a highly valuable site incurs a significant opportunity cost.
(2) The cost of housing in the South places significant upward pressure on wages, and makes it difficult to recruit labour from other areas.
(3) The situation is often exacerbated by shortages of skilled labour, in part as a result of the cost of housing and in part as a result of long-standing weaknesses in Britain's industrial training, the Government appearing to regard official training schemes more as an opportunity to reduce the unemployment figures and provide cheap labour than as serious training.

It is important to note that the above employment statistics do not support any notion that the South East has led the way in industrial development since the slump, despite the continued severe leakage of industrial employment in the peripheral regions.

As in the 1970s there is a complicated set of circumstances in which industrial employment in and around London is mildly vulnerable to cyclical downturns but heavily vulnerable to high land prices, while industrial employment in the periphery is highly vulnerable to generally weak industrial performances. In the Midlands, representing the "core" part of industrial Britain, industrial trends since the slump have been relatively favourable, while there are signs of expansion in the "outer South" (EA, SW). Industrial employment has also remained stable in Wales which, despite its severe historical structural problems, adjoins the Midland growth belt. In the North of England and in Scotland severe industrial job loss continues as before; 270,000 manufacturing jobs were lost in these regions (NW, YH, N, Sc) in five years *after* the slump.

85. No presumption is made here as to whether it is "correct" or "incorrect" that Cardiff should have been left out of the regional policy net. The arguments that Cardiff, and the rest of South Glamorgan, should have been included are firstly that the considerable industrial job *losses* of the 1970s in South Glamorgan might well have held the South Wales economy back (with the implication that something stronger than simple diversion was involved) and secondly, taking a broader view of regional policy, that the service sector should have been included in the regional policy net and that regional policy should have helped enhance Cardiff's role as a major service centre. The contrary argument is that new industrial jobs were both more needed and more efficiently sited in the rest of South Wales, where unemployment was higher and urban congestion lower.

86. The "echo effect" problem is held to have been the main weakness of traditional regional policy, with the assisted areas having had their employment base built up in industries liable to later decline, creating an echo of the 1930s regional problem. Whether the orientation of regional policy towards manufacturing should be regarded as a "mistake" depends on to what extent it should have been regarded as forseeable that manufacturing employment was to decline sharply from the mid-1960s. Probably there was no reason why this possibility should have been forseen; if however one still wishes to note a "mistake" at the centre of regional policy, this "mistake" pervaded the *whole* of British post-war economic policy. Maybe, as Manners (1976) suggested, the direction of regional policy should have concentrated more on services as soon as it became clear that manufacturing employment was in deep decline while only service sector employment was growing. Maybe also more attention needs to be given to the question of generating self-sustaining endogenous growth in the periphery, rather than relying simply on industrial migration.

87. See especially Townsend (1981, 1983).

88. See, though, the brief discussion in note 63 above.

89. The strong positive differential shifts in education in Buckinghamshire and Cambridgeshire are dominated, at the level of the travel to work area, by Milton Keynes and Peterborough, two of the largest and most expansive of the New Towns. One would expect rapid growth of employment in education, even during recession, in each town, yet the rates of increase indicated in the Census of Employment seem excessive. An increase in employment over a third in three years in Buckinghamshire, and even faster in Milton Keynes itself, seems highly implausible. The great size of the positive differential shift would appear to be explained in part by

under-enumeration in 1978 and in part by the "natural" differential shift being positive.

90. Hertford showed an apparent increase of employment of 9,300 (+22.2%) between 1978 and 1981, while neighbouring Harlow showed an apparent decrease of -12,600 (-17.9%). Combined Hertford/Harlow figures are -3,300 (-2.9%). Such contrasting experiences in neighbouring travel to work areas, combined with, in context, abnormally high increases of employment in one of the areas, represent strong evidence that a boundary shift has taken place. See also note 102 below.

Figures for employment totals by county, up to the 1981 Census of Employment, are based on the nearest fit of Jobcentre areas, rather than the nearest fit of travel to work areas. There is a very strong likelihood (note 102) that statistical reorganisation of the data would involve redrawing of the Jobcentre areas, and hence a shift of employment from Essex into Hertfordshire.

Later researchers will need to note that Census of Employment figures for 1984 onwards are disaggregated to the level of the local authority ward, rather than to the level of the Jobcentre area (see for example *Regional Trends* 1988 p.145), meaning that figures at the county level cover the administrative county precisely rather than approximately. This is undoubtedly an improvement, but leads to some loss of comparability between 1981 and 1984 figures (Table 8.16).

91. If anomalous results in the Cambridgeshire education sector (Peterborough TTWA) are excluded (Table 8.15), the county would be shown as having a job loss of -1.4% between 1978 and 1981, instead of an employment gain of 1.1%.

Another statistical anomaly may also be noted for Cambridgeshire, a gain from nothing to 8,000 jobs in MLH 334 (industrial engines) and a loss of 9,600 jobs, leaving zero employment, in MLH 380 (wheeled tractor manufacturing). This is evidently a reclassification in a factory which in fact had around the national average rate of job loss in manufacturing, yet a structural shift of -5,700 (-2.7%) and a differential shift of +4,600 (+2.2%) is indicated. The extreme positive differential shift, combined with a negative structural shift, for Cambridgeshire (Table 8.7) is thus unreliable.

92. Thus:

	Employment (000s) 1971	1978	Change (%)	(% per annum)
London	3939.4	3663.8	-7.0	-1.0
Inner ring	1789.2	1911.1	+6.8	+1.0
"Golden arc"	1862.1	2102.8	+12.9	+1.8
Outer ring	1336.3	1486.7	+11.3	+1.5

The inner ring comprises of Hertfordshire, Essex, Surrey, East Sussex and Kent. The "golden arc" comprises of Suffolk, Cambridgeshire, Bedfordshire, Buckinghamshire, Berkshire, Oxfordshire, Hampshire and West Sussex. The outer ring comprises of Norfolk, Lincolnshire, Gloucestershire, Wiltshire, Somerset, Devon and Dorset.

93. See for example Townsend (1983 pp.180-188). New towns in the periphery were more deeply affected by slump than new towns in Southern England, but within Southern England new towns were often affected more severely than less industrialised areas.

94. In Bedfordshire 10,300 out of 26,900 car jobs were lost; in Oxfordshire 11,000 out of 28,300.

95. Although the running down of Chatham Dockyard was fairly widely reported at the time, relatively little attention was given to it in the *Financial Times*, perhaps in part because the running down of employment in a state-owned naval dockyard has, in comparison with a private firm selling in the open market, relatively few wider commercial implications. A mid-1981 report (*F.T.* 27.6.81) notes the loss of 7,000 jobs at Chatham dockyard and 6,000 jobs at Portsmouth dockyard over an unspecified period; the Census of Employment indicates that between June 1978 and September 1981 5,800 out of 7,600 shipbuilding, repairing and marine engineering jobs were lost in Chatham TTWA.

There is the irony that at this stage British defence policy was concentrated so heavily on the "official enemy" and so weighted towards nuclear rather than "conventional" force that naval dockyards were being rapidly dismantled at just the time when a naval war was approaching. It seemed that the Conservative Government had not appreciated the possibility that an ideologically sympathetic foreign government, whose internal policies created favourable opportunities for British arms exporters, might at a time of severe economic and political stress bring to a head a long-standing territorial dispute. It is interesting to speculate what might have happened if Argentina had attacked the Falklands a year or two later.

96. Townsend (1986 p.539) cites a 1985 press report as indicating that in a typical year nearly half of aerospace output and nearly a third of output in electronics industries is accounted for by the Ministry of Defence. Such an estimate seems plausible, though it is not clear how closely defined the electronics sector is in this particular case.

In MLH 367 (radio, radar and electronic capital goods) there are industries with obvious military implications (e.g. radar equipment, radio communication equipment and relay link manufacture; various other radio sectors) but also clearly non-military sectors of production (e.g. radiant heat lamp and bath, electro-medical). There is no clear sector labelled "electronic weapons system", etc., but one would suspect a much higher weighting towards military use in MLH 367 than in most other MLHs in electrical engineering. Indeed, various MLHs (e.g. 368, electrical appliances, domestic use; 365 broadcast, sound reproduction equipment) are very clearly orientated to the domestic consumer market.

Detailed relationships between defence and high technology can be very difficult to untangle unless one works at a localised scale. See however Boddy and Lovering (1986) for an assessment of the importance of military demand in supporting Bristol's high technology industrial sector, centred chiefly on aerospace. The authors note (p.222) that the aerospace sector includes not just the building of aeroplanes, civilian or military, but also the development of a wide range of electronic weapon systems, and ancillaries to weapon systems. They also note (p.223) the considerable significance of high technology military production elsewhere in the South West; similar considerations would also apply in much of the South East. Comment has already been made (chapter 6, note 80) about the possibility that high technology military production represents, in terms of opportunity costs, a significant drain on the economy and a hidden subsidy to the South. It is not in dispute that in many respects the South has "natural" advantages over the North in terms of high technology production; the basic problem, faced also by other

over-militarised economies (e.g. the USA, but not Japan) is that military production denies resources to the civilian sector, and thus slows down progress in the development of products sold on markets rather than to the state sector.

97. For example, +3,300 jobs in aerospace in Hertfordshire, +2,800 jobs in "other electrical goods" (MLH 369) in Kent, +1,100 jobs in aerospace in Hampshire, +700 jobs in radio and electronics components in Surrey, +700 in electronic computers in West Sussex, +600 in broadcasting and sound reproduction equipment in Essex. Again, in many of these cases the military/civilian split in market destination is not clear from the available evidence.

In addition, perhaps 3,000 jobs were created in electronic computers in Berkshire, although the picture is partially obscured by a major reclassification (see text).

98. 5,800 jobs were recorded as having been created in education in Milton Keynes between 1978 and 1981, more than doubling the previous total. This is excessive even for a new town.

99. More specifically, banking, insurance and finance, national government, legal services, research and development, etc., and the higher echelons of the education and health sectors (e.g. universities rather than primary schools).

100. The Census of Employment shows a gain of 1,200 jobs in Hampshire in banking and bill discounting (MLH 861), but a loss of 1,600 jobs in this sector in Dorset. One suspects informal boundary changes, although the figures for employment growth in insurance are more firmly based in that both Hampshire and Dorset showed increases in employment.

101. Several recent sources, for example Howells (1984) and works cited therein, have noted the strong weighting of high technology industry and of research and development towards the core regions, where reservoirs of skill at all levels of production represent an important locational factor. It takes time for such pools of skill to build up, and in a much longer term perspective one can trace the dominance of core regions in higher technology industries back to market orientation factors.

An important point being developed in the text is that the division of the economy into core and periphery is largely independent of industrial location patterning. Critically, core status depends on the degree of development of the "quaternary" sector, of economic activities based mainly on the handling of money and various forms of credit rather than on the handling of goods. Industrial trends tend to reflect this core-periphery distinction rather than create it, even though core-periphery distinctions in rates of employment change tend to be most conspicuous in the industrial sector. In that high income groups tend to be concentrated in the core regions, creating a market for more sophisticated industrial products, and in that high status workers are more readily attracted to high income regions than to low income regions, there are reasons on both the demand and supply sides why a spatial division of industrial labour should emerge in which advanced production should take place in the core and routine production should take place in the periphery.

In earlier discussion in this thesis the empirical attention has been concentrated chiefly on patterns of industrial employment change and on their effects on unemployment. A definite and strongly entrenched tendency for the South to be industrially favoured relative to the North has been noted and described in terms of

core-periphery effects. Since the 1920s patterns of relative industrial advantage and of labour market buoyancy have undoubtedly closely matched the pattern of core and periphery. It is important to keep the basic direction of causality in mind, however; the South's core status has attracted the more advanced industries, while the North perpetually faces the dual handicap of a failure to attract in sufficient numbers newer industries at levels other than of routine production and an industrial structure with a strong legacy of "older" industries (coal, shipbuilding, iron and steel, textiles, etc.) which, although displaying considerable possibilities of technical advance, approached market maturity a long time ago, thus not being likely motors of rapid industrial growth. Discussion of Southern England during the slump emphasises, though, that the relative advantage of the South over the North ultimately depends on "finance" rather than "industry". This point takes on major significance in chapter 9 below in which the 19th century is discussed. During the 19th century, and in strong contrast with the post-1918 period, industrial development was for various technical reasons more vigorous in the North than in the South, yet despite this the South, or more specifically London, still clearly remained the core of the national economy.

102. "Other services" refers here exclusively to MLH 899. Hertfordshire also showed an increase of employment of 4,200 in sea transport (MLH 705). This would appear implausible, especially if one consults a map (Hertfordshire is land-locked), but would presumably refer to head office employment. Figures for Essex show, however, a decrease of employment of 4,300 in this sector, strongly implying a boundary shift between Hertfordshire and Essex. At the level of the travel-to-work area, Hertford showed an increase of 4,000 jobs in this sector while neighbouring Harlow (Essex) showed a corresponding decrease of 4,100 jobs. This confirms that a boundary shift was involved, and furthermore one which has artificially reduced the 1981 level of employment in Essex and increased it in Hertfordshire, when measured with respect to 1978 employment totals.

103. See for example the Hardman Report (Great Britain 1973), which noted (pp.23-27) the dispersal of 25,200 non-industrial Civil Service staff up to 1963, of 22,500 staff between 1963 and 1972 (notably 3,700 to Glasgow and 1,800 to Durham in the National Savings Department, and 2,200 to Manchester in the Inland Revenue), with 6,300 jobs awaiting dispersal as of October 1972. New office work, as of October 1972, accounted for 9,500 posts in scattered locations, with 10,400 projected after 1972. Such dispersal "has been substantially of work which is relatively self-contained and can be done anywhere" (Hardman Report, p.v). The number of jobs involved is large, though clearly not as large as the number of jobs decentralised in the manufacturing sector. In general, costs tended to be reduced by office dispersal, although para. 14 of the Hardman Report creates a confusing impression when it suggests that other non-cost considerations are needed "to justify the loss of efficiency which dispersal involves." The loss of efficiency described is essentially related to a reduction, probably economically unquantifiable, in the richness of contacts through dispersion; as in manufacturing industry, there was a tendency in the Civil Service for high-level activities requiring frequent contact inside and outside the organisation (including in this case other Civil Service departments) to gravitate to core locations while routine activity could be decentralised to the periphery.

It is never fully clear how much Civil Service activity is fully decentralisable; the payoff between cost factors and information factors is indeterminate. One can suggest however that with modern

advances in communications technology, and with ever-increasing congestion in the office district of Central London, the scope for decentralisation might well have strengthened considerably since the early 1970s.

104. It goes beyond the scope of this thesis to enter into debate on the complicated and controversial question of changes in the National Health Service, and on class and geographical inequalities both in standards of treatment and in changes in standards of treatment. A general point to be made, though, is that especially with attempts being made to place strict limits on NHS expenditure there is the danger that areas in relative economic decline will tend to fall back in the efficiency with which they meet local needs. This might well be accentuated considerably by variations in general levels of health created by variations in general social conditions (income inequalities, work hazards, etc.), implying a greater need per head for health care in poorer areas, and by changes in the age structure of the population in areas of net emigration. Close empirical analysis is required to see how such factors work themselves out in practice.

105. See note 97. Allowing for the anomaly in the education sector, it can be estimated that employment in Milton Keynes increased by perhaps 3% or 4% between 1978 and 1981.

106. For an account of the second oil shock see Terzian (1985 pp.257-307), on which the following summary is based.

The increasing unpopularity of the American-backed regime of the Shah in Iran precipitated a revolutionary situation, with a national oil strike starting in mid-October 1978. It has to be emphasised that anti-Shah feeling was strong across a wide range of political groups; in the early stages of the Iranian revolution there was no simple battle between Ayatollah Khomeini and the Shah, although later, as the revolution crystallised, the religious fundamentalists led by Khomeini were able to marginalise other revolutionary groups. The oil strikes lasted from October to December, at which stage the Americans withdrew their support from the Shah, who soon fled into exile.

The stoppage of Iranian oil production did not immediately create a physical shortage on the world oil market as other countries, notably Saudi Arabia, were able to expand production to meet the gap in the market. Spot prices increased however, and oil companies were anxious to keep high stocks of oil in reserve, partly in anticipation of future supply difficulties and partly, perhaps, in anticipation of further price rises. Indeed, as political tensions implied the possibilities of oil shortages, various countries, notably the USA, tried to *increase* imports.

Spot prices on the open market were considerably higher than the official OPEC prices, and so in early 1979 oil producing countries attempted to sell on the spot market rather than the official price. By mid-1979 a third of the international oil trade was conducted on the spot market, compared to a normal figure of about 5%. By the end of May, Saudi oil was selling at almost three times the official rate. Oil companies were, according to the interpretation given by Terzian, actively using the "panic", itself to a large extent artificially contrived, to boost profit margins. The differences between official prices and spot prices also precipitated a wave of corruption and bribery in some of the oil producing countries, notably Saudi Arabia.

OPEC official prices rose only modestly in 1979, the major component of price rises being speculative purchases by the West on the spot market. By the beginning of 1980, however, "the oil market lurched into indescribable chaos" (Terzian p.275), the spot market stabilising slightly, but with producer countries continually adding surcharge upon surcharge on official prices, completely disrupting price structures. By late 1980 prices had more than doubled in the space of 16 months. Eventually, however, prices fell back again, as the slump reduced demand for oil and as the speculative wave peaked. In February 1982 prices on the spot market actually fell below the official OPEC prices.

One aspect of the oil shock was that it boosted North Sea Oil production, and in Scotland boosted the Aberdeen economy. The broader question arises though of whether the oil shock actually *caused* the slump.

Many commentators were inclined to "blame the Arabs" for the 1974-76 recession, and yet this type of explanation was far less fashionable in, say, 1980 or 1981, when causes of industrial recession were being discussed. Various salient differences between 1973-4 and 1979-80 may be listed:

(1) Although both oil shocks took place at relatively late stages of the long cycle downswing, the spiral of relative decline up to 1973 had been fairly weak, giving the impression that background economic conditions were smooth. A deep recession under such conditions would tend to be attributed by the pundits to specific external shocks, and there is no doubt that what happened in 1973 was a severe shock to the world economy.

In contrast, in 1979, the economic situation was manifestly perilous; western governments were by this stage well used to high inflation, high unemployment and, in many cases, balance of payments problems. Trouble could be anticipated, independently of what was happening in oil markets.

(2) The oil shock of 1973 had such severe effects in part because it was so unexpected and presented novel difficulties for governments and companies. In contrast, the possibility of a future oil shock would have been more central in strategic planning in the late 1970s, especially given the considerable political tensions in the Middle East.

(3) In Britain, at least, attention was concentrated more on the role of Government economic policies in precipitating a slump.

With close knowledge only of the British experience, in which the slump took place earlier than elsewhere, it is difficult for the present author to state with conviction how important a factor the oil crisis was during the international slump. Undoubtedly, though, a jump in energy prices can hardly have made things easier.

107. Regular statistics are published in the *Scottish Economic Bulletin* on employment in the North Sea oil industry (see also Table 6.57), but these *exclude* associated manufacturing industries, such as oil rig construction and engineering. As so often, one has to try to make reasonable inferences (which may turn out to be incorrect) from limited data.

Employment in North Sea oil in Scotland peaked, on half-yearly figures, at 66,000 in December 1985 (52,900 in Grampian). Falling oil prices and a natural peaking of production led to a decline of

employment to 50,800 (40,700 in Grampian) by June 1987; subsequently employment in this sector had increased again.

Boom-slump cycles tend to be very pronounced in extractive industries since in the short term prices of raw materials often tend to be highly unstable, and since in the longer term the natural resources being extracted may start to run out. The most destructive combination is that of falling prices and depleted reserves, which severely affected the older coal mining areas in the inter-war years (chapter 4). Clearly Aberdeen's problems in 1986 were not as severe as this, although the earlier boom in house prices was thrown into reverse. In the longer term there is no guarantee that Aberdeen will continue to be an area of great relative prosperity; much depends on the strength of diversification into other economic activities as North Sea oil production starts to fade away.

108. The most obvious asymmetry would be in the construction industry, in that any major "active" expansion of employment will require an increased housing stock, more roads built, etc., while if there is a downturn in activity jobs will be lost through a slowing down of housebuilding but not through the depletion of the *existing* housing stock. Construction is regarded in the text (section 8.3(ii)) as part of the active side of the multiplier equation rather than as part of the passive side, although house-building (as opposed to, for example, factory building and infrastructural development) may perhaps be regarded as at least partially "passive". There might well be parallel considerations, though, in more purely passive sectors.

109. Assuming a reclassification in the Highland Region between MLH 341 (industrial plant and steelwork), -3,000 jobs, and MLH 371 (shipbuilding and ship repairing), +2,400 jobs.

110. Total employment fell by 8.7% in Dundee TTWA and by 0.4% in Perth TTWA between 1978 and 1981. Manufacturing employment fell by 28.0% in Dundee and by 1.0% in Perth. Unemployment figures in the early 1980s reflected this differential performance with Dundee typically having an unemployment rate about the same as Glasgow's, while Perth's unemployment rate matched that of South East England. Thus, for June 1981 unemployment rates were UK 11.1%, Dundee 15.5%, Glasgow 15.1%, Edinburgh 9.3%, Perth 7.8% (South East England 7.7%) and Aberdeen 6.4%. This wide spread of unemployment rates obviously reflects differential economic performance, yet even so it is perhaps surprising that differences in unemployment rates should be so large, given the possibilities of migratory equilibriation. For example, in South Wales the difference between undepressed Cardiff (11.9% unemployment) and other towns (Port Talbot 14.2%, Swansea 14.3%, Newport 13.6%, Pontypridd 14.3%, Ebbw Vale 18.7%) was generally rather less. Perhaps a large part of the explanation lies in the very low density of population in areas *between* the major Eastern Scottish cities, so that for example there are few places such that there would be substantial emigration from Dundee to A and from A to Perth or Aberdeen. In such cases unemployment differentials can remain sharp.

111. See Tables 8.7, 8.26.

In the Island Areas a positive differential shift in the service sector is concealed by a very large negative differential shift (-2,200; -9.1% of total 1978 employment, in all sectors) in the construction industry. This relates to the end of the constructio and investment phase of the North Sea oil boom; in 1978 construction accounted for 22.0% of total employment in the Island Areas, an

abnormally high figure which clearly cannot be explained by purely local demand.

112. It should also be noted that the rural South of Scotland had only slow increases in employment levels up to 1978; between 1973 and 1978 employment in the Borders Region went from 38,400 to 38,300 while employment in Dumfries and Galloway went from 47,600 to 50,000.

113. See note 63 above for a more detailed discussion.

114. In Whitehaven TTWA, employment grew by 7.3%, while in Dumfries TTWA employment increased by 8.1%. Whitehaven's industrial performance was boosted by significant employment growth in soap and detergent (MLH 275), while the public sector services were expanding rapidly in Dumfries, with employment in national government services (MLH 901) increasing by 500 (114.6%).

To some extent Lakeland as constructed in Table 8.27 is artificially constructed in that, for example, Whitehaven is included but Workington excluded. The point of Table 8.27 is not so much to try to show in which large rural area (including small towns) growth is fastest, but rather to show that rural/small-town growth took place in the periphery in regions other than Scotland.

115. Townsend (1986) has also noted the significance of employment growth in various medium sized towns in various regional settings, continuing even through the slump.

116. See especially Keeble (1977). The elaboration of the concept of the urban-rural shift by, for example, Fothergill and Gudgin (1979b, 1982) and Keeble (1980c), represented a development of this theme in that the main differentiating factor between regions in terms of employment growth was not the familiar North-South divide, but rather the degree of urbanisation of particular regions.

Wildly inaccurate results have occurred when this type of reasoning was applied to conditions in the slump, in for example Gillespie and Owen (1981). Perhaps the most bizarre comment by academic writers on the slump has been that "the most recent recession has done more for the equalization of employment rates across regions than three decades of regional policy" (Frost and Spence 1983 p.258). This astonishing claim, which is wholly incorrect whether "employment" is a misprint for "unemployment" or not, represents part of an argument, or rather an assertion, that regional convergence has been dominant for a long period, a result which, especially in the 1980s, does not withstand close examination.

Gillespie and Owen (1981) presented their results as an assault on the "conventional wisdom" that the peripheral regions were more prone to recession than Southern England, yet when in a later paper (Owen, Coombes and Gillespie 1986) it fails to escape their attention that employment fell less during the slump in the South than in the North, this is presented as an overturning of the "conventional wisdoms of the mid-1970s, such as the paramountcy of the urban-rural shift and the shrinking of North-South differentials." It is commendable that Gillespie and Owen should retract, even if only implicitly, their earlier views yet it still appears that they are confused about what the "conventional wisdom" of the 1970s really was.

117. See for example Hudson (1978).

118. These were to be expressed mostly at the level of the large factory closure, or mass redundancy, in a single town, although in some industrial areas a combination of major redundancies in apparently unrelated industries could have a major effect.

119. For Northumberland, the unusually early decrease in unemployment in Morpeth TTWA in early 1983 has already been noted in chapter 7.7(ii), with the inference being made that a specific major job creation event was involved.

In Northamptonshire especially, and to a lesser extent in Staffordshire, favourable location with respect to the South East core has probably assisted recovery from slump.

120. Clearly the intensity of the slump and of the North-South divide has been something of an embarrassment, though ultimately not a decisive setback, to the Government, and has created the need for the Government to create a framework of analysis in which the Government could be absolved from all blame and in which the victim instead could be blamed. Thus it was decreed that the South was the "enterprise culture" while the North became the "dependency culture", allegedly preferring to rely on state handouts to getting involved in economic activity. In particular, recent rhetoric has concentrated heavily on the need to bring the enterprise culture to the inner cities, yet much of the intensity of the inner city problem derives from the extent to which enterprise earlier deserted the inner cities.

Inevitably, a situation in which work is scarce implies the growth of dependency, on the State and on other institutions, and one can perhaps argue that a "culture" of dependency arises, showing itself in various forms of passivity, frustration, resentment, petty crime, breakdown of family ties, and so on. Indeed if one is marginalised in the labour market it often takes considerable strength of character to avoid being over-acclimatised into dependency. If indeed it is possible to speak of a general culture of dependency, then no Government can have done more to spread and to perpetuate that culture than the post-1979 Conservative Governments. Any UK Government which is proud of its record on unemployment with unemployment persistently over 2,000,000, largely resulting from a collapse in industrial employment, chiefly in the private sector, which was greatly exacerbated by its own policy measures, is a government deeply responsible for the creation of a culture of dependency. Furthermore, the Government's view that dependency can be reduced by cutting back the welfare state shows a fundamental misunderstanding of the problem; dependency is created in the labour market, and not by individuals nor by the state.

121. In the end such projections turned out to be incorrect, and the Conservative Government was re-elected. This most certainly does not mean that the projections were incorrect *at the time*, any more so than, for example, a die showing 6 makes it incorrect earlier to have projected that the die would show a number from 1 to 5. Given that as of 1980 and 1981 the economy was in a state of collapse, unemployment was soaring and opinion poll ratings for the Conservatives were for long periods well below 30%, it would have taken a major and sudden political shift to leave the Conservatives with any real chance of winning the next election. This happened, but under most levels of analysis the sequence of events involved could be classed as "historical accident". To have predicted the Falklands War and its political impact, one would need to have predicted the misreadings of the situation by various key actors, notably the assumption made by Britain that Argentina would not attack the Falklands and the assumption made by Argentina that

Britain would not defend the Falklands.

The main point in the text, however, was not the question of whether the 1980/1981 prediction of the next Election result was "correct" or not, but rather the projection being made that after the slump there would be a considerable economic upswing *whichever* party won the next election. Such a projection was at the time highly unorthodox, and it may well be that the present author did his academic career prospects no favours by proposing research on the 1930s post-slump boom to gain advance indications of the future shape of the forthcoming (as of 1981/1982) 1980s boom. The boom materialised, but now the orthodoxy is to suggest that this was the result of Mrs. Thatcher's success(!) in overcoming Britain's economic problems. It is suggested instead that the boom of the last few years represents simply the normal contours of economic change after a slump, and would have taken place under a Government of any political complexion.

It is quite possible to set up a counterfactual "history" of the mid-1980s, assuming away the major exogenous shock of the Argentine invasion of the Falklands, and allowing for a more normal course of political and economic events. It is assumed furthermore that the Labour Party would not have self-destructed completely as a result of the intensification of internal battles as the prospect of power becomes closer, although this is perhaps a generous assumption. The likelihood under the given assumptions is that Labour would have formed either a majority or a minority Government at some stage in early 1984, and would have inherited an economy with massive unemployment, but poised for rapid growth with North Sea oil providing an important boost. By about 1988, with economic policies being directed towards reducing unemployment, one would expect unemployment to have fallen below 2,000,000 (in early 1982 the present author regarded 1,500,000 as a difficult but achievable target). Political emphasis, given that unemployment would still have been seen as an important problem, would have been given not so much to the strength of the boom, but rather to the immensity of the inherited problem, requiring still further imaginative restructuring of the economy. And, critically, had the Falklands War never happened, Thatcherism as an economic policy would have been seen as a disastrous failure; the new policies designed to overcome the Conservatives' crisis of confidence in the mid-1970s would themselves in their collapse have created a new crisis of confidence. Under such circumstances it would be a Conservative opposition, not a Labour opposition, which would be seen as fatally lacking in ideas and seen as concentrating above all on maintaining an illusion of unity to hide low morale and a sense of crisis.

Historical accidents can have profound effects, and there can be little doubt that the Falklands War was, in terms of its effects on British political life, one such historical accident with profound effects. A historical accident is not a mere random occurrence; human history is far more closely structured than that. Historical accidents can themselves be regarded as having analysable causes. The point, however, about a historical accident is that it represents a relatively marginal event which has a disproportionate effect on the main currents of historical motion.

122. Thus the tendency towards increased import penetration in UK markets was temporarily halted during the slump; see chapter 7 note 58.

123. The front cover of the *Gazette* has featured tourism in four out of the first eight months of 1988.

124. For leisure travel, the balance of payments position was as follows:

Year	Balance (£m)	Year	Balance (£m)	Year	Balance (£m)
1977	+971	1981	-455	1985	+353
1978	+770	1982	-563	1986	-951
1979	+535	1983	-243	1987	-1333
1980	+ 9	1984	-156		

Source: *United Kingdom Balance of Payments 1988 Edition* p.26.

Between 1977 and 1987 credits from tourism (leisure travel) have increased by 19.9% (1.8% per annum) while debits have increased by 262.7% (13.8% per annum). The price deflators used are the implied price indices for services given on p.29 of the source reference.

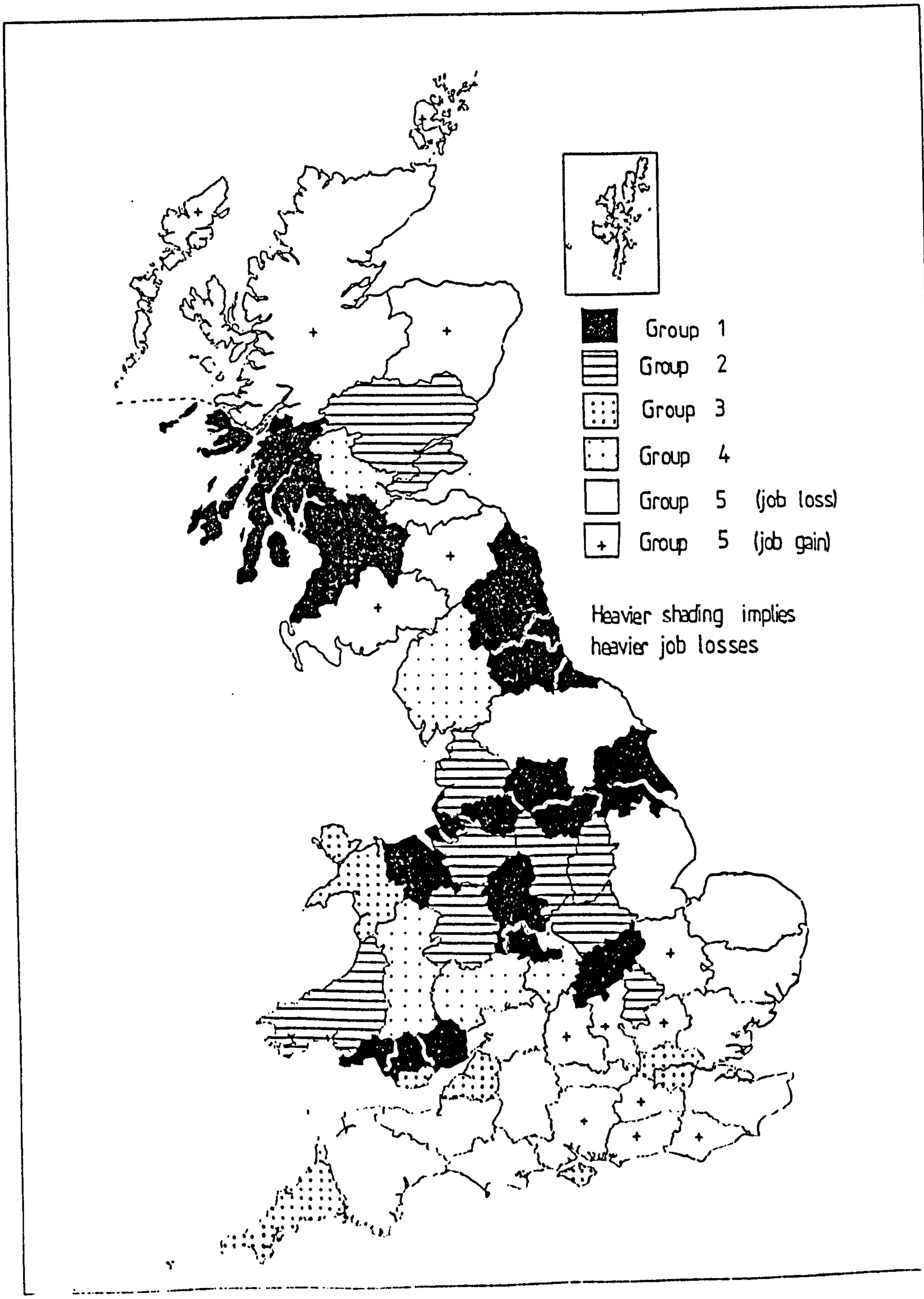
Unless there has been a very major change of accounting practice, or of producing estimates (which are generally slightly lower than those published in the *Gazette*, even taking into account business travel), the general picture has been one in which UK tourism abroad has been booming, leading to considerable outflows of currency, and in which foreign tourism in the UK has been growing relatively slowly. Obviously any expansion in the UK tourist industry is to be welcomed, and the expansion of employment in this sector is also to be welcomed (+221,000 jobs, or +20.6% between March 1982 and March 1988; *Gazette*, August 1988, Table 8.1; self-employment increased by perhaps 40,000 in the same period), yet this increase needs to be set in context. Given the severe and increasing balance of payments deficit on tourism, it cannot be said that the UK is greatly improving its competitive position in international tourism; still less can it be said, Government hyperbole notwithstanding, that tourist development is a suitable replacement for industrial development in an allegedly "post-industrial" society. The situation seems more as described in chapter 6.9 above in which rising real incomes and the persistence of high unemployment combine to induce a substantial expansion of employment in the lower paid parts of the service sector.

125. These figures represent net earnings of City institutions, rather than the total balance of payments in financial services.

During the slump the main increase in City earnings was in banking (UK overseas earnings averaging £120m per annum between 1977 and 1979, then £139m in 1980, £849m in 1981 and £1,361m by 1983). After the slump, the most spectacular increase in overseas earnings was in insurance, with net earnings rising from £1,648m in 1982 to £4,913m in 1986 and £4,834m in 1987.

All figures taken from *United Kingdom Balance of Payments* 1988 p.38.

Fig 8.1 Classification of Counties According to Degree and Structure of Job Loss



Chapter 9 Pre-1914 Origins of the Regional Problem

9.1 Introduction

The preceding few chapters have been devoted to discussing various aspects of regional economic change in 20th century Britain. Much of the discussion has been in a semi-narrative form, emphasising the specificity of developments through each business cycle; from such relatively detailed accounts a broader picture may be developed without the over-generalisations which are liable to occur in a more "thematic" account. The problem of over-generalisation is seen, for example, in those accounts of the inter-war period which treat the period as a whole as being uniformly depressed, without taking account of the radically different sets of economic trends operating either side of 1932.[1]

In all the variety of economic conditions which have characterised the study periods, several reasonably consistent themes have emerged. The most central theme is that during the post-1918 period, the "core" regions of Southern England have persistently outperformed economically the peripheral industrial regions. This tendency has at times been weak, particularly in periods in which a strong regional policy had been operative, and at other times the tendency has been very strong, particularly during periods of deep recession. This is broadly what might be expected from a cumulative causation model of the type suggested by Myrdal (1957), as discussed in chapter 1.5 above. In any given period, the more dynamic economic performance is likely to be attained by the more prosperous region rather than the less prosperous region; this dynamism improves the background structure for the more prosperous region in subsequent periods, and helps perpetuate superior growth. In periods of recession, heavier rates of job loss are likely to be found in the less prosperous region, particularly if such a region has a large industrial sector, susceptible to decline.

There is undoubtedly a strong core-periphery component to the regional differences in economic growth in the 20th century. The London region, with its concentrations of employment in administration, higher finance and the more income-elastic branches of industry, certainly shows the central attributes of a dominant core region. The periphery may then be described negatively, in terms of "not-core". The relative absence of the higher economic functions in the peripheral regions tends to be a constraint to growth in the peripheral regions, not just in Britain but also in most other countries. This however is not sufficient to define a specific form of economic *problem* in the periphery. Peripheral regions vary considerably in economic structure from country to country;

the distinction in structure between a declining industrial region in Northern England and a backward rural area in a less developed country is in many ways more fundamental than the differences between the core metropolitan regions in each country.

The basic regional problem in a less developed country is one of lack of economic development in the periphery; the basic regional problem in a more developed country is that past economic development in the periphery cannot be sustained, leading to the development of coal mining problem regions and depressed manufacturing regions.[2] Agricultural problem regions may still be an important feature in the more developed economies, but this is less the case in contemporary Britain, with a small agricultural population, than elsewhere.

The dominant regional problem in Britain in the 20th century, and the one which has affected most people, has been the poor employment performances of the coal mining and manufacturing areas. In recession after recession, throughout the periods studied in chapters 4 to 8, this has been the central component in the geography of employment change. Industrial and coal mining employment has historically tended to be concentrated in the periphery, and has also tended to decline there more quickly than in the core regions.

This pattern of decline presupposes an earlier period of powerful industrial growth in the periphery. That this growth, from the late 18th century to the late 19th century, took place in the periphery rather than in the core, is regarded as accidental rather than fundamental at the current scale of analysis. Had Britain's main coalfields been located in Southern England rather than in the peripheral regions, Britain's Industrial Revolution would probably have taken place predominantly in the South rather than in the North, if it were to have taken place anywhere. The presence of water power in the Pennine fringes was undoubtedly an important factor in the early industrial expansion of the Northern cotton and woollen industries,[3] but it is difficult to envisage the shift to large scale production taking place without access to cheap, and thus relatively locally mined, coal.

19th century industrial growth was concentrated in the peripheral regions not because they were peripheral but rather because they had coal. This, the main source of non-living energy in the steam revolution, was very bulky, and hence difficult and costly to transport. It is worth noting, for example, that much of the very early development of the British railway system was carried out primarily to deal with the major problem of moving coal from the pithead.[4]

The presence or otherwise of coal was an extremely important locational factor for industry in the 19th century. Coal is a sporadically

occurring raw material which is not transported away with the finished product in any form. The combination of 100% weight loss and sporadic occurrence means, using Weberian analysis,[5] that industrial location is likely to be tied quite closely to the coalfields. The cost of transporting coal was far from negligible. In the decades up to 1913, the price of coal in London was typically 10s per ton higher in London than at the pithead, with the pithead price varying between 5s and 9s per ton.[6] In effect, energy was over twice as expensive in London than in the coalfield areas; the differences in industrial profit margins which would have resulted from this were likely to be substantial. The weakness of industrial development in the towns and cities of Southern England in the 19th century can be largely explained by this factor. The effect of the Industrial Revolution was, paradoxically, more to deindustrialise the South than to industrialise the South.[7]

Fortunately for the development of British industry, there was not just a single coalfield, but several, allowing considerable regional specialisation in industrial development. In following the arguments later in this chapter, it is important to recognise that while much of Britain's main industrial growth was, in locational terms, coal orientated (or transport orientated, in Weber's more ambiguous terms), it was not orientated to final consumer markets, almost by definition in the case of the main export industries. The fact that rapid industrial growth could take place without being dependent on a local market meant that cities could emerge almost from nothing in a very short time period.[8] Investment was needed to develop such urbanisation, yet there was no requirement for investment to be generated wholly from the previous savings of the inhabitants of a place; mobility of capital was present in a number of forms in the 19th century.[9]

An extremely important set of technical developments had profound implications on the geography of industrial development in the 20th century. These revolved around the increased transportability of energy, most obviously through the widespread use of electricity and also through the increased use of liquid oil rather than solid, bulky coal. Weber (1909/1929 pp.91-94) noted at an early stage that the use of electricity would substantially reduce the transport costs of energy, and allow location to be orientated towards markets and sources of other raw materials, rather than towards sources of coal. In practice, the greater attractiveness of market locations dominated, with the focus of industrial development, particularly in the newer industries, shifting decisively towards the Midlands and South. When examined from a longer historical perspective, however, it seems rather strange that the main markets should be in the Midlands and the South, after a century and a half of vigorous

industrial development in the North and relative industrial stagnation in the South. If the Industrial Revolution of the late 18th and early 19th century had a decisive transforming effect on the British economy (a claim which is made, usually in the introduction, in virtually every economic history of the Industrial Revolution),[10] it is difficult to see why, after a century and more of the Industrial Revolution the dominant markets should have been at the end of England which did not participate in the Industrial Revolution, namely London and the South East. For the time being, let it merely be suggested that there is no automatic presumption for the economic dominance of the new industrial areas over the South in the 19th century. A stronger version of the argument, that the South has been economically dominant over the North *throughout* Britain's economic history, will be advanced later.

A complicated set of questions is opened up here. It hardly needs stressing that the British economy has been in relative decline since the First World War, and that this decline has been concentrated in industry[11] and, geographically, in the industrial areas (chapters 4 to 8 above). Somewhere, Britain lost her way. Pollard (1985) in a recent review article, notes that there is a tendency for those studying Britain's relative economic decline to look back to roots of decline in the 1870-1914 period. In that the British regional problem is spatially the sharpest manifestation of this relative decline, and in that it is felt necessary to go back before 1914 to search for the roots of the regional problem, the current author is following this tendency.

In studying decline at the national level, the question has often been raised of whether the heavy capital exports of the 1870-1914 period were good or bad for the national economy. Pollard (1985) distinguishes between a "gut reaction" school on the one hand which suggests that capital exports were bad for the economy, and that capital should be used to create jobs at home rather than abroad,[12] and a "neo-classical" school on the other hand, which suggests that the diversion of capital towards home uses would have lowered the rate of return on investment and damaged the economy.[13] Pollard does not find decisive support for one point of view or the other from the available evidence, but he notes various instances in which industrial expansion was clearly hindered by a lack of capital at a time in which overseas investment was considerably more fashionable than domestic industrial investment.[14]

Fortunately, there is no need here to attempt a definitive answer to this particular question, although the present author would tend to agree with the "gut reaction" school rather than the "neo-classical" school. The central question as far as the present analysis is concerned is not whether the heavy capital exports were good for the *national*

economy, but rather whether they disfavoured the industrial areas. The answer in this case is reasonably unambiguous; a major switch of investment from home to abroad can hardly have been anything but detrimental to industrial employment growth, and to the industrial areas. It is possible that the economic gains to the *South* largely or fully compensated for this loss at the aggregate scale, but even if this were the case, there would still be a strong shift in the balance of economic advantage from North to South, and from Northern industrial interests to Southern rentier interests.

The development of industrial Britain was thus undoubtedly hampered by the direction of investment abroad. This would affect not just current rates of industrial development, but also the possibilities of developing new industries in the longer term; Britain largely missed out on the *industrial* upswing starting in the mid-1880s, but had a very strong record of foreign investment (chapter 2.6). In terms of longer term industrial dynamics, it is surely misleading to suggest, as McCloskey does,[15] that "by keeping savings at home the British people could have had two Forth Bridges, two Bakerloo lines, two London housing stocks, two Port Sunlights"; what was at stake was whether Britain, supposedly the leading industrial country, would keep up with Germany and the USA in the development of the chemicals industry, and such infant industries as the vehicles industry and the electrical industry.

The retardation of the peripheral industrial areas in the late 19th century is shown clearly in Fig 3.1. Throughout the 19th century up to the 1881 Census there was a powerful drift in population to the North, and more specifically to the Northern industrial areas, while after 1881 the North-South balance of population remained stable. The period after 1881 was furthermore one in which exports of capital were very high,[16] corroborating the impression that it was the diversion of capital investment abroad which was largely responsible for the North's retardation.

The argument has now been carried back one stage further. There still remains the presumption of a split between finance and industry, in which what happens in the financial sector is crucial to what happens in the industrial sector, without the converse necessarily being the case. Prior to the Industrial Revolution, one could state that the main forms of wealth were landed wealth and financial wealth (banking, trade, etc.). The industrial capitalist represented not so much an offshoot of these older classes, but rather a new class. In the early stages of the Industrial Revolution especially, many of the industrial capitalists started from fairly humble origins,[17] which suggests that while such capitalists may have accumulated considerable wealth by the standards

of the industrial wage level, this wealth was relatively small compared with the more traditional concentrations of wealth. Furthermore, the development of industrial wealth would have been constrained by the requirement for access to investment funds, which were not necessarily forthcoming if the holders of major wealth preferred to concentrate on non-industrial investment.

Industrialists tended to be moderately wealthy rather than extremely wealthy, while those with extreme wealth in the 19th century tended to be either landowners, or bankers and merchants based in the capital city; this aspect of the distribution of wealth has been much emphasised by Rubinstein (1977, 1981), although a reworking of Rubinstein's data in chapter 9.4 below suggests that Rubinstein somewhat understated the relative concentrations of wealth in the Northern conurbations. The extreme wealth of London does not require a large local industrial workforce to perpetuate itself, in contrast with the more moderate wealth of the industrial North. A centre of finance and wealth such as London tends, however, to generate a substantial middle class, and also substantial employment in miscellaneous services and finished goods industries. The Northern industrial areas would have, in proportion to the wealth existing in the area, a far larger industrial working class than the South.

Later sections in this chapter will elaborate on this basic picture of how a large industrial base developed in the North while the main locus of wealth remained in the South. An important distinction can be made between the "visible geography" of the 19th century (industrial location, employment, unemployment, migration, etc.) which can be examined from readily available statistics, or even seen on the ground, and the "invisible geography", the hidden structures of wealth which underlie so much of what is happening on the ground.[18] Geographers have tended to concentrate on the visible geography of the 19th century, and in particular on such features as industrial location[19] or urban growth.[20] The invisible geography, of wealth and of capital exports, has largely been ignored. Nineteenth century imperialism is perhaps the most conspicuous form of this invisible geography, "invisible" insofar as the internal structure of Britain is concerned, but also the sheer accumulations of wealth suggested by Rubinstein as underlying the economy of London will tend not to be fully revealed in the "visible" indicators.

This does not mean that population growth, or employment growth, in London was negligible. Table 9.1 shows that while Northern cities grew in *proportionate* terms far more quickly than London, and hence far more spectacularly, the *absolute* growth of London at least balanced that of the Northern cities. This feature is often overlooked in accounts of

the geography of 19th century Britain, especially those which concentrate on the industrial geography of the period (e.g. Perry 1975). Even on visible indicators, Southern urbanisation matched Northern urbanisation.

This chapter attempts to elaborate on aspects of British economic geography prior to 1914, both to give a coherent picture of the period itself, and to establish the background against which regional economic change after 1918 was set.

Section 9.2 summarises the geography of migration up to 1914 in order to give an outline of the visible geography of Britain, and in order to identify major patterns of change through time.

Section 9.3 considers in more detail, and on a theoretical basis, some features of the geography of wealth in 19th century Britain, and how this influenced the geographical structure of the working class. Section 9.4 discusses Rubinstein's evidence on the geography and sectoral composition of wealth, and some of the implications of this evidence.

Section 9.5 in many ways is the crucial link section between the discussions of regional class structure in the 19th century (sections 9.2 to 9.4) and the discussions of the regional geography of unemployment in the 20th century (chapters 4, 5, 7). Beveridge (1944) has suggested that there was a fundamental reversal of regional patterns of unemployment before and after the First World War.[21] Up to 1914, unemployment was high in London and the rest of Southern England, but low in the coalfield industrial areas. After the First World War, London and the South had low rates of unemployment, while the coalfield industrial areas had high rates of unemployment. Beveridge interpreted this in terms of a prosperous North and a depressed South. It is suggested, however, that this is too simple a distinction, and that the extreme wealth which was present in London encouraged an employment structure to develop which was liable to labour glutting in a way in which the labour markets of the industrial towns of the North were not.

Section 9.6 concentrates on the coal industry to see what aspects of its pre-1914 expansion can be used to help explain the extreme rapidity of employment decline in this sector in the 1920s and 1930s. It is suggested that the patterns of expansion in this industry were highly lopsided, and that the growth in employment which resulted was exceptionally unstable. Much of the intensity of the regional problem between the wars can be explained by this factor.

9.2 Geographical Patterns of Migration Before 1914

It is not inconsistent with earlier arguments to examine the redistribution of population through time as an indicator of spatio-temporal shifts in prosperity, so long as a distinction is drawn between "prosperity" and "wealth". Under such a distinction, prosperity refers to the economic well-being of the mass of population who have to sell or attempt to sell their labour power in the job market (and refers to such matters as the degree of unemployment and the dynamics of wages) while wealth, or riches, refers to the economic condition of the capitalist class(es). It is not necessarily true, and depends a lot on regional class structure (sections 9.3 to 9.5 below), that the geography of prosperity and the geography of wealth should coincide, and indeed it is a central contention of this chapter that due to a complex set of circumstances they did not coincide in the 19th century. This basic point applies whether the class of wealth-holders is defined narrowly (e.g. millionaires) or broadly, to include a large part of the middle class.

A geography of migration is mainly a geography of prosperity, or lack of prosperity, rather than one of wealth, and as such links in with the statistical indicators (unemployment, migration, etc.) used in previous chapters to measure the geography of prosperity in the 20th century.

That there has been a geographical reversal of patterns of prosperity is clear. A striking illustration of this is to compare the map of net absorption and dispersion of population up to 1881 in Ravenstein's classic paper on migration (Map 6 in Ravenstein 1885) with present migration trends. Net absorption is given by expressing, as a percentage of the county's 1881 population, the difference between the county's population and the number of people enumerated as being born in that county, and as such gives a long term pattern of migration rather than an expression of current tendencies, which were in considerable flux, as Cairncross (1953 p.69) points out.

The general picture of migratory trends in England and Wales presented by Ravenstein for the mid-19th century is almost the complete reverse of general trends of migration and economic growth at present. In the 19th century the four "metropolitan counties" (in the sense of containing the metropolis of London) were particularly rapid absorbers of population, more so in Middlesex and Surrey, where the London built-up area represented a dominant part of the population, than in Kent and Essex, which had large rural hinterlands. As well as Surrey (net absorption level of 30.7% of the 1881 population) and Middlesex (17.7%),[22] there

were three other counties with absorption levels considerably in excess of any other county in England and Wales. These were Glamorgan (26.7%), Durham (19.9%) and Lancashire (18.1%). In no other county was the absorption rate over 8.0% but generally the more industrialised counties were net absorbers of population; thus, in addition to the above, Monmouth, Kent, Yorkshire, Cheshire, Warwick, Sussex, Carnarvon, Hampshire, Essex, Derby, Nottingham, Merioneth, Northumberland, Stafford. Of these only Kent, Sussex, Hampshire, and Essex, in the London zone of influence, and Carnarvon and Merioneth in the North Wales slate mining zone were outside the main coalfields.[23] All other counties in England and Wales were net dispersers of population, about half of them showing net dispersion rates of over 20%, although certain counties, notably Cumberland, (-1.7% net absorption rate), Leicester (-3.6%), Worcester (-3.6%) and Gloucester (-5.9%) had only slight degrees of net dispersion of population. Of particular interest is that the counties in the rural belt from the Wash to Cornwall universally showed heavy rates of net dispersal of population yet it is these counties which in recent years have tended to be fastest net absorbers of population. Thus, in the 1971-1981 period the following English counties had net migration rates of over 9% (measured in terms of gain in population through net migration):

Cornwall (+15.1%),West Sussex (+15.1%), Isle of Wight (+13.5%), Buckinghamshire (+13.5%), Dorset (+11.9%), Norfolk (+10.9%), Hereford and Worcester (+10.5%), Cambridgeshire (+10.1%), Devon (+9.4%), Suffolk (+9.2%), Shropshire (+9.1%).[24]

All these counties except West Sussex were in the rural zones of net population dispersal in Ravenstein's analysis.

Clearly this line of analysis could be carried much further, but this is hardly necessary if one intends merely to outline the reversal of patterns of internal migration between the mid-19th century and the late 20th century. This reversal is noticeable on a North-South basis (Fig. 3.1), but is even more strongly marked on a rural-urban basis, most clearly but certainly not exclusively in the South. Fothergill and Gudgin (1982) appear to make a false distinction when they suggest that in contrast to earlier experience current spatial problems are best expressed on an urban-less urban basis rather than a North-South basis. Both aspects need to be treated together, both for the present and for previous periods; neither can be treated in isolation. The 20th century regional problem of the North is not simply a regional problem of an area of the map; it is the regional problem of Northern *urbanisation* deriving from past periods. The late 20th century rural growth in the South is not simply abstract rural growth, as Fothergill and Gudgin seem to imply, but the growth of the metropolis on green fields.

A 19th century writer (Ogle 1889 p.230) suggested that

"Towns and manufacturing districts in all times and in all countries grow more rapidly than rural districts, and at their expense; this being a necessary consequence of the rigidly limited amount of land available for agriculture, and the practically unlimited amount of material available for manufacturing purposes."

This, despite some overgeneralisation (... "in all times and in all countries" ...) seems a reasonable statement of the nature of the 19th century rural-urban shift, though perhaps some indication of the importance of the service sector in urban areas, and particularly in London, would have been useful. Whereas Fothergill and Gudgin explain the 20th century urban-rural shift in terms of the rigidly limited amount of land available in cities for industry, Ogle describes the 19th century rural-urban shift in terms of the limited availability of land *in rural areas* for agriculture, the question of congestion in the city not yet having been seen as a major problem.

The rural-urban shift of the 19th century and the urban-rural shift of the 20th century are not entirely parallel, however. In the former period the growth of the cities and the relative stagnation of the rural areas was the result of a major sectoral shift in economic activity from agriculture to industry and services. In the latter period the relative decline of the cities and the growth of smaller population centres needs to be explained in terms of geographical shifts in activity *within* broad sectors.

Summarising, one can state that the general tendency before 1914 was for population to be redistributed from country to town, a process which was international in scope but felt most strongly in Great Britain,[25] and that this major redistribution of population involved, secondarily, a net redistribution of population from South to North. These trends need to be examined in more detail. Table 9.2, taken via Cairncross (1953 p.70) from Welton (1911) and ultimately from Census data, is a basic source for analysis. Much of the relevant data is mapped by Lawton (1968) who is able to show that "the fewness of the areas of migrational gain over the period as a whole is a reflection of the concentration of employment into a limited number of growth points" and that "the volume of migration into these areas was very large."[26] The general trends are reasonably well known, however; it is the pattern of fluctuations which are of primary interest here, in that these fluctuations might shed considerable light on the changing economic geography of pre-1914 Britain. The emphasis is on domestic migration; Thomas (1973) has covered in considerable detail the question of international migration.

In general patterns of change were relatively stable up to the 1870s, although the Irish migrations of the 1840s tended to augment the growth of the Northern towns and displace English net rural migration.[27] After the 1870s, patterns of migration fluctuated sharply from decade to decade; Cairncross (1953 p.69) noted that "up to 1881 the movements of population were along channels that seemed fixed and deep, and that it was not until the eighties that they overflowed into unfamiliar courses." The switch between the 1870s and the 1880s seems to be pivotal.

The most important aspect of the rupture of trends of the 1880s, combined with the subsequent violent switches of trend, was not its internal geography but rather its external geography. Table 9.2 shows that apart from the 1840s, the decade of the Irish famine (chapter 3.3), England and Wales were moderate net exporters of population up to 1881, with a loss of population through net emigration averaging around 100,000 per decade between 1851 and 1881. After the 1881 Census, the net loss of population through migration increased sharply in comparison with previous periods, with a loss of over half a million in both the 1880s and the 1900s. In the middle, the loss of population through migration in the 1890s was remarkably slight. Fig 9.1 graphs the official annual statistics for UK migration, and thus shows more clearly cyclical turning points. As the graphed series includes Ireland, while Table 9.2 excludes Ireland, Fig 9.1 indicates much higher figures for net emigration than does Table 9.2. Emigration from the UK was on an increasing trend during the late 1860s and early 1870s, peaking in 1873. During the depression of the 1870s, which was felt both in Britain and in America, emigration dropped sharply. Emigration recovered, and remained at high levels during the 1880s. The period from 1888 to 1896 was one of falling emigration, but after 1896, the date conventionally used to mark the upswing of the long cycle, net emigration from the UK reached new peaks.

The economic forces behind such major fluctuations in migration were highly complex. In general, unless there are extreme factors operating (as in Ireland in the 1840s) the level of net emigration from a zone of population dispersion is set not by the level of economic depression in that zone, but by the degree of economic opportunity elsewhere. In the context of internal migration in 20th century Britain,[28] the "degree of economic opportunity" is set by the growth of employment in the more prosperous regions; in the context of 19th century imperial expansion, it was set by the development of new territories abroad, most notably in the USA, but also across substantial other parts of the "white periphery" (Australia, New Zealand, etc.). The rate of net migration from the UK, and from other parts of Europe, thus tended to be high when economic conditions in the white periphery were favourable,

and low when trade was dull in these peripheral countries, a feature noted both by contemporaries[29] and by later writers.[30] This clearly applied to business cyclical swings in migration, but the presence of inverse long swings[31] in economic development creates complications. It was noted in chapter 2 that there was a very powerful upswing in economic development in the white periphery from the 1880s, which relied heavily on a redistribution of capital and population from the European core. The growth of the new lands was perhaps the central feature of the upswing of the "imperial Kondratieff" cycle, but this growth would have been partly at the expense of employment in the European core nations, as a result of the diversion of investment abroad. The upswing from the mid-1880s was thus characterised by very heavy rates of emigration from Europe and particularly from the rural areas, but there was a significant interruption in the process in the early 1890s, when the collapse of the Baring bank, which had over-invested in Argentina, significantly discouraged new investment in the white periphery.[32]

Long swings in the peripheral economies clearly had considerable repercussions on the British domestic economy. British domestic investment and British foreign investment were in the long run inversely related;[33] the extreme volume of overseas investment in the 1880s and in the decade up to the First World War was such that domestic investment was certain to be affected. In periods when overseas investment was heavy, for example the early 1870s, the later 1880s, and the period from about 1906 onwards, domestic investment was reduced, whereas when overseas investment was slight, as in the later 1890s, domestic investment was high. Cairncross (1953) regarded domestic and foreign investment as coming from a common pool of saving, and although the size of this pool, as a proportion of GNP, fluctuated through time[34] these fluctuations were slighter than the fluctuations in overseas investment, so that inverse swings between domestic and overseas investment still existed.

It was suggested in section 9.1 that whatever the effects of overseas investment on national income as a whole, a considerable shift in the balance of economic advantage between the industrial North and the metropolitan South would result. Any problems which the Northern industrial economies might face as a result of the direction of investment overseas might reasonably be expected to be stronger in the 1880s and 1900s than in the 1890s. Table 9.2 suggests that this was indeed the case, and that in the 1880s the Northern industrial areas, previously centres of heavy immigration, had actually become areas of net outward migration. In the 1870s, these areas had a net inflow of population of 350,000 while in the 1880s they had a net outflow of 60,000, a change in the total balance of -410,000. Table 9.3 notes this shift and disaggregates it.

"The changes in the 1880s fell with particular vehemence on the northern towns"[35] while the migration balance in the non-industrial towns remained steady, although with an evidence of a shift in the balance away from the North and in favour of the South. It might have been expected that the heavy increases of migration from England and Wales would have led to substantial increases in net migrations from the rural areas. Tables 9.2 and 9.3 show emphatically that this was not the case. The level of migration from rural areas was basically set by push factors, notably a lack of employment expansion in areas in which the natural increase in population is very high. The agricultural depression of the 1870s and 1880s[36] probably contributed to the peaking in the rate of rural emigration in these decades, but there is little clear evidence that the overseas orientation of investment had much effect. Immigration of a rural population from Ireland undoubtedly reduced domestic rural emigration in the 1840s through intensified competition for jobs (Table 9.2), but a redirection of growth from the Northern cities to "abroad" had relatively little effect.

The switch in final destinations of migration was far more significant than any switch in origins. Table 9.3 shows a change in the migration balance of -459,000 between 1871-1881 and 1881-1891. The Northern towns account for -439,000 of this,[37] of which the bulk is accounted for by the cities and industrial towns. London had a substantial deterioration (-139,000) in its migration balance, possibly in part because the local labour market was starting to become heavily glutted (section 9.5 below) and in part because London, a port city, represented a convenient stepping stone for migration between rural origins and final destinations abroad. In other areas, the migration balance remained fairly steady, while in the South Wales coalfield inward migration increased substantially, in a totally counter-cyclical fashion; this feature needs closer investigation.

Table 9.4 lists in more detail migration into the specialised colliery districts. In the 1840s and 1850s migration into the coalfields was substantial, both in England and in South Wales. In the 1860s and 1870s, migration into the South Wales coalfield slowed down substantially, but in the 1880s and 1900s such migration became extremely high; virtually all the net migration into the British colliery districts was directed to South Wales. The movements of the South Wales economy were thus out of phase with the rest of the British economy, but in phase with the pace of development overseas. The more rapid development of the South Wales coalfield, in contrast with the rest of Britain's coalfields, can be found in Wales's role as an *exporter* of steam-coal. Thomas (1973 p.293) notes that: "In the period 1861-1911 long swings in the export sector of Britain were inverse to those in home investment. The rate of output of

coal in Wales synchronised with fluctuations in the British export sector, whereas the rate of output of English coal consumed on the home market was sensitive to the long swing in home capital construction." A pattern of inverse swings *within* British industry is therefore possible, although the dominant positively phased swing is of course linked to domestic investment rather than to foreign investment.

In general, the relative fortunes of the industrialised North declined sharply in the late 19th century, as the balance of investment shifted from the domestic economy to foreign investment. The large industrial cities were more capable of riding the storm than the smaller centres of population. Table 9.5 suggests that the major cities of the East (Leeds, Sheffield, Leicester, Hull) were hardly affected demographically by the shift of the 1880s, although Nottingham seems to represent an exception. It is in the West, in Liverpool, Manchester and Birmingham, that the switches of the late 19th century were most sharply felt, with net emigration taking place in the 1880s (or, in Manchester, a significant deceleration of net immigration), and high rates of immigration in the 1890s.

Of all the main Northern cities, Liverpool was most affected by the changes of the 1880s in terms of migration. This city had been a centre of considerable net immigration during the mid-19th century, and not just during the "hungry forties", yet in the 1880s the city was a source of considerable net emigration. The migratory shift between the 1870s and 1880s in Liverpool stood at -64,100 (Table 9.5), compared with -166,400 in the eight Northern cities as a whole (Table 9.3); this is a substantial proportion. A likely reason for the extremity of the migratory shift in Liverpool is that the lure of overseas economic expansion would have skimmed off surplus population far more readily in Liverpool, a Western port city with a history of heavy immigration and emigration, than in the inland cities of the East. It seems quite possible that with the high levels of external migration in the 1880s, Liverpool was still a considerable centre of net *internal* migration, but that much of this migration was increasingly transitional, with the final destination not being Liverpool itself but rather the USA and the white dominions. Various forms of "stepwise" processes (Ravenstein 1885) could be envisaged, with migrants from smaller towns moving into the city, and migrants from a previous period, having acquired skills in Liverpool, moving abroad. Net emigration from Liverpool does not necessarily imply a depressed local economy; it could simply be a side-effect of Liverpool having been the primary migrant port in a time when prospects abroad were, to many, more attractive than prospects in Britain.

While attention so far has concentrated on patterns of migration, and in particular on the effects of events abroad on patterns of migration, it should not be overlooked that Britain was undergoing an intense industrial recession in the early 1880s which had several of the features of a long cycle slump. If the Northern industrial areas could show a net migratory balance of -60,000 in a decade in which net migration from the rural areas stood at -850,000, economic trends can hardly have been favourable. A Royal Commission on the *Depression of Trade and Industry* reported in 1886 and found evidence of considerable economic depression in the industrial areas. The evidence is not structured in such a way that it is easy to provide a picture of the economic geography of slump, but doubtless close sifting of the evidence would provide important information on the performance of the industrial economy at what was a critical stage in Britain's economic development. Unfortunately, a discussion of the economic geography of the 1880s slump goes beyond the bounds of the present thesis; this subject can perhaps be left to later researchers.[38] The slump of the early 1880s is *not* regarded as resulting from a switch from home to foreign investment; it is seen instead as representing the culminating phase in a series of intensifying recessions as a result of a particular generation of industries losing momentum, and is thus regarded as broadly comparable with the post-1929 and post-1979 slumps. The post-slump recovery was unusual, however, in that half the total savings in the economy were directed to foreign investment and only half to domestic investment. Under such circumstances, the vigorous post-slump industrial growth which characterised the 1840s and 1930s could hardly be expected to take place in the 1880s.

The extent to which the unfavourable migration figures in the Northern industrial areas represent the geography of slump, and the extent to which they represent the geography of recovery, remain unclear. Allen (1929 pp.211-243) suggests that the West Midlands were particularly severely affected by the slump as a result of a rapid decline in the older metal trades, and in the iron industry especially, but comparative regional statistics on the severity of slump are hard to compile. If Allen is correct, this could explain why Birmingham was a centre of emigration in the 1880s, and why the "Northern industrial (non-textile) towns" in Table 9.3 also showed net emigration. Five of these smaller industrial towns (Potteries, Stafford, Rugby, Walsall and Wolverhampton) were in the West Midlands, and some of these, notably Walsall and Wolverhampton, were economically closely linked with Birmingham.

There has been no shortage of research on the 1870-1914 period, but much of it has concentrated on broad questions such as the international movement of capital. The relative lack of any detailed modern research

into patterns of industrial growth and decline in specific trade cycles is keenly felt.

In the 1890s, overseas investment remained slack, largely as a result of a series of financial crises, which had their roots in over-investment abroad,[39] which produced a debt crisis, which reverberated across financial markets. Tha main single event in this was the crisis of the Baring bank in 1890, a bank which had been heavily involved in Argentinian finance, but which had run into liquidity problems. A Wall Street panic in 1893, and various other factors, including the end of an Australian land boom, combined to make overseas investment far less attractive during the 1890s. Once these disruptions had worked their way through domestic economies, both at home and abroad, economic expansion resumed, and at a fast pace. In the UK, overseas investment had reached a low level by the mid-1890s while domestic investment was rising quickly. Table 9.2 implies that this renewed expansion had favourable effects on the Northern cities, and counter-acted many of the worst effects of the 1880s, but that the smaller industrial towns did not benefit much from renewed domestic expansion. Amongst these smaller industrial towns, both the textile and non-textile towns were undergoing continued net emigration during the 1890s. In the North, therefore, the balance was shifting towards the larger cities and away from the smaller towns.

Table 9.2 suggests that the pace of urbanisation in the South was accelerating, and that a new component was beginning to exert a strong influence, namely the large-scale growth of the non-industrial town. Net migration to the 71 non-industrial towns listed by Welton, of which 55 were in the South, stood at 218,000 in the 1890s, which, when added to London's net migration (226,000), overshadowed urban growth in the industrial areas. These centres of renewed urbanisation outside London were not so much the 20 "old" towns (Carlisle, York, Cambridge, Exeter, etc.) which had a positive migratory balance of less than 2,000 between them, but rather the 35 "residential" towns with a combined migration balance of 143,000. These residential towns consisted mostly of seaside resorts, such as Blackpool, Scarborough and Brighton, but also included a large number of inland spas, such as Harrogate, Bath and Cheltenham, and also, significantly, various towns immediately surrounding London, such as Guildford, Uxbridge and Watford. The 16 military towns in the South (Aldershot, Plymouth, Salisbury, etc.) also showed a strong positive migratory balance, of 73,000. These military towns could also be regarded as "residential" in that they would have represented natural places for military personnel to settle down, having completed their military service.

The growth of the suburbs, which was most prominent in London,

and the growth of the seaside resorts have often been noted as distinctive features of the economic geography of Britain at the turn of the century.[40] This distinctive feature first became clearly noticeable in the 1880s and became expecially prominent in the 1890s and 1900s. At a regional scale, urban growth was becoming particularly powerful across the whole of South East England, and not just in London, as maps produced by Robson (1973 pp.108-110) show. The rural areas of the South were still areas of heavy emigration, but one could suggest that as soon as drift from the land slowed down, whether as a result of a falling birth rate or as a result of improved economic conditions, the South would appear in a position of clear ascendancy over the North. This was beginning to happen in the 1900s.

The major expansion of London and the residential towns was based more on the expansion of middle class wealth than on industrial growth. This expansion of middle class wealth was based, directly or indirectly, largely on overseas economic expansion, both inside and outside the British Empire. The dominance of London as a world financial, trading and political centre was central to Britain's role, and represented an increasingly important component in Britain's *internal* geography. In contrast, the Northern industrial towns and cities were beginning to become marginalised, a development undoubtedly accentuated by the shift in investment away from domestic industry and towards overseas development.

The major domestic markets at this time would undoubtedly have been situated in the South rather than the North. One would expect that there was a potential for a considerable degree of industrialisation in the South; as Hamilton (1967) points out, Weber's industrial location theory, which was being developed in Germany at around this time,[41] postulated that industry would tend to gravitate to the final market areas, unless the cost of transporting bulky raw materials, which lost bulk in the manufacturing process, was prohibitive. The technical preconditions for such a major industrial drift to the South were not yet in existence in that coal, a raw material which was expensive to transport, and which had 100% bulk loss during manufacturing, was still the main source of industrial energy. When energy became more easily transported, through the widespread use of oil and electricity, the industrial advantages of the South became more apparent. Between the wars, the traditional industries, which happened to be in deep decline, tended to remain in their old locations as a result of locational inertia[42] while the new industries tended to grow in the prosperous areas of the South; these trends are described in more detail in chapter 4 above.

As far as urban growth trends are concerned, the advantage of the South over the North was already clear in the late 19th century, despite

the continued growth of the coal mining areas (a growth which section 9.6 below suggests was highly unstable). The advantage of the *urban* South is concealed in regional population figures (Table A3) by heavy emigration from the rural areas of the South.

The basic advantage of the South continued in the 1900s. Migration figures (Table 9.2) are dominated by two features, the heavy net emigration from the UK as a whole (Fig 9.1) and the slowing down of the population loss from the rural residues. The combination of these two features implies a considerable shift in the migration balance against the towns and main cities. Both North and South were affected by this, although the high natural rate of increase of population meant that urban population was still increasing.

Migration out of London was extremely high, but this would seem to imply more that decentralisation from the metropolis was strong, rather than that Edwardian London was in decline. To be offset against this migration loss of 232,000 is a migration gain of 129,000 in the Southern residential towns. In addition, the suburbanisation of London meant that rural parts of counties surrounding London (Hants., Berks., Herts., Essex, Bucks., Oxford, Kent, Surrey, Sussex) showed a net loss through migration of 12,000 between 1901 and 1911, compared with 130,000 in the previous decade.[43] Had rural depopulation diminished only to the same extent as in the rest of the rural South, one would have expected a migration loss of 58,000. Therefore, one can estimate that the decentralisation of London led to a component of net migration of 46,000 to the rural areas of surrounding counties. Once these two factors are offset against London's migratory loss, the net migration level from the London urban system may be estimated at 57,000 rather than 232,000; 11% of the national total rather than 46%.

Net emigration from the industrial centres of the North was thus far more substantial even when the growth of the South Wales coalfield is taken into account. The net loss in migration from the *English* industrial areas (including the English colliery districts, but excluding the Welsh colliery districts) stood at 235,000, a loss of population through migration comparable to that of the rural districts. The problems of the industrial North, so conspicuous between the Wars, was starting to become serious in the 1900s.

The 20th century regional problem was incipient in the economic geography of Edwardian Britain; a thriving South with a strong rentier based economy (8.6% of GNP in 1913 consisted of returns from foreign investment,[44] of which the South took the main share) contrasted with a relatively stagnant industrial North. A series of severe industrial recessions, such as occurred in the 1920s and early 1930s could easily

send the North into a spiral of decline.

It seems that even as early as the 1880s the South was economically more favoured than the North, which is as the balance of advantage remained in the pre-industrial period. A major problem still remains. The patterns of redistribution of population up to the 1870s suggest that the industrial North was the most favoured zone in the early 19th century. This implies two reversals of "polarity". It would be more parsimonious if the explanation of the evolution of the British space economy required no such assumed reversals of polarity, if it could be suggested that in some sense the South had *always* been better off than the North. Such a continuity cannot be demonstrated for working class standards of living, in that 19th century annual wages tended to be higher in the North than in the South,[45] both in rural areas and in urban areas, but the geography of major wealth holding and general middle class wealth needs to be considered as well. It is argued that while there have indeed been two reversals of polarity in patterns of working class *prosperity* there has been a long period of continuity in the North-South distribution of concentrations of *wealth*. Section 9.3 and 9.4 below consider the case in more detail. The attempt is made to clarify the confused conventional picture in which Britain's 19th century economic dynamism was built on industrialisation, and major wealth accrued to the coalfield industrial areas whereas in the 20th century the location of economic activity became increasingly "market oriented" towards the main market areas of the South. This picture appears convincing until one asks why the main market areas should suddenly have been in the South, even as early as the 1920s, when the greatest visible concentrations of economic growth had at a previous stage been in the North. To explain the reversal in terms of a prolonged intermediate period does not help any proposed explanation; if the North was economically dominant up to 1881, then presumably capital invested abroad would have had Northern origins rather than Southern origins, and rentier wealth would have accumulated primarily in the North rather than the South. This is not what happened.

9.3 The Geography of Wealth and Prosperity; Some Basic Issues.

The distribution of wealth in the 19th century is seen as a central question. While the increase of employment in manufacturing and mining was a particularly prominent feature of the 19th century, it cannot automatically be assumed that industrialists became the most prominent wealth holders in their period. Landed wealth was extremely important, and given that land has a capital value and that land ownership is far from evenly spread amongst the population, simply the ownership of land represented a dominant form of wealth.[46] If a landowner should own land where urban development was rapid, or land across which a railway was to be built, or land from which coal could be extracted, the possibilities for the accumulation of landed wealth would intensify.[47]

Landed wealth thus represented the dominant source of extreme wealth in the Victorian period. Commercial wealth, based on finance and trade, represented another major source. Industrial wealth, according to Rubinstein (1981) represented merely a third form of extreme wealth; the more sucessful industrialists became wealthy, but not sufficiently wealthy to compete with the major land owners or the more successful financiers. Rubinstein's work, or aspects of it, will be discussed in greater detail in section 9.4. In this section, the discussion concentrates on some more theoretical issues, indicating firstly that there is no necessary connection between the generation of industrial employment in an area and the generation of extreme wealth in that area, and secondly that it is quite plausible on economic grounds that commercial capital rather than industrial capital could be the main ultimate beneficiary of industrialisation.

Trade and industry are complementary; the relationship between these branches of the economy is one that it is necessary to elaborate in order to understand the dynamics of the Industrial Revolution and its aftermath. There is an easy temptation to note the "visible" history of the Industrial Revolution, the legacy of early mills and factories, and urban growth, and to assume that it was the manufacturing dynamic which dominated the Industrial Revolution, and 19th century economic growth. The products of manufacture have to be sold, however, and in large-scale manufacture this presupposes trade between areas. One cannot build up an adequate picture of the Industrial Revolution simply by accumulating a list of significant inventions and saying that these brought about a whole new economic system into being; the question of economic preconditions is crucial.

Mantoux, in his early, classic work on the Industrial Revolution laid considerable stress on the role of commerce in the Industrial

Revolution:

> "From the economic point of view the industrial revolution is characterised by the concentration of capital and the growth of large undertakings, the existence of which from being only exceptional came to be the normal conditions of industry. Though, not without reason, this concentration is often considered as the result of technical inventions, yet to a certain extent it preceded such inventions. It was essentially a commercial phenomenon and was connected with the gradual hold obtained by merchants over industry. Not only was it accompanied, but it was also prepared by the expansion of trade and credit."
>
> (Mantoux, 1928/1961 pp.475-476).

The penultimate sentence is the one to be emphasised; Mantoux sets industrialisation firmly in the context of commerce, rather than the other way round, and suggests that merchants were obtaining a gradual hold on industry, rather than the other way round. In Lancashire, Mantoux[48] stresses, the early growth of Manchester, the manufacturing city, depended on the prior growth of Liverpool, the port city; Liverpool was far more than just a western port for the cotton industry.

There is no need to conduct any form of detailed analysis of the origins of the Industrial Revolution here. The important point to note is that industrial development was not a wholly alien element superimposed on an "empty" North of England, but instead presupposed a certain degree of development of trading relationships in the local economy. The general opinion amongst current economic historians would appear to be that while the economic and industrial growth of the 1780s was undoubtedly rapid and substantial, this represented an intensification of earlier patterns of growth, rather than a "revolutionary" new start.[49] It was tentatively argued in chapter 2.9 above that the industrial burst of the 1780s can perhaps be seen in terms of a post-slump recovery following an earlier long cycle from the 1740s to the late 1770s. The conception of a sudden Industrial Revolution is, however, obsolete.

A simple model of industrial wealth would suggest that manufacturers buy raw materials, purchase labour power to process these raw materials, using various forms of machinery, and sell the finished material for a profit, once the non-labour costs of production have been accounted for. Since the industrial worker is paid for less than the value of the labour he or she undertakes, wealth accumulates to the industrialist. This is in many respects a gross oversimplification of Marx's basic model of industrial capital accumulation,[50] but it helps focus on some basic issues. The process which takes place inside the factory is the key process in industrial commodity creation and industrial wealth creation,

yet it would be a mistake to assume that all the net wealth produced accrues either to the workers, or even to the workers plus the industrial capitalists. The industrialist needs to buy his main raw materials from outside (from the USA in the case of the cotton industry) and to sell his finished product, often on export markets. This gives the commercial capitalist the chance to achieve his "cut" at two different stages of the production process, and puts him in a position to squeeze the manufacturer's profit margins.[51] If as a result of mechanisation, even of a limited kind, production costs are reduced significantly in one producer country, far more than in others, and goods are traded at a world scale, then the cost of the finished product would be expected to fall considerably in relative terms. The purchaser of the product thus pays a lower price than before, yet there is no necessary reason why the price of the final product on foreign markets should drop to a level which merely deeps commercial profits in line with those of the manufacturer; it is sufficient to be able to undercut foreign competition.[52]

The extent to which profits accrue to the industrialist, and the extent to which they accrue to the merchant capitalist, is seen as being dependent upon the degree of openness of competition in each sector. If for example manufacturing is dominated by small to medium sized firms, and there is relative ease of entry into manufacturing, the high degree of competition prevents the produce being sold at the factory gate for much more than the cost of production. If however there is a higher degree of monopoly in the merchant capitalist sector, and less freedom of entry into this sector, a situation develops in which a relatively limited number of merchants from one country can sell cheaply produced goods whereas merchants from other countries can sell only more expensive produce. The relatively low degree of competition between merchants of the low cost country implies a less powerful tendency for the price of sale to be pushed down to the price of purchase. In such circumstances, which may be taken as broadly representative of Britain at the time of the Industrial Revolution, the merchant is in a more favourable position to accrue wealth than the industrialist.

By such mechanisms, and many analogous mechanisms, trade can advance on the basis of advancing industry, with the possible generation of fortunes through commerce being greater than the possible generation of fortunes through industry. There is an implication here that while the Industrial Revolution gave Britain the power to dominate the world economically both in industry and in trade and finance, the commercial dominance was likely to be on a firmer basis and more enduring than the industrial dominance. Rival countries were beginning to pose a substantial threat to Britain's industrial dominance by the mid- to late

Victorian years, this threat being strongest from Cermany and the USA. Numerous contemporary observers were concerned about growing industrial competition.[53] In contrast, Britain's position as a financial and imperial centre flourished in the late Victorian years, and up to the First World War. Britain represented the capital-rich core which was a major source of funding for the development of the rapidly expanding peripheral economies such as Argentina and Canada; in addition the British imperial grip tightened across much of the non-European world.[54]

The decades leading up to the First World War can be regarded as decades in which Britain's industrial hegemony was on the decline while the British imperial hegemony was strengthening; this, it is suggested, represented a logical culmination of the interplay of economic forces present through 19th century Britain. Chambers (1967 pp.1-2) suggests that around the 1820s Britain "was in the throes of the transition ... from a primarily agricultural and commercial economy to a modern industrial state." If however one of the central features of industrialisation was to generate a whole new set of possibilities for expanding commercial wealth, perhaps the process of the evolution of late Victorian Imperialism should be regarded as the most significant transitional process in the late 19th century.

If the "economic base" of 19th century Britain was not so strongly orientated to manufacturing as was previously thought, but instead tied more firmly to commerce and to its imperialist offshoots, then it is more readily appreciated why the "superstructure"[55] was tied to pre-industrial forms. If the dominant culture reflects the dominance of particular economic and social forces, as Marx's distinction between base and superstructure suggests, then one would expect a tendency, especially throughout the late 19th century, for a specifically "imperial" rather than an "industrial" culture to develop. Wiener (1981) argues instead that the long process of deindustrialisation in Britain was primarily the result of the "decline of the industrial spirit" and the development of anti-industrial cultural norms. This argument, which suggests that the form of the "cultural superstructure" determines the evolution of the "economic base" is, probably quite deliberately, the complete reverse of Marx's argument; Wiener's analysis is defective, however, precisely because it neglects the economic basis of changing cultural norms. The development of imperialism both had a profound effect on domestic economic structure and also created large numbers of career opportunities for the sons of the wealthy. University and public school education, chiefly the preserve of the wealthy, would thus tend to concentrate far more on the qualities required for the development of empire than on the qualities required for the development of manufacturing industry, but here "high culture"was following rather than leading economic trends.

Wiener's treatment of Imperialism is extremely superficial; in a period in which the globe was being "painted pink" (the conventional colour for representing British owned territories) and in which Britain's investment abroad was a dominant feature of the balance between savings and investment, there is surely more to be said about imperial culture than that it represented merely a return to nostalgic rural values.[56] If imperial culture indeed emphasised the virtues of pre-industrial rural England, this would seem to say more about continuities in class structure than about changes in fashion.

The picture is drawn here of a continued dominance of commercial, financial and landed wealth, with industrial wealth being an important, but subsidiary, feature of the economy. So far the argument has been presented largely in theoretical and abstract terms, but the empirical basis of the argument is essential, particularly on the question of the overall distribution of major wealth, given that this element of the argument could be regarded as the most controversial. Much of the following is based on the researches of Rubinstein (1977, 1981) for the simple reason that the subject has otherwise been largely unexplored; it has been a tacit assumption that the "invisible geography" of the 19th century has largely matched the "visible geography". Rubinstein (1977, p.602 states that

> "the chief .... (tacit assumptions commonly made) .... are that the wealthiest men of nineteenth-century England, apart from the great landowners, were engaged in industry and in manufacturing, in trades which were a direct part of the Industrial Revolution; that the nineteenth-century middle class consisted primarily of industrialists and manufacturers; and that the new towns of the north of England brought into existence a group of middle-class industrialists sufficient in wealth and numbers to constitute the dominant element in Victorian society. None of these assumptions, it will be suggested here, is correct, and any view of Victorian society which subscribes to them must stand in need of revision."

Rubinstein's direct evidence is based primarily on valuation figures in probate records for all persons leaving £100,0000 or more on death between 1809 and 1939, with particular concentration on half-millionaires. He concentrates mainly on non-landed wealth, rather than "older" landed wealth, although for completeness it needs to be emphasised that landed wealth, the ownership of land, was still the dominant source of wealth in Britain during this period, and especially before the agricultural depression of the 1870s (Table 9.6).[57] The source of landed wealth is mainly the capital value of the land,[58] but even when this has been allowed for, the possibilities of the investment of annual returns

from the land imply the possibilities of substantial extra income generation through reinvestment in other forms of economic activity. Thus some, possibly quite significant, proportion of landed wealth could have derived from commercial and industrial activities, rather than from land itself. The possibility of a switch in investment to foreign investment in the late 19th century would presumably have helped preserve landed wealth at a time when agricultural incomes were falling.

Table 9.7 shows the occupational sector of non-landed major deceased wealth holders in Rubinstein's study period, and Table 9.8 shows the ratio between manufacturing and financial/commercial wealth holders for various sub-periods. The separation of food, drink and tobacco from manufacturing proper, adopted by Rubinstein, has been retained. Rubinstein argues that this is justifiable since such trades were not essentially part of the Industrial Revolution, and indeed were in many respects sociologically far closer to the pre-industrial society than to the new manufacturing.[59]

Table 9.8 suggests that the sources of manufacturing and commercial wealth were becoming increasingly more important through time whereas the sources of landed wealth were becoming relatively less important through time. The degree of wealth in manufacturing was never, since the Industrial Revolution, negligible, but in the early part of the 19th century it was strongly outweighed by landed wealth, and throughout the period there were more fortunes made in finance and commerce than in manufacturing (food, drink and tobacco excluded).

Rubinstein notes that very few of the extreme, multi-million pound, fortunes were made in manufacturing, whereas there were several in commerce and finance. The distinction between industry and commerce also seems to apply strongly at lower levels of wealth. The unfortunately incomplete evidence provided by Rubinstein[60] notes 85 lesser wealthy (£100,000 to £500,000 at death) occupied in commerce and finance dying between 1809 and 1829, compared with 22 in manufacturing, a ratio of 3.86:1. Rubinstein provides no information on the next twenty year period, but shows that between 1850 and 1869, 79 "lesser wealthy" occupied in commerce and finance died, compared with 48 in manufacturing, a much smaller ratio of 1.65:1.

Of the 198 non-landed millionaires to die between 1809 and 1919, exactly half (99) made their fortunes in commerce and finance, and 34 in food, drink and tobacco (mainly in the drink and tobacco industries, rather than the food industry). Other main industrial sectors were represented as follows: 16 millionaires in cotton manufacture, 12 in engineering, 9 in iron and steel, 8 in chemicals, 6 in coal mining, 3 in

shipbuilding (compared with 10 in shipowning), and so on. Stated in these terms, the relatively fragmentary nature of manufacturing wealth is clear, with for example only 8% of the non-landed millionaires, and an even lower proportion (4.9%) of half-millionaires making their fortunes in cotton manufacture. Rubinstein[61] points out that during the 1809-1939 period there died only two cotton manufacturing millionaires in Greater Manchester ("cottonopolis"), of which one was in Manchester and one in Bolton; the majority of the millionaires came instead from the Coats and Clark dynasties of Paisley. In contrast, there were a large number of half-millionaires with a greater geographical spread indicating roughly the scale of wealth it was possible to make as manufacturers in the cotton industry. If only one Manchester cotton manufacturer died a millionaire between 1809 and 1914, then *seven* Manchester cotton merchants died millionaires there during the same period,[62] indicating the possible locus of advantage in the manufacture/commerce distinction.

Rubinstein's work helps place some of the features of industrialisation in clearer perspective. While it was undoubtedly the case that the factory owners of the time were more wealthy than the people they employed, the degree of wealth of the factory owners, especially at a time in which there was a relatively low degree of concentration of ownership in manufacturing, was small compared with the levels of wealth of the more successful merchants and financiers, and larger landowners. The geographical implications of this will be discussed in the next section. To conclude this section, a brief outline can be presented, following an account by Checkland (1964 pp.115-133) of the locus of advantage between cotton manufacturer and cotton merchant.

Checkland notes[63] that "in the early decades of the (nineteenth) century cotton men could start modestly, often financed by cotton dealers, buying a few mules, hiring space and power, and employing half a dozen workers or less. In 1834 there were some 300,000 cotton looms; of these the hand-looms still outnumbered the powered by two to one .... The cotton manufacturer, in fact, was the classic case of the entrepreneur who hires his factors of production from others, whose function most obviously consisted in making combinations of these factors, and who may rise from petty production to the ownership of a large firm." Undoubtedly, therefore, from small beginnings there was considerable concentration of ownership, which was becoming readily apparent by the 1830s and 1840s;[64] much of this, however, was taking place at a time in which the tendency to overproduction was becoming severe.[65]

The form of concentration is worth noting. Checkland[66] states that "though (various) influences operated to promote size, the cotton entrepreneur seldom integrated vertically. He was flanked on the one

side by the cotton broker and on the other by the textile merchant; within the industry proper there was a great deal of specialisation on one or two operations." It was the merchants who were outflanking the manufacturers rather than the other way round. Many of the well documented abuses of industrial labour resulted not so much from the desire of increasing already substantial wealth, but rather from the problems of the less successful manufacturer, who, faced with eclipse, and with no influence over "the suppliers of raw materials, the cotton market, or the suppliers of machines, the strongly placed engineers or the merchants," tended to react to an unsatisfactory market position, and to a lack of economies of scale, by demanding longer hours from the workforce.[67] The larger producers in contrast, had greater scope for more efficient methods of production, and for a more paternalistic treatment of labour.

The balance of power in the early cotton industry was complicated. The manufacturer was by no means all-powerful, although the directness of contact between the manufacturer and the industrial working class tends to focus attention on the question of class conflict in the factory. The more indirect, but still antagonistic, relationships between merchant capital and the working class may easily be obscured.

The balance of advantage between industrialists and financial and commercial wealth holders appears to have been tilted in favour of the latter, although possibly not as decisively as Rubinstein has suggested. Rubinstein's statement[68] that "the wealthy have *disproportionately* earned their fortunes in commerce and finance .... rather than in manufacturing or industry" (emphasis added) may be regarded as either ambiguous (what would be proportionate?) or an exaggeration, given that the ratio of wealth holders shown in Table 9.8 averaged about 1.4 in commerce and finance to 1 in manufacturing. Perhaps the fairest statement to make is that while there was substantial wealth generated in manufacturing in the late 18th and 19th centuries, the wealth generated in commerce and finance would appear to have been even more substantial, and certainly not less substantial. Closer historical analysis of this whole complex question would seem to be warranted.

9.4 Elements of Regional Class Structure in the 19th Century

To locate concentrations of wealth is to locate only part of the complex pattern of class structure. To gain a fuller understanding of class structure, it is necessary to examine in more detail how the development of different types of wealth leads to the development of different types of class structure, and more specifically, to show that the type of class structure which develops around financial or commercial wealth is radically different from the type of class structure which develops around industrial wealth.

The development of large accumulations of wealth depends ultimately on some form of physical production and on the ability of certain people to retain at least part of the "surplus product", that part of net production which is not paid out to labour. The relationship between physical production and the accumulation of wealth can, in certain cases, be extremely indirect, particularly where financial and commercial wealth are concerned. For an industrialist the relationship is fairly direct, however; the industrialist requires a particular workforce in a particular place to undertake the physical production which creates his wealth. This, in the days before the widespread operation of multi-regional and multi-national corporations, would tend to imply that any local concentration of industrial wealth will be spatially closely linked with the presence of a substantial industrial working class.

In the case of commercial or financial wealth, however, the separateness of commercial transactions from physical production implies that only a relatively small *local* labour force, weighted heavily towards clerical occupations, is required in the process of accumulating wealth. If, for example, a cotton merchant buys raw cotton from the USA to sell to Lancashire manufacturers, or if a financier lends a Latin American government money so that a railway may be built, the process of physical production which is "ultimately" responsible for *creating* wealth is located far away from the centre of the *accumulation* of wealth. The City of London, the main commercial and financial quarter of London, is the place in which many of these fortunes were generated, yet the employment which ultimately created this wealth was definitely not local, quite often not even national, but could well have been spread across the whole of the commercialised world.

Industrial wealth, to be generated, therefore requires a large local labour force while commercial wealth requires only a small local labour force. This has considerable regional implications; the manufacturing regions could develop a large industrial working class, despite only moderate concentrations of wealth, while London could remain

economically dominant despite having a relatively small working class, in relation to the degree of local wealth. The general northward drift of population up to 1881 shown in Table A3 is seen in terms of this regionally differentiated, and sectorally differentiated, process of formation of the working class.

Rubinstein (1981 pp.102-110) in his discussion of the *geography* of extreme wealth tended to suggest a strong London dominance, and within that, a strong City dominance. He notes, for example, that among non-landed millionaires, "London was the venue for between 39 per cent and 63 per cent of the total number in each cohort; among half-millionaires for between 38 per cent and 64 per cent; while among the lesser wealthy London's lead was even clearer."[69] Table 9.9 suggests, using a reclassification of Rubinstein's data, that London's dominance was rather less, when compared with the periphery, than Rubinstein implied. The major division to be made is not between London and the North, nor even between the South and the North, but rather between the conurbations and the rest; the overall nationwide growth of urban wealth is perhaps more remarkable than the North-South division of urban wealth. London's proportion of the total number of non-landed millionaires is, when examined in comparison with other conurbations, not excessively high. It can be seen, from Table 9.8, that Merseyside and Clydeside, the two peripheral conurbations most strongly involved with commodity trading, had a slightly higher proportion of major wealth holders in their population than London. The concentration of major wealth holders in the textile conurbations (Greater Manchester, West Yorkshire) was around the average for conurbations, while the proportion of wealth holders in the metal manufacturing conurbations (West Midlands, South Yorkshire) was distinctly low. Major non-landed wealth was, as one might expect in a period of extremely rapid urbanisation, concentrated in the swelling conurbations rather than in the less expansive "small town England" of the rural South; parts of the industrialising Midlands and periphery outside the conurbations also had relatively high concentrations of major wealth holders.

The proportion of minor wealth holders (£100,000 to £500,000 at death) in London is, as Rubinstein[70] points out, rather more striking. Between 1809 and 1829, 92 "lesser wealthy" from London died, compared with 16 from the other conurbations and 15 from the rest of the UK. The figures for 1850-69 show 75 lesser wealthy from London, 29 from the peripheral conurbations and 21 from the rest of the UK, a rather lesser, but still substantial disproportion.[71] The conclusion could be drawn that the "middle-middle class"[72] was far more strongly represented in London than elsewhere. Given the substantial opportunities in a major

financial and administrative centre for highly lucrative professional employment without, in the more open sectors, the requirement of an exceptionally large capital backing, this disproportion is perhaps not surprising. A more detailed assessment would be required, however, to see whether Rubinstein is correct in emphasising that "above everything else there was London, the fixed point around which the Victorian middle classes revolved",[73] or whether there were substantial middle classes developing throughout all the conurbations, with London having the largest number simply because it was the largest conurbation. It seems highly probable that Rubinstein captures an important element of Victorian class structure, and correctly emphasises its importance, but in this emphasis exaggerates slightly.

The fact that London gained in population by over 6 million between 1801 and 1911[74] suggests that a large London working class was also being created; such an expansion of population could not come about simply through the emergence of the Victorian middle class. This working class was not primarily an *industrial* working class; to understand its composition it is necessary to consider not the wealth generation processes of the wealth, but rather the *expenditure* patterns of the wealthy.

A simple model of income and expenditure, as divided between an industrial working class and industrial capitalists might start off by regarding workers' wages as representing the productive expenditure required to produce and reproduce the labour force. No implication is made that workers' wages tend to be reduced to their subsistence level; on the contrary, in a growing economy a wide range of new commodities would come to be regarded as wage goods, the price of which would be taken into account in wage bargains.

The more wealthy will also undertake this basic expenditure on wage goods, but an unequal distribution of income will leave a considerable discretionary element for saving and expenditure. In that saving is required in order to provide funds for investment, which enable the economic system to expand, saving may be regarded as "productive", along with basic expenditure. This element of saving reproduces the capitalist class, it being assumed that most, but not necessarily all, saving takes place in this class.[75] The pattern of investment which results from this saving has considerable implications for the future prosperity of the working class, a point with obvious implications, for example, for the question of foreign investment before 1914, but this is not a point which shall be considered in depth here.

Productive expenditure and savings would certainly not account for all the income of the wealthy (the case of the miser excepted). A highly

uneven distribution of income implies a high level of *unproductive* expenditure, which does not contribute to the development of the economic system, but instead meets what might more kindly be called the higher needs of the wealthy, and less kindly the luxuries, fads and fancies of the wealthy.

This unproductive expenditure might be concentrated on goods or on services. Adam Smith, in his early discussion of productive and unproductive labour, concentrates on questions of physical production and classes as unproductive those employments of which it can be said that "the work of them perishes in the very instant of its production",[76] thus menial and other services. Marx, in his own discussion of productive and unproductive labour,[77] emphasises instead the importance of what would in modern terms be called income distribution in distinguishing between productive and unproductive expenditure of labour. If labour is directly transformed into capital it is productive;[78] if not it is unproductive. There is a clear implication that the production of luxury goods for wealth-holders is not a form of productive labour.

The unproductive element of capitalist *expenditure* does not vanish, but instead produces an "unproductive" labour force, of menial servants (as emphasised by Smith) of makers of luxury goods, and, as Marx delighted in pointing out, of various miscellaneous services from priests to prostitutes.[79]

The presence of substantial wealth-holders will tend to result in the presence of considerable elements of unproductive labour, with an occupational bias towards services and the production of luxury goods. If the wealth-holder is basically an industrial wealth-holder, this presence will be diluted considerably by the presence of a large industrial work force. If however the wealth holder is engaged in finance or commerce, an economy strongly oriented to unproductive services will develop; this, it is suggested, was an important feature of 19th century London. The London labour market will be discussed in more detail in section 9.5 below, with attention focusing on the mechanisms by which a strong orientation towards non-productive employment, with attendant high seasonality of employment, and also a powerful stream of rural immigration, combined to produce continually high levels of unemployment in London before 1914. In the remainder of this chapter attention focuses on the regional distribution of the labour force.

Table 9.10 illustrates the employment structure in Britain's main centres of urbanisation in 1881, a Census year which might be regarded as reasonably typical of the late 19th century. Regional specialisations in industry are clearly revealed; textiles in Lancashire and the West Riding of Yorkshire, coal mining and shipbuilding in the North Eastern

coal field, the metal trades and engineering in the West Midlands (and also pottery manufacture, classified under "other manufacturing") and a mixture of engineering, shipbuilding and textiles in Strathclyde.

In the main industrial areas in 1881, between one third and a half of the employed population worked in the "basic industries" of the Industrial Revolution. The corresponding figure for London was 8.8%. In contrast, London had a far higher proportion of employment in consumer industries, and in the lower order services, much as would be expected from the previous discussion. The "not classified" element should by no means be ignored, since it includes various ill-defined and numerous groups such as "general labourers" or "artisans" or "other workers in sundry industries" which would generally tend, in urban areas, to imply an orientation towards various miscellaneous services or construction, or, in more general terms, a marginal position with respect to the labour market. Employment in the higher services (professional, financial, government services) was proportionately far greater in London than in the provincial conurbations, yet as Table 9.10 shows, this had relatively little direct effect on overall differences in employment structure.

Lee (1984) criticises the previously accepted generalisation that the service sector grew primarily in response to the growth of industrial demand, and suggests instead that the service sector could generate its own growth. Indeed had service sector provision remained a passive follower of *industrial* employment, one would expect that the main provincial cities would have grown far more quickly than actually was the case, or that London would have grown far more slowly. Lee rejects the notion that growth in service sector employment in Victorian England was the result of industry-led forces, and cites Rubinstein's evidence of a concentration of wealth in the South to explain the growth of the service sector through income effects. In his analysis, Lee emphasises the regional dualism in employment structure in the Victorian economy, but does not consider in depth the significance of dualisms in the service sector *within* the service-based London economy.

It is important to recognise that the growth of the service sector in London is far from homogeneous. A clear distinction may be made between the leading "active" services which were primary generators of employment, and the lagging "passive" services, where employment expanded in response to flows of income generated in other sectors.[80] The South East's predominance in the higher order active services (banking, finance, insurance; professional services; national and local government), and the rapid growth in employment in these sectors, may be regarded as largely responsible for the increased dynamism of the Southern economy in the decades before the First World War. Employment also increased

substantially in the miscellaneous services, but this had a rather more double-edged impact on patterns of regional prosperity. Table 9.11 shows that between 1881 and 1911 the fastest expansions of employment in the miscellaneous services were in the South East, from an extremely high base, and in the industrial regions of Northern England (YH, NW, N). The rural South (SW, EA) had high proportions of employment in miscellaneous services, largely as a result of the presence of landed wealth alongside a relatively small industrial base, but a low rate of increase. The rapid expansion of this sector in the South East suggests the development of a low wage sector in a high wage economy.

9.5 The London Labour Market and the Question of Unemployment Prior to 1914

(i) An Overview of the Problem

There are immense difficulties involved in the construction of even an outline geography of working class prosperity, or the lack of it, in 19th century Britain. The patterns themselves would appear to be highly complicated, yet the data base on which to build an analysis is irretrievably incomplete. There were of course numerous surveys, some of considerable detail, of patterns of industrial change, and patterns of poverty, in 19th century and Edwardian Britain,[81] but these cannot satisfactorily be pieced together to provide the sort of overall geography of prosperity and recession which national insurance statistics make possible for the 20th century. There are, however, some questions about the 19th century which need to be urgently considered in order to help make sense of Britain's 20th century economic geography.

It is useful to make a brief summary of points which can readily be established from Census and other data. These may be listed numerically:

(1) That the rural areas were persistent areas of heavy net emigration, while the urban areas were persistently characterised (except for the 1900s) by heavy net immigration (Table 9.2). On average, the rural areas showed a net emigration level of about 60,000 per annum in England and Wales, while the urban areas showed a net immigration level of about 50,000 per annum.

From what is known about migration patterns in the 20th century,[82] it can be inferred that rural areas in the 19th century would have had persistent labour surpluses while urban areas would have had tended to have, in relation to their total population, smaller labour surpluses.

(2) That Britain as a whole was a substantial net exporter of population. This implies a persistent tendency towards a labour surplus in the economy as a whole, and thus that the urban areas were probably not running at full employment, despite their rapid growth of employment.

(3) That the tendency towards labour surplus was, *in the long run*, determined by demographic factors (an unusually high natural rate of growth of population of over 10% per decade) rather than by any deficiencies of growth of employment. A rate of growth of employment which would have maintained full employment in post-1945 conditions would have led to a substantial accumulation of unemployment prior to 1914.[83]

Point (3) is crucial in understanding patterns of unemployment and labour surplus prior to 1914. Background levels of unemployment were generally high in the 19th century, although this was quite often disguised by irregular patterns of employment in which a casual labourer might be employed for, say, three days in a week but unemployed, *through a lack of availability of work*, during the rest of the week.

Patterns of unemployment before 1914 would tend to reflect at least as much the geography of where this surplus labour congregated, as patterns of job loss during recession. It would be careless to assume, as Southall (1983, 1986) does, that the geography of unemployment before 1914 was determined by the geography of job loss during recession in the industrial sector, and that the geography of unemployment may thus be established simply by calculating local unemployment rates for members of industrial trades unions. Such unemployment would represent only a minority, and furthermore an unrepresentative minority, of total unemployment. This point will be discussed later.

On the question of unemployment, it can be noted:

(4) That between 1912 (the first date for which national insurance data on regional unemployment rates are available) and 1920, unemployment rates were consistently higher in London, especially, and also in the rest of Southern England, than in the industrial regions of the North and Midlands (Table A7). It sould appear reasonable to assume that this relationship, which is the complete reverse of post-1921 relationships, also applied for substantial periods before 1912. Clearly, corroborative statistical evidence is in principle unavailable, although Stedman Jones (1971), in an important work on the 19th century London labour market, notes that "when economists, politicians and pamphleteers first talked of 'unemployment', they thought above all of the situation in London ... Metaphors of poverty and depression came not from Wigan Pier but from the London docks."[84] Statistical evidence, both in Booth's *Life and Labour of London*,[85] a monumental seventeen volume piece of late Victorian empirical social research, and also in other sources,[86] shows that the London labour surplus was indeed great, but unfortunately there is a marked absence of detailed research covering industrial cities on which to base a comparison.

It would seem that a closer examination of the London labour market, where unemployment was high and industry weakly developed, is critical for any understanding to form of the transition between Britain's 19th century economic geography and Britain's 20th century economic geography. There needs to be full recognition both of the high degree of concentration of the nation's wealth in London, a feature common to both the pre-1914

and post-1914 periods, and also of the high degree of concentration, before 1914, of poverty in London, a concentration which was lacking thereafter. Jones (1971) focuses his attention on the slump decade of the 1880s, when "outcast London" first became a major perceived threat for the substantial middle classes of the metropolis. The assessment which follows also concentrates largely on this period. The conclusions which are drawn with respect to the London labour market are often at variance with those drawn by Jones, however. In particular, it is suggested that Jones underestimates the importance of rural immigration in generating the crisis of poverty in London.

The basic picture given by Jones is one of what might now be termed an "inner city problem". A declining inner city industrial base leads, at a time of economic crisis, to a substantial shedding of labour, and a large increase in the number of workers trapped in the inner city (or the "inner industrial perimeter"[87]) and available for a relatively small number of casual jobs, with the result that there is substanital irregularity of employment, and a high degree of poverty.

Jones thus concentrates attention on patterns of short term and long term industrial decline in inner London:

> "The condition of casual labour in the East End in the 1880s bore all the signs of a conjunctural crisis: the result of a temporary fusion of seemingly unconnected long-term and short term phenomena ..... The trade depression of the mid 1880s, the unforseen increase in Jewish immigration and a series of hard winters highlighted and reinforced more long-term tendencies towards industrial decline .... At the basis of the crisis lay the long-term impact of the Industrial Revolution upon the London economy. This impact was complex. For industrialisation proved as greatly beneficial to London's commerce as it was detrimental to its traditional industries."[88]

Thus London had high levels of unemployment during the slump, although these tended to be expressed not so much in terms of continuous spells of unemployment, covered by unemployment insurance, but rather by the operation of a large-scale casual labour market in which workers are employed on a day to day basis, but with days of unemployment interspersed between days of work.

To say, however, that London had high rates of unemployment during the slump of the 1880s is not, perhaps, to say very much. It would be more remarkable if London did *not* have a high rate of unemployment during a major slump.[89] It is more important, in terms of regional labour market theory,to ask firstly whether unemployment rates were significantly

higher in London than in other urban centres, particularly in the coal-field industrial areas, and secondly to consider the *long term* states of local labour markets, through times of prosperity as well as times of depression.

The evidence of 1913 unambiguously suggests that background unemployment rates (the minimum unemployment rates reached at a cyclical peak) were high in London and low in the industrial regions (Table A7). This pattern persisted in the early post-war period, but in the severe recession of 1920-22, unemployment rates in the industrial regions overtook those of Southern England.

It would seem to be reasonable to assume that background rates of unemployment were relatively high in London and low in the urban industrial areas throughout the whole period from the 1880s to the early 1920s. Since the people who comprised the unemployed, or casually employed, at cyclical peaks were, almost by definition, at the *margins* of the labour force, trade union statistics for unemployment, which cover a *core* workforce, would systematically understate background levels of unemployment. Unemployment insurance statistics, available for 1913, would provide a more accurate picture of background unemployment, in that the national insurance scheme was originally established primarily to deal with the problem of what is here referred to as background unemployment.[90]

The presence of high levels of background unemployment in London do not automatically mean that unemployment in London increased faster than elsewhere during recessions. In fact, the converse is more likely; if depressions of trade were to hit "basic industries" (capital goods, export industries) rather than local consumer industries or services, there is an obvious inference that the industrial regions would be more severely affected by recession than London, simply as a result of differences in industrial structure. Table 9.10 shows, for example, that in 1881 London had less than 10% of its employment in the cyclically vulnerable "basic industries", whereas the industrial counties had about 40% of their employment in these sectors. Furthermore, within the "basic industries", and more specifically in engineering, London tended to concentrate more on repair industries, or manufacture for local demand, than did the industrial regions.[91] This probably at least partly explains why trade union unemployment rates in engineering in recessions tended to be lower in London than elsewhere, a feature noted by Southall (1986).[92]

To establish whether, during the troughs of recession, unemployment rates were higher in London than in other urban areas, it is necessary to consider whether differences in the background rate of unemployment (high in London, low elsewhere) outweigh differences in the increases of

unemployment through industrial recession (relatively low in London, high elsewhere. Southall's (1983, 1986) method of ignoring background unemployment and considering only cyclical increases in unemployment, is inadequate, and systematically understates levels of unemployment in London and rural areas, relative to those in industrial areas.

The difficulty of estimating background unemployment in London prior to 1913 makes it impossible to compare directly regional levels of unemployment during pre-1914 recessions. For the period between 1918 and 1922, such an exercise is, however, possible, and there seems to be no reason why the general results should not be applicable to earlier business cycles. Discussion in chapter 4.2 has shown that unemployment rates between 1918 and 1920 were higher in Southern England, and in London especially, than in the industrial regions, a continuation of pre-war background conditions. In the 1920-22 recession, however, unemployment increased much more sharply in the industrial regions than in Southern England, so that by late 1922 the industrial regions had slightly higher unemployment rates than Southern England. If it takes an *exceptionally* severe recession to push unemployment rates in the industrial areas higher than those in Southern England, it would appear to be unlikely that unemployment rates in the industrial regions, taken as a whole, were significantly higher than in London during pre-1914 recessions, and quite probably were slightly lower during most recessions. The likely situation concerning late 19th century urban unemployment was thus that throughout most of the period unemployment rates were higher in London than in the industrial regions taken as a whole, but that this gap narrowed considerably during periods of industrial recession. It is not certain how far back this can be traced. Probably the glutting of the London labour market was a long term process, with the London labour market in the early 19th century not being especially overburdened. Figures for able-bodied pauperism in 1802-1803, reproduced in Williams (1981 pp.149-150) suggest that poverty at this stage was concentrated in rural areas, while being relatively moderate in London, and in the industrial centres.

The next question to consider is that of why background levels of unemployment came to be higher in London than elsewhere. The answer is not to be found in regional differences in the rate of urban economic growth; indeed it seems highly likely that the London economy was growing faster than the peripheral industrial economy in the decades before the Great War. The question of geographical labour market structure is more critical. The rural areas of Britain and Ireland generated considerable labour surpluses during the 19th century, which, through migration and other displacement effects, increased urban unemployment. The increases

in urban unemployment which resulted can be explained in terms of the *incompleteness* of the absorption of unemployment in certain areas; migration could be absorbed, but at less than full employment.

Consider the patterns of migration shown in Tables 9.2 and 9.3, and in particular the differences between the 1870s and the slump decade of the 1880s. The impact of recession on the industrial areas is strongly marked; net immigration into the industrial areas (excluding the specialised colliery districts) totalled 263,200 between 1871 and 1881, but in the following decade there was a net *emigration* from these areas of 69,400, reflecting the downturn in urban employment opportunities. In London, however, very substantial net immigration continued despite the slump. Net immigration totalled 307,300 between 1871 and 1881, and 168,900 between 1881 and 1891; it is probable that the drop in net immigration into London reflects not so much a decline of London's economic magnetism, but rather an unprecedentedly high level of net migration abroad from England and Wales as the "white periphery" boomed.

The reversal of the earlier inflow of population by the industrial areas reflects a normal pattern during a period of deep recession. It is the continued influx into London, despite the slump, and despite high unemployment there, which requires attention. Two features need to be considered; firstly the structure of the London labour market, and secondly the geography of rural migration.

The central feature, in this respect, of the London labour market was not so much the long-term industrial decline emphasised by Jones (1971), but rather the weighting of employment towards those sectors which *service* wealth rather than *produce* wealth (see section 9.4 above). Employment in these industries tended to be intermittent, with considerable short-term and seasonal fluctuations in employment levels. The seasonality of demand in London was accentuated by the presence of a "London season" amongst the fashionable and wealthy,[93] and also by a marked tendency for industrial production to be undertaken on a workshop basis rather than a factory basis.[94] This tendency was a response both to the need to maintain considerable flexibility in production, with the possibility of quick switches in response to changes in fashion, and also to the high cost of land, which made the establishment of large factories prohibitively expensive in inner London.[95] The "fashionable" element of seasonality added a considerable extra seasonality of employment to those elements of seasonality which might ordinarily be expected in a large city of that time. In addition, a substantial port industry imposed an extra element of irregularity in the demand for employment, both on a seasonal level and on a day-to-day level.[96]

The cumulative effect is one of considerable short-term irregularity

of employment patterns in London. An additional feature in a city of great wealth would have been the development of various assorted miscellaneous services, including domestic service, as those without regular mainstream employment sought niches in the economic system. Prostitution, a category of employment not normally covered in employment statistics, was an obvious manifestation of this tendency, but as Mayhew showed in mid-century, there was no lack of street-sellers, ranging from near-beggars upwards, chimney sweeps and others.[97]

The general impression is given of an economy with an extremely large number of niches for employment, but that this employment did not represent regular employment at high wages. The irregularity of employment is a key feature, which helps push *annual* wages down towards bare subsistence level, or below, even though *daily* wage rates might be high. The argument which follows is based largely on that of Beveridge (1910, pp.68-110), but adapted to allow for comparisons with an economy based on regular industrial employment. An essential feature to remember is the relative ease of entry into employment in London, even if the job which is entered is only temporary.

Consider the situation in which wage rates per day of work are identical in an industrial labour market with regular employment, and a fragmented economy of irregular employment, such as London. Let these wage rates be, for the sake of argument, 25% above the bare subsistence level. In the industrial labour market, the size of the workforce will be set by the demand for labour; cyclical unemployment may be high, but towards the peak of the cycle unemployment will tend to be low, as there will be relatively few niches outside regular industrial employment which an aspiring migrant can fill temporarily.

The situation in a labour market of easy entry and short engagements is radically different, however. There are plenty of jobs available at any given time, but these jobs often tend to be of short or seasonal duration. If there is any tendency towards a labour surplus in the economy as a whole, the lure of employment will attract migrants and retain the resident population. The limit for the size of the workforce is set not by the demand for labour but by the number of labourers who can subsist at a bare minimum by working at a variety of jobs for a certain proportion of the year. If for example wages are 25% above the subsistence level, the limiting case is that there will by 125 people in the work force for every 100 units of work available, leading to 20% unemployment or underemployment in the seasonal and casual branches of the workforce (though less among the workforce as a whole) and incomes tending towards a bare subsistence level. In such a labour market, poverty can exist in extreme forms. Furthermore, this type of labour

market is one which is largely created, directly or indirectly, by the final demand patterns of the wealthy; the economic structure of London was therefore such that extremes of wealth and of poverty could coexist.[98]

The situation in the 1880s was not, however, one in which rural migrants were flooding into inner London, displacing local labour, swelling the casual labour market and causing unemployment amongst the existing population. Jones (1971) has criticised in detail this contemporary perception of the problem.[99] Neither, however, was the problem simply one of the decline of London's industrial base. Such a decline existed, undoubtedly, but industrial decline could take place in other places without breeding a large-scale casual labour market.

The problem is perhaps best seen in terms of the degree of *entrapment* of the population of inner London within a declining labour market. Industrially, the "crisis of the inner industrial perimeter" may be regarded as a classic example of the inner city problem. Shortages of space, the encroachment of the city centre, high land prices, competition from elsewhere, and the development of industrial areas on "greenfield sites", notably in the Lea Valley of East Middlesex, all contributed to a general running down of the economic base of inner London.[100] In comparable circumstances a century later, one would expect a substantial exodus of population, even in a period of relatively depressed economic trends. Between 1971 and 1981, for example, the population of Inner London fell by 17.7%, with declines of 25.2% in Salford, 17.4% in Manchester, 16.4% in Liverpool, 13.4% in Newcastle, 13.9% in Gateshead, and so on.[101] In the 1880s, however, the population of the administrative county of London *increased* by 10.4%.[102] Jones cites Booth as noting "that while a trade leaves, people stay."[103] Furthermore, Jones notes, "there is also considerable evidence that the poorest sections of the population were unable or unwilling to move out of the area. In this situation, employers of casualized and sweated labour were able to reap the advantages of a captive labour market."[104]

This entrapment of the labour force was not due to a lack of job opportunities elsewhere; the industrial suburbs were expanding rapidly. The population of Middlesex rose from 380,800 in 1881 to 575,000 in 1891, an increase of 50.9%, with the population increasing by 50,700 in Tottenham, 52,500 in the rest of the Edmonton registration district (mostly in Hornsey, Edmonton and Enfield) and, further west, by 33,700 in Willesden. In the West Ham registration district of Essex (Stratford, Plaistow, Canning Town, Forest Gate, East Ham, Leyton and Walthamstow) the population increased from 201,000 to 365,200, a rise of 45.0%.[105] This growth of the "working suburbs" was a conspicuous feature of London in the late 19th century, but the growth was concentrated along the

rivers Lea (Middlesex) and Thames (Essex) with relatively little of the growth taking place in Surrey or Kent.[106] These new industrial areas represented part of the London economy, but they did not necessarily draw on London for their population. Table 9.12 compares the places of birth in 1881 and 1891 for inhabitants of London, Middlesex and West Ham urban sanitary district.[107]

For London, the great bulk of the population increase took place through natural growth. There was a slight increase of "foreign-born" people in London's population, this being accounted for mostly by immigration from abroad, rather than internal migration. The general impression is one of migratory balance; it should be noted that the figures shown in Table 9.2, which show substantial net immigration into London, refer to the built up area of 1911, and include the Middlesex and Essex suburbs; the "London" defined in Table 9.12 was a smaller entity.

In those parts of London's industrial suburbs indicated in Table 9.12, the number of London-born inhabitants increased by 99,200. The number of locally born inhabitants increased by perhaps 74,000, if one argues that of the increase of 33,000 in the Essex-born population in West Ham urban sanitary district, 13,000 would represent natural increase and 20,000 would represent migration from other, more rural, parts of Essex. On this basis of calculation, the industrial suburbs listed absorbed about 73,000 natives of the extra-metropolitan South between 1881 and 1891. A pro rata adjustment to take into account the fact that West Ham urban sanitary district represented only part of suburban Essex (Leyton and the rest of West Ham registration district also have to be considered) would suggest that the industrial suburbs as a whole absorbed about 130,000 of London's population and 110,000 from the extra-metropolitan South.

The pressure of rural migration on inner London's labour market was severe, but indirect. Had it not been for the chronic tendency in rural areas for the natural rate of increase of population to outpace employment growth by a substantial margin, and had the migratory balance of the rural areas with London been neutral, rather than perpetually in favour of London and its suburbs, the total population of a Greater London area would have expanded by perhaps 100,000 less than was actually the case. This lower degree of expansion would have relieved pressure on the inner London Labour market considerably. A major problem was that the shift to the suburbs by the population of inner London was impeded by rural migration to the expanding parts of the economy. Smith (1904 pp.129-141) examines the question of rural migration from the point of view of the agricultural feeder districts and finds that much of the

migration was of young people, using a network of family and other village contacts, to take up firm offers of employment. "Of 202 cases of migration which I have been able definitely to track (from a small group of villages in Hertfordshire and South Cambridgeshire), 102, or almost exactly one-half, showed that the migrant had definitely secured or was practically sure of a place in town before leaving the country .... Of the remaining 100, a very large number were doubtless pretty sure at the outset of being able to better themselves."[108] Those trapped in the casual labour market in inner London, who represented the labour surplus of London, tended to have lower levels of informal access to information on job vacancies in the expanding areas, and indeed were often confined in their search for day-to-day jobs to highly localised labour markets.[109] Furthermore, the people trapped in the margins of London's labour market were often not young, having gone through a series of jobs and having found themselves at a dead end,[110] whereas the surplus population of rural areas tended to be weighted much more strongly to young people unable to find employment locally. This, perhaps more than any other factor, helps explain why rural labour could displace urban labour in the industrial suburbs.

Although the problem has been discussed as though it were a problem of the 1880s, the 1870s was also a decade of economic depression, especially keenly felt in agriculture. Shannon (1935 pp.84-85) notes a sharp increase of migration from South Eastern England into London during the 1870s, with the figure rising from 117,000 between 1861 and 1871 to 212,000 between 1871 and 1881. This would undoubtedly have placed considerable extra pressure on the London labour market.

The London economy, defined broadly, was a great magnet for rural migration, partly because of the ability of the London economy to absorb surplus population, even if at less than full employment, partly because of the extensiveness of the rural South, with relatively few alternative destinations in the domestic economy available for migrants, and partly because rural wage structures pointed migrants towards London, rather than away from London. Agricultural wages were generally much higher in areas surrounding major cities than elsewhere. Thus in 1869-70, agricultural labourers in the UK were paid 14s 3½d on average, but 17s 3d on average (unweighted) in Kent, Middlesex and Surrey, 17s 6d in each of the ridings of Yorkshire, 17s 9d in Lancashire, 18s 6d in Cumberland and Westmorland and as high as 20s in Durham;[111] these counties all had large urban labour markets either within or nearby. There was a high degree of urbanisation in the South, as in the North, but it was concentrated in one city, London, rather than dispersed across large coalfield areas. Wages in agriculture fell as one moved further away from London, into

the rural South, due to the relative lack of large urban centres to boost local agricultural demand; along one transect, agricultural wages in 1867-70 fell from 17s 6d in Surrey, 14s in Hampshire, 13s in Wiltshire to as low as 11s 6d in Dorset, and between 12s and 13s in the Outer South West.[112] Such sharp local differentials in wage rates under conditions of chronic labour surplus gave particular incentive to migrate, either to towns or to more prosperous rural areas. The most favourable paths of migration would of course be along transects leading to London.

Ravenstein (1885) suggested that a process of step-wise migration was dominant in this period, with long-journey migration, of people "who leave their homes in order to settle in a distant part of the country (being) the exception, not the rule."[113] He suggested that such long-distance internal migration probably constituted less than a quarter of all migrants, but did not explicitly consider migration abroad, which was such an important feature of the 1880s. Ravenstein suggested that

> "It often happens that a migrant in search of work wanders from parish to parish, settling down at each place for a time, until on the day when the census is taken he finds himself far away from the place in which he originally started. There can be no doubt, for instance, that many if not most of the natives of Ireland to be found in London did not travel from their homes in Ireland direct to their present place of residence, but reached it by stages ..... (Perhaps the most voluminous stream) passed through Plymouth, Hampshire and Surrey."[114]

Once London had been reached, there were few places left in the domestic economy which could represent favourable destinations for a subsequent stage of migration.

Background unemployment tended to be high in rural areas, and in towns set in predominantly rural areas, a feature which is shown in the high unemployment rates in Southern England outside London in 1913 (Table A7). Background unemployment tended to be higher still in London. Booth conducted an extremely detailed survey of the London population between 1887 and 1889, a period of cyclical upswing and lower than average unemployment. 37,000 inhabitants were grouped in class A ("the lowest class of occasional labourers, loafers, and semi-criminals") and 316,800 grouped in class B ("casual earnings - very poor"), amounting to a total of 8.2% of London's population.[115] Another 938,500 were classified under groups C and D ("intermittent earnings; small regular earnings, together the "poor" "), but without similarly detailed surveys of other large cities it is very difficult to determine to what extent this represents the poverty which was widespread in Victorian cities, and to what extent it represents a specifically "London" component. Frustratingly,

Booth tends to band groups C and D together in most of his analysis, but in his detailed survey of East London, he suggests that there were 74,200 East Londoners in households with irregular earnings (group C) and 129,000 with very low but regular earnings (group D). Any attempt to convert these figures into an estimate of the degree of surplus labour is hazardous, but it is unquestionable that the surplus was large in London terms, and even in national terms. Maybe a background unemployment rate of between 5% and 10%, with higher rates of unemployment during recessions, is a reasonable estimate.

Booth's work has been criticised for the extent to which he "attributed the unemployment he observed to a surfeit of people not to a shortage of jobs".[116] There is little doubt that Booth's work is theoretically crude in many respects, and yet the demographic factor was perhaps more important than is given credit for by modern writers. As a result of an unusually high natural rate of growth of population, Victorian Britain was running a permanent labour surplus, but various features of the Victorian economy combined to ensure that the degree of labour surplus in London was proportionately greater than in other cities. The importance of the long term demographic factor in this, as opposed to the short-term problems of job loss in an expanding economy, is shown by the extent to which London had a high background rate of unemployment on the eve of the Great War, nearly thirty years after the slump of the 1880s. This was despite very considerable expansion in the London economy.

London, in the decades up to 1914, was Britain's dominant centre of wealth, economic expansion and also persistent urban poverty. Other cities and industrial towns may have been recession-prone, but probably without developing large permanent classes of "occasional labourers, loafers and semi-criminals" and of those with "casual earning - very poor." In the 1920s, two major new features were to emerge whith were to change this geography of unemployment permanently. Firstly, the severe recessions of the 1920s had a sufficiently large cumulative effect as to leave the peripheral industrial regions with high *background* rates of unemployment, as well as the pre-existing high degree of sensitivity to recession. Secondly, the major post-war downturn in population growth rates greatly reduced net migration from rural to urban areas, and thus eliminated a large part of the mechanism by which high background rates of unemployment in London were maintained. London, as before, remained a zone of fast economic growth, and the reduction of demographic pressure on London ensured that this high growth was combined with, in the context of the time, low unemployment rates. In 1929, for example, at a cyclical peak, unemployment rates were substantially lower in London and Southern

England than elsewhere.

Inevitably the discussion on pre-1914 unemployment has to be conducted in a highly roundabout way, given the absence of any comprehensive unemployment statistics. It would be a serious mistake, for example, to assume that any regional disaggregation of trade union unemployment statistics would provide a reliable picture of regional patterns of unemployment, given the total exclusion of rural unemployment, and of urban unemployment outside the industrial sector; this point will be discussed further in the next subsection. Whereas for post-1914 data the problem is one of examining the published unemployment statistics and trying to untangle patterns of causality, for pre-1914 data the problem is one of trying to untangle patterns of causality from fragmentary evidence and then trying to infer what the underlying patterns of unemployment would have been.

The basic presumption is that unemployment would have been generally higher in rural areas than in urban areas, as rural areas would have had a static or declining employment base (especially if small towns in a rural setting are excluded from analysis), combined with a high rate of natural increase of population. The heavy migration flows from rural areas supports this contention, although urban-rural migration would also have the effect of reducing urban-rural unemployment differentials. It is unclear without much closer analysis whether unemployment differences between rural and urban areas would have been large or small, but there is a strong likelihood that regions with a high proportion of population living in rural agricultural areas would have, under normal circumstances, higher unemployment rates than more urbanised areas.

Urban areas, as well as having high rates of natural increase of population, were also centres with substantial net inward migration (Tables 9.2, 9.5). The level of unemployment in such urban areas depends not only on the performance of the local economy, but also on whether the local labour market is structured in such a way as to allow for a high degree of migration with respect to the number of jobs available, and thus a chronic glutting of labour. London was a centre with particular problems in this respect, with an unusually large rural hinterland, certainly when compared with Northern cities, and an employment structure which allowed easy entry into temporary jobs, but rather less prospect for permanent employment for the less favoured. It seems probable, although more detailed research is required, that the degree of glutting was relatively slight in the Northern industrial areas, with smaller rural hinterlands and an employment structure based on regular jobs, without a large casual fringe. The situation in port cities may well have been different, though.

(ii) How Not to Study pre-1914 Unemployment Rates; A Recent Case Study

The material required for even an outline analysis of regional patterns of unemployment, and of regional fluctuations in unemployment, is irretrievably lacking; quite simply, most unemployment was not recorded. Partial sources exist, but these provide only a partial picture; there is no legitimate way, for example, in which it is possible to present regional patterns of unemployment amongst skilled engineering workers in trade unions as representative of overall regional patterns of unemployment. Thus, trade union statistics would tend to emphasise the experience of industrial workers in the industrial regions, and the impact of cyclical downswings on employment levels, but completely ignore the experience of workers outside the main basic industries, workers who form the vast majority of the working population in London and the rural areas. This is not a minor problem, as the following table shows:

Sector	Unemployment concentrated in:	
	North	South
Industrial labour	*	
Rural labour		* (rural areas)
Urban casual labour		* (London)

This is the highly probable pattern, but because of the data problems noted above, complete certainty is not possible. What can clearly be seen, though, is that any attempt to gain a representative picture of overall patterns of unemployment will require an attempt to estimate the relative magnitudes of each of the three components noted above. Southall (1983, 1986, 1988) performs a useful service in calculating regional unemployment rates for the members of one particular union (the Amalgamated Society of Engineers), but negates this by arguing that rural unemployment did not exist and that unemployment in the secondary labour markets of London did not exist, leaving industrial unemployment as the only form of unemployment existing in pre-1914 Britain. Such assumptions are necessary if one is to assert that trade union unemployment figures accurately represent regional unemployment patterns, but these assumptions are *wrong*. Instead of conducting the painstaking work required to supplement figures for industrial unemployment, instead even of admitting that the problem exists, Southall takes the simpler short cut of ignoring the problem and thus provides an interpretation of pre-1914 unemployment which leaves out any consideration of the details of Victorian and Edwardian labour market structure. This is then compounded, notably in Southall (1988), by an interpretation of the inter-war years which relies on Southall's interpretation of earlier

years, but is almost wholly erroneous, both in its broad thrust and in its grasp of detail. This section attempts to provide a refutation of Southall's analysis.

Southall's first task is to prove that unemployment in London did not exist, despite the contrary indications given both by contemporaries and by the detailed historical analysis by Stedman Jones (1971).[117] His main approach is simply to *define* unemployment in London as not existing, and calling it "underemployment" instead. He supports this approach by attempting to discredit the opinions of contemporary observers, an easy task in historical analysis as the dead are unable to answer back. Thus Southall (1983 p.239) notes that "middle class observers" were concentrated in London and "consequently, the abundant references to the special problems of unemployment in the metropolis cannot be taken at face value." Yet Southall (1988 p.242) notes that these self-same middle class observers, this time described as "informed contemporaries" (note the use of emotive language), were unable to detect any sign of unemployment being higher in London than elsewhere. This would seem to imply merely proper caution given the rudimentary state of official statistics at the time.[118] Southall (1988 p.242) also claims that Beveridge (1909) made no reference to spatial disparities in unemployment. This is incorrect; Beveridge (1910 edition, p.95) noted very clearly that unemployment tended to be concentrated in port cities (London especially, also Southampton, Bristol, Hull, Glasgow, Liverpool) rather than in manufacturing districts, and that this pattern also applied in Germany. Out of context, Southall's error here might appear trivial, yet it is a major component of his argument that Beveridge, who popularised the idea that unemployment was higher in London than elsewhere before 1914, had absolutely no notion *at the time* that London might have had high unemployment.

The use of two diametrically opposed interpretations of the same writers to produce identical conclusions is unimpressive,[119] but it is the removal of unemployment by calling it underemployment that is the key issue. Southall (1983 pp.238-239) suggests that those "lacking regular employment" were "underemployed as much as unemployed and concentrated into the casual labour markets of the great cities, particularly London." Even more strongly Southall (1988 p.236) notes that "the casual sector formed a secondary labour market, providing minimal economic niches so that many might starve yet not be, strictly, 'unemployed'." In each case it is clearly admitted that there were substantial casual labour markets in London and especially in other cities, and that within these markets work was scarce in comparison with the number seeking work, yet considerable effort is spent in attempting to

demonstrate that this involved little or no unemployment. In each case the definition of unemployment used is unsatisfactory.

The first quotation illustrates what might be termed the "labelling fallacy", the notion that one can measure unemployment, a socio-economic phenomenon, by labelling individuals as fully employed, as underemployed, or as unemployed, and comparing the ratios.[120] This would give a *much* lower figure for unemployment than any count of the numbers unemployed on *any particular day* since most of the people out of work on any particular day would be counted as "underemployed" rather than "unemployed". As an illustration, suppose that of a group of 20 workers 10 are "fully employed", 9 are "underemployed" working two-thirds of the time and a solitary worker is "fully unemployed". On an average day, 16 will be in work and 4 out of work, giving an unemployment rate of 20%; on Southall's definitions, this shrinks to 5%. Southall's basic response to the question of unemployment amongst casual workers is thus simply to deny that casual workers can ever by unemployed; if they work on a Tuesday they cannot be unemployed on a Wednesday. Yet the whole point of a casual labour market is that the demand for labour is irregular and lower than the supply of labour; unemployment is endemic to any casual labour market, and this was indeed shown by numerous 19th century and early 20th century studies.[121]

The second quotation involves a contentious interpretation of the "unemployed beggar" paradox; if someone who is unemployed begs for money, this means that he or she is no longer unemployed, but rather is employed as a professional beggar. At the heart of any pardox is an element of definition which may be exposed as absurd, and here the absurdity lies in the notion that anyone who is unemployed by definition indulges in no economic activity whatsoever. Yet there are undoubtedly various forms of economic activity (begging, selling matches on the streets, etc.) which are no more than disguised unemployment; Southall prefers to see the disguise, not the unemployment.

The problem of defining unemployment is particularly acute when there is no comprehensive unemployment insurance scheme, and this problem is continually encountered in contemporary third world economies[122] and in pre-1914 Britain. Perhaps the most satisfactory solution is to adopt a three-tier model of the labour market.[123]

(1) The primary labour force - engaged in regular employment at industrial wages.

(2) The secondary labour market - characterised by lower wages and irregular employment. The size of the workforce in secondary (and lower) markets is set by the gap between demand for primary labour and the size of the total workforce.

(3) The tertiary labour market; unemployment and disguised unemployment. There is no guarantee of full employment in the secondary market; the supply of labour might well be in excess of the demand for labour. This would leave large numbers of people unable to secure employment in the secondary labour market. Such people would be classed as unemployed had there been a comprehensive unemployment insurance scheme, and ought to be regarded as unemployed *even if there is no unemployment insurance scheme*. This definition removes the absurdity that people can be classed as unemployed only if there is an unemployment insurance scheme.

Without the benefits of unemployment insurance, someone who is unemployed has various options, depending on his or her situation:

(a) If such unemployment is regarded as only temporary (if for example a dock worker fails to find employment on a particular day but hopes to find employment later in the week) the worker can rely on savings from previous periods of employment, meagre though these savings might be.

(b) If unemployment is prolonged, a worker might, given the lack of unemployment benefits, be forced into tertiary activity (begging, scavenging, various forms of street-selling, etc.).

(c) The worker might be forced to rely on the Poor Law, or various forms of charity. The Poor Laws were so framed as to provide a considerable disincentive for the able-bodied unemployed to apply for relief,[124] yet unemployment amongst the able-bodied could also quickly be reflected in demands for relief amongst dependents.

Southall neglects all this and uses an anachronistic definition of unemployment by which someone in effect is classed as unemployed only if that person receives unemployment benefit, that is, is *paid* for not working and being engaged in no labour market activity other than looking for work.[125] Since unemployment insurance schemes were, for most of his study period, confined to trade unions, only trade unionists could be counted as unemployed under Southall's definitions. Presumably before trade unions existed there would have been no unemployment! It is a very serious weakness in Southall's approach that the work experiences of the most marginal members of the workforce are ignored, while attention concentrates on skilled industrial workers;[126] this, in a study on unemployment.

The assertion that unemployment did not exist, except perhaps on a very small scale, in London before the Great War is thus based on a highly misleading definition of unemployment in which the most vulnerable sections of the London workforce could be regarded as by definition never

unemployed. Similar tactics are used to deal with the question of rural unemployment. Southall (1982 p.239) notes that English pauperism rates tended to be high in rural counties in the South and East Anglia and low in the industrial North, a tendency which was very persistent through time. Astonishingly Southall relates this not to the state of the labour market but to administrative circumstances. It is as though someone who wanted to prove that in the 1980s unemployment was no higher in the North than in the South were to dismiss 60 years of official unemployment figures because they were administrative in origin.

On any realistic appraisal of the state of the labour market in Victorian and Edwardian Britain, one would *expect* unemployment rates to be high in the rural South, including towns within the rural South, and low in the industrial North. A combination of high rates of natural demographic growth, static employment and high emigration very clearly signals a high unemployment economy. Furthermore, rural areas were far more extensive in the South than in the North, with relatively few large urban areas to drain off surplus labour. There was London, but London itself was also generating a large labour surplus because of the difficulties of absorbing rural migration.

Direct analysis of regional patterns of unemployment in agriculture is scarce because of data problems. The following quotations from two agricultural historians (Orwin and Whetham 1971) should be noted.[127] Of the 1840s (and note that Orwin and Whetham do not include Ireland in their account) "the lot of the labourers in the south and south Midlands of England was probably hardest of all during this period .... There were fewer alternative occupations open to farm labour, and periods of unemployment were almost inevitable", while in Essex "unemployed and half-starved men were asking for work at almost any wage" (although conditions eased in the 1850s). "Unemployment, or under-employment of agricultural workers was a chronic problem, *at any rate in the South of England*" (emphasis added). Orwin and Whetham cite an 1867 Royal Commission. "The picture that emerges of conditions in the northern counties is altogether much brighter than in the rest"; "The general picture of farm labour in Wales is on the whole happier than that in England. There was no spectre of unemployment." And, discussing the same period, "In Wales and in Scotland the farmers were competing for the best workers, whilst in southern England the workers were competing for places .... the spectre of being out of work was always with (Dorset workers)." It would also be possible to cite other sources,[128] noting for example how agricultural wages tended to be high in the North and low in the South, reflecting patterns of demand for labour, or that the Great Agricultural Depression from the 1870s tended to have very severe

effects on the arable areas of Eastern England. Furthermore the experiences of Ireland, rural like much of Southern England, could also be stressed. Enough has already been cited, though, to suggest that Southall is wrong in assuming that there was no problem of rural unemployment in Southern England, and wrong in assuming that rural unemployment can be ignored.

Pauperism figures give the best available surrogate for spatial variations in unemployment across the whole population, so long as it is understood that pauperism is not identical to unemployment. There is a strong expectation that pauperism rates will be positively correlated with unemployment rates.[121] In this context it is worth noting that Matthews, Feinstein and Odling-Smee (1982 p.629) quote contemporary figures to show that in 1907 pauperism rates averaged 2.9% in wholly rural areas, 2.6% in partially rural (less than 75% urban) areas, 2.6% in London, 2.0% in the wholly urban areas and 1.9% in mainly urban (more than 75%) areas. MacKinnon (1986) uses a longer time series and shows that labour market conditions in the South tended to improve through time while labour market conditions in the North tended to deteriorate, implying that the South-North gap would have been greater in, for example, the middle half of the 19th century than in the period just before the First World War. In addition, MacKinnon notes that pauperism rates tended to be more cyclicallyvulnerable in the North than in the South.[130] One can add also that early unemployment statistics (Table A7) show unemployment as being much higher in London, the South and Ireland than in Northern England, Scotland or Wales. All this provides a reasonably consistent picture of the pre-1914 labour market, with base unemployment (the minimum of unemployment at the peak of the business cycle) reflecting demographic pressures originating in rural areas, and spreading unemployment to towns and cities with a large rural hinterland; with the balance of economic advantage gradually tilting southwards in the late 19th century; and with industrial employment in the North vulnerable to the trade cycle. If one were able to chart unemployment in the 19th century, the most likely picture would be of unemployment much higher in the South (plus Ireland) than in the North for most of the time, but with the gap narrowing considerably towards the trough of recessions.

The interpretation noted above is, as far as the present author is able to determine, consistent with all the presently available evidence, including the trade union unemployment series. Southall's interpretation is consistent with trade union unemployment figures but almost wholly inconsistent with other information; as a result he has to spend a lot of effort trying to find reasons why other sources of evidence should be dismissed outright (see especially Southall 1983). Had his basic interpretation been correct, then other sources would have

provided *supporting* evidence; this is not the case.

Southall (1983) notes that early National Insurance figures show that unemployment was high in London, Southern England and Ireland, but low in the industrial areas. Instead of examining the meaning of these figures in the context of labour market conditions, he argues that the figures can be ignored, on grounds which are at best flimsy. He notes that the data come from a very early stage of the operation of the National Insurance system, with the implication that they are unreliable, and yet unemployment rates of the first few years after the Great War also show the same pattern of unemployment being low in the North and high in the South. He also suggests that the unemployment rates should be ignored because they were taken at a cyclical peak, yet in many ways the most important questions of labour market theory concern what is happening at cyclical *peaks* rather than troughs.[131] To ignore what is happening at the peaks is to slip into pre-Keynesian orthodoxy, to produce an implicit model of the economy in which the economy tends towards a full employment equilibrium, with unemployment being merely a cyclical feature associated with structural change in key sectors.[132] This does not present an adequate picture of the labour market.

Southall (1988) tries to link his analysis of pre-war unemployment to a study of the origin of the depressed areas, and in doing so magnifies many of his misconceptions. His knowledge of the literature of the period is almost non-existent; to assert that the Barlow Commission which reported in 1940 "is often cited as the first expression of official concern with the 'regional problems' " shows lack of acquaintance firstly with the numerous Board of Trade studies on the depressed areas (Board of Trade 1932a-e, 1934), secondly with the Special Areas Act of 1934, and thirdly with the basic texts on regional policy in Britain (McCrone 1969, McCallum 1979, Parsons 1986, etc.), which all note the importance of the Special Areas Act. Even more serious than this, though, is that while Southall (1988 p.256) claims that "the focus of this paper .... centres on a relatively short period before and after the First World War" it is in fact very clear that Southall has not taken the trouble to look up regional unemployment figures for the years just after the First World War and instead relies on a guess, which happens to be wrong. Up to about 1921, unemployment rates tended to be higher in the South than in the North (chapter 4.2(i), Tables 4.4, 4.5), the *reverse* of the result assumed by Southall.

It is true that the critical 1918-21 period has been neglected by earlier writers on the British regional system, leading to various false claims that the First World War marked a reversal in regional patterns of unemployment.[133] Southall is correct in attacking these claims, but

does so for the wrong reason, not having examined the appropriate data. There undoubtedly was continuity of patterns of unemployment across either side of the First World War, but it was *not* the continuity of a pattern in which the North had higher unemployment rates than the South. Instead, it is strongly indicated that both before and just after the First World War the South had higher background unemployment rates than the North, but that the North was more vulnerable to recession. Thus during the post-war boom the North had low unemployment rates, but unemployment increased much faster in the North than in the South during the severe recession starting in 1920. Even at the trough of the recession, unemployment rates were only slightly higher in the North than in the South. The real reversal of polarity came not during the First World War but during the 1920s, when demographic pressure on the Southern labour market was fading, when the South was consolidating its economic dominance by developing new industries, and, perhaps most importantly of all, when the cyclical recovery in the industrial areas was thrown into a very severe reverse in 1925 by the collapse of prices in the coal industry. Since then the North has always had higher unemployment rates than the South, both during cyclical peaks and troughs; there is no need to disregard cyclical peaks to demonstrate the point.

It is unfortunate that this review of Southall's work has necessarily been destructive, but there has been little choice given the strong claims made, and the biased treatment of evidence. Perhaps the basic weakness in Southall's argument is encapsulated in his rhetorical question, "if industrial unemployment was the crucial measure in 1920 or 1930, why should we assess the economy of 1900 or 1910 so differently?" The basic point is simple; there is no need to deny the existence of non-industrial forms of unemployment to show that unemployment in 1930 (though *not* in 1920) was concentrated in the industrial areas; in order to argue that unemployment was concentrated in industrial areas before 1914 Southall has to go to considerable lengths to deny the existence of non-industrial forms of unemployment. This attempt to massage away the greater part of Victorian and Edwardian unemployment is not valid.

9.6 Coal; Unblanced Expansion of a Key Industry

Whatever the problems of the London economy at the turn of the century, the economic structures were present to enable London and the South East to share fully in, and indeed to dominate, economic growth in 20th century conditions. A combination of high employment levels in the expanding professional, administrative and financial service sectors, along with a lack of commitment to older industries which were liable to decline, provided the basis of a high income regional economy with stable employment. There were highly conspicuous pockets of poverty in late 19th century London, but a reduction in levels of migration from rural to urban areas would tend to bring labour demand and labour supply more closely into balance in London.

By the start of the First World War, long term economic prospects for the South East could be said to be reasonably bright, with clearly identifiable growth sectors being present. In the industrial areas, much depended on what happened to the industrial base; in comparison with the South East, there were relatively few possibilities for major sustained growth in the higher order services.

In the post-war period, Britain's older industrial base came to be in substantial decline, as detailed in chapter 4 above. The catastrophic and often highly regionally specific patterns of employment decline need to be related to changes in particular industries, rather than to any generalised patterns of regional prosperity. The one industry whose decline had the greatest impact on regional patterns of employment change after the War was coal mining; this has been a consistent theme in the analysis presented in chapter 4. This earlier analysis needs to be extended in order to understand what features there were about coal mining expansion before 1914 which led to such an unstable surplus of employment in coal mining in later years. An early attempt to link coal mining employment expansion before 1914 to the inter-war regional problem stated that

"A large part of the depressed area problem is due to the fact that the number of coal miners in Great Britain suddenly tripled between 1881, when it was less than half-a-million (3½ per cent of the working population) and 1921, when miners formed nearly 7 per cent of a much larger occupied population. No sooner had the peak employment of nearly 1¼ millions been reached than an even more rapid contraction set in and since 1934 there have never been as many as 800,000 at work in this industry."[134]

This passage captures some of the most important issues, although one wonders whether something can "suddenly" triple in 40 years (a

compound growth rate of less than 3% per annum). The emphasis on the increasing proportion of the working population employed in coal mining is certainly appropriate, but unfortunately the analysis was not extended by considering in depth the relationship between employment and output.

Table 9.13 shows that the rate of growth of output was 2.0% per annum, the same growth rate as in manufacturing industry. This comparison suggests that output changes do not explain why coal mining employment, as a percentage of total employment, doubled from 3½% to 7%.

There would seem to be a considerable imbalance between output and employment trends in coal mining, with productivity trends in this sector falling behind productivity in the rest of the economy; indeed, productivity in coal mining was declining substantially in the period of analysis, from 318 tons per man per year in 1883 to 254 tons per man per year in 1913 (Table 9.13). Pasinetti (1981 p.141) suggests that in a growing economic system costs of production broadly determine relative prices, while consumers' decisions broadly determine relative quantities. Applying this principle to the question under consideration, one can deduce that the relative price of coal was probably rising substantially during the period, a relationship which may be seen by comparing the level of coal prices with Rousseaux's general price index in Fig 9.2, and one can also deduce that the underlying level of demand for coal was on a sharply upward trend if the growth in physical production was faster than average in an industry of falling productivity. It is possible therefore to point to a "long boom" in the world coal industry before 1913, even though the rates of output growth in Britain were relatively modest. A very large number of jobs depended on the continuance of this long boom, but trends turned sharply against the coal industry in post-war conditions, and much of the employment generated during the boom was quickly lost during the crash, with job loss being especially severe between 1924 and 1928 (chapter 4.2(ii)) as world overcapacity became acute.

In assessing the long-term significance of the pre-1914 coal boom, two central points need to be borne in mind. Firstly, the growth of markets for coal was brought about primarily by the growth in industrial production at a world scale, coal at this stage being by far the most important source of industrial energy.[135] After the 1870s, the growth of industrial output in the UK was relatively slow, a point much emphasised in the economic history literature, but European industrial growth started to become rapid,[136] allowing a sustained expansion in markets for coal. Furthermore, the continental coalfields were relatively undeveloped at the start of the period; in 1871, the output of hard coal in the UK stood at 120 million metric tons, compared with only 29 million

tons in Germany, the main continental producer. By 1913 this relative gap had been reduced substantially, with production in the UK standing at 292 million tons, compared with 190 million tons (plus 87 million tons of a lower grade "brown coal") in Germany.[137] The UK had a "mature" coal industry throughout the 1870-1913 period, with the implication of a continued high level of productivity by international standards. The initial relative lack of development of the continental coalfields implied a low level of productivity at the start of the period, but as these coalfields became more fully developed, productivity rose, eroding much, but not all, of the substantial competitive advantage of the British coal industry. Buxton (1978 p.97) notes that between 1874 and 1878, output per man year in the UK coal industry averaged 270 tons, compared with 209 tons in Germany and 154 tons in France (1876-78). By 1894-98, output per head had risen to 287 tons in the UK, compared with 262 tons in Germany and 208 tons in France, a much reduced gap, but one still favouring the UK. For reasons which will be discussed shortly, productivity then declined up to the First World War, but more rapidly in the UK than elsewhere, so that by 1913 the productivity gap between the UK and Germany had been virtually eliminated. The inland coalfields of the USA had levels of productivity about twice as high as in the UK, but transport difficulties (lack of access to the sea, distance from European markets) ensured that American coal did not dominate world markets.[138]

The basic structures of expansion of the British coal industry in the decades up to 1914 revolved around the exports of coal from the relatively high productivity British coalfields to industrialising areas throughout the world. As Table 9.13 shows, the growth in production for domestic use was slow, at less than 2% per annum, while exports expanded by about 4½% per annum.

The second key issue which needs to be considered is that of productivity. There is a fundamental distinction to be made between manufacturing industry and extractive industry when productivity trends are being considered. In manufacturing industry there is no particular reason why a large scale expansion of output at the industry level should result in a decline in productivity, or even a downward shift in the rate of growth of productivity; there is no reason why a new factory should operate any less efficiently than an already existing one, provided that certain "teething troubles" can be overcome. Indeed, the expectation is in the opposite direction; a faster rate of growth of output is likely to lead to accelerated productivity increases through the operation of dynamic economies of scale.[139] With extractive industries, as with agriculture, there are physical barriers to expanding production smoothly,

caused by the extent of the resource base being a limiting factor. One source of diminishing returns, emphasised by Taylor (1968 p.48), is that the tendency for easily worked coal (thick seams, exposed coalfields) to be extracted first means that later extraction has to concentrate on less easily won coal. This, however, is a very long term process. In the medium term, such an effect need not be strong so long as output remains fairly steady; particular seams in an existing pit are worked steadily, while the opening up of new pits is a gradual process. If however output expands rapidly, the problem of diminishing returns is felt more acutely. Possibilities for raising output by more intensive working on seams which are already being used are limited, implying that *acceleration* of production from a particular pit would tend to require the working of thinner or less accessible seams. This reduces average levels of productivity.[140]

Table 9.13 shows that productivity was increasing up to the 1880s and declining thereafter. There was a sharp increase in both output and productivity in the 1879-83 cyclical upswing; output increased from 134 million tons to 163 million tons, while output per man year increased from 280 to 318 tons. Productivity in 1883 was at a maximum, but annual output per head remained over 300 tons until 1889, before the downward trend in productivity set in. Fig 9.2 graphs output and productivity levels for the decades before 1914 and seems to suggest quite clearly that under the technical conditions of the time, any level of output beyond 170 million tons per year could be achieved only with a serious loss of productivity. The sharply rising price levels for coal, from 5s 7½d per ton in 1882 to 6s 4d in 1889 and 7s 3d in 1892,[141] ensured that production continued to expand substantially, and along with rising profits, despite adverse productivity trends.

The 170 million ton threshold of diminishing returns seems clear. As a point of later comparison, a more technically advanced coal industry produced on average about 220 million tons per year in the later 1930s, falling to about 120 million tons per year in the 1980s.[142] Under the conditions prevailing before 1914, and given a low rate of investment and innovation in machinery[143] an "equilibrium" output of abour 170 million tons and a workforce of about 550,000 would appear to be appropriate. Instead, markets continued to expand, physical productivity continued to fall and labour was sucked into the coal mining industry, labour which was liable to be shed very quickly if markets ceased to expand. By 1913, 1,130,000 were employed in the coal mining industry, but this employment was vulnerable; as outlined in chapter 4, 400,000 jobs were lost in the industry between 1924 and 1932.

The fall in productivity in the late 1880s and 1890s would appear to result from an overloading of capacity. Some perverse statistical results could be noted in later cyclical upswings. For example, the price of coal rose sharply between 1898 and 1900. In 1898 total employment stood at 706,900, while output stood at 202.1m tons, each ton of coal raising on average 6s 4d. In 1899 prices rose to 7s 7d per ton, with output jumping by 8.9% to 220.1m tons to meet increased demand, while employment increased by only 3.1% to 729,000. This high level of productivity proved impossible to sustain, so that in the following year, despite an increase in prices of 42.2% and an increase in employment of 7.0%, output rose by a mere 2.3%. A similar pattern may be noted a business cycle later, when in 1906-7 employment jumped from 882,300 to 940,600 (+6.6%) and prices jumped by 23.5%, output in millions of tons increased by 6.7%, from 251,100 to 267,800. This might appear a very satisfactory performance, but in the next few years output remained merely steady (+1.5% between 1907 and 1911) while employment rose sharply (by 127,000 or 13.5% in the same period).[144] As Taylor (1968 p.47) notes, these major drops in productivity when coal was in heavy demand were not recovered during subsequent recessions. The state of demand is measured here in terms of prices, rather than in terms of output.

The cyclical pattern of productivity change in coal mining is of some interest, but for present purposes the longer term nature of the decline in productivity after the 1880s is perhaps of more importance. Mitchell (1984 pp.321-324) attributes this primarily to the increasing average age of mines, which increased the length of travel underground, cutting the effective length of the working shift. In 1894, for example, Mitchell notes that each major coalfield had more than 40% of its men in collieries which were less than 30 years old, and this figure reached 86% in South Wales and 78% in Nottinghamshire. By 1913, a figure of 20% (40% in Nottinghamshire and South Wales) was more usual. Coal output almost doubled between 1886 and 1913, but it seems that this expansion took place largely through the extension of existing pits rather than through the development of new pits, if not in the early part of this period, then certainly in the later part. In some of the older coalfields, the decline in productivity through the ageing of pits was extremely severe, especially if demand was still rising rapidly.

Table 9.14 provides a summary of output and productivity trends in each of the major coalfields. It may readily be seen that the productivity decline of the late 1880s and early 1890s affected every major coalfield; nowhere was it easy to expand capacity to meet unprecedented levels of demand. Productivity was stable across the 1895-1904 business cycle when taken as a whole; there was a minor drop in productivity in the

declining Lancashire coalfield, but elsewhere productivity was steady or gently expanding. Across the 1904-1911 business cycle, however, productivity fell, but regional experiences were highly divergent. Productivity continued to increase in the Yorkshire and Midland (Notts., Leics., Derby, Warks.) coalfields and output trends were extremely favourable, an early indication of the extent to which production in the concealed but productive inland coalfields would tend to dominate aspects of growth in the British coal industry in the 20th century. The economic performance of these inland coalfields, which had previously been relatively lightly exploited, provided a sharp contrast with the exporting coalfields of South Wales and North East England.

The North East coalfield was undoubtedly Britain's dominant coal producing area up to the late 19th century as a result of there being a substantial exposed coalfield, and access to the coast to allow exports both to London and abroad. Mitchell (1984 p.317) indicates that output per man year reached 400 tons in the North East in the early 1860s as a result of the ease with which coal was gained. From this high point, representing a much higher level of productivity than reached by any other coalfield before 1914, productivity declined sharply, almost halving by the start of the First World War. The main problem was the progressive depletion of coal reserves in the inland exposed coalfield. While coal prices were high, before 1914, the problems of declining productivity in the exposed part of the North East coalfield could be counteracted. In the changed conditions after 1918, however, the impact of declining export markets and low prices was felt strongly in the North East, and in the exposed West Durham coalfield especially.

The decline of productivity in coal mining in South Wales between 1904 and 1911 was even more severe, but for different reasons. Again, like the North East, this coalfield was strongly geared to export, but this export trade was built not so much on high productivity extraction, but rather on the extraction of high quality "steam coal". The particular advantage of this coal was that it had a high energy value per unit of weight, and this, combined with the accessibility of South Wales to major shipping routes, enabled South Wales to dominate long distance world trade in coal.[145] The main disadvantage of Welsh coal was that it was difficult to extract as a result of unfavourable geological structures; the whole of the South Wales coalfield is heavily faulted so that coal seams tend to be discontinuous, and therefore cannot be worked continuously for long time spans.[146] As a result, diminishing returns set in at an early stage; the level of production in 1873, the year of maximum productivity, was only 16.2 million tons, compared with 29.7 million tons in the North East coalfield. By 1913, output in South Wales had increased

to 56.8 million tons, but at the cost of productivity falling by a third.

For slightly different reasons, therefore, productivity was sharply declining in the main exporting coalfields of South Wales and North East England, and also in Lancashire where a relatively small coalfield had passed its peak. The two exporting coalfields were later to undergo severe decline as a result of falling prices and low productivity. The inland coalfields of Yorkshire and the Midlands, in contrast, were showing relatively healthy production trends with output rising by over 4% per annum and productivity increasing, against national trends, in the decade before the First World War.

In the long term, low productivity in the coastal coalfields meant a severe competitive weakness when compared with coalfields in which productivity was stable or rising. In the shorter term, the declining productivity in coal mining, especially in the exporting coalfields and Lancashire, drew in substantial quantities of labour. In that this extra employment was created on the basis of declining productivity as much as on output growth, a vulnerable surplus of employment could be said to have been created. Before 1914, the only sense in which productivity in coal mining could be said to be increasing was in the revenue sense. On the basis of the monetary value of coal produced per head, productivity was rising by 1.2% per annum, once changes in the general price level have been allowed for, compared with 0.9% per annum in industrial production as a whole. This increased revenue productivity represented the economic basis for the rapid expansion of coal production up to 1914, yet any downward shift in prices, as a result of world overproduction or declining markets, would reveal the situation in terms of employment as being highly unstable.

It is possible to give a rough estimate of the "surplus" element in coal mining employment by comparing actual employment levels in 1913 with what the levels would have been if physical productivity in coal mining had risen by the same rate as in manufacturing. Table 9.15 shows that employment increased substantially in all the major coalfields between 1886 and 1913, and that the decline of employment in the inter-war recession was of approximately the same order of magnitude in each coalfield as the pre-1913 increases. It is of interest to see whether the inter-war declines of employment corresponded to the surplus element of employment in coal mining in 1913, or whether they cut more deeply. At root is the question of whether the recessions of the inter-war years reestablished, by means highly disadvantageous to the workforce, an economic equilibrium which was seriously unbalanced by the lopsided course of expansion in the decades before 1914, or whether, alternatively, the course of recession in the 1920s and 1930s bears little relation to the

course of expansion in an earlier period.

Table 9.16 suggests that the "excessive" increase in employment between 1886 and 1913 stood at 350,000 in the six main coalfields, and that this closely matches the total of employment lost during the subsequent downswing, whether the measurement is taken on an aggregate level, or on a coalfield by coalfield basis. There is no wholly unambiguous point from which to measure the downswing of the coal industry; production peaked in 1913, while employment was on an increasing trend until 1924. The figures for the net changes in employment in the downswing given in Table 9.16 are compromise figures, which in effect weight the 1924-36 years twice as heavily as the 1913-24 years.

There would seem to be no theoretical reason to expect a *precise* match between the generation of excess employment in one period and the loss of employment in a subsequent recessionary period, but it would seem appropriate to expect an approximate match. Table 9.16 demonstrates this match, and suggests that the geography of job loss in coal mining in the inter-war years closely matches, and is at least partially explained by, the geography of the development of excess employment prior to 1913. In particular, the heavy job losses on the Northern coalfield in the inter-war period may be seen as the counterpart of the development of excess employment in an earlier period; the figures match very closely. The correspondence appears less close in South Wales, with a fall in employment of 100,000 and disguised labour surplus of 80,000 having appeared between 1886 and 1913. In South Wales, however, a significant degree of excess employment had already built up before 1886, and particularly in the early 1880s. Between 1873 and 1886, coal output in South Wales grew by 53% (3.3% per annum), a very fast rate of growth, while in the rest of the UK output grew by only 18% (1.3%) per annum. The increase in output in South Wales was achieved at the expense of falling productivity; in South Wales output per man year fell from 356 tons in 1873 to 291 tons in 1886, whereas in the UK as a whole output per man year rose from 250 tons to 303 tons. Had output per head in South Wales remained merely stable between 1873 and 1886, coal mining employment would have risen from 45,500 to 69,700 rather than to 85,100. Thus, an element of earlier excess employment, unrecorded in Table 9.16 should be allowed for when considering the Welsh position after 1914. It would seem that here, as well as in North East England, the exceptionally high rate of job loss in coal mining in the inter-war period is *closely* explained by the degree of excess employment generated earlier.

The lower rates of job loss in coal mining in the inland coalfields of Yorkshire and the Midlands can be explained in terms of a much lower degree of excess employment by 1913. Tables 9.15 and 9.16 show that there

was considerable expansion of employment between 1886 and 1913, but that most of this expansion was "justified" by a high rate of increase in output, along with rising productivity. These two coalfields were therefore in a much better position than the North East, Lancashire, and South Wales to retain the employment in coal mining generated at the turn of the century.

In chapter 4 it was established that declining employment in coal mining was by far the single most important factor in explaining the massive differences in unemployment between North and South between the wars, and also in explaining the differences between various parts of the periphery, for example between Yorkshire and the North East (although the decline in cotton employment in the North West represented another important component). It was suggested in this earlier chapter that the examination of the previous growth performance of the coal industry might hold the key to understanding the extreme intensity of Britain's inter-war regional problem.

A combination of a moderate rise in coal output from a high base, and falling productivity, a combination possible only with buoyant markets, led to employment in coal mining in 1913 being over a third of a million higher than one would expect from overall trends in productivity in the economy. This surplus developed in less than 30 years; over half the net addition to coal mining employment in this period could be regarded as structurally highly unstable. Furthermore the excess of employment was extremely unevenly divided between regions with half the total excess being concentrated in the two major exporting coal regions of South Wales and North East England. It was South Wales and North East England that were the two regions most severely affected by the inter-war depressions.

Much of the intensity of the inter-war regional problem may be attributed ultimately to the extremely unstable path of expansion in coal industry between the 1880s and 1914; any subsequent problems in the industry would then lead to extremely rapid falls in employment.

9.7 Summary

It is both very important and very difficult to establish the outlines of Britain's 19th century economic geography in endeavouring to understand fully the economic geography of 20th century Britain. The difficulties of understanding what was happening in the 19th century result not so much from the period being in a remote historical past, and hence beyond direct observation or personal recollection, but rather that there is an irretrievable shortage of reliable and comprehensive statistical information for the period, and also that the patterns of change were themselves exceptionally complicated.

Three questions would appear to be centrally important in the light of the earlier discussion, although it has to be admitted that none of these questions has been resolved fully to the author's satisfaction. Further analysis will therefore be required at some stage. These questions are

(1) To what extent, if at all, the growth of the peripheral regions dominated the growth of the core regions during the Industrial Revolution and after

(2) To what extent the events of the 1870s and 1880s (deep industrial recession; large-scale capital exports) represented a decisive set-back to the peripheral industrial regions and a major long-term boost to the core regions, thus creating the background of the development of the modern regional problem

(3) The question of the structure of 19th century labour markets.

It seems highly unlikely that the periphery *dominated* the core during the Industrial Revolution. To have the South clearly economically dominant up to the late 18th century and in the 20th century, but the North dominant in the intervening period, it would be necessary to postulate two major reversals of economic polarity. This does not seem to be acceptable; it is more natural to assume first a weakening and then a strengthening of the dominance of the South rather than an outright reversal of patterns of dominance, itself later to be reversed. At the same time, it would be dangerous, perhaps even more dangerous, to suggest that the Industrial Revolution of the North was merely a superficial phenomenon with little autonomous effect on the structure of the economy.

It is perhaps best to see the problem not in terms of North and South, but rather in terms of core and periphery. There is a general tendency for a core economy to specialise in higher order economic functions, such as finance, professional services and high order administration, and for the peripheral economy to concentrate on lower order economic functions, such as agriculture, mining and quarrying, and

manufacturing. This is not to deny the significance of, for example, manufacturing in a core economy, or finance in a peripheral economy, but rather to suggest a set of broad distinctions.

In the long term, this spatial division of economic functions will tend to lead to economic growth being substantially faster in the core than in the periphery. In the shorter term, however, there are various reasons why the periphery might at times grow faster than the core. The most important reason is likely to be the presence of a substantial natural resource base, which not only sets up possibilities of large scale expansion in primary activities, but also, in certain circumstances, lowers the cost of manufacturing activity enough to allow substantial industrial development, possibly at the expense of development elsewhere. Or, to put the point another way, if an "Industrial Revolution" is imminent, under conditions in which raw materials and energy sources are costly to transport, such a revolution is more likely to take place in an area with a rich resource base, with the presence or absence of coal being especially important, than in a naturally less well-endowed area, even one which is better placed to serve national markets.

It is likely that were it possible for early 19th century growth rates to be calculated on a regional basis, they would show the gross product of the North growing faster than that of the South. Great care must be taken not to exaggerate the differences; it is extremely unlikely that London was economically stagnant during this period, even though Northern manufacturing industries outcompeted Southern industries. For such a gap in growth in favour of the North to be anything other than temporary, it would be necessary either for expansion in industry to outrun expansion in higher order services, which in the long run is unlikely, or for the manufacturing regions to generate a complex of higher order economic functions on level terms with London. Neither of these possibilities is likely in the long run. At times of crisis, industries decay, and the limited economic base of the periphery is exposed. Furthermore, to the extent that a peripheral area's development of higher order economic functions is dependent on the development of its industrial base, there is likely to be an increased concentration of higher order functions within the core during a major industrial downturn. Thus the relative advantages of the peripheral regions would seem to have been largely confined to periods of economic upturn; no industrial upturn lasts for ever, though. The periphery during the Industrial Revolution was therefore fast-growing rather than economically dominant.

It would seem that from the 1870s onwards, the South was not only economically dominant, but also faster growing than the North. The industrial depressions of the 1870s and 1880s were severe, and as such

had a severe effect on the industrial areas. Industrial recovery after the "great depression" was relatively weak, however, despite a price-led boom in coal mining. The post-slump recovery of the 1880s was marked by a major expansion of investment in the resource-rich economies of the "white periphery", with Britain being a dominant foreign source of this investment. Such investment, it seems, at least partially crowded out domestic industrial investment, except during the years of uncertainty in the 1890s, and led to a retardation of industrial growth in the peripheral regions. The combination of economically strong core and economically weak periphery probably dates from the 1870s or 1880s rather than the 1920s, although an unstable "long boom" in the coal industry largely concealed this relationship.

The structure of the 19th century labour market is complex and poorly documented, and requires considerable further investigation. Dogmatic pronouncements by Southall (1983, 1986, 1988) that systematic unemployment in London and rural areas did not exist, and that only industrial unemployment at times of depression should be considered, obscure rather than clarify the issues. Given the considerable gaps in pre-1914 labour market data, one can suggest only what is probably true; it is not possible to deal with proven fact. It would seem that there were two dominant components behind pre-1914 unemployment. These were, firstly, job losses during recession, and secondly the permanent mismatch between supply and demand of labour caused by an unusually high rate of population growth. It is little more than a statement of the obvious that unemployment through industrial job loss was concentrated in industrial areas, and that, given the high amplitude of 19th century business cycles, such unemployment could be severe. Trade union figures, as presented by Southall (1986, 1988) indicate the problems faced by industrial workers during recession, but the problems of estimating levels of unemployment amongst non-industrial workers are immense. The most promising approach would appear to be to establish what can and what cannot be achieved by the study of pauperism statistics; MacKinnon (1986) provides a useful start, but there is still much work to be done.

Without recapitulating in detail the arguments of section 9.5, it would appear that there is a considerable demographic element to unemployment before 1914. Matthews[147] notes that "when one reads the accounts of unemployment in those times one is irresistably reminded of the characteristics of urban unemployment in underdeveloped countries at the present time"; certainly such features as heavy rural-urban migration, and the strong segmentation of urban labour into a primary labour force and a casual labour force "who rarely succeeded in getting a full week's work in periods of general prosperity"[148] accentuates this similarity.

Matthews interpreted this in terms of an inadequate supply of capital. If one considers the massive capital exports of the 1880s and 1900s this case sounds plausible, but perhaps a slight shift of perspective can sharpen understanding of the situation; capital was short *in relation to the population seeking employment*, as a result of a rate of population increase that would have placed strains even on the post-1945 British economy. Chronic third world unemployment generally results from a combination of fast population growth and inadequate capital development; 19th century Britain undoubtedly had fast population growth, but whether or not the dual labour market resulted from inadequacies in capital development is open to debate. Had population growth been slower one might well have expected to find a situation in which unemployment in London and the rural South was low, with unemployment concentrated in the industrial North during recessions.

The linkages between the pre-1914 economy and the post-1918 economy are complex, and claims that what was happening was a simple reversal of patterns of prosperity, or alternatively claims that inter-war problems were merely a continuation of pre-war problems, are both over-simplified.

Discussion of the pre-1914 period would normally cease here, but an important addendum to chapter 2, concerning 19th century climate, needs to be incorporated; the problem addressed was noticed only after chapter 2 had already been typed.

9.8 Climatic Change and 19th Century Economic History

In any truly dynamic research project, it is quite possible and indeed likely that even at a very late stage new information may come to light which may require a substantial modification of earlier conclusions. This presents both problems and opportunities. It takes both time and effort to resolve the problems and take up the new opportunities; failing that, all that it is possible to do is to present an interim report and suggest directions for possible further research.

Chapter 2 above can be faulted for not taking into account climatic change, and for using an inappropriate implicit model of climate. This fault is common to perhaps the bulk of writings on economic history, and on long cycle theory, leading to various problems of interpretation. Any competent economic historian will be fully aware that the level of prosperity in particular years may be heavily affected by unusual weather conditions in such years, the effect being especially strong in a predominantly agricultural economy in which the size of the harvest is largely dependent on the weather through the growing season. The question of *climatic* change, as opposed to quasi-random variations of weather within an assumedly stable climatic regime, has often been neglected, though.

Lamb notes that climatic change has been neglected even by meteorologists until relatively recently. "Not so very long ago - between the wars in fact - climate was widely regarded as something static, except on the geological time scale .... (It was regarded) that if only a long enough series of observations could be amassed, this would produce an average - described as the 'normal' - value of each element to which, in the climate of any given place, the element would always tend to return. Climate was described as 'average weather'."[149] Lamb proceeds to note, however, that climate is changing continuously. The question that needs to be answered here is whether climatic change can be invoked to explain various of the shifts in the "economic climate" which were interpreted in terms of an endogenous economic dynamic in chapter 2.

By chance, the author happened to glance at a diagram of temperature changes in central England from 1680 to 1960, in Manley (1964), reproduced as Fig 9.3 below. This particular diagram is also given in a number of other sources, but derives from Manley's research. The results give particular cause for concern to any long cycle theorist, especially where the 19th century is concerned. There appears to have been a sharp climatic upswing from the late 1810s to about 1830, then an equally sharp downswing until about the mid-1840s, then a gradual upswing until about the early 1870s, then another sharp downswing, more strongly

marked in the Winter, Spring and Summer than in the Autumn, until the 1890s, and then a prolonged 20th century upswing. This mirrors very closely the assumed phases of the long cycle indicated in chapter 2, although Manley's use of a ten year moving average makes it difficult to establish the precise degree of match between the two series, particularly insofar as turning points are concerned.

This raises major problems of interpretation. It is very easy to think of ways in which climatic change could affect economic change, but rather more difficult to see ways in which economic fluctuations, under 19th century levels of economic development, could affect climatic change.[150] Thus it is extremely unlikely that 19th century climatic fluctuations are economically determined, but quite possible at this stage of analysis that economic fluctuations are climatically determined. Indeed the question raised in chapter 2.9, of whether it is possible to identify an endogenous 300 year long cycle can now be answered quite firmly in the negative; the A-phases have predominantly been periods of improving climate (1100-1300, 1450-1600) while the B-phases have predominantly been periods of deteriorating climate (1300-1450, 1600-1750).[151] The extensiveness of agriculture would seem to have reached its limits at certain phases not as a result of endogenous economic problems, but rather as the result of climatic deterioration, making once cultivable lands uncultivable.

Braudel (1981 pp.47-51) examines the question from a slightly different perspective, emphasising that the question of economic development was not simply one of successions of faster and slower economic and population growth in Europe, but of *synchronised* successions of faster and slower growth. It is this simultaneity, across several weakly connected economic systems which Braudel regards as the critical question, concluding that "one can only imagine one single general answer to this almost complete coincidence: changes in climate." Braudel adds a cautionary note, pointing out that most historical studies relating economic decline to climatic shifts have related to climatically marginal areas such as Scandinavia. He notes that "if one seeks to argue that serious consequences resulted from a deterioration of the climate, one has to prove first that such deterioration occurred in the countries of the temperate zone, the most densely populated and in the past 'the most important for Western Europe's food supply'." The English evidence, carefully collected by Lamb, Manley and others, shows very clearly that important climatic shifts did in fact take place in the temperate zone at the critical times (Fig 9.4). Climatic deterioration would tend to lower the upper limits of cultivation in upland areas and reduce average yields (and possibly also make necessary changes in crops) in lowland

areas. The 300 year "cycle" is seen, therefore, as essentially climatically driven; it is a genuine cycle only if there is a genuine 300 year climatic cycle; examination of this particular point falls well outside the scope of the current thesis. Attention now returns to recent 50 year economic long cycles.

Examination of Fig 9.3 shows that while, importantly, there is no sign of climatic deterioration in the downswings of the 20th century long cycles, there is a strong visual indication of a high degree of correspondence between the phases of the long cycle and climatic phases in the 19th century. It is upon the 19th century that attention needs to be concentrated. To attempt to discredit the long cycle theory insofar as the 19th century is concerned,[152] it is not necessary to indicate the presence of *regular* climatic cycles with a 50 year periodicity; it is merely necessary to indicate that there are definite long *swings* in the climatic record which *dominate* swings in the economy and, by coincidences of timing, give a false impression of fairly regular long cycles in the *economic* record. There is evidence that volcanic activity was particularly intense at certain stages of the 19th century, and that the high levels of volcanic dust circulating in the atmosphere materially reduced average temperatures. One must investigate, therefore, the possibility that 19th century "long cycle downswings" represent little more than the side-effects of volcanic activity around Java!

Graphs using 10 year moving averages might appear to give impressively smooth curves, but this particular representation of data should be treated with caution.[153] One cannot tell, for example, whether the smooth curves produced represent genuine upswings and downswings in the climate, or whether they are the indirect effects of particularly warm or particularly cold years happening to be located at certain critical junctures. If the latter is the case, it is of some importance to identify precisely which years have unusual weather conditions, and to correlate these conditions with shifts of conjuncture in the economic time series. For serious analysis, attention needs to be given to the raw data on which Fig 9.3 is based, the month by month average temperatures and the annual temperatures from 1659 onwards listed by Manley (1974). This is a data source to which economic historians ought to pay extremely close attention.

Fig 9.5 graphs annual average temperatures in central England from 1800 to 1939, and also 2-, 3- and 4-year moving averages. Short-term moving averages are presented in order to avoid the dangers of over-smoothing. As an illustration of why this is necessary, consider the period from 1870 to 1900. The ten year moving averages, which have often been cited, show a very pronounced downswing in average

temperatures from about 1868-78 (peak) to about 1885-95 (trough) (Fig 9.3). A closer examination, however, shows that this apparent trend was the result of an exceptionally cold year in 1879 (according to the statistics in Manley 1974, 1695 was the only colder year between 1659 and 1973), followed by a period of warmer temperatures, typical of those in the years *before* 1879, then a prolonged period of unusually cold weather lasting from 1885 to 1892, with another poor year in 1895. This detailed information would seem to suggest not that there was a continuously falling trend in air temperatures in central England (and to whatever area these figures can be generalised to), but rather that there were two distinct spells of unusually cold weather which need explaining. Lamb (1972 pp.410-433) discusses the question of volcanic activity and climate, and points out that dust from major eruptions may often be carried into the stratosphere, and that fine dust can often remain in the stratosphere for a few years. It is very noticeable, Lamb points out, that the strength of direct solar radiation at the Earth's surface falls sharply after a major eruption, even in latitudes a long way from the original eruption (as dust circulates along air currents). Lamb (1970, 1972 pp.434-435) has attempted to construct a Dust Veil Index for major volcanic eruptions between 1680 and 1970. This index was constructed so as to provide an indication of the climatic effects of major eruptions, calibrated so that Krakatau 1883 is given a score of 1000.[154]

The main cold spells of the 19th century can all be related to unusually high levels of volcanic activity, levels of activity which have generally been lacking in the warmer 20th century. Thus,[155]

Cold spell		Major eruptions (and DVI)	
(1) Late 1810s	1815	Tambora, Sumbawa (nr. Java) (total veil, 1811-1818, of 4400)	3000
(2) Late 1830s, early 1840s	1835	Coseguina, Nicaragua	4000
(3) Late 1870s 1880s (1879; 1885-1890)	1878	Ghaie, New Ireland (nr. New Guinea)	1250
	1883	Krakatau (nr. Java) (total veil, 1883-1890, of 1500)	1000
(4) Early 1900s	1902	Three eruptions in Caribbean and Central America	1000

No eruption with a DVI of greater than 1000 was recorded between 1912 and 1963. Not surprisingly, given the values of the DVI noted above, the cold spells of the early 19th century were more intense than those of the late 19th century.

The evidence seems fairly clear that, certainly since the seventeenth century, particularly cold phases in the world climate can be linked primarily to unusually high levels of volcanic activity. Earlier

cold spells, including the 1690s, also fit into this pattern.[156] Since the volcanic eruptions involved took place at widely scattered locations, it would be hard to conceive of any regular volcanic cycle being involved; the timing of cold spells would appear to be random. This would seem to dispose of the argument that there was a regular climatic cycle in the 19th century, and that this drove the economic long cycle, which could then be regarded as merely a reflection of the climatic cycle. The 19th century climatic record reflects *incidents*, with often far-reaching effects, rather than cycles. The next question which needs to be asked is whether phase shifts in the long cycle were triggered off not by the endogenous tensions and pressures of the economy, but rather by physical environmental factors.

In an agricultural economy, the surplus available for investment is given by the gap between production and consumption, with the level of production depending crucially on the size of the harvest, and thus on climatic factors and the amount invested in this year's harvest from the previous year. The level of consumption is basically set by physiological needs, with the variation in the level of consumption from year to year being relatively small, unless extreme poverty sets in. The implication is that when production fluctuates, investment fluctuated far more sharply than consumption. Thus, following a bad harvest, investment in the next year's harvest will be low. A series of poor harvests may quickly lead to famine. This basic model is well known, both for pre-industrial Britain and for present-day third world countries.[157] A version can also be applied to industrialised economies, perhaps, in which a poor harvest or a series of poor harvests will lead to considerable distress in agricultural areas, and drag down the total level of effective demand for industrial products, resulting in a general depression. Thus, on this model, a few years with poor weather might be expected to initiate a depressive downswing in the whole economy.

The climatic record does not support the hypothesis implied here that long cycle downswings are initiated by unusually poor weather in certain years; the timing is wrong. In chapter 2 the long cycle downswings of the 19th century were identified as starting around 1825 and 1873. Reference to Fig 9.5 shows that these years, and the years which followed, were generally fairly warm years. The climatic deteriorations, which at first appear to have dominated the long cycle downswings, in fact start only about halfway through each downswing (Fig 9.5). There is little sign that the sequence climatic deterioration → agricultural depression → industrial depression was responsible for the start of either long cycle downswing, and indeed even as early as the post-Napoleonic period there was a high level of independence between industrial and agricultural

trends. (Smart 1910, 1917, cited in chapter 2 above).

The apparent coincidence in timing between the downswings of the long cycle and periods of climatic deterioration is largely illusory. Closer examination shows that the first half of each 19th century downswing had "normal" climatic conditions, while the second half of each downswing had, by chance, predominantly poor weather conditions. This added considerable economic problems as the slump was approached, and helps explain why agricultural conditions continued to be depressed in the years after the slump, but cannot be used as an explanation of how the downswing started. The record of the 1870s shows this point clearly; the years from 1872 to 1878 were unusually depressed even without the intervention of climatic change.

The discussion in this section strays somewhat from the main theme in this chapter, but is necessary in order to anticipate some objections which might otherwise have quite reasonably been made to the argument in chapter 2. On the specific question of the relationship between the economic long cycle and climatic change, it would seem that the 50 year cycle is a genuinely "economic" cycle, while the 300 year "cycle" (or "logistic") is climatically driven. There is scope for further discussion, however, and in any case the general point can be made that an awareness of climatic change is important in economic historical research, even if only to prove that certain key phenomena cannot be interpreted or explained by climatic factors.

Table 9.1 Population of the Main Urbanised Areas of Great Britain, 1801-1881

	Population (000s)		Change	
	1801	1881	(000s)	(% per annum)
Greater London	1117	4770	+3653	+1.8
London County	*1088*	*3881*	*+2793*	*+1.6*
Lancashire	673	3454	+2781	+2.1
Manchester/Salford	*96*	*678*	*+ 582*	*+2.5*
Liverpool	*86*	*627*	*+ 541*	*+2.5*
Oldham	*12*	*111*	*+ 99*	*+2.8*
Bolton	*18*	*105*	*+ 87*	*+2.2*
Yorkshire,W. Riding	591	2237	+1646	+1.7
Leeds	*53*	*309*	*+ 256*	*+2.2*
Sheffield	*46*	*285*	*+ 239*	*+2.3*
Bradford	*13*	*183*	*+ 170*	*+3.4*
Staffs/Warks	450	1718	+1268	+1.7
Birmingham	*82*	*546*	*+ 464*	*+2.4*
Durham/Northumb.	317	1301	+ 984	+1.8
Newcastle/Gateshead	*42*	*211*	*+ 169*	*+2.0*
Glasgow	*84*	*673*	*+ 589*	*+2.6*

Source: Mitchell and Deane (1962 pp.19-27), based on Census data. Some 1801 figures, where they concern environs of cities later incorporated, are estimates. Any errors thus incurred are minor, perhaps mostly within 3,000.

Note the differences between the *numerical* growth of London's population and corresponding growth in other major cities; 3,000,000 compared with 500,000.

Table 9.2 Net Migration in England and Wales by Type of Town, 1841-1911

(Migration figures are net gains of population through migration in '000s)

	1841-51	1851-61	1861-71	1871-81	1881-91	1891-1901	1901-1911	Total
1. London	+273.6	+274.5	+261.6	+307.3	+168.9	+226.5	-231.9	+1280.5
2. 8 Northern cities	+249.3	+195.5	+185.8	+187.8	+21.4	+143.6	-90.0	+893.3
3. 36 Northern industrial	+86.4	+29.9	+43.4	+86.8	-84.9	-92.0	-132.7	-63.1
4. 11 Southern industrial	-7.2	-4.6	-18.7	-11.4	-5.9	+25.4	+6.7	-15.7
5. 16 Northern non-industrial	+12.1	+4.5	+14.7	+36.4	+4.6	+60.0	+23.7	+156.1
6. 55 Southern non-industrial	+45.7	+47.0	+35.8	-2.4	+33.6	+157.5	+103.2	+430.2
7. 9 Northern colliery districts	+82.3	+103.5	+90.9	+84.5	+90.3	+85.2	+114.0	+650.5
8. Northern rural residues	-158.8	-229.4	-253.5	-263.0	-349.1	-237.4	-152.5	-1643.8
Southern rural residues	-284.4	-513.2	-429.5	-574.4	-496.3	-423.0	-142.4	-2863.2
Total net emigration								
North	+271.4	+104.0	+81.1	+132.6	-317.7	-40.7	-237.6	-6.8
South	+27.8	-226.3	-40.8	-280.9	-299.7	-13.7	-264.4	-1198.1
England and Wales	+299.1	-122.3	-59.6	-148.3	-617.4	-54.5	-502.0	-1204.9
(Total: rural residues	-443.2	-742.6	-683.0	-837.4	-845.4	-660.4	-294.9	-4507.0)

Source: Cairncross (1953 p.70)

Notes:- (1) North in this table comprises, approximately, the following regions: N, NW, YH, WM, parts of EM, Wa
(2) The following aggregations have been made:- 36 Northern industrial towns from 22 Northern textile towns and 14 Northern industrial towns, 55 Southern (16 Northern) non-industrial towns from 13 Southern (7 Northern "old" towns (e.g. Carlisle, York, Exeter, Norwich), 26 Southern (9 Northern) residential towns (e.g. Scarborough, Cheltenham, Watford) and 16 Southern military towns.

Notes (continued):-

(3) Northern cities are as follows: Birmingham, Hull, Leeds, Leicester, Liverpool, Manchester, Nottingham, Sheffield.
(4) A correction has been made for the 1841-1851 figures for total migration, which add up to +299137, rather than +294121 as given by Cairncross. This affects the grand total, where a similar correction has also been made.

Table 9.3 Major Changes in Net Migration Patterns Between 1871-81 and 1881-91, England and Wales

	Gains of population through net migration (000s)		Change (000s)
	1871-1881	1881-1891	
Rural residues	-837.4	-845.4	-8.0
London	+307.3	+168.9	-138.4
(Northern cities	*+187.8*	*+21.4*	*-166.4)*
(Northern industrial (non-textile)	*-6.0*	*-88.6*	*-82.6)*
(Northern textile	*+92.9*	*+3.7*	*-89.2)*
(Colliery districts, excluding South Wales)	*+72.3*	*+3.1*	*-69.2)*
Total Northern industrial	+346.9	-60.4	-407.3
Southern industrial	-11.4	-5.9	+5.4
Northern non-industrial	*+36.4*	*+4.6*	*-31.8*
Southern non-industrial	*-2.4*	*+33.6*	*+36.0*
Non-industrial towns, total	+34.0	+38.2	+4.2
South Wales coalfield	+12.2	+87.2	+75.0
Total, England and Wales	-148.3	-617.4	-469.1

Source: Cairncross 1953, p.70 and p.80.

Table 9.4 Net Migration to Colliery Districts, England and Wales, 1841-1911

	Net gain of population ('000s) through migration						
	1841-51	1851-61	1861-71	1871-81	1881-91	1891-01	1901-11
Durham group	+49.9	+63.4	+84.3	+31.6	+8.2	+23.4	-23.8
Glamorgan group	+52.1	+39.6	+11.0	+12.2	+87.2	+40.3	+129.3
Wigan group	+3.2	+9.0	+2.9	+15.7	+5.1	-12.6	-29.8
Chesterfield gp	-8.8	-5.4	+0.1	+15.9	-1.3	+22.2	+26.9
Barnsley group	-6.6	+2.0	+2.2	+11.2	-1.0	+5.7	+11.3
Wrexham	-0.2	+2.7	-2.0	-1.9	-1.1	-0.6	-2.9
Nuneaton	+0.4	-3.6	-7.3	-2.0	+0.0	+7.7	+8.4
Cannock	-0.8	-0.3	+2.0	+5.7	-3.3	-1.3	-2.8
Ashby-de-la-Zouch	-2.2	+1.7	-2.4	-4.0	-3.3	+0.4	-2.5
Total	+82.3	+103.5	+90.9	+84.5	+90.3	+85.2	+114.0
Total in England							
(1) according to Cairncross		+61	+82	+74	+4	+46	-12
(2) according to Thomas		+63	+82	+63	-30	+18	+35

Sources: Cairncross (1953 p.80); Thomas (1973 p.457).

The statistics given by Thomas are for areas more closely restricted to coal mining than statistics given by Cairncross.

Table 9.5 Net Gains of Population by Migration in Eight Large Northern and Midland Cities, 1841-1911

	Net gain in migration (000s)						
	1841-51	1851-61	1861-71	1871-81	1881-91	1891-1901	1901-11
Manchester	+73.0	+33.8	+35.5	+51.4	+17.3	+31.6	+4.7
Liverpool	+107.1	+68.7	+56.9	+49.0	-15.1	+22.8	-11.8
Birmingham	+37.8	+46.9	+15.0	+20.0	-10.2	+42.6	-23.5
Leeds	+4.3	+11.1	+20.7	+6.8	+15.5	+13.8	-29.5
Sheffield	+8.8	+26.1	+26.6	+4.4	+2.2	+15.3	-19.0
Leicester	+0.4	-5.3	+12.6	+17.6	+10.1	+9.9	-10.5
Hull	+14.5	+3.1	+13.3	+16.8	+7.2	+9.6	+4.0
Nottingham	+3.4	+11.3	+5.1	+22.0	-5.5	-2.0	-4.5
Western Group	+217.9	+149.4	+107.5	+120.4	-8.0	+97.0	-30.6
Eastern Group	+31.4	+46.1	+78.1	+67.8	+29.4	+46.6	-59.5
Total	+249.3	+195.5	+185.6	+187.8	+21.4	+143.6	-90.0

Source: Cairncross (1953 p.80). See also Table 9.2 above
Western Group: Manchester, Liverpool, Birmingham.
Eastern Group: Leeds, Sheffield, Leicester, Hull, Nottingham.

Table 9.6 Landed Wealth-Holders by Date of Death, 1809-1939

	1809-1858	1858-79	1880-1899	1900-1919	1920-1939
Millionaires	181 (72)*	118	36	33	29
Half-millionaires	351 (140)*	162	138	107	62
Total	532 (212)*	280	174	140	91

* 20 year rate

Source: Rubinstein (1981, p.60; Tables 3.1, 3.2), based on probate data with corrections made to include the capital value of land.

Table 9.7 The Occupational Distribution of Non-Landed Millionaires and Half-Millionaires by Date of Death, 1809-1939

Sector	Number of millionaires and half-millionaires (number of millionaires italicised)									
	1809-59		1860-79		1880-99		1900-19		1920-39	
Manufacturing	*4*	18	*12*	44	*23*	82	*27*	124	*44*	153
Commerce/Finance	*4*	36	*16*	71	*23*	94	*54*	179	*61*	228
Food/drink/tobacco	*0*	3	*1*	3	*14*	36	*19*	48	*4*	61
Publishing	*0*	1	*0*	2	*0*	4	*0*	5	*6*	12
Professions	*1*	5	*0*	5	*0*	4	*0*	4	*1*	2
Miscellaneous	*1*	1	*0*	0	*0*	3	*1*	1	*1*	2
TOTAL	*10*	64	*29*	125	*60*	223	*101*	361	*117*	458

Source: Rubinstein (1981 p.67, Tables 3.6 and 3.7).

There is obviously a time lag between date at which fortune was made and date of death.

Table 9.8 The Ratio Between the Number of Manufacturing Wealth Holders and Other Types of Wealth Holder, by Date of Death, 1809-1939

	Manufacturing		Commercial/Financial		Landed
1809-1859	1	:	2.00	:	30.1
1860-1879	1	:	1.61	:	5.8
1880-1899	1	:	1.15	:	2.1
1900-1919	1	:	1.44	:	1.1
1920-1939	1	:	1.49	:	n.a.

Source: Tables 9.6, 9.7 above.

Table 9.9 Number of Non-Landed Millionaires and Half-Millionaires by Geographical Origin and Date of Death, 1809-1939

	1809-58		1859-79		1880-99		1900-19		1920-39		TOTAL	
Conurbations	M	M&HM	M	M&HM	M	M&HM	M	M&HM	M	M&HM	M	M&HM
London	*5*	30	*16*	63	*21*	83	*48*	129	*61*	173	*151*	478
Greater Manchester	*0*	1	*2*	13	*2*	17	*3*	19	*6*	27	*13*	77
Merseyside	*0*	2	*1*	11	*8*	16	*4*	28	*15*	40	*28*	97
West Yorkshire	*0*	2	*2*	6	*2*	5	*4*	19	*11*	32	*19*	64
South Yorkshire	*0*	0	*0*	3	*0*	3	*0*	6	*1*	6	*1*	18
West Midlands	*0*	2	*0*	2	*2*	5	*3*	8	*5*	19	*10*	36
Tyneside	*0*	0	*1*	4	*1*	8	*5*	22	*6*	22	*13*	56
Clydeside	*0*	1	*2*	8	*4*	15	*12*	29	*12*	40	*30*	103
Others												
Rest of South	*0*	1	*1*	4	*2*	10	*6*	13	*8*	23	*17*	51
Rest of Midlands	*1*	1	*1*	4	*6*	15	*2*	17	*8*	19	*18*	56
Rest of Northern England	*1*	3	*0*	2	*3*	8	*3*	13	*4*	26	*11*	52
South Wales	*1*	*4*	*2*	4	*2*	2	*2*	7	*4*	9	*11*	26
Rest of Scotland	*0*	0	*1*	1	*0*	5	*1*	11	*5*	17	*7*	34
Ireland	*0*	0	*1*	1	*1*	3	*1*	6	*2*	6	*5*	16
South	*5*	31	*17*	67	*23*	93	*54*	142	*69*	196	*168*	529
Midlands & periphery	*3*	16	*13*	59	*31*	102	*40*	185	*79*	263	*166*	625
Conurbations	*5*	38	*24*	110	*40*	152	*79*	260	*117*	359	*265*	919
Non-conurbations	*3*	9	*6*	16	*14*	43	*15*	67	*31*	100	*69*	235
TOTAL	*8*	47	*30*	126	*54*	195	*94*	327	*148*	459	*334*	1154

Source: Based on Rubinstein (1981, pp.103-104).

Origin given by the location at which fortune was made.

Table 9.10 Employment Structure in Major Centres of Urbanisation, 1881

Proportion of employment in:	London	Lancs.	Yorks, West Riding	Durham and N'humb	Staffs and Warks	S'Clyde	GB
(1)Ag., for. and fish.	0.7	3.5	6.1	7.2	7.2	6.9	*12.5*
(2)Mining and quarrying	0.4	4.7	7.2	18.8	6.7	8.1	*4.9*
(3)Food, drink and tobacco	5.6	4.2	4.0	4.1	4.6	5.0	*4.7*
(4-12)Metals, chemicals, engineering,vehicles	6.1	8.4	12.2	15.6	20.7	14.3	*8.6*
(13)Textiles	2.3	29.8	27.8	1.3	3.3	13.3	*10.2*
(14-15)Clothing,footwear	13.0	6.5	6.9	6.3	8.3	8.0	*8.8*
(16-19)Other manufacturing	8.4	3.7	3.3	3.6	9.9	4.6	*4.5*
(20-21)Const. & utilities	8.1	6.1	6.5	6.9	7.0	6.9	*7.1*
(22)Transport and comm.	9.9	7.4	4.5	7.7	4.8	6.8	*6.2*
(24,25,27)Prof.,fin. & govt.	8.3	3.8	3.6	4.0	3.9	3.9	*5.7*
(23,26)Dist. and misc.	26.0	12.7	11.3	14.6	14.6	12.3	*18.3*
Not classified	11.2	9.2	6.5	10.1	9.0	10.2	*8.7*
"Basic industries"	8.8	42.9	47.2	35.7	36.2	35.7	*23.7*
Consumer industries	27.0	14.4	14.2	14.0	17.3	17.6	*18.0*
High order services	8.3	3.8	3.6	4.0	3.9	3.9	*5.7*
Lower order services	55.2	35.4	28.8	39.3	35.4	36.2	*40.3*

Basic industries; Orders (2), (4-13)

Consumer industries (3), (14-19)

High order services (24, 25, 27)

Lower order services etc. (20-23, 26, Not classified)

(Except that in Staffordshire, 40,000 of the pottery workers have been classified under "basic industries" rather than consumer industries).

Source: Lee (1979). Bracketed figures represent 1968 SIC orders.

Table 9.11 Employment in Miscellaneous Services by Region, 1881 and 1911

	As percentage of total population		Change in numbers employed, 1881-1911		
	1881	1911	(000)	(%)	(% per annum)
SE	10.5	10.2	+365.8	+44.0	+1.2
EA	7.9	8.5	+15.6	+19.1	+0.6
SW	8.7	8.7	+31.5	+15.3	+0.5
WM	6.6	6.0	+30.6	+18.4	+0.6
EM	6.5	5.7	+29.6	+23.9	+0.7
NW	5.8	5.4	+71.8	+30.2	+0.9
YH	5.0	5.0	+47.6	+37.0	+1.1
N	5.9	5.3	+34.3	+30.0	+0.9
Wa	6.9	5.5	+25.8	+23.9	+0.7
Sc	5.4	5.0	+36.6	+18.2	+0.6
GB	7.4	7.1	+689.2	+31.3	+0.9

Source: Lee (1984 pp.149-150) for first two columns; Lee (1979).

Table 9.12 The Place of Birth of the Populations of London and Main Extra-Metropolitan Suburbs, 1881 and 1891

	Number of natives (000s) of				
	London	Middlesex (extra-met.)	Rest of Southern England	Rest of UK	Total population
	Enumerated in London				
1881	2402.0	99.7	814.8	381.2	3816.5
1891	2759.4	72.6	824.1	386.8	4211.7
Change	+357.4	-25.1	+9.3	+5.6	+395.2
	Enumerated in Middlesex (extra-metropolitan)				
1881	94.8	132.1	99.3	32.4	369.9
1891	169.2	185.7	141.6	51.1	564.4
Change	+74.3	+53.7	+42.3	+18.7	+194.5
	Enumerated in West Ham Urban Sanitary District				
1881	38.5	49.5	25.1	12.6	129.0
1891	63.3	82.6	36.5	19.2	204.9
Change	+24.9	+33.1	+11.5	+6.6	+76.0

Source: Census of England and Wales, 1881, 1891

Those born in England, but with no county of birth stated, are excluded from all but the "total population" column.

Table 9.13 Coal Production and Exports in the UK, 1873-1913

Year	Output (Million tons)	Export (Million tons)	Production for domestic use (Million tons)	Output per head (Tons per man year)
1873	128.7	12.1	116.6	250.3
1879	133.7	15.7	118.0	280.4
1883	163.7	21.7	142.0	317.9
1886	157.5	22.1	133.4	302.9
1891	185.5	29.5	156.0	277.7
1895	189.7	31.7	158.0	270.9
1900	225.2	44.1	181.1	288.7
1904	232.4	46.3	186.1	274.2
1907	267.8	63.6	204.2	284.7
1911	271.9	64.6	207.3	254.8
1913	287.4	73.4	214.0	254.8

Percentage change per annum

	Output		Exports	Production for domestic use	Output per head
	Coal mining	*(Manufacturing)*			
1879-1886	+2.4	*+2.2*	+5.0	+1.8	+1.1
1886-1895	+2.1	*+3.1*	+4.1	+1.9	-1.2
1895-1904	+2.3	*+1.7*	+4.3	+1.8	+0.1
1904-1911	+2.3	*+2.5*	+4.9	+1.6	-1.0
1873-1913	+2.0	*+2.0*	+4.6	+1.5	+0.0

Source: Based on Mitchell and Deane (1962, pp.115-116 for output, p.121 for exports, pp.118-119 for employment, which is required to calculate output per head).

Buxton (1978 p.86) uses a slightly different set of definitions, and includes fuel shipped for the use of steamers engaged in foreign trade under "coal shipments abroad" rather than under domestic consumption. This gives export figures of 98.3 million tons in 1913, rather than 73.4 million tons.

Figures for change in manufacturing output from Feinstein (1972 pp.T111-112).

Table 9.14 Productivity in Main UK Coalfields, 1873-1913

Year	Productivity (Tons per man year)						
	North East	S. Wales	Yorks.	Midland	Lancashire	Scotland	UK
1879	290	268	270	275	259	262	280
1886	308	291	295	305	273	323	303
1895	267	265	257	269	225	306	271
1904	267	269	257	290	222	315	274
1911	238	227	264	294	201	301	255
	Change per annum in productivity (%)						
	North East	S. Wales	Yorks.	Midland	Lancashire	Scotland	UK
1879-86	+0.9	+1.2	+1.3	+1.5	+0.7	+3.0	+1.1
1886-95	-1.6	-1.0	-1.5	-1.4	-2.1	-0.6	-1.2
1895-1904	-0.0	+0.2	+0.0	+0.8	-0.2	+0.3	+0.1
1904-11	-1.1	-2.4	+0.4	+0.2	-1.4	-0.6	-1.0
	Change per annum in output (%)						
1879-86	+2.7	+4.9	+2.6	+2.6	+1.5	+2.2	+2.4
1886-95	+1.5	+3.2	+1.8	+2.8	+0.8	+3.9	+2.1
1895-1904	+2.2	+3.2	+2.6	+2.6	+0.6	+2.4	+2.3
1904-11	+2.2	+2.0	+4.5	+4.5	+0.2	+2.3	+2.3

Source: Mitchell and Deane, 1962, pp.115-119.

The productivity figures for the North East and Lancashire are estimates, since officially published statistics for output and for employment covered different areas. These estimates have been produced by scaling down according to the precentage of 1913 output in the Northern coalfields accounted for by Cumberland, and the percentage of the Lancashire and North Wales coalfield accounted for by North Wales.

Table 9.15 Employment in Coal Mines in Major Coalfields, 1886, 1913, 1924 and 1936

Coalfield	Employment in '000s						
	Date						
	1886	1913	Change, 1886-1913 ('000s)	1886-1913 (%)	1924	1936	Change (000s)
Northern	108.5	237.8	+129.3	+119.1%	251.7	151.1	-100.6
Yorkshire	65.7	161.2	+95.5	+145.3%	195.3	144.5	-50.8
Midland	55.1	130.6	+75.5	+137.0%	160.2	122.2	-38.0
Lancashire/N.Wales	76.4	123.9	+47.5	+62.2%	124.7	76.9	-58.7
South Wales	85.1	233.1	+148.0	+173.9%	250.1	142.9	-107.9
Scotland	63.1	147.5	+84.6	+133.8%	141.8	81.6	-60.2
Major coalfields	453.9	1034.1	+580.2	+127.8%	1123.8	719.2	-404.6
Total, U.K.	520.0	1127.9	+607.9	+116.9%	1213.7	767.1	-446.6

Source: Mitchell and Deane (1962, pp.118-119).

Notes: Northern: Northumberland, Durham, Cumberland

Midland: Derbyshire, Leicestershire, Nottinghamshire, Warwickshire

Lancashire, etc.: Lancashire, Cheshire, Denbighshire, Flintshire (i.e. Clwyd)

A percentage rate increase of 100% in 27 years represents a compound growth rate of 2.6% per annum; +150% represents +3.5% per annum; and +175% a growth rate of 3.8% per annum.

Table 9.16 The Creation of Surplus Employment in the Coalfields, 1886-1913

	Employment 1913 (000s)				
	Actual	Theoretical	"Justified" increase in employment, 1886-1913	"Excessive" increase in employment, 1886-1913	Net change in employment, average of 1913-36 and 1924-36
Northern	237.8	137.9	+29.4	+99.9	-93.9
Yorkshire	161.2	116.0	+50.3	+45.2	-33.8
Midland	130.6	99.8	+44.7	+30.8	-23.2
Lancashire	123.9	70.7	-5.7	+53.2	-52.9
South Wales	233.1	152.8	+67.7	+80.3	-99.1
Scotland	147.5	103.1	+40.0	+44.4	-61.6
			+226.4	+353.8	-358.3

Sources: Mitchell and Deane (1962, pp.115-119),
Feinstein (1972 pp.T111-112 and T131).

Method of calculation

(Theoretical employment 1913)=(Employment 1886)x(Coal output 1913)÷(Coal output 1886)÷(Index of productivity in manufacturing in 1913; 1886=1)

The index of productivity in manufacturing in 1913, standing at 1.27556, is an estimate based on the change in productivity between the Census dates of 1881 and 1911, and assuming no excessive fluctuations in productivity change within the period. The highest decennial increase in productivity was between 1891 and 1901 (+12.0%, or 1.1% per annum) and the lowest was between 1901 and 1911 (+6.9%, or 0.7% per annum); this range is not felt to be sufficiently large to prevent a rough estimate of excess employment in coal-mining to be made.

The theoretical level of employment in coal mining is the level of employment that would have existed had productivity increases in coal matched productivity increases in manufacturing.

Notes to Chapter 9

1. See Chapter 4 note 8.

2. Brown and Burrows (1977) provide an outline discussion of the various characteristics of different types of problem region (agricultural problem regions, coal mining problem regions, depressed manufacturing regions; also congested regions) which is useful, but does not consider in depth the implications of structuration into core and periphery.

3. For the woollen industry, see Gregory (1982 pp.68-74); for the cctton industry see Chapman (1971). Up to about the 1820s water power was at the very least competitive with coal-based steam power, and areas with fast running streams, such as Lancashire, Yorkshire and Scotland, had a natural advantage over areas with slow running streams and low gradients such as the English Midlands. The problem with water power was not that it was in any way technologically inferior, but rather that capacity constraints, resulting from the naturally given limits to water power, were soon met during the expansion of production. Heavily urbanised centres of the textile industry thus found themselves forced to diversify on a large scale into steam power, and the availability of coal started to become a far more critical locational factor, allowing textile based urbanisation in Northern England to outstrip that of Southern England; see for example von Tunzelmann (1978 pp.62-67).

   The most detailed recent discussion on the early diffusion of steam power, and its relationship to water power, is von Tunzelmann (1978).

4. Marshall (1938 pp.10-27) notes that there were various experiments with "waggonways" in North East England from about 1620 onwards, in an attempt to ease the transport of coal towards navigable rivers such as the Tyne and the Wear. In the early stages, the waggons were drawn by horses along wooden rails. See also Dyos and Aldcroft (1971 pp.111-118) and Bagwell (1974 pp.88-97). It was not until the 1830s and 1840s that the railways became passenger transporters as well as industrial transporters.

5. Weber (1909), also Hamilton (1967).

   The basic point about weight loss is that if raw materials are considerably heavier and/or bulkier than finished products, then it is far cheaper to transport finished products over long distances than to transport raw materials over long distances; this will tend to make industrial production in such industries gravitate towards the localities of raw materials rather than the localities of the markets. The case of coal, particularly when used solely as a form of energy, is especially important in this respect; coal is brought into the factory, but not taken out.

   The significance of sporadic occurence is that it means that *particular* locations are favoured.

6. Figures taken from Buxton (1978 p.79).

7. For the "deindustrialisation" of London, which has perhaps been overstated, see Jones (1971 pp.19-32), much of which develops Hall (1962). The deindustrialisation of Southern England outside London can be seen clearly in the concentration of the woollen industry in West Yorkshire and its near disappearance elsewhere, described by for example Gregory (1982 pp.26-79). Coleman (1962)

notes the decline of the East Anglian industrial base during the Industrial Revolution.

The word "deindustrialisation" was first used in the 1940s to describe the situation in India in the 19th century when emergent British industrialism was pushing the Indian industrial base aside; it was from these sources that Singh resurrected the term in his 1977 paper. Ironically, though, Thorner (1960) has suggested that the original thesis of deindustrialisation depended on a misreading of Indian Census data, and a failure to recognise major changes in classification. Thorner suggests that what was happening was not so much a decline in industrial employment, but rather "that agricultural production was reported as virtually constant, and the industrial structure of the economy as practically stationary, during a half century when India's population rose by nearly one hundred million" (Thorner 1961 p. 226; see also Charlesworth 1982 pp.32-39). By these standards any "deindustrialisation" in 19th century London was very slight, and, given that manufacturing employment was increasing in London, there was "deindustrialisation" only in relative terms, in the context of fast industrial growth in the North. In fact, as examination of Lee (1979) will show, 19th century industrial retardation was much more severe in the less urbanised counties of Southern England than in London. There is scope for further study on this question.

8. Unfortunately the first Census, in 1801, was conducted too late to trace the late 18th century growth of the textile towns, although some of these towns showed very quick growth from a relatively small base in the first half of the 19th century; most notably the population of Bradford increased from 13,000 in 1801 to 104,000 in 1851. At a slightly later stage, the population of the iron town of Middlesbrough grew from 8,000 in 1851 to 40,000 in 1871 (Mitchell and Deane 1962 pp.24-27). It should be noted, however, that during the early phases of the Industrial Revolution in the late 18th century much of the expansion of the textile industry was to be found in semi-rural locations; the growth of the major urban agglomerations, which required significant *non-industrial* investment, came later (note 9 below).

9. The question of the financing of the Industrial Revolution has still yet to be fully resolved, although Cottrell (1980) clarifies many of the key issues. Cottrell (p.4) notes that "generally in the early stages of growth the biggest demands for capital arise from urbanisation and the development of transport systems. The demand of manufacturing industry is normally small and a high proportion of its share of investment consists of inventories." This suggests certain complexities in the relationship between urbanisation (taken to include the development of the urban and inter-urban transport infrastructure) and industrialisation. At one level of analysis, industrial employment growth was the spur to urbanisation, yet if the degree of capital investment in the urbanisation process is so much higher than that involved in industrial development, then the question is raised of how urban development was financed. Logically, since the development of the land was involved, and since land ownership was at this stage the dominant source of wealth (Rubinstein 1981), one would expect a major involvement of aristocratic landowners in the urbanisation process in the industrial areas; Cannadine (1980 pp.41-45) provides examples. Cardiff, Belfast and Huddersfield were, as cities, largely the creation of single families, but other industrial cities had more complex land ownership structures.

As far as industry itself is concerned, it is not clear that

agriculture or the landed interest represented major direct sources of funding (Cottrell 1980 pp.11-13). Landowners tended to concentrate on the development of their own estates and while they played a major role in the development of the coal industry, their influence on the textile industry was much smaller (Cottrell pp.12, 28-30). In cotton the expenses of setting up in business were relatively small, and the sources of finance various. Personal and kinship contacts were often important, while merchants and the newly evolving country banks were also major sources of credit, the latter implying some degree of inter-regional mobility of capital. Cottrell (pp.19-28) emphasises, however, that much of the finance needed for development was internally generated, with retained profits being used to finance expansion within the enterprise, and new enterprises borrowing from existing ones.

Thus there would seem to be an important dualism in patterns of finance for the development of industrial urbanisation, with industry relying on relatively small scale borrowing, often from the local area, and use of retained profits, and the more generalised process of urban development (housing, roads, etc.) appearing in effect as a form of land improvement, promoted by landowners. Furthermore, these landowners would have been far more closely tied in to "gentlemanly capitalism" (the term used by Cain and Hopkins 1986) than industrialists would have been, and thus would have had close access to London money markets in order to raise the capital for lucrative urban development.

The whole question of the economics of urban development in the late 18th and 19th centuries needs to be reopened. Too often the question of urbanisation has been subsumed under the questions of industrial and financial development. The author, in the main text, is culpable in this regard; the present note is regarded as a substantial modification to the main argument; urban rent needs to be considered as well as merchant profit. Deane (1979) also pays little regard to the independent dynamics of urbanisation (is it possible to speak of an "urban revolution"?) while even Cain and Hopkins (1986, 1987), who emphasise the distinction between gentlemanly capitalism and industrial capitalism, and who emphasise the links between the landed interest and other gentlemanly capitalists, virtually ignore urbanisation. The only mention they make is when they remark that "capitalists could remain (or become) gentlemen if they derived incomes from agricultural or urban property or if they were rentiers drawing on other types of investment, whether public or private" (Cain and Hopkins 1986 p.506). Histories of the landed interest, such as Thompson (1963), have tended to concentrate primarily on the rural question, although Cannadine (1980) has done much to redress the balance.

If Cottrell (1980 p.248) is correct in arguing that "a considerable proportion of manufacturing concerns during the nineteenth century relied on private and internal sources of finance" even after the liberalisation of company law, and thus could remain largely independent of London financial markets, and if he is also correct (p.4) in arguing that "the biggest demands for capital arise from urbanisation and the development of transport systems", and if the broad thrust of the argument above is correct, various important implications arise for the development of the British regional system. The growth of the Northern towns and cities, especially prominent in the first half of the 19th century, was a highly spectacular process. Industry and trade made this development possible, but not in a wholly mechanical way. Industrial development was largely tied to local sources of capital, with relatively little access to wider capital markets; this ultimately placed an important brake on industrial development in the coalfield industrial areas.

Urban non-industrial development would appear to have been linked, via the local landowning interests, far more closely to metropolitan capital. Where peripheral land booms are concerned (and perhaps any boom in the periphery is to a large extent a land boom), then metropolitan capital flows in readily while there are opportunities for genuine economic development, but starts to dry up when conditions are less favourable. As discussion in the text shows, there were clear signs of the Northern urbanisation process slowing down sharply in the 1880s, while attention was devoted to developing the lands of the white periphery, and while domestic urbanisation was concentrated more on the London area, the core region of capital.

10. Perhaps the strongest recent statement of this type is Hobsbawm (1968 p.1). "The Industrial Revolution marks the most fundamental transformation of human life in the history of the world recorded in written documents. For a brief period it coincided with the history of a single country, Great Britain." More recently, economic historians have tended to see the Industrial Revolution not so much as a sudden breakthrough in the last quarter of the 18th century, but rather as a more gradual, but still decisive, shift (note 49 below). The question of what structures were transformed, and what structures were merely modified, is complex.

11. For example, Blackaby (1979), Pollard (1982), Kirby (1981).

The situation as of 1913 was that "Britain stood at the centre of the international economy, the world's greatest trading nation providing, through the City of London, sophisticated financial and commercial services which underpinned the structure of world trade" (Kirby 1981 p.1). There were, as Kirby proceeded to point out, various incipient weaknesses surfacing even before 1913, with the USA and Germany taking over Britain's previous role as industrial pace-setter.

Britain's economic decline since 1913 has of course been relative rather than absolute; standards of living are far higher in the 1980s than before 1914, and even the economic condition of the unemployed in the 1980s is better than that of the unemployed in the 1930s or the 19th century casual labourer. The relative decline has taken two main forms; firstly, in the political-economic sense Britain is no longer at the centre of the international economy, but is one of the secondary centres, and secondly, that the British economy has developed less effectively than other economies which have had, at various stages, broadly comparable economic structures. Thus Britain's relative decline has been in respect to other industrialised countries such as the USA, Germany, France and Japan, rather than to less developed countries.

12. Pollard (1985 p.494), who notes that a wide range of contemporary opinion "considered it to be self-evident that it was better to use capital at home, employing British labour and developing the home economy, rather than do the same for our competitors." Thus the problem of capital takes on two forms:

> (1) In the short-term the geographical distribution of investment which maximises returns on investment is not the same as the geographical distribution of investment which maximises national income. Home investment creates *workers'* income as well as capitalists' income while foreign investment creates, in purely British terms, merely capitalists' income (leaving aside the question on the ramifications of reduced food prices on workers' incomes).

(2) In the longer term, *excessive* investment abroad, and the institutional biases in the British economy which led to foreign investment being preferred over domestic investment, might lead to a retardation of industrial development in Britain.

The question is one of balance. It would not be tenable to argue that there should have been no foreign investment in the period before 1914; the point being made, though, is that there is a strong possibility that the direction of investment was overbalanced towards foreign projects, leaving British industry to rely, in contrast with German industry, on raising capital at a local or regional scale (see Pollard 1985 p.500).

Such an interpretation of Britain's relative industrial failure before 1914 does not assume any widespread "entrepreneurial failure" in British industry, and does not even assume inefficiency in capital markets. Capital markets were efficient in their own terms, but were not structured to provide the optimum conditions for the growth of British industry. The conflict of interests between the City and industry, rather than any alleged weakness of either City or industry, seems to be central.

The debate on entrepreneurial failure has a long history, with for example Levine (1967) arguing strongly that industrial entrepreneurship was weak. Payne (1974 pp.45-46) suggests that while it is of course possible to demonstrate in a few cases that entrepreneurs were inefficient, there is little real evidence that entrepreneurs as a whole were inefficient; the problem lay more in the economic environment. For example, Payne (pp.53-54) notes that comment was often passed (see also note 38 below) that German and American industrial firms were often far more vigorous than British firms in sending commercial travellers abroad; this, argues Payne, was not so much a sign of entrepreneurial failure, but rather that British firms were characteristically much smaller than German or American firms.

13. Pollard (1985 p.495). McCloskey (1970) has put the neo-classical case in perhaps its clearest form. He bases his argument on the case that "most of the supporters of the hypothesis of immiseration by capital exports have accepted the assumption that the enlightened self-interest of investors in perfect capital markets maximises national income" (p.451) and that accordingly any criticism of the role of foreign investment is necessarily on the theme that either investors were not enlightened or that capital markets were not perfect.

The present author does not accept the neo-classical case presented above that the optimum for capitalists is the optimum for the whole economy; on the contrary the two optima are held to lie at radically different points. See note 12 above. Neither is it accepted (McCloskey 1970 p.455) that there was full employment in late Victorian Britain, and that the potential efficiency of domestic investment was thus constrained by labour shortages.

14. For example Pollard (1985 pp.501-502) notes a case in which a Lincolnshire bicycle factory, founded in 1896, expanded rapidly, was technologically innovative having diversified into motor cycles, and profitable, yet was consistently hampered by difficulties in raising capital for expansion, and went into liquidation in 1913.

There was certainly an element of "fashionability", with the implication that markets were not as perfect as the neo-classicists would like to believe, in investment abroad. Pollard (p.499) thus notes the existence of bandwagon effects.

15. McCloskey (1979 p.539).

16. The literature on late 19th century and early 20th century British foreign investment is enormous; see especially Cairncross (1953), Imlah (1958), Cottrell (1975), Edelstein (1981, 1982) and the papers in Hall (1968 ed). A cautionary note needs to be added in that Platt (1980, 1986) has strongly argued that these foreign investments, although important, have been quantitatively over-estimated; see note 44 below.

17. See for example Payne (1974 pp.24-25) and references cited therein, notably Perkin (1969 pp.80-87). Perkin notes that early industrialisation was greatly facilitated by "the wide diffusion of modest wealth" (p.80) and also by the fact that in the new industries there was relatively little need for large masses of pre-accumulated capital. Some degree of prosperity was desirable if starting out in manufacturing, while those with greater wealth might well have been repelled by the need to work hard and long in risky new ventures. Kinship and personal connection often proved vital in raising credit for new ventures and for expansion.

    It is not clear how far down the social scale it was possible for industrialists to emerge. The more successful and dominant industrialists might well have been recruited largely from the "lower levels of the middle ranks" (Perkin p.82), yet as Payne (1974 p.24) points out many of the less successful industrialists who ultimately failed, perhaps through difficulties in raising credit, might well have come from even more modest backgrounds.

18. The use of the terms "visible geography" and "invisible geography" parallels the distinction in trade theory between visible trade (the trade of material goods) and invisible trade (the trade of services, etc.).

19. See for example Perry (1975), in which after a preliminary discussion of urbanisation, migration and population growth the geography of 19th century Britain is described in terms of patterns of change in individual manufacturing and extractive industries. Langton and Morris (ed. 1986) provide a similar sort of treatment, though with slightly more coverage of services.

    The problem is not of course that 19th century industrial geography has been explored in detail, but rather that the geographical structure of change in the service sector has been relatively neglected, Lee (1984) being an exception. It seems that many of the critical questions of 19th century regional structure depend precisely on what is happening in the service sector, and more specifically in the "core" service sector.

    A recent debate between Gregory (1988a, b) and Langton (1988) touches on many of the key issues raised in this chapter. Langton concentrates squarely on the "visible geography" of the Industrial Revolution, on "the distribution of natural resources, labour and capitalists with particular cultural characteristics, and patterns of movement of goods and people" and argues that "neither capital nor information is, in fact, material" (p.172). In concentrating on the "material" and ignoring "non-material" *forces*, Langton reproduces the traditional picture in which the industrial areas, the newly developing industrial *regions*, are at the core of the Industrial Revolution. Gregory's argument is more in line with that of the present text, noting in particular the crucial importance of London as a centre of capital in non-commodity forms and as a centre of commercial intelligence; this Gregory (1988a p.55) suggests, implies that "London's international hegemony may well have cast a

long shadow over the domestic space-economy of late *Georgian* England" as well as Victorian England (emphasis in original). This "long shadow" is seen mainly in the form of industrial crises.

Gregory argues, essentially, for the continuous historical dominance of London, while Langton argues that this dominance was overturned for a while during the early Industrial Revolution. In such arguments, fine shades of meaning are often critical. It seems highly probable that overall control of the direction of economic change, and thus *dominance* persisted in London throughout, but that economic *growth* was faster in the urban North than in the urban South. The distinction becomes clearer if one makes an analogy; if one considers an Anglo-Argentine economy in the 1880s, then the Argentine may well have shown much faster economic growth than England, but it would clearly be inappropriate to suggest anything other than that England economically dominated Argentina.

20. Urbanisation was so central to 19th century experience that no history of the period can ignore urbanisation, and indeed "the study of nineteenth-century cities has been one of the most rapidly expanding areas of British historical research in recent years" (Johnson and Pooley 1982 p.3). It seems fair to suggest that the bulk of the recent research (for example all the papers in Johnson and Pooley 1982ed.) concentrates on untangling the internal structure of the growing Victorian city, with its patterns of class conflict and geographical segregation, and its changing economic, political and demographic profile. Stedman Jones's (1971) study of late Victorian London, discussed in section 9.5 is a classic in this particular genre. Relatively little attention has gone, however, on explaining why British urbanisation was so rapid, and in exploring the links between patterns of industrialisation and urbanisation.

Robson (1973) has attempted to examine patterns of urban growth, in both time and space, in England and Wales in the 19th century, but his approach suffers from being too closely tied to the orthodoxies of late 1960s quantitative geography; there are plenty of abstact models of urban growth and simulations of urban growth, but recognition of basic historical points, as that the growth of Bradford was closely tied in with the growth of the wool textile industry, are conspicuously lacking. Robson (p.111) assumes that he has gone beyond this approach, yet the opposite seems to have been the case; to reduce historical economic geography to abstract human geography is a retrograde step, reducing historical explanation to abstract explanation. The whole question of the basic patterns of 19th century urban growth is open to further examination, with concrete economics and history brought back into the picture. The edited volume by Gordon (1986) explicitly concentrates on the period from 1890 to 1980, although touches on earlier developments; there is scope to focus attention on a rather earlier period. Briggs (1963) provides useful essays on particular Victorian cities, although his study is designed more to provide a historian's panorama than to explain in detail the processes of growth. More recently Waller (1983) has also attempted a very broad description of Victorian urbanisation and urban society.

21. Beveridge (1944 pp.72-75), also Table A7. Beveridge (p.74) described London in 1913 as the "least prosperous" part of the country; it is argued in later sections that this makes sense only if a clear distinction is drawn between "wealth" and "prosperity".

22. These, and following figures, taken from Ravenstein (1885 pp.185-186).

23. At this time the North Wales coalfield was economically small, although coal mining may have significantly altered local migration patterns. The Kent coalfield was not yet in production.

24. Census 1981, *Key Statistics for Local Authorities, Great Britain,* Table 1, based on population present on Census night and increase other than that due to natural increase.

25. Weber (1899 pp.144-145) shows that the proportion of population in England and Wales living in cities of over 20,000 population increased from 16.9% in 1800 to 35.0% in 1850 and 53.9% in 1891. Comparable 1890s figures for other countries are 42.4% in Scotland (1891), 38.8% in Australia (1891), 29.3% in the Netherlands (1889), 21.9% in Germany (1890), 21.1% in France (1891), 23.8% in the USA (1890), and 15.3% in Ireland (1891).

26. Lawton (1968 p.60).

27. See especially Lawton (1959). In 1841, 417,000 of the population of Britain was Irish-born, while by 1861 this number had increased to 806,000, not including British-born descendents of Irish-born: "Liverpool, Glasgow and Bristol were besieged by destitute Irish" (Lawton p.38). Liverpool however was the most important final centre of migration, and also an intermediate staging post for migration elsewhere, either to urban Britain or to the white periphery.

    That the Irish displaced British rural migration is clearly implied in Table 9.2; despite very depressed agricultural conditions in the 1840s and an agricultural upturn thereafter, British rural emigration was unusually low in the 1840s.

28. See especially the discussions of chapters 4.4 and 5.4 above.

29. See especially Giffen (1885, 1886) and other reports in this annual series, also Liégard (1884) for an European/American perspective.

30. Thomas (1973) is by far the most detailed study.

31. See chapter 2.6(ii), and chapter 2 note 96. The "Kuznets cycle" had a wavelength of about 20 years, with upswings in the periphery (USA, Australia, etc.) tending to coincide with downswings in the core (UK, etc.) as the wide variety of investment opportunities in the periphery diverted both capital and labour away from the core. Whenever signs of economic crisis began to appear in the periphery the exports of capital and labour slowed down considerably, allowing investment in the core economies to swing upwards.

    An interesting sidelight on these inverse swings is given by Fenoaltea(1988) in a study on Italy. Fenoaltea shows that during the "peripheral" phase of the Kuznets cycle emigration from Italy was high. This of itself is a fairly well known result (e.g. Thomas 1973), but Fenoaltea also shows that construction activity was high during the *peripheral* phase of the Kuznets cycle, in contrast with the pattern in England. This shows that construction activity is related to investment conditions and not, as some previous writers have suggested in the American context, to demographic change. It also shows that in terms of labour markets Italy might well have been a core European country, but in terms of investment she was part of the periphery. At a slightly more detailed level of spatial analysis, migration from Europe tended to originate ultimately from the rural periphery of the European core, rather than from the hard core itself.

It makes sense therefore to regard 19th century Italy not as part-core, part-periphery but rather as part of the periphery of Europe.

32. See for example Cottrell (1975 p.39). "Taken together the Baring crisis, the Wall Street panic (of 1893), the end of the land boom in Australia and the collapse of the banking system in 1893 were sufficient to shake confidence in all foreign securities and consequently overseas investment fell to a low ebb during the 1890s." The main exception was that there was an upsurge in investment in gold mining in South Africa and Western Australia during the 1890s (Cottrell p.40).

33. See chapter 2 note 107, also Cairncross (1953) and Thomas (1973).

34. See for example Cottrell (1975 p.53).

35. Cairncross (1953 p.69).

36. The most detailed recent account of the Great Depression in agriculture is Perry (1973); see also Orwin and Whetham (1964 pp. 240-288), Perry (1975 ed), especially Fletcher (1961/1975), and Hall (1973a pp.679-695). Agricultural depression was most intense in the arable east, with East Anglia, including Essex, being particularly severely affected, but was relatively moderate in the pastoral west. In addition, farms close to large urban markets were better placed than more distant farms, while farms on poor soil tended to fare worse than farms on less marginal soil (Perry 1973 p.21).

Perry (1973) concentrates his attention on long-term trends in the agricultural economy, and notes in particular the growing competition, intensified by advances in transport technology, from the white periphery. He repeatedly discounts the importance of a run of poor seasons, a factor much noted by contemporaries, as a cause of agricultural depression. From the point of view of cyclical analysis this argument is flawed; a long-term downward trend does not *cause* a depression, but rather helps determine how strong the depression will be. A series of bad harvests would be quite sufficient to trigger off an agricultural depression, but the *intensity* of depression is likely to be set by longer term factors. There can be little doubt that the Summers of the mid and late 1870s were unusually cool, with 1879 being an exceptionally bad year (see Manley 1974 p.396). Furthermore the post-1873 years were industrially depressed, possibly both reinforcing and being reinforced by the agricultural depression.

It would seem therefore that there was a considerable agricultural depression in the 1870s triggered off by poor harvests. In a relatively closed economy agricultural prices would tend to rise during a poor season; the main immediate significance of increased foreign competition in this respect is that is prevented the normal rise in prices (as noted by Perry 1973 p.59), thus ensuring that the burden of the poor harvest fell on the producer rather than the consumer.

Certainly there appeared to be a very deep agricultural depression in the late 1870s. It would however take a detailed cyclical analysis to determine to what extent the changes taking place thereafter were due specifically to depression and to what extent they were due to longer term structural changes working themselves out.

Perry argues that financially the landowners and farmers were

worst affected by these agricultural changes, and that the labourer was relatively lightly affected, with wages remaining high. There were, however, considerable reductions in employment, though Perry contends that migration to higher paid urban jobs offset this problem fairly efficiently. Perry (p.130) argues that "the evidence suggests that the depression never generated more than ephemeral or localised rural unemployment except among some classes of casual workers." No quantitative evidence is supplied however, and one is left wondering whether this ephemeral, localised and casual unemployment averaged 2%, 5%, 10%, or more. Taken out of context 5% unemployment in a rural area might appear as insignificant - a few "unemployables", slack times in the winter, etc. - but in terms of broader labour market structure a 5%+ rural unemployment is still unemployment, and it is unlikely that full employment existed in rural areas, particularly in the South, in the 1870s, 1880s or 1890s.

37. Calculated by summing "Northern industrial" and "Northern non-industrial".

38. Some preliminary comments, based on the final reports of the *Royal Commission on the Depression of Trade and Industry* may be made. Some splicing of majority and minority reports is involved in the following. Various of the minority reports suggested that the majority report had understated the degree of depression.

The general outline was that producing interests, in both agriculture and industry, were suffering severely from a prolonged regime of low prices, which led to a significant reduction in profits for both farmer and manufacturer. Labour was affected not so much through a fall in wages, but rather through increased irregularity of employment. In the meantime "the classes who enjoy fixed incomes, or incomes derived from foreign investments, or from property not connected with productive industries, appear to have little ground for complaint; on the contrary, they profit by the remarkable cheapness of "commodities" (Dunraven, Ecroyd, Muntz and Lubbock, para 33).

Within the productive industries, agriculture was showing a severe decline in production, employment and income, even though the very bad seasons of the late 1870s were by this time in the past. Increased foreign competition, particularly from America, was of course highly significant in this respect (see also note 36). Sir James Caird (evidence, para 7778) suggested a form of ratchet effect in which the poor European harvests of the 1870s stimulated an acceleration of production, enabled by the spread of the railway, in America, and that when harvests improved America retained her grip on the European market, keeping European producers depressed. It should not be forgotten, though, that even in the 1880s falling prices caused distress in the more marginal areas of American agricultural production, particularly in the drier West (evidence, para 7777). Within the British Isles, the problems faced by the arable East of England are well known (note 36 and references therein), but the situation in Ireland was, not surprisingly, probably even worse (O'Connor, para 8a).

The industrial situation was unclear as, in contrast with agriculture, output was still increasing for any but selected short time periods. This increasing output enabled the majority report to suggest that the depression was not as severe as has been stated in many quarters. Profits were low, but this was nothing unusual, merely "the fall in the rate of profit which it is the natural tendency of the accumulation of capital to effect" (majority report, para 93). Concern was expressed, however, about increased foreign

competition, particularly from Germany. The normal grumbles about protectionism were expressed (majority report,paras. 66, 67, 74), mixed with an uneasy awareness that competitors were becoming genuinely more efficient, with a more acute awareness of the needs of local markets (para 75), and a superior system of technical and commercial education, combined with knowledge of foreign languages (para 97). The suggestion was made, but rejected, that British diplomatic staff should play a commercial role, collating intelligence and making contacts (paras 98-100): "Such action must, we think, tend to lower the reputation of the country and to diminish the usefulness of the officer concerned." (para 99). The majority report indicates some of the tensions involved in a free market view at a time when various foreign states were taking a more direct stance, encouraging industrialisation so as to be able to compete with Britain. "Protectionism" was held as a cause of the long depression (paras 66, 67), yet no evidence is offered to suggest that a more interventionist industrial policy was doing anything other than making Germany's industry more efficient; if through the invisible hand the advantage of one is the advantage of all, it is difficult to see why German development should cause British depression.

In terms of maintaining employment in Britain, the industrial problem was not that output was declining, but rather that checks were operating such that industrial output increased by less than the Harrod natural rate (measured in terms of productivity growth plus natural demographic growth), so that the share of industrial employment amongst the total population was declining. This happened, it must be remembered, at a time when agricultural employment was falling particularly sharply. Thus industry could not at this stage effectively absorb surplus rural labour, or the rapid demographic increase in the labour force, and was prone itself to potentially severe lapses in employment during cyclical downturns. Dunraven, Ecroyd, Muntz and Lubbock (paras 54-57) make essentially this point, and note also the problems of foreign protectionism, but note that this protectionism was more the result of the difficulties of increasing production than the cause of the difficulties.

Dunraven et al touch on what, it seems in retrospect, is a critical aspect of the contrast between "open" and "protected" economies: "An important effect ... is to discourage and lessen the investment of capital in the development of our own agriculture and manufactures, and to stimulate and increase its investment in foreign land and securities, and foreign industrial enterprizes ... This directly operates to limit the employment of labour in our country." (Dunraven et al, para 59). Yet "the healthy and continuous growth of our industries, not only in productiveness, but in power to afford full and well reminerated employment to the population, is therefore the question of supreme importance; for upon that must ultimately depend ... the prosperity and social well being of every class of the community" (Dunraven et al, para 57).

As far as details of industrial change are concerned, undoubtedly there is much to be learned from the close sifting of evidence to the Royal Commission, to be supplemented by other, independent sources. Further investigation also needs to be made of the extent to which agricultural depression induced industrial recession. There was, however, a general consensus of opinion among chambers of commerce, manufacturers' associations and trades unions that conditions were becoming progressively worse from the early 1870s onwards, although not surprisingly there were exceptions. A survey of unemployment at the end of 1885 in trades union local branches showed that high unemployment rates among engineering

workers, iron moulders, shipbuilders, etc., were to be found in the specialised industrial areas, with low rates elsewhere, but that unemployment in the building industry, which might be expected to attract considerable numbers of rural migrants, was high everywhere with no immediately obvious North-South distinctions.

In so many respects the 1880s was, in both downswing and upswing, a pivotal decade in the evolution of the modern world economy, and thus deserves very close attention in both national and international aspects. During the long depression to 1886, British (and Irish) agriculture was in very severe decline, with foreign competition particularly vigorous, while industry was gradually falling behind in competitiveness as other countries started to generate their own industrial revolutions. British capital's solution, in a free trade economy, was to invest heavily in competitor economies, particularly in the new agricultural economies of the "white periphery". There is at least a possibility, given the timing of the major waves of British foreign investment, that such investment was to a large extent a direct result of Britain's emerging problems in productive industries. In the long term, heavy exports of capital probably exacerbated this problem.

39. Cottrell (1975 pp.38-40); Flamant and Singer-Kérel (1970 pp.38-42).

40. See for example Coppock (1973 pp.661-673) and Hall (1973a pp.736-746). Pelling's (1967) study of the electoral geography of the period throws some interesting light on the sub-regional social geography of the time.

41. Weber (1909/1929).

It is now fashionable to regard Weber as hopelessly old-fashioned; Gregory (1981) has noted however that such critiques are generally made from the ahistorical perspective of (neo-classical) location theory, and neglect the intellectual framework in which Weber set his own theory. Weber is thus seen among location theorists as an imperfect neo-classicist rather than a German historical economist.

Maybe the present author too regards Weber through inappropriate paradigmatic spectacles, yet it seems that Weber's work provides, far more than any other early writer, the nucleus of an economic explanation of the growth of the industrial city in the 19th century, and of why such growth was concentrated in large industrial towns, rather than spatially dispersed.

42. The basic point is that in an industry in decline, or one of restricted growth, existing plant generally provides sufficient, or near-sufficient, capacity to meet demand, requiring little new factory building.

43. Cairncross (1953 p.76).

44. Calculated from Feinstein (1972 pp.T4-T5), "net property income from abroad." Clearly for figures to be of that magnitude, or even the lower magnitude suggested by Platt (1986), more than simply interest payments are involved; rents and profits also enter the picture.

Attention needs to be drawn, though, to a recent work by Platt (1986) which suggests that the level of British investment abroad before 1914 had consistently been overstated by earlier writers. Feinstein's figures, largely based on an earlier work by Imlah (1958), use a balance of payments approach to estimate net

investment abroad. This is theoretically a soundly based approach, although it says little about the actual location of foreign investment; the problem is, though, that the data sources available are simply not of a high enough quality to make a reliable estimate on total foreign investment (Platt 1986 pp.19-21). Platt's main attention, though, focuses on the "direct" method of calculating investment, derived essentially from Paish (1909), in which foreign investment is calculated by summing securities bought and sold on the Stock Exchange. The basic weakness, as Platt (1986 pp.31-40) emphasises, is that *foreign* purchases of overseas securities on the London Stock Exchange have been included in the sum of British foreign investment; London, however, was an important enough financial centre to act as an outlet for savings at the European scale. This has implications both for the stock of investment (Platt suggests that a 1913 figure of £2.6 billion is more appropriate than the £3.7 billion usually quoted) and for the flow of investment; Platt (pp.79-85) argues that the very high figures for British foreign investment just before the First World War are probably exaggerated.

Maybe therefore the figure in the text is exaggerated, but it would have had to have been exaggerated to an extent far beyond the degree suggested by Platt to disprove the basic contention that a powerful rentier economy was developing in Southern England prior to 1914.

45. See especially Hunt (1973). The higher wage rates in the North apply *within* occupations, and do not relate simply to differences in the sectoral employment structure.

46. See for example Thompson (1963), Rubinstein (1981).

47. The general principle is stated by Sayers (1967 p.87) when he notes that "to own land under which coal was worked was one of the quickest ways of getting rich in the 19th century." To own land on which city centre urban development was taking place would of course be an even quicker method.

Since the text was written, the author has come to place even greater stress on the importance of urban landed wealth; see note 9 above.

48. Mantoux (1928/1961 pp.105-112). See also Marriner (1982 especially pp.30-69). A complex trading economy was in place on Merseyside before the ascent of the cotton industry.

49. Flinn (1966 pp.1-18) traces the shift of perception on the Industrial Revolution, noting the "dramatic interpretation" of the turn of the century, and the modification and weakening of this dramatic interpretation through the 20th century. Ironically a Frenchman (Mantoux 1928; published in French in 1906) was well in advance of British writers in his assessment of the British Industrial Revolution (Flinn 1968 p.4). See also chapter 1, note 34. It perhaps ought to be noted in passing that the "dramatic interpretation" represented a hardening of the concepts presented in Toynbee (1884), rather than a mere continuation.

The mid-century view of early modern industrialisation in Britain has tended to concentrate more on the antecedents of the Industrial Revolution, and in particular the speeding up of demographic growth and output growth in the middle decades of the 18th century, with further acceleration, combined with structural change, during the final quarter of the century. Various strands of economic growth, various "revolutions", may be noted in the run-up to the

"Industrial Revolution"; Deane (1979), following Deane and Cole (1962), notes a "demographic revolution", an "agricultural revolution", a "commercial revolution" and a "transport revolution"; Flinn (1966) adopts a broadly similar outline.

More recent analysis by Crafts (1983, 1985) has tended to undermine even further the concept of a separate Industrial Revolution. Crafts follows closely the analysis of Deane and Cole (1962) and Deane (1979), and generally concurs with the notion of a mid-18th century acceleration of economic growth, but argues that growth was still, during the late 18th century, slow by later standards, and that industrial output growth did not reach 3% per annum until about the 1820s (Crafts 1983 p.194). The problem of assessing industrial output growth results not just from the obvious difficulty of incomplete data, but also by a severe version of the index number problem (see also chapter 2.5(i)). If an industrial growth rate is calculated on 1770 weights, a growth of 1.60% per annum between 1780 and 1790 is given; if however 1801 weights are used, a growth rate of 3.68% per annum is indicated (Crafts 1983 p.183; 1985 p.26). Crafts uses compromise estimates of 2.40% per annum between 1780 and 1790, 1.83% between 1790 and 1801, 2.72% between 1801 and 1811, 2.63% between 1811 and 1821 and 3.65% between 1821 and 1831. This rate of industrial growth is still quick, by earlier standards, but by Crafts's implication less than "revolutionary".

For gross national product, Crafts (1985 p.45) notes growth rates of 0.69% per annum in the period 1700-60, and 0.70% in 1760-80, closely corresponding with Deane and Cole's estimates. After 1780, the two series diverge considerably, with Crafts giving 1.32% for 1780-1801 and 1.97% for 1801-31, compared with 2.06% and 3.06% according to Deane and Cole. For purposes of long cycle theory it would have been interesting to have had estimates by Crafts for the 1830s; the sources used in Table 2.1 indicate a growth rate of 1.30% per annum between 1831 and 1843, a deceleration on either count.

Quite clearly the question of economic growth during the late 18th century and the early 19th century is not yet fully resolved; Crafts has made an important contribution, though, removing some accidental upward bias in earlier estimates of late 18th century growth. The theoretical background to this chapter and chapter 2 were developed before Crafts's estimates became available, raising the question of what revisions need to be made to the text in the light of the new estimates. As far as long cycle theory is concerned, it would still appear to be perfectly feasible to detect a long cycle upswing starting in the mid-1770s and continuing to the mid-1820s or thereabouts, given that Crafts still shows a significant acceleration of growth at the start of the period; the amplitude of the long cycle is however reduced, when compared with the Deane and Cole estimates. As far as the present chapter is concerned, the new material actually makes it easier to sustain the case that industrial development was not the all-important totally dominant facet of early 19th century economic life that is implicit in the idea of a sharply delineated "Industrial Revolution".

50. As presented in volume 1 of *Capital*. Of course once wealth finds its way into the hands of the industrial capitalist it does not remain idle. A substantial proportion is reinvested, or reconverted into capital, in order to generate more surplus value. Thus over a period of time the extraction of surplus value becomes the accumulation of capital.

Marx had his attention focused on mid-19th century England and on the question of the development of *industrial* society;

accordingly domestic industrial production and capitalist accumulation were seen as very closely linked. Even for the early 19th century it is open to question as to whether the industrial capitalist was economically as dominant a figure as Marx implied, but in the late 19th century the increasing complexity of the international economy made clear the need to broaden the theoretical picture of capital accumulation. The new industrialism in Europe, heavily backed by financial institutions, and imperialism and capital exports each posed new theoretical problems which were taken up by a later generation of Marxist theorists, notably Hilferding (1910/1981) and Luxemburg (1913/1951). The question is not so much that of how industrial capital accumulates, but rather than of how capital accumulates in all its various forms and how industrialism fits into the picture.

51. To some extent the implication in this model of a clean split between manufacture and merchandising is a convenient oversimplification; after all, if the large profits are to be made in buying and selling to the outside market rather than in producing, there is an obvious incentive for the cotton manufacturer to diversify. Certainly such a process was operative in the late 18th and early 19th centuries (Chapman 1984 pp.5-9), but the Napoleonic Wars introduced multiple hazards into international trade, leading to the ruin of many of the older merchants and the withdrawal of manufacturers from overseas marketing; from the 1820s onwards, the specialised merchant, backed up by financial support from London, was the norm (Chapman 1984 pp.9-15). Later in the 19th century merchanting tended to give way to "pure" finance (Chapman 1984 pp.126-149), in part as a result of the uncertainties of the trade cycle and foreign war, notably the American Civil War.

From the perspective of the cotton industry, the generally small scale of the individual enterprise in the earlier years meant that vertically integrated firms were exceptional, and indeed specialisation rather than vertical integration was the main direction of organisational change (Chapman 1972, especially pp.43-52).

52. Thus it is assumed that while there is some tendency for rates of profit to equalise in various sectors, equalisation in a dynamic economy is never complete. A dynamic economy is one in which technological development, structural change and uncertainty have important roles; the "friction of distance" resulting from geographical separation is also an important factor, not so much in terms of transport costs, but rather in terms of uncertainty (about the state of distant markets, about the supply of raw materials, etc.) and unequal access to information. Generally a merchant is in a much better position to play the market than a manufacturer.

53. For example the *Report of the Royal Commission on the Depression of Trade and Industry* (Great Britain 1886), Williams (1896), Shadwell (1905) (though, alas, one has to note with irony the claim in the preface to the first edition that "the growing pressure of international competition in industry ... is evidently going to be the warfare of the future"). Questions of free trade and protectionism, "fair" and "unfair" trade, were hotly discussed in the media of the time; see also Tomlinson (1981 pp.47-61).

54. The partition of Africa was one of the most conspicuous political features of the 1880s, with the European powers, most notably Britain and France, taking almost complete territorial power over Africa (see for example Munro 1976 pp.64-85, Wickins 1986 pp.1-101). While much of the motivation for partition was directly or indirectly economic, Africa was ultimately of less importance to

Europe than the temperate lands of the white periphery. Wickens (1986 p.101) notes that there was relatively little productive investment in the colonies, and even this limited investment was vulnerable to cyclical downswings; much of the colonial budget was swallowed in administration and policing.

Clearly there was a major power vacuum in Africa and Asia in the late 19th century which the European powers were ready and willing to fill. In the short term this may have helped defuse internal European political tensions, but in the long term inter-imperialist tensions probably made European politics far more volatile; it is at least arguable (e.g. Hobsbawm 1987 pp.302-327) that imperialist conflicts of interest served as a significant causal factor behind the outbreak of the Great War. Clearly there is no monocausal explanation of the outbreak of war in 1914; this is a large part of the reason why the run-up to 1914 is such a perpetual source of fascination for historians. The "long peace" from the early 1870s appears to have been based on a delicate balance of diplomacy and shifting patterns of alliances among the major European nations, such that no nation could gain by instigating war. If all the major European powers were strong enough not to crumble at the first sign of aggression, and strong enough to be a credible alliance partner, then the balance of power could be maintained. Yet this balance of power started to break down in the early 20th century. The Ottoman Empire particularly, and also the Austro-Hungarian Empire, showed signs of weakness leaving the possibility of a power vacuum. Abroad, inter-imperialist frictions in areas of relatively weak political control could not so easily be defused by balance of power diplomacy. Meanwhile, in Europe the wish by Germany to assert itself was becoming very disruptive. Germany was industrially strong but her political power did not match her economic power; the German colonial empire for example was relatively small. In part this derived from the lateness of the unification of Germany, and in part it derived from a deliberate underplaying of political demands by Bismarck in order to maintain balance. In the early 20th century, though, various imperialist jealousies showed through, and Germany started a major armaments drive.

The increasingly fragile balance of European and imperial power shattered in 1914. A terrorist attack triggered off the march to war, but naturally deeper causes have to be sought for the underlying origin of war. It certainly makes a neat theoretical package, especially from a Marxian point of view, to produce the "inevitable" historical sequence industrialisation → imperialism → war → revolution, yet one should always be healthily sceptical about a straightforward stages-of-change model. Concrete historical analysis is required to sort out causal links, yet concrete analysis is not so much the way to conclude the debate, rather the way to perpetuate the debate as observers from different theoretical backgrounds will have different presuppositions about what is concrete and relevant. In a thesis of the current scope it is impossible to ignore the question of the First World War altogether, yet it would be foolhardy to pretend that the scope is broad enough to sort out the origins of this war. What can be said with relatively little fear of contradiction was that there was a major European scramble for colonial territory in the 1880s, that this developing imperialism created various conflicts of interest among the European powers, that the imperial grip tightened after the 1880s, and that the First World War broke out when European imperialism appeared to have been approaching its natural limits (although this last clause is open to debate). Quite what inference can be drawn from this juxtaposition is far from clear.

55. See Marx (1859/1971).

The base/superstructure question has been argued about so often, and frequently at a tangent, that it is useful to reconsider what Marx actually wrote (or at least its translation into English).

> "My inquiry led me to the conclusion that neither legal relations nor political forms could be comprehended whether by themselves or on the basis of a so-called general development of the human mind, but that on the contrary they originate in the material conditions of life, the totality of which ... (is embraced) ... within the term "civil society"; that the anatomy of this civil society, however, has to be sought in political economy."
>
> "In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which there arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life."
>
> In many ways serious social science begins here.

Marx finds unsatisfactory the idealist interpretations of law and politics in which the structures of law and politics emerge naturally from the human mind. Neither, though, can politics be discussed simply as politics, derived from politics, and independent of society; the same can be said of law. So how are politics and law rooted in human society? The answer is that they reflect the material conditions of life. There is an important asymmetry; it is possible to have material conditions for life without law or politics, but it is not possible to have law or politics without the material conditions for life. Thus material conditions are fundamental. The material conditions for human life imply however particular forms of organisation of human society; human society inevitably has some form of economic organisation, whether implicit or explicit, which pervades the whole social structure. The starting point, though not necessarily the finishing point, of any satisfactory analysis of human society has to be sought in political economy (a category which may be extended to cover economic anthropology).

The present author is in strong agreement with this basic argument, as is hoped is clear throughout this thesis. Thus mass unemployment, although it can be interpreted in "social" terms, can only be *explained* in economic terms. Two problems with modern social science may readily be diagnosed; firstly the sociologisation of Marx in which researchers no longer pay much attention to questions of economic theory, but instead reduce their analysis of the material base of society to elaborations on Marx's own verbal formulations, and secondly the retreat in economics from any discussion of social structure.

The base/superstructure distinction is important, and indicates that material structure underlies social structure (or at the very least sets limits to what social structures are possible). Problems occur, however, when the concept is over-extended, and *events* (as opposed to structures) are dogmatically reduced to economic causes, or when particular conjunctions of economic conditions are held to completely determine future events. To suggest however that 19th century British imperial culture was the reflection of imperial economic interests (as argued in the text), and not merely a form of

rural nostalgia, does not overstretch the base/superstructure notion.

56. Wiener (1981 pp.55-58).

57. See Rubinstein (1981 pp.193-226). Rubinstein emphasises (pp.213-222) that there was relatively little large-scale purchase of land by non-landed wealth-holders, contrary to received opinion; thus the distinction between landed wealth and non-landed wealth was preserved. While there were obviously possibilities for landowners to diversify their economic interests, Rubinstein (p.219) suggests that there is probably no case of a major nineteenth century landlord receiving more than half his income from non-landed sources; given the extensiveness of landed wealth, though, even a minority source of income could be very substantial. Cannadine (1977) notes that it was far from infrequent for landowners, their creditworthiness secured by the capital value of land, to borrow money to invest in major non-agricultural projects.

58. The capital value of land is itself calculated by multiplying annual income from the land by a suitable multiplier (Rubinstein 1981 p.193).

59. See Rubinstein (pp.68-69).

Such an argument might appear slightly hazy, but is probably tenable if one notes that the "traditional" food, drink and tobacco industry draws its raw materials from British agriculture and from well established trading partners abroad, and sells primarily on the home market. Furthermore, while new technological conditions, and particularly improvements in transport, might well considerably assist such industries, it is not so obvious that these were "revolutionised" by the Industrial Revolution and by new energy technology in the production process.

Quite obviously the internal markets for food, drink and tobacco were already substantial before the 19th century, giving the possibility for substantial wealth accumulation, while rising population and rising real incomes accentuated the process in the 19th century.

60. Rubinstein (p.68).

61. Rubinstein (1981 pp.82-86); see also Rubinstein (1977 p.612).

62. Rubinstein (1981 p.107).

63. Checkland (1964 p.116).

64. Checkland (1964 p.120). Chapman (1972 p.29) notes that even during the period of the French Wars, the structure of the cotton industry was highly polarised, "characterised by a few giants and many small men dependent on the credit of merchants or merchant-manufacturers." As time went on, the small men tended to be competed out of business if they were unable to expand, while factories were operated on a larger scale, and the "giants" increased in size.

65. Matthews (1954 pp.127-151) provides a detailed study of the economics of change in the cotton industry from the mid-1820s to the early 1840s.

66. Checkland (1964 p.121).

67. Checkland (1964 pp.121-122).

68. Rubinstein (1981 p.61).

69. Rubinstein (p.106).

70. Rubinstein (1977; 1981 pp.105, 108-110).

71. Fugures from Rubinstein (1981 p.105).

72. Definition of social class is always more difficult "on the ground" than in an economic model of income distribution, especially when there is a high degree of social mobility; see for example Hobsbawm (1987 pp.165-191). Marx's notion of an ever widening gulf between large capitalist and proletarian, with the destruction of intermediate classes, is not borne out by events. Firstly the increased size and complexity of organisations under capitalism created the need for various intermediate technical and managerial functions. Secondly the expansion of the economy created new niches for small scale enterprise, in professional and other fields. Thus was created a substantial new middle class. Boundaries are imprecise, but one can perhaps distinguish between an upper middle class of major capitalists, a new "middle middle class" on the ascendant and an old lower middle class (Hobsbawm p.171) based on independent artisans, small shopkeepers, etc. The likelihood would appear to be that the new middle class, which at its upper end merges into the upper middle class, was concentrated in and around London.

73. Rubinstein (1977 p.619; 1981 p.110).

74. The population of Greater London was 1,117,000 in 1801, and 7,256,000 in 1911 (Mitchell and Deane 1962 p.19, based on 1951 Census; figures given, as nearly as possible, for the 20th century area of the conurbation).

75. It is of course a convenient simplification to assume that workers do not save, but Pasinetti (1962/1974) points out that little is changed macroeconomically if workers' savings are brought back into the picture. Workers' savings affect the distribution of income, but do not affect the rate of profit, or even the total level of savings, according to Pasinetti. Neither does it affect the basic point that the capitalist class reproduces itself through saving and investment.

76. Smith (1776/1976 p.330).

77. Marx (1861-63/1968 part 1, pp.152-300). Marx draws heavily on Smith, but notes an ambiguous duality in Smith's approach, given the use both of the "physical" definition of productive and unproductive labour (see text) and the view of productive labour as that which is exchanged for capital rather than revenue. Marx takes the latter approach; only if money is paid out of capital to labour with the aim of generating further capital is labour said to be "productive". The criterion here is how the worker is paid, not how the consumer decides to spend his money. To modify slightly (Marx p.160), if an independent workman is paid by a consumer to build a piano,that is unproductive labour as capital does not accumulate as a result, while if a firm employs someone to build a piano for purchase by the same consumer this counts as productive labour as the firm pays the worker out of capital with the hope of accumulating capital. Even this definition raises problems; should a self-employed piano maker be regarded as a precapitalist,

a capitalist or a worker, or something of each? If for example the piano maker saves some of his revenue and reinvests it, then he acts, at least partially, as a capitalist.

Marx, when he says productive, means productive *for capital*. This is not of course the same as socially productive. For example, 1980s style privatisation of publicly owned utilities is a measure which almost certainly has no economic benefit, and is very unlikely to make such utilities run more efficiently, but brings these industries into the arena of capital and makes them productive *for capital*. It is only from a highly limited perspective that such a switch of ownership could be regarded as making the economy more "productive"; Marx sees numerous ironies inherent in the capitalist definition of productiveness, but Mrs. Thatcher fails to see the point.

The author's own implict definitions rest on the question of what elements of capitalist expenditure may be regarded as socially productive. Capitalist expenditure may be subdivided into savings/investment, taxes and consumption. The saving/investment nexus is to be regarded as productive under any count; money is expended in order to make further monetary gains. Without trying to enter into value judgements on the usefulness of particular public sector services, money extracted as taxes may be regarded as socially productive. Cases have to be decided on their merits; there are insufficient grounds for either blanket condemnation or blanket support for the whole range of publicly funded economic activity. The critical question, where unproductive labour is concerned, is that of capitalist consumption. It seems appropriate to argue that all working class consumption may be regarded as productive consumption, in that it relates to the level of income required to reproduce the labour force at a socially accepted standard of living. Part of the consumption of capitalists may also be regarded as productive. Where *unproductive* consumption enters the picture is where there is a level of expenditure clearly beyond the reach of the average citizen, in short, *luxury* expenditure. Luxury expenditure is regarded here as unproductive, irrespective of whether money passes through a firm or is paid direct to the worker, whether an employee of the capitalist or self-employed. Obviously employment is created through this expenditure, but there is a strong case for arguing that this employment is socially unproductive. Luxury expenditure does not help reproduce the economy, but merely drains off some of the surplus. Such expenditure is doubly unproductive in that even in terms of the utilitarian calculus, and leaving aside special pleading concerning the allegedly more refined tastes of the wealthy, a more optimal result would be obtained if there were some mechanism to transfer income spent on luxuries to workers and unemployed people and let *them* spend the money.

78. The sentence in the text refers to Marx's view, rather than to the present author's view (note 77 above). What Marx implies is here taken as explicit and central to the question of unproductive labour.

79. It was wondered whether, on reflection, the comment made in the text is an exaggeration, based on too hasty a reading of Marx's discussion (in *Theories of Surplus Value*, volume 1) of productive and unproductive labour. There is no doubt, however, that Marx made some extremely derogatory remarks about the middle class professions and also, as Luxemburg (1913/1951 pp.134-135) points out, that Marx wished to eliminate from analysis all "third persons" who were neither capitalists nor wage labourers. Thus both from a polemical point of view and an analytical point of view the bulk of the professional

classes are treated as unproductive labour, paid out of the revenue of those who buy their services. The polemic is sharpened if priest and professor are grouped together with, and thus regarded as no better than, soldier and prostitute. Such a linkage is never made fully explicit in *Theories of Surplus Value*, but Luxemburg (1913/1951 p.135) cites an example of this connection being made unambiguously in volume 2 of *Capital*.

80. See for example various discussions of the service sector in chapters 6.9 and 8.3(ii). The classic case of passive (unproductive) service sector labour in the 19th century was the domestic servant. A large number of domestic servants in a locality indicates firstly that wealth was being accumulated in order to pay domestic servants, and secondly that there was a persistent labour surplus in the economy.

81. See for example the *Royal Commission on the Depression of Trade and Industry* (Great Britain 1885, 1886), Booth's *Life and Labour in London*, the *Royal Commission on the Poor Laws* (Great Britain 1909), Drage (1894), Beveridge (1909). For more recent discussions of the questions of pre-1914 unemployment, poverty and policy, see Gilbert (1966), Harris (1972), Hay (1975), Treble (1979); these works contain more comprehensive bibliographies of the contemporary material. Attention tended to concentrate, particularly in the early 20th century, on industry and the rapidly expanding urban labour market, rather than on agriculture and the static rural labour market, although it would appear that "the poor" made up a higher proportion of the population in rural areas than in urban areas (e.g. Great Britain 1909 vol 1 pp.52-56). While pauperism rates may have been over twice as high in Norfolk and Dorset as in Lancashire or the West Riding, it is difficult to determine the extent to which this represents an undermining of the local economy through unemployment, or an increase in the rural dependency ratio as a result of migration of people of working age. Clearly both processes were operative.

82. See chapters 4.4(ii), 5.4, 7.2. The strongest currents of net migration are from areas of low wages, low growth and high unemployment to areas of high wages, high growth and low unemployment. Urban areas before 1914 undoubtedly had higher wages than rural areas (e.g. Hunt 1973), and higher rates of economic growth; it is also likely, but not conclusively proven, that given the intensity of 19th century rural-urban migration, unemployment was chronically higher in rural areas than in urban areas, but it cannot be totally discounted that these migration flows were sufficient to eliminate unemployment differentials.

83. Between 1948 and 1966 employment in the UK increased by 16.4%, or 0.8% per annum (Table A4; *Historical Abstract* pp.242-243). This represented a major sustained boom with full employment and only weak recessions. Between 1881 and 1911 the population of Great Britain grew by 1.1% per annum. Thus the rate of growth of employment sufficient to maintain full employment after 1945 would have failed to maintain stable levels of unemployment at the turn of the century.

It is possible that in the post-war boom investment would have been expanded to cover even a rate of population growth at 19th century levels; thus shortage of labour would have been a constraining factor. There seems to be little reason to believe the converse, though, that 19th century demographic growth created an investment long boom of post-1945 intensity; on the contrary the indicators are

that Britain's population boom was outstripping the growth of productive capacity, and that if the post-1886 boom was constrained anywhere by labour shortages it was in the white periphery, and not in Britain which was a source of migrant labour.

If population growth outstrips the capacity of the economy to provide primary employment (in dual labour market terms), then the implication is that the secondary labour market would have had to expand to fill the vacuum in the labour market. Almost certainly the rate of growth in the number of people in employment in fact matched the rate of growth of population, but much of this employment was at the margins of the economy, with problems of casualisation, low pay and irregularity of employment being critical. The *amount* of work probably increased rather less quickly than the *number* of workers. Furthermore, irregularity of employment is itself a source of concealed unemployment which has to be taken into account in estimating the severity of pre-1914 unemployment.

It is perhaps only with very long hindsight, including knowledge of the structures of the mid-20th century long boom, that it can be appreciated that demographic growth was placing a considerable strain on the labour market in the late 19th and early 20th centuries. As the degree of urbanisation increased, so "in popular political economy fear of 'over-production' tended to replace fear of overpopulation" (Harris 1972 p.7), and urban problems came to be more intensely studied than the problems of the rural backwaters. Overpopulation is an obvious threat in rural areas, but when production is divorced from the land, problems of unemployment tended to be seen more in terms of problems of industry and disorganisation of the labour market, rather than in terms of demographic stress. The demographic factor did not so much cause unemployment but rather made unemployment very difficult to eradicate.

84. Jones (1971 p.v).

85. Booth (1902-1904). The dates refer to the second edition. The works of the first edition, based on research started in the 1880s, were published at intervals in the previous 20 years.

86. Drage's (1894) survey of day-to-day employment levels in the London docks in the 1891-92 winter help to indicate the scale of the problem; see note 96 below.

See also Treble (1979) for an attempt to outline causes of irregularity of employment, unemployment and poverty on a broader spatial scale; many contemporary references are cited.

87. The term "inner industrial perimeter", as used by Jones (1971 pp.152-156) seems more precise, if less concise, than the more commonly used "inner city", which tends to obscure the important distinction between the central business district and the surrounding zone. See also chapter 6 notes 60 and 102.

88. Jones (1971 p.150). It should not be forgotten, though, that despite the problems of the inner industrial perimeter, London's industrial suburbs along the Lea and the Thames were developing rapidly. Also, in an intra-regional context, London's industrial development was more rapid than that of the rest of Southern England (note 7 above). In an inter-regional context, however, the major expansion of the inner industrial areas of the Northern cities, and the relative lack of expansion in inner industrial London makes a significant contrast; both types of inner city area were prone to industrial recession, however.

89. For example, in June 1932, Greater London had an insured unemployment rate of 12.5%, with rates of 14.6% in Essex, 9.0% in Hertfordshire, 11.1% in Middlesex and 13.7% in Kent, even though each of these counties had substantial *increases* in employment during the slump, except for London where employment was merely stable (Beck 1951, Tables 18, 19). While these figures have to be reduced by perhaps a quarter to show the overall unemployment rate, as opposed to the insured unemployment rate (Chapter 3.5 above), significant concentrations of unemployment are indicated. It would be remarkable indeed if London did not also have significant concentrations of unemployment during the slump of the mid-1880s.

90. Perhaps more accurately, background unemployment exacerbated by recession.

The background to the Liberal reforms and to the start of Unemployment Insurance is complex, the resultant of several forces; see for example Gilbert (1966 pp.233-288), Brown (1971), Harris (1972), Hay (1975). It must not be forgotten, however, that unemployment in urban areas was an exceptionally serious problem in the second half of the 1900s, probably even more severe than during the 1880s slump (Table A9), as a result of the paradoxical situation in which the international long cycle upswing tended to divert capital away from Britain, rather than to build up the domestic production economy.

Attention tended to focus rather earlier on London, and particularly on the East End, rather than on the industrial regions (see for example Gilbert 1966 pp.237-242). Unemployment in London was undoubtedly serious, and the structure of the London labour market in many ways set the paradigm of the labour market which was the basis for official action. In part this was because of the highly fragmented structure of the London labour market which indicated the need for *state* involvement; in the industrial areas greater possibilities of self-help, through the medium of trade union unemployment insurance schemes, existed.

91. See Jones (1971 p.21), Booth (1903, *Industry*, vol 1, p.294).

92. Booth (1903, *Industry*, vol 1, pp.289-305) provides some interesting insights on this question, noting (pp.294-295) that a relatively small proportion of London's engineering employment was in "general contract work", which may be regarded as cyclically vulnerable. Engineering in London was orientated either to repair work or to highly specialised forms of production which were often only slightly affected by recession. The London engineering industry thus escaped many of the problems faced by counterparts in the industrial towns and cities, where an industrial downturn would sharply reduce demand for capital equipment. Another point to note is that London, with its large consumer markets and relatively small industrial base, probably provided far better opportunities for skilled mechanics to take temporary repair jobs (Booth p.304) than in the industrial towns where more engineers would be chasing fewer jobs.

93. Jones (1971 pp.34-35).

94. Jones (1971 pp.19-23), Hall (1962).

95. Jones (pp.33-51).

96. This factor was much emphasised by contemporaries, and the irregularity of demand in the docks was noted as a substantial component of urban unemployment by for example the *Royal Commission*

on the Poor Laws (Great Britain 1909 vol 1 pp.450-459) and Beveridge (1910 p.95).

Estimating levels of unemployment in the docks is hampered by lack of information. Drage (1894 pp.121-138) attempts to show fluctuation in the level of employment in the London docks in the early 1890s. On a daily basis, between October 1891 and March 1892, employment in the London and St. Katherine's Docks reached a maximum of 4,000 in early February and a minimum of 1,500 in mid-October. For perhaps a quarter of the time employment was below half its peak level, implying unemployment of over 2,000 on those particular days. On a broader study covering all the London docks, "the number of men regularly competing for employment, exclusive of those who drift in occasionally from other trades, is estimated at 20,000. "Good work" appears to be available for 16,000" (Drage 1894 p.132). An unemployment rate of 20-30% is thus implied. In London-wide terms this might appear relatively slight, about ½% of the total London labour force, yet the high levels of unemployment in the dock industry clearly imply a lack of full employment elsewhere in the London economy, otherwise the dockland surplus labour would disperse.

97. Mayhew's *London Labour and the London Poor* was first published in 1851, following a series of articles in the *Morning Chronicle*. Selections from the newspaper articles are presented in Thompson and Yeo (1971); various abridged editions of *London Labour* have been published. Mayhew paid great attention to the "London street-folk", dividing them into street-sellers, street-buyers (purchasers of old clothes, broken metal, rags, waste paper, etc.), street-finders (e.g. those "who collect the refuse pieces of smoked cigars from the gutters, and having dried them, sell them as tobacco to the very poor"), street-performers, street-artisans, and street-labourers (cleansers, street advertisers, etc.). This wide range of occupations reflects in part the slowness of the development of shops in 19th century cities (see, for example papers in Johnson and Pooley 1982), but also a chronic surplus of labour, swollen as Mayhew notes by destitute migrants from Ireland.

98. Such a labour market, in which any increase in the size of the labour force tends to depress incomes towards subsistence level, could be termed, perhaps slightly mischievously, "Ricardian" (Ricardo 1817/1951 pp.97-105). It is not, however, changes in the birth rate which push wages toward their subsistence levels, but rather migration into a fragmented local labour market.

99. Several passages from Booth's *Life and Labour in London* indicate a modified form of this perception. Llewellyn Smith, in his chapters on migration (Smith 1904 pp.58-164) starts by mentioning the popular belief that rural migrants, seeking work in the great city and finding none, swelled the ranks of the unemployed, then notes that often the situation would appear to a London workman as one in which the immigrant *displaced* the native, who then "went to the wall". Smith himself saw the problem partly in terms of the structure of urban and rural labour markets, and the relationship between population and demand in each type of locality, although his analysis was at times clouded with various notions of social Darwinian competition between town and country labour. Jones (1971 pp.127-144) quite properly criticises the social Darwinian streak in Smith's article, but in concentrating his attention primarily on the inner industrial perimeter largely neglects the question of the wider-scale spatial structure of labour markets raised by Smith.

100. See especially Jones (1971 pp.152-155).

101. Census of England and Wales 1981, *Preliminary Report for Towns*.

102. Lee (1979), based on the 1891 Census.

103. Jones (1971 p.154); Booth (1902, *Poverty* vol. 4, p.340). Jones simplifies the quotation to "that Trades leave, people stay."

104. Jones (1971 p.154).

105. All figures based on the 1891 Census of England and Wales.

106. Ashworth (1964) discusses the process of suburbanisation of south-west Essex, effectively the area from the Lea to the Thames, and notes three main phases. Firstly there was an industrial phase in which "industry and trade on the spot accounted for most of the rise in West Ham's population from 12,738 in 1841 to 204,903 in 1891" (Ashworth p.65). Secondly, and overlapping with the later stages of the first phase, was the growth of residential districts (Ilford, Leyton, etc.) which housed workers in the metropolis and the industrial suburbs. Both processes were active at the time being discussed in the text. Only thirdly did suburbanisation of the inter-war type take off, when residential London spread outwards in all directions, with the uptake of mass commuting. The *commuting* suburbs of north-west London were relatively undeveloped at this time (Coppock 1973 pp.667-669). Suburbia was growing (Hall 1973a pp.736-746), but not concentrically.

107. The West Ham Urban Sanitary District, a considerably smaller unit than the West Ham Registration District, was the only unit in the new Essex suburbs for which the relevant data are available for both Census dates.

108. Smith (1904 p.135).

109. Jones (1971 pp.81-83) indicates some of the forces keeping casual labour geographically immobile. Institutionalised bribery of foremen, especially in public houses, was common, while employment was more likely to be gained on the day if the casual worker both knew and was on good terms with the foreman, rather than if the casual worker was a stranger. Even skilled labourers were relatively immobile before the cheapening and extension of public transport in the 1880s (Hobsbawm 1964 p.7); the situation was still worse for the casual worker as even cheap transport is a major expense if no job is to be found at the end of the journey.

110. Jones (1971 pp.67-98) provides a more detailed discussion, differentiating between a juvenile casual labour market and an adult casual labour market.

111. Hunt (1973 pp.62-64).

112. Hunt (1973 p.62).

113. Ravenstein (1885 p.113).

114. Ravenstein (1885 p.183).

115. These figures are taken from Booth (1902, *Poverty*, vol 2, Appendix p.60). In this appendix, Booth tabulated data on a street-by-street basis, and then aggregated his results. Such an enterprise naturally required a large research team, even though much of the statistical information was based on official sources.

116. Garraty (1978 p.113); Stedman Jones argues in similar terms.

117. Notably Booth, in *Life and Labour*, Drage (1894).

118. For example, the Minority Report to the Poor Law Commission (Great Britain 1909) reports (pp.570-571) that "There are no statistics available which enable us to compute, even within hundreds of thousands, how many persons are at any one time simultaneously in distress from Unemployment" and that any estimate of the severity of unemployment has to be collated from several sources, including trade unions, Distress Committees, and the case papers of the Board of Guardians. Even this gives only a general idea of the problem, though. Furthermore, short spells of unemployment, lasting perhaps a few days, would not show on most of the available statistics, leading to various problems of estimation. It is difficult to see, even in retrospect, ways in which levels of unemployment, and the geographical distribution of unemployment, could be calculated in the absence of a comprehensive unemployment insurance scheme.

The urgent questions of poverty and unemployment up to and during the 1900s, and the weakness of the statistical base on which the dimensions of the problem could be comprehended, led to a considerable upsurge of interest in measuring poverty (see Hennock 1987 for a review). One of the most important technical developments was the introduction by A.L. Bowley of the sample survey (Maunder 1972, Darnell 1981) in contrast to the more heavy-handed methods of Booth (*Life and Labour*) and Rowntree (1901) covering London and York respectively. Bowley's method made it possible to produce inter-urban comparisons of poverty for the first time. Bowley and Burnett-Hurst (1915), in a much reproduced table (e.g. Hennock 1987 p.225) note that a high proportion (23%) of working class households fell below the poverty line in Reading, while very low proportions of such households fell below the poverty line in Bolton (8%) and the Durham mining town of Stanley (6%). Warrington (13%) and Northampton (9%) were intermediate. Unfortunately the present author has not been able to examine Bowley and Burnett-Hurst (1915), although the contrast implicitly depicted between prosperous North and less prosperous South is clear. Hennock (1987 p.225) cites Bowley as suggesting that insufficient wages for the labourer in employment represented the primary cause of poverty in four of the five towns studied; this, it should be remembered, was at a time in which family sizes were by current standards large. A critical re-examination of this work, and if necessary and possible, of the original data manuscripts, would undoubtedly help untangle some of the complex regional labour market structures of pre-1914 Britain.

119. There is of course nothing wrong with changing one's mind about a particular topic, and indeed this is often the only appropriate response to new information. When an *identical* conclusion (there was no unemployment in London) is reached by two directly opposed and mutually incompatible chains of argument, then one suspects that the author is searching for rhetorical devices to reach a pre-determined conclusion, rather than searching for evidence and using the evidence to reach a reasoned conclusion.

120. A more sophisticated version of the labelling fallacy is to divide those on the unemployment register on a particular day between the "genuine" unemployed and those who are "not unemployed, merely changing jobs". Any increase in unemployment is then defined not in terms of falling demand for labour, but rather in terms of people spending more time changing jobs, being more choosy about selecting new jobs.

121. For example, Drage (1894), Beveridge (1909).

Both the Majority and Minority Reports of the 1909 Royal Commission on the Poor Laws recognised, and indeed emphasised, this point, (Great Britain 1909, Majority Report vol 1 pp.427-437, 462-463; Minority Report pp.588-605).

Various differences of opinion existed as to how to deal with the problem of surplus labour and unemployment in the casual sector. The Minority Report, dominated by Mrs. Webb, argued strongly for a "social" solution to the problem with major state intervention in preventing the demoralisation of, and starting the retraining of, casual workers in distress. Beveridge also advocated intervention in the labour exchanges and a system of unemployment insurance to make the labour market function more efficiently. Behind this view was a belief that so long as the labour market was well organised, demand deficiency ("underconsumption") would not be a problem (Harris 1972 p.120). There may have been differences of emphasis between Beveridge and the Webbs, and thus a certain amount of incompatibility of priorities and policies, yet there was a fundamental agreement that the problem of unemployment was best dealt with by a restructuring of the labour force.

The idea that unemployment, particularly among the casual fringes, could best be dispersed by means of social policy, was prominent in the debate of the 1900s. It was only much later that the macroeconomic conception of employment became dominant, such that *economic* policy held the key to unemployment. Keynes was central to this shift in perception, but the works of Hobson (1896/1911, 1922) provided an important forerunner. Hobson (1896/1911) was critical of various "palliatives" of unemployment, such as proposals for establishing labour colonies or labour bureaux, which fail to address themselves to the problem of inadequate demand.

122. See for example the discussion by Godfrey (1986 pp.1-30), which draws heavily on Sen (1975). The critical point is that modern international definitions of unemployment usually decree that to be unemployed a person must be both out of work and seeking work. Yet as Godfrey (1986 p.7) points out, "in the absence of a social security system most people cannot afford to be *both* not working *and* seeking work. Most of those who are seeking work have to find some way of keeping themselves alive which may place them outside of the ranks of the unemployed on the standard definition." As a result of this problem of definition, third world unemployment statistics tend to imply that rural areas have "virtually no unemployment problem at all" (Godfrey p.5) despite the general consensus that such areas have a massive labour surplus.

Similar problems may be noted for assessing British unemployment patterns before 1914, given the incompleteness of unemployment insurance schemes, essentially confined to relatively limited groups of skilled industrial workers, and given also the similarity of labour market structure between pre-1914 Britain and contemporary less developed countries (Matthews 1968 pp.564-568). Components of such a labour market structure include high rates of natural demographic growth in rural areas, heavy rural-urban migration, surplus labour in urban labour markets and the development of an urban casual fringe. There is no simple answer to the question of the evaluation of levels of unemployment in such circumstances. Full account must be taken of the days in which casual or semi-casual workers fail to find employment, while there is a strong case for arguing that if someone who fails to gain mainstream employment is forced to undertake paid work of *very* low productivity then this should not be accounted for as "work" in evaluating the employment/

unemployment balance (chapter 6 note 132). There is no clear line between unemployment and poverty due to low wages in the absence of a comprehensive unemployment insurance scheme.

123. This section extends the discussion in chapter 6.9 and chapter 6 note 132.

Compare also the classification of the various types of unemployment in the Minority Report to the *Royal Commission on the Poor Laws* (Great Britain 1909), pp.570-634. Four main types of those in distress from unemployment are listed (p.571).

> (I) "Those who have lately been in definite situations of presumed permanency; for instance, an engine-driver, cotton-spinner ...."
> (II) "Those who normally, in their own trades shift from job to job, ... with more or less interval between jobs, but each lasting for weeks, and perhaps for months"
> (III) "Those who normally earn a bare subsistence by casual jobs, lasting only a few hours each, or a day or two."
> (IV) "Those who have been ousted, or have wilfully withdrawn themselves from the ranks of the workers; for instance, the man broken down by some infirmity or by advancing age."

Thus a definitely hierarchical structure of the labour market is indicated, with also the possibility of the worker sinking down the ranks of the hierarchy and eventually joining the "unemployables". The Minority Report is very clear in arguing, in contrast with Southall (1983, 1988), that workers in all the above groups should be regarded as unemployed if out of work. Furthermore, the Minority Report argues that the bulk of unemployment comes under category (III). "At least half the task of the Distress Committees has been to relieve, not the Unemployed of our Class I, for whom the Unemployed Workmen Act was designed; nor yet the unemployed of our Class II, who need only be tided over an unusually prolonged interval between two engagements of some duration; but to supply the claimant wants of the Unemployed of our Class III - men whose chronic condition is one of partial destitution tempered by odd jobs .... We have discovered, on quite irrefragable testimony, that it is from the same class that is directly drawn at least two-thirds of all the pauperism, other than that of old-age, sickness, widowhood and orphanage; and probably, if we include indirect results, at least as large a proportion also of those part of pauperism." (Minority Report, pp.596-597).

The present author had not read the relevant sections of the Minority Report when the main text was prepared, yet the similarity of approach is clearly evident. Chronic unemployment is assumed in each case. This is in major contrast with the interpretations both of Southall (1983, 1986, 1988) and also of Harris (1972) who assumes full employment outside cyclical depressions (p.150), and also that the Poor Laws had long since ceased to relieve unemployment (pp.148-150). The Poor Laws were not framed with the purpose of dealing with unemployment, yet there were undoubtedly several ways, both direct and indirect (e.g. relief for dependents), in which the Poor Laws in effect provided unemployment relief.

124. The Poor Law Amendment Act of 1834 introduced the principle of "less eligibility" in which outdoor payments to the able-bodied were abolished, leaving indoor relief (maintenance inside the workhouse) as the only option of relief. Regimentation inside the workhouse was designed so as to be unattractive to the able-bodied. The effect was that the able-bodied unemployed would tend to apply for relief only when they had reached the point of destitution

(Rose 1972 p.8), with the strong implication that pauperism rates for the able-bodied would considerably understate the true unemployment rate. It is noticeable, though, that during times of depression between 1848 and 1859 Lancashire had about half the national total of able-bodied male paupers (Dessauer 1940), although various problems of interpretation remain; it is likely that the number of male adult paupers in Lancashire was greatly swollen by Irish immigration. The total number of able-bodied male paupers in England and Wales fluctuated from 1,000 in July 1853 to 18,000 in July 1848.

The principle of less eligibility remained, although towards the end of the 19th century and in the early 20th century, "English welfare services were developed largely as a result of attempts to remove various classes of the poor from dependence on poor relief" (Rose 1972 p.41). Thus a new institutional framework developed to deal with problems of pauperism, poverty in a wider sense, and unemployment.

125. Thus, even in the early trade union insurance scheme, applicants for unemployment benefit had to sign on every day to show that they were not working, had to be actively searching for work, and had to be willing to apply for, or accept, any job offered (Boyer 1988 p.323). One way of looking at the situation is to suggest that the job search process for insured unemployed union members was subsidised, while job search for others was unsubsidised. It would be naive to assume that the labour market behaviour for both sets of workers would be identical; the latter group would have far more need to search around for *any* low paid temporary job that was on offer, with brief spells of employment alternating with brief spells of unemployment. One can legitimately call this "underemployment", provided one does not assume that it involves no unemployment.

In current circumstances, with a centrally funded unemployment benefits scheme, it seems strangely anachronistic that those receiving unemployment benefit should be debarred from *all* financially gainful economic activity. The only people who are not allowed to take on small "odd jobs" are those who most need to be able to do so. It seems unnecessarily petty that an unemployed person should not have the chance to work, say, eight hours a week, and would indeed be open to accusations of criminal fraud if he or she did so. When senior Conservative politicians rhetorically ask that if 3,000,000 unemployed people really want work, why is it so difficult to find someone to paint the front gate, there is a failure to recognise that the problem lies not with the unemployed but with the benefits system; it would be "fraud" to paint the front gate! Maybe some reform in this area would be a step forward.

126. MacKinnon (1986 pp.209-302) notes a more general tendency for studies of labour market conditions to concentrate on the experiences of relatively well paid workers to the neglect of the "virtually invisible" submerged tenth.

127. Quotations are from pp.80-81, 126, 187, 210, 213, 226-227 of Orwin and Whetham 1964.

128. On regional patterns of agricultural wages see especially Hunt (1973). See note 36 above for discussion of the Great Agricultural Depression, plus sources.

129. Southall (1983) evades this point, making merely the obvious comment that pauperism rates measure poverty and not unemployment.

. Yet in his argument that pauperism statistics should be dismissed out of hand there are the implications firstly that pauperism rates are negatively correlated or uncorrelated with trade union unemployment rates (otherwise Southall would quite properly have quoted pauperism rates in support of his argument), and secondly, given that there is a negative correlation, that patterns of poverty are *inversely* related with patterns of unemployment. Southall gives no theoretical justification for his implicit belief, and certainly no counter-argument to the proposition that poverty is often largely the result of lack of employment or irregularity of employment (see also Treble 1979 p.53 and note 123 above).

130. As noted also by Crouch (1982b).

Southall (1983) attacks the brief comments on the pre-1914 period by the present author in the above paper, without understanding the basic points being made. Unfortunately I was unaware of Southall's paper until a long time after publication, which precluded any possibility of replying in the same journal. It is perhaps appropriate to clarify my position as of 1982, which in most important respects is virtually identical to the position currently being argued, the main difference being that the relative importance placed on rural labour markets has increased in the intervening years. What Southall (1983) refers to as a "serious mistake" was in reality a refusal to fall into the same trap that Southall failed to avoid.

Existing theory, up to 1981, suggested that there had been a simple reversal of regional patterns of unemployment across either side of the First World War. This seemed unlikely, given the events of 1918-22, discussed in the main text. It seemed that while generally unemployment rates prior to 1914 were higher in the South than in the North, during recession unemployment would have increased faster in the North than in the South. In the absence of any comprehensive unemployment rates, pauperism figures were used, as a second-best alternative, to make the basic point.

The situation was complicated by Gillespie and Owen (1982b) citing Brown (1972 p.120) as noting that trade union unemployment rates were higher in the South than in the North. Suspiciously, Brown made no reference to detailed sources; it seemed at the time that Brown had confused trade union unemployment figures with Unemployment Insurance figures, and that Gillespie and Owen had followed the well-worn academic habit of regarding someone else's mistake as authoritative. It seemed in fact very unlikely that trade union figures would have shown higher unemployment in the South than in the North, precisely because of the cyclical component of unemployment. That Southall (1983) could produce a map of trade union unemployment at a cyclical trough showing trade union unemployment as concentrated in the North is a refutation of assertions by Gillespie and Owen, but far from being a refutation of Crouch, was merely the expected result.

The point is, however, that trade union statistics do not, and could never, provide an accurate or representative indication of *total* unemployment, as all non-industrial forms of unemployment, particularly important before 1914, are excluded. In writing a reply to Gillespie and Owen, a dilemma was created. It seemed that Brown (1972) was wrong in his assertion about trade union unemployment, but to state without backing evidence that Brown was wrong, and that trade union figures would probably show high unemployment rates in the industrial areas, but that these figures should be disregarded when determining total unemployment rates, would represent a very complicated chain of argument for a brief

paper. Obviously, before trade union rates had actually been published (in Southall 1986), there was no way in which this claim could be empirically backed, while the chain of argument on which such a claim could be made would require several pages. It seemed simplest to note that unemployment probably increased faster in the North than in the South during recessions, and merely to imply that there is no way, given the irretrievable lack of information, that reliable unemployment rates could be calculated for any but the briefest period before the First World War. Southall missed the point and tried to promote the interpretation that Crouch was unaware of the existence of trade union unemployment rates. Such an interpretation is absurd since Gillespie and Owen (1982a) had already introduced trade union unemployment rates into the debate. Maybe Southall would have done better to have asked himself what sort of assumptions about the labour market it would have been necessary to make, without having access to (at that time) unpublished trade union unemployment statistics, in order to make the claim that unemployment increased faster in the North than in the South during recessions.

131. It would be an inaccurate caricature to suggest that pre-Keynesian economists, however "orthodox", assumed that unemployment was impossible in a free market economy. Rather, the prevailing theory of unemployment, as expressed in for example the earlier works of Pigou (1913, 1933), was based on a stitching together of abstract equilibrium theory, which suggested that the free market economy naturally tended towards full employment, and a large number of empirical studies of the business cycle, which demonstrated that high unemployment often came into being during recessions. The hybrid theory which developed was that unemployment was caused by "structural change" during recessions, but that once unemployment had come into being the mismatch between labour supply and labour demand would again match, recreating the full employment equilibrium. On this viewpoint, unemployment should not persist, and if it does it is because wages are too high. Such a form of explanation of mass unemployment, which argues that unemployment is caused *both* by job loss and by wages being too high, has recently been resurrected by Casson (1983).

The basic point of disagreement between Keynes (1936) and the "classics", and indeed the most important point of controversy in labour market economics, is that Keynes argued that even once the recession was out of the way (and much of the analysis in the *General Theory* implicitly assumes the pre-existence of mass unemployment), the equilibrium to which the economy returns was one of *less than* full employment. The level of employment is set not by workers but by capitalists, and capitalists base their employment decisions not primarily on the level of real wages, but rather on expectations of the level of demand. If effective demand is too low, then the result will be unemployment rather than low wages. In the Keynesian system, furthermore, there is nothing to guarantee that the level of effective demand at the peak of the business cycle will be sufficient to create full employment. In the Pigovian view, in contrast, the *state* of effective demand is irrelevant to the question of unemployment, while the rate of change in the level of demand is temporarily important; such temporary effects soon disperse, though, according to the basic assumption.

Quite clearly there is agreement between Keynes and Pigou (and for that matter between Crouch and Southall) that industrial recession can create large-scale unemployment. Where Keynes (and Crouch) differ with Pigou (and Southall) is in arguing that unemployment is not confined to "depression" unemployment, plus a small amount of

frictional unemployment associated with obstructions to real wage flexibility, but rather that mass unemployment can persist throughout the business cycle, and indeed through several business cycles. To gain an appropriate statistical picture of unemployment it is as necessary to examine the peak of the business cycle as well as the trough. For the pre-1914 period this naturally concentrates attention on rural areas and on the fringes of the urban labour market.

It must of course be added that this debate is not simply Keynes v. Pigou, although these two economists gave clearest expression to the basic difference in theoretical outlook. Modern mainstream labour market theory makes much use of the concepts of the "natural" rate of unemployment (that supposedly consistent with stable prices) and the non-accelerating inflation rate of unemployment (NAIRU), but instead of admitting the implication that capitalism can equilibriate at less than full employment, redefines "full employment" such that it equals the natural rate or the NAIRU!

132. See above note. It is unclear whether Southall has fully thought through the theoretical implications of the form of analysis he uses, but in that he concludes his 1988 paper with a citation from Pigou (1913), and in that there is nothing in his paper which cannot be fitted into a Pigovian framework, but plenty that is incompatible with a Keynesian framework, it does not seem unfair to regard Southall's implicit labour market assumptions as pre-Keynesian.

133. For example, Southall (1988 p.237) cites von Tunzelmann (1981 pp.247-248) as saying that "the familiar division between Inner and Outer Britain dated only from the First World War. .... The very abruptness of the turn-around ... coupled with its intensity, helps account for the length of the shadow cast over interwar Britain." This however is not the full quotation; von Tunzelmann (p.247) also notes that "to take only one extreme example, unemployment in the Welsh town of Merthyr was 1.4 per cent of its labour force in 1913, whilst even at the cyclical peak of 1937 it was as much as 41.6 per cent of the town."

The "mistake" here is not in the assumption of a reversal of polarity, but rather in the dating of the reversal of polarity; the problems of Outer Britain surfaced not as a result of the First World War but rather as the result of industrial decline after the First World War. Undoubtedly the First World War itself would have led to considerable labour market changes; with about 750,000 UK servicemen killed it could hardly have been otherwise. There is no evidence, however, that the First World War led to a reversal of regional patterns of working class prosperity.

134. Political and Economic Planning (1939 p.199).

135. See Buxton (1978 pp.91-98), who notes that the tonnage of coal shipped abroad rose almost twenty-fold between 1855 and 1913, and that "the principal causal factor at work was industrialisation abroad" (p.91). Mitchell (1984 pp.10-39) notes the changing structure of demand through time for coal from individual coalfields. The main markets for British coal were in Europe, especially northern Europe, a point emphasised in Church (1986 pp.34-35).

136. For recent texts on European industrialisation at this stage see Milward and Saul (1977), Pollard (1981 pp.219-277) and Trebilcock (1981). German industrialisation was the most spectacular, and caused the most concern in Britain, but as Pollard emphasises, there was significant industrialisation throughout much of Europe. The pattern tended to be not so much that a whole country

industrialised at a particular time, but rather that parts of the country industrialised, leaving behind a relatively undeveloped rural periphery in many cases.

137. Figures taken from Mitchell (1975 pp.360-370).

138. Thus Buxton (1978 p.94), following Jevons (1915), notes that at the end of the period steam-coal could be carried more cheaply from Cardiff to Buenos Aires than from the United States coalfields, where some overland travel was involved, to Buenos Aires. Furthermore, technological changes in the shipping industry had more than halved shipping rates since the mid-19th century, considerably enhancing the possibilities for development in the export industry.

139. The "Verdoorn effect", as noted by Kaldor (1966).

140. The argument is thus based on capacity constraints leading to diminishing marginal returns (each additional worker after a certain point finds it more difficult to have access to the coal face, or must open up an inferior seam) rather than the more commonly cited factor (e.g. Mitchell 1984 pp.321-323) of increasing distance to the coal face in ageing pits, which does not explain the *cyclical* dynamic of productivity. Of course, with investment and the sinking of new pits it is possible to increase effective capacity although not instantly. Long term trends in productivity, as opposed to shorter term cyclical fluctuations, depend on the extent to which it is possible to create new capacity, and thus ultimately on the stage of the "life cycle" of a particular coalfield.

Recent work by Church (1986 pp.471-496, 546-549) suggests that more refined calculations than used in the text, taking into account the effects of fluctuations in the length of the working week, indicate a rather slower downturn in productivity than has been given in previous assessments. While therefore the magnitudes of change, as indicated in the text, are open to correction, the general direction of change would appear in most cases to have been correctly indicated. Data for output per man shift (Church p.473) indicate however that increases in productivity in the 1879-83 upswing were much less than suggested in Table 8.13, perhaps 8% rather than 14%. On any calculations productivity fell sharply in the late 1880s. The directions of cyclical shifts in productivity in individual years in post-1898 cycles appears to have been indicated correctly (compare Church p.476), although output per man hour fluctuated, according to Church, within the range of 0.130 tons to 0.141 tons, again a smaller range than implied in the text. Regional figures for output per man hour (Church p.476) indicate the standard picture of rising productivity in the East Midlands and generally falling productivity elsewhere, especially in Lancashire, the North East and South Wales. Productivity in Scotland remained relatively stable in the longer term, although productivity in Yorkshire is shown as being on a falling trend after 1906, contrary to the impression given in the text.

Clearly it would be possible to construct a revised version of Table 9.16 in order to take into account Church's calculations, It seems likely, though, that the basic conclusion would still remain that regional patterns of job loss in the coal industry after 1918 closely match regional patterns of creation of "excess" employment before 1914.

141. Calculated from Mitchell and Deane (1962 p.115). 5s 7½d roughly corresponds, in decimal currency, to 28p, while 6s 4d and 7s 3d correspond to 31½p and 36p respectively.

142. Mitchell and Deane (1962 pp.115-117) give figures for coal output from 1854 to 1945. For later years, see Mitchell (1975 p.368), covering the period to 1969, and the relevant issues of *Annual Abstract of Statistics*.

143. The question has been debated of whether the low rate of investment in machine cutters before the First World War was "rational", a response to objective technical conditions of production, or a sign of "entrepreneurial failure", of management conservatism holding back technical advance. Figures for the diffusion of mechanical cutting equipment are readily available (Mitchell and Deane 1962 p.123), and show that 1% of coal was cut by machine in 1900, rising to 5% by 1907, 9% by 1914, and 20% by 1925, rising rapidly as the inter-war profits crisis intensified the problem of reducing costs, and reaching 59% by 1938.

Taylor (1968 p.60) suggests that while under existing demand-led conditions of profitability the gains to be made through the wider diffusion of mechanical cutting equipment were relatively slight, the main significance of the slow uptake of mechanical cutting equipment was that it was symptomatic of a more general conservatism of management in the coal industry, which had potentially far-reaching effects. Mitchell (1984 p.84) disputes this interpretation on neo-classical grounds arguing that "free entry" into the industry meant that a state of pure competition was approached, and that accordingly neither mass economic irrationality nor individual economic irrationality could survive. This line of argument seems highly questionable; the survival of sub-optimal producers was guaranteed, or at least strongly facilitated, by the high level of demand for coal, a factor which was notably absent when coal mines were closing in large numbers in the 1920s.

Church (1986 pp.344-364) emphasised the more practical question of the relatively limited set of conditions which at that time would have made mechanised cutting more efficient than traditional methods, with geological conditions often being unsuitable, with large mines being required to make the process economic, with electrical fires underground being a perceived danger, and with the machinery at that time simply not being as efficient as later generations of machinery. Much of the emphasis in technical development was concentrated not so much on winning coal at the face more efficiently, but rather on transporting coal to the pithead more efficiently, an increasing problem given the gradual extension of underground working.

Whether or not it can be said that colliery owners were underinvesting in machinery, mechanisation was certainly not strong enough to maintain pre-existing productivity levels in the late 19th and early 20th century.

144. All figures from Mitchell and Deane (1962 pp.115-119).

145. See for example Buxton (1978 p.94). The fact that Welsh coal production was strongly tied to inter-continental trade and exports has the unusual implication that the Welsh economy prospered during the *peripheral* phases of the Kuznets cycle, rather than during the core phases. This contrast between the Welsh experience and the English and Scottish experiences is explored further by Thomas (1959, 1973 pp.290-295).

146. See for example Moore (1954 pp.101-105). Moore emphasises (p.105) that "the detailed structures encountered in mining are frequently more complicated than a surface examination would indicate." At the time Moore wrote, the question of the origin of high quality anthracite coal had not been fully resolved (Moore 1954 p.121); the present author is unaware of the current state of research. If however, as is plausible, anthracite developed as a result of pressure and heat on bituminous coal during the process of earth movement, then the high quality of coal in South Wales is to some extent *explained* by the complexity of the local patterns of faulting and folding.

147. Matthews (1968 p.564).

Also: "The rural labour surplus moved to the towns, and part of it became urban surplus labour. The urban surplus, especially in London, was in this way continuously replenished ... Unemployment was being increasingly transferred away from agriculture, where it was not measured, to the towns, where it was measured to a greater extent. This has, of course, been characteristic of many countries in the process of development." (Matthews 1968 p.566).

148. Matthews (1968 p.565).

149. See Lamb (1966 p.1).

150. The question of the effects of man's activities on the climate is here opened up. There has been much scientific discussion and media attention given recently to the question of the alleged "greenhouse effect", created by an accumulation of carbon dioxide in the atmosphere as a result of the large-scale burning of fossil fuel in the industrial era, combined with widespread burning of forests, and resulting in a hindrance to long-wave radiation sent out from the Earth, but not to short-wave radiation arriving from the Sun. The ultimate effect would be to cause the Earth's atmosphere to warm up, leading to widespread local shifts in climatic regime and, perhaps most seriously of all, endangering the polar ice caps in the long run, with the possibility of substantial rises in sea level. Other economic activities are also, now, capable of significantly altering the balance of the atmosphere.

It would be presumptuous for the present author to say, without research experience in the subject and without a closely relevant specialisation, whether or not the greenhouse effect is as serious as has often been suggested. Recent issues of any relevant journal (e.g. *Climatic Change*) will carry various technical articles. For present purposes it is enough to note that it is possible to conceive of a level and direction of economic activity such that human activity is capable of causing major climatic shifts at a world scale. It can remain a matter of debate whether this threshold has already been reached or is being closely approached. What is considered very unlikely, however, is that climatic records *before* the 20th century show large-scale climatic fluctuations which are economically derived, although of course local effects may well have been important.

Man's economic activity has always changed the physical environment; to clear woodland to create fields for cultivation is an example of such a change. The problem comes not when the environment is changed but rather when the environment is *destabilised*. Such destabilisation tends to be manageable in temperate climates, but in more environmentally sensitive climates major deforestation can lead either to desertification or to major problems of increased runoff, rapid erosion and downstream flooding.

Environmental catastrophes of this type have become increasingly prominent during the 1980s. Changes in the atmosphere as a result of industrial activity have far more than a local or regional effect, but have potentially a world-wide effect; a climatically-led world-wide environmental catastrophe is possible. If this is the case then there is a pressing need for examination of the way economic change can lead to environmental disaster. It does not seem unlikely that in the 21st century and beyond, environmental crises will be central to any economic crises which may build up.

151. A-phases and B-phases derived from Wallerstein (1979).

"For a few centuries in the Middle Ages the climate in most parts of the world regained something approaching the warmth of the warmest postglacial times ... In most of Europe the warmest period seems to have been between 1150 and about 1300." (Lamb 1977 p.435). The A-phase of economic expansion lasted from about 1100 to 1300 according to Wallerstein.

From then onwards the general tendency until the 18th century was towards deteriorating climate, a "Little Ice Age". Lamb (1977 pp.449-473) notes a significant deterioration of the climate up to about 1460, with conditions in the 1310s, the 1430s and 1450s being particularly severe; "the 1430s seem to have brought a possibly unparalleled run of severe winters, or winters which included severe spells, in most parts of Europe" (Lamb p.457). The B-phase of stagnation is given by Wallerstein as lasting from about 1300 to about 1450; Lamb notes that this was also the main phase of village desertion in Europe.

In the late 15th century, the climate stabilised and became less severe, with a definite return to a warmer climate following in the early 16th century (Lamb p.461). This marked part of the economic A-phase. The climate deteriorated sharply in the second half of the century, however, marking the start of the second, more serious, phase of the "Little Ice Age". "It is reasonable to regard the time from about 1550 to 1700 as the main phase for most parts of the world and probable that the lowest values of 50-year, 100-year and 150-year mean surface air temperatures in most places fell within that time" (Lamb p.463). The start of the 18th century showed a very noticeable amelioration of climate; the late 20th century is still in a warm phase.

It should be remembered that the A- and B-phases of economic development, as given by Wallerstein (1979) are to some extent approximations, and that other researchers might well want to modify boundary dates. It is still remarkable, though, that in a period of 650 years the only periods in which climatic phases and economic phases appear not to correspond are 1550-1600 (economic A-phase; climatic B-phase) and 1700-1750 (economic B-phase; climatic A-phase). Lamb himself argues strongly that climatic change had a major influence on the pace of economic life, and the presence or absence of economic crises, particularly in agriculture, during the period under consideration.

152. It should be added that there is no question of 20th century long cycles being climatically driven. In Britain there was a gradual warming of mean temperatures from about 1900 to 1950, followed by a phase of falling mean temperatures into the late 1960s (based on Manley 1974), clearly not conforming with long cycle phases. In the eastern United States, the early 20th century amelioration is again clearly identifiable, but with average temperatures peaking at precisely the time of the slump (1930-33). A gradual cooling down into the late 1960s followed (Lamb 1977 pp.578-579; the data source stops at 1968). The phasing of US climatic cycles is the complete

reverse of what would be expected if climatic cycles drove 20th century economic long cycles.

153. There is an irony here in that the Slutzky-Yule effect (Slutzky 1937, Yule 1921, Lewis 1979, chapter 2 note 52) was originally analysed, in Slutzky's case, in order to throw doubt on Kondratieff's concept of the economic long cycle. Kondratieff's data was presented primarily in the form of nine year moving averages (a practice followed also by Glismann, Rodemer and Wolter 1984), but as Slutzky, Yule and various others have pointed out the use of moving averages, even on random numbers, can produce a spurious impression of both long and short cycles. It is especially easy to imagine this happening if one deliberately introduces the occasional extreme value into a random number series. It should be emphasised yet again that the analysis of the long cycle in chapter 2 depends on the precise evaluation of turning points, and in no sense relies on the interpretation of moving averages.

The problem being faced in the text is that ten year moving averages of British temperatures appear to show a 50 year long cycle in conformity with the Kondratieff cycle (upswings matching upswings, and downswings matching downswings). To demonstrate that the Kondratieff long cycle is economic in origin it is necessary to show firstly that the apparent climatic long cycle in reality results from a Slutzky-Yule effect, and secondly that the commencements of runs of years with consistently worse than average or better than average weather do not precisely coincide with independently determined turning points in the economic long cycle. The critical test is the matching of turning points and extreme values, not the matching of cycles generated by moving averages.

154. Krakatau was a particularly well reported volcanic eruption, and one which had world-wide effect on air conditions, typically leaving the sky a bright red colour as a result of volcanic dust. Such phenomena were reported in detail in Symons (1888), although without any mention being made of a lowering of temperatures.

Lamb (1970, 1972), using the Krakatau eruption for calibration, constructs a Dust Veil Index in three separate ways:

$$DVI = 0.97.\ R_d\ \text{max.}\ E\ \text{max.}\ t$$
$$DVI = 52.5.\ T_d\ \text{max.}\ E\ \text{max.}\ t$$
$$DVI = 4.4\ q.\ E\ \text{max.}\ t$$

Where Emax is the greatest proportion of the Earth at some time covered by the dust veil (1 for eruptions between 20^{o}N and 20^{o}S; 0.7 for eruptions between latitudes 20 and 35^{o}, 0.5 for latitudes $35\text{-}42^{o}$, 0.3 for latitudes greater than 42^{o}).

t is the time in months between the eruption and the last detectable temperature and radiation effects in middle latitudes.

$R_d$max is the greatest percentage depletion of the direct solar beam shown by monthly averages in middle latitudes.

$T_d$max is the estimated lowering of average temperatures for the most affected following year in middle latitudes.

q is the estimated volume of solid matter dispersed as dust in the atmosphere.

More recent research (Bradley 1988 and references therein) has attempted to refine Lamb's analysis, attempting to assess the severity of eruption in more strictly volcanological terms and trying to avoid the potential circularity of argument in which the severity of eruption is measured in terms of the temperature drop, and the temperature drop is measured in terms of the severity of eruption.

Self, Rampino and Barbera (1981) in particular note that in volcanological terms the Coseguina eruption of 1835 was not nearly as severe as implied by Lamb, despite the large drop in temperature it created. Another point to note is that zonal effects on temperatures might well be substantial in cases of high latitude eruptions with relatively little world-wide effects; for example Icelandic eruptions might have a substantial effect on Scandinavian and British temperatures.

Bradley (1988) attempts to examine more closely the timing of climatic responses to major volcanic eruptions, and notes firstly that the effect on temperature is at its strongest during the Summer and Autumn months, and secondly that low temperatures tend to recur in later Summers and Autumns, up to three years after the eruption. In the case of Britain it would appear (using the data in Manley 1974) that the main drop in Summer and Autumn temperatures often occurs perhaps two years after the eruption. For example, after Krakatau (August 1883), 1884 was actually a warmer year than 1883, while there was a sharp drop in temperatures in the Summer and Autumn of 1885 (average of 13.8°C, May to October 1884; 12.1°C, May to October 1885).

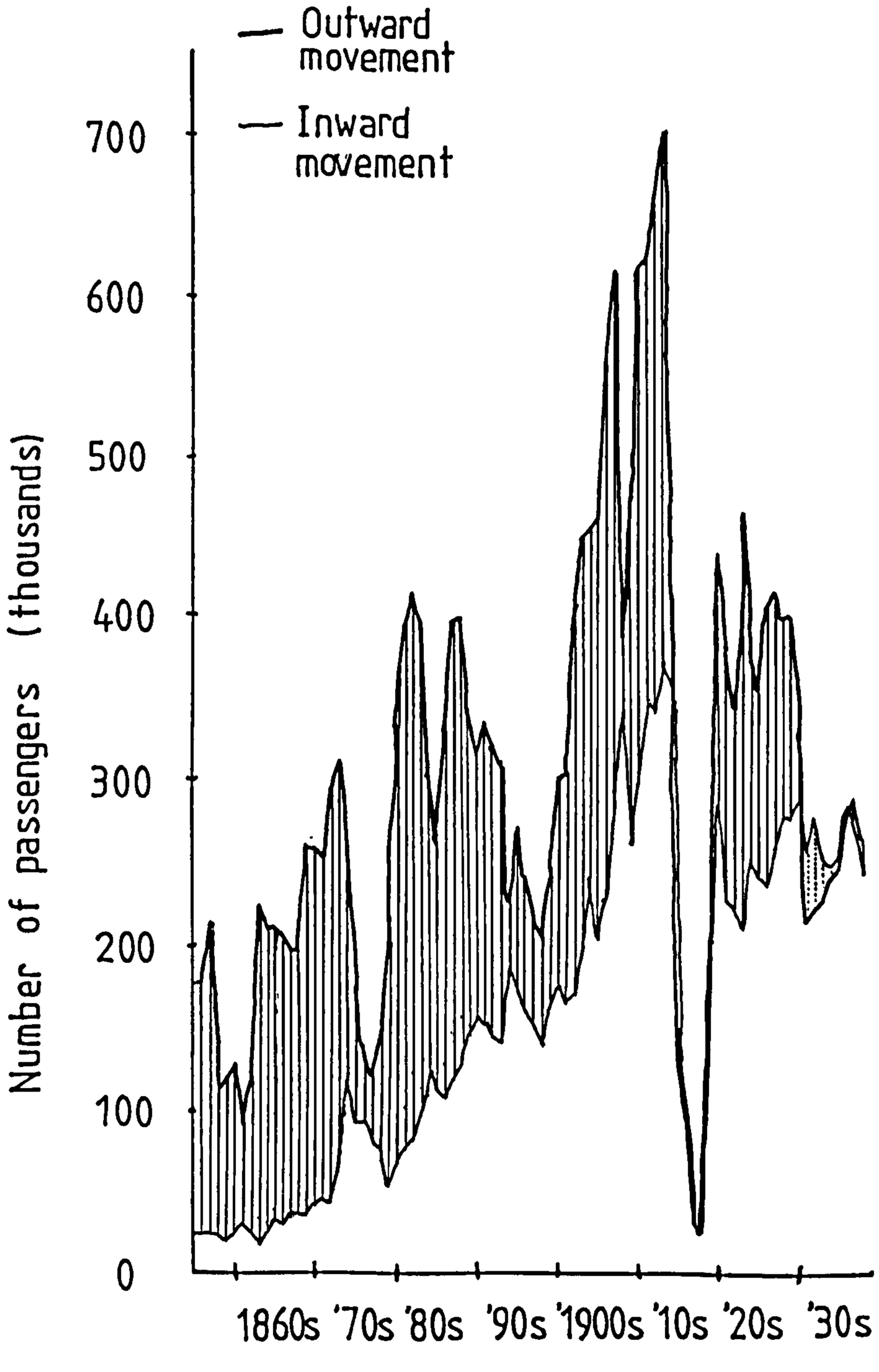
The correlation between major volcanic eruptions and years of anomalously cold Summer temperatures in Britain would seem to exist, but there is much detail that needs to be explored.

155. Extracted from a much longer list in Lamb (1972 pp.434-435).

156. Lamb (1972 p.434) estimates a total DVI for 1694-98 of perhaps 3000, even though the eruptions he cites total only half this amount. There is the problem that, particularly at this early stage when large parts of the world were unexplored, significant eruptions may have been missed. This is an acknowledged problem in volcanological research.

157. The "bad years" starting in 1314, provide a clear example of how a poor harvest, followed by other poor harvests, can trigger a severe economic crisis. Contemporary Third World examples are numerous; the path to famine is often even more indirect in that hot areas, whether wet or dry, are far more vulnerable than temperate areas to severe ecological disruption which itself reduces agricultural productivity.

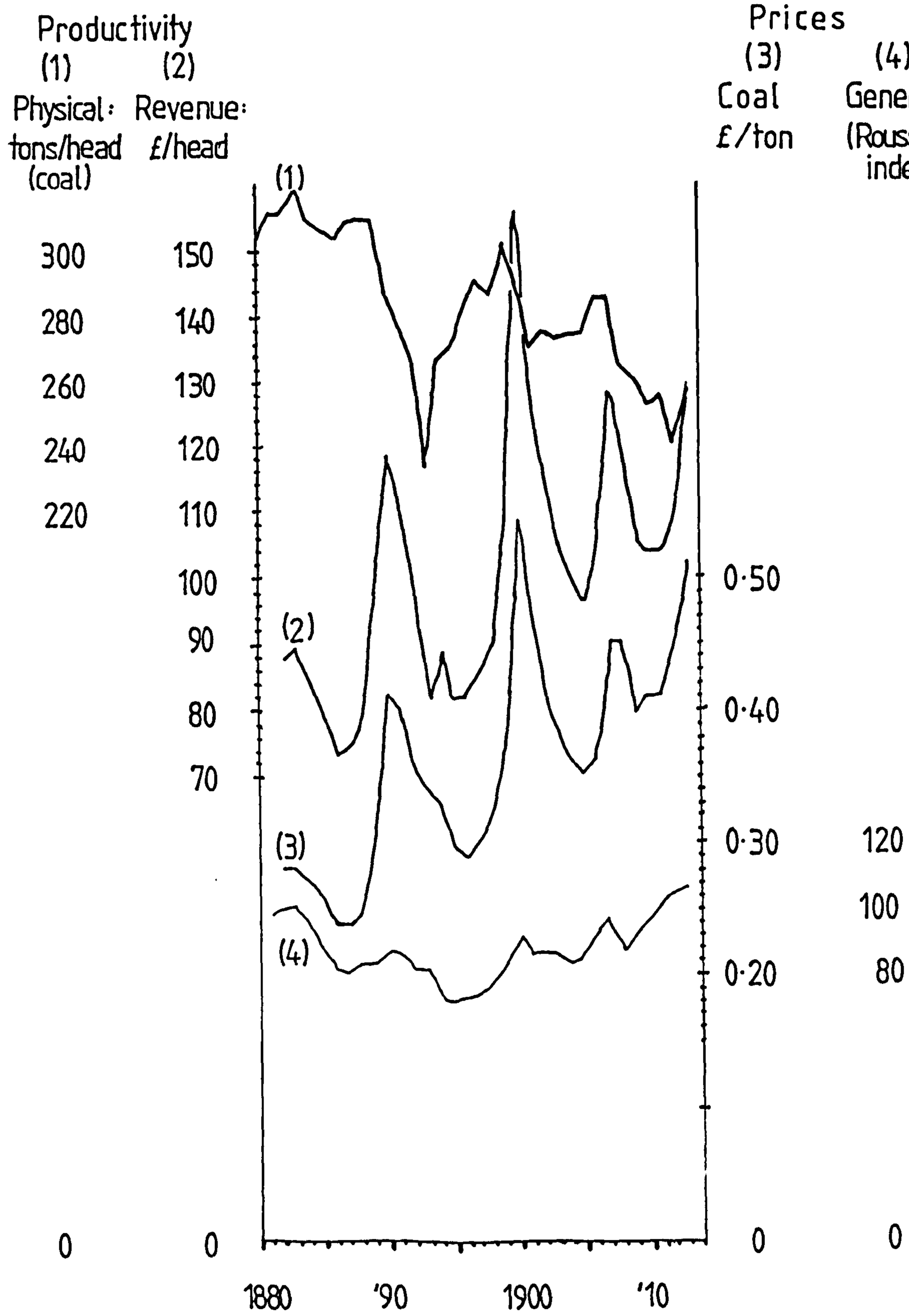
Fig 9.1 Net Emigration From the UK, 1855-1938



Vertical shading indicates volume of net emigration (dotted for net immigration)

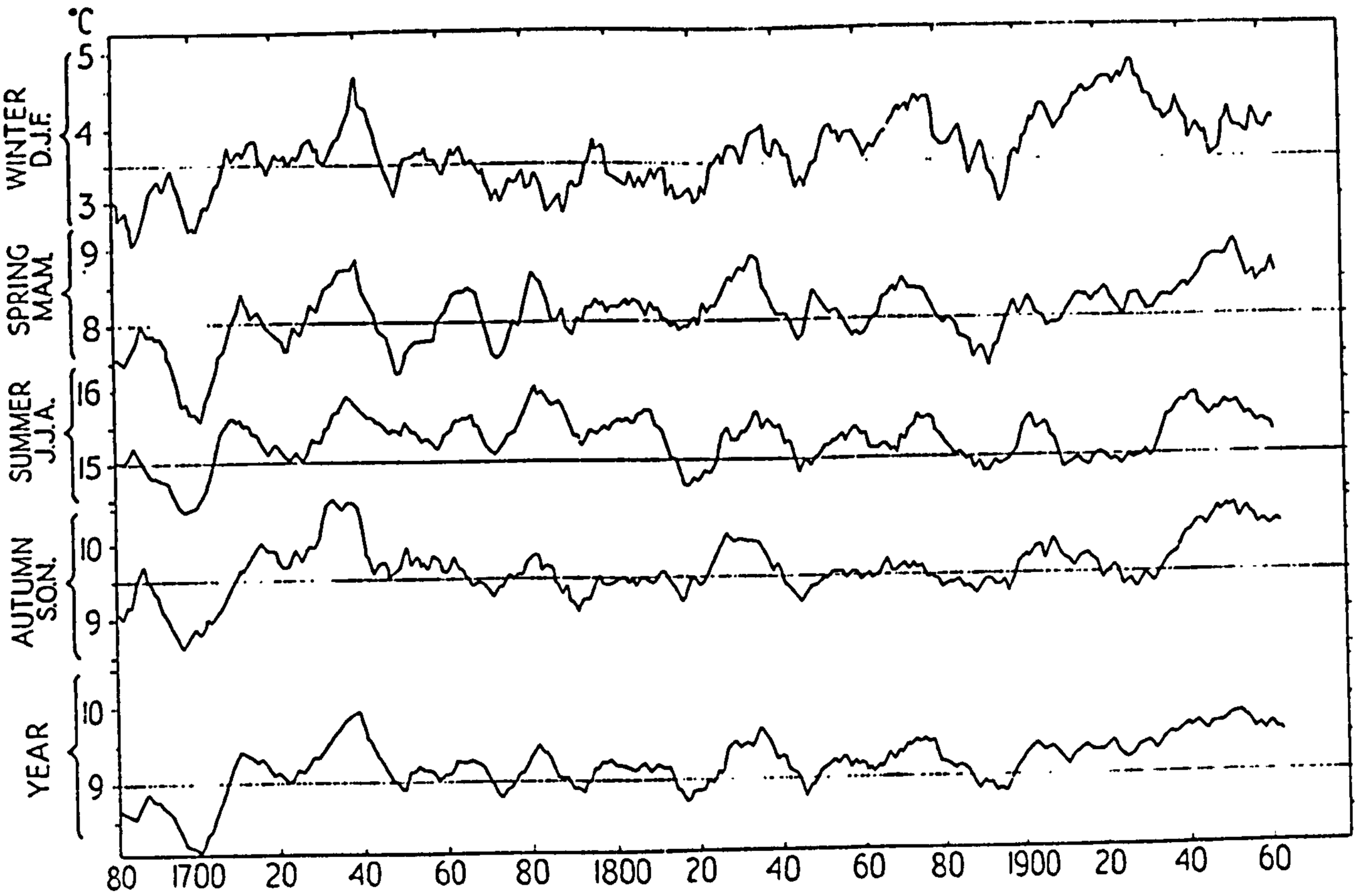
Source: Mitchell (1988 pp.77-80). Passengers between United Kingdom ports and extra-European countries only; thus European migration is not included.

Fig 9.2 Measures of Price, Physical Productivity and Revenue Productivity in the British Coal Industry, 1880-1913



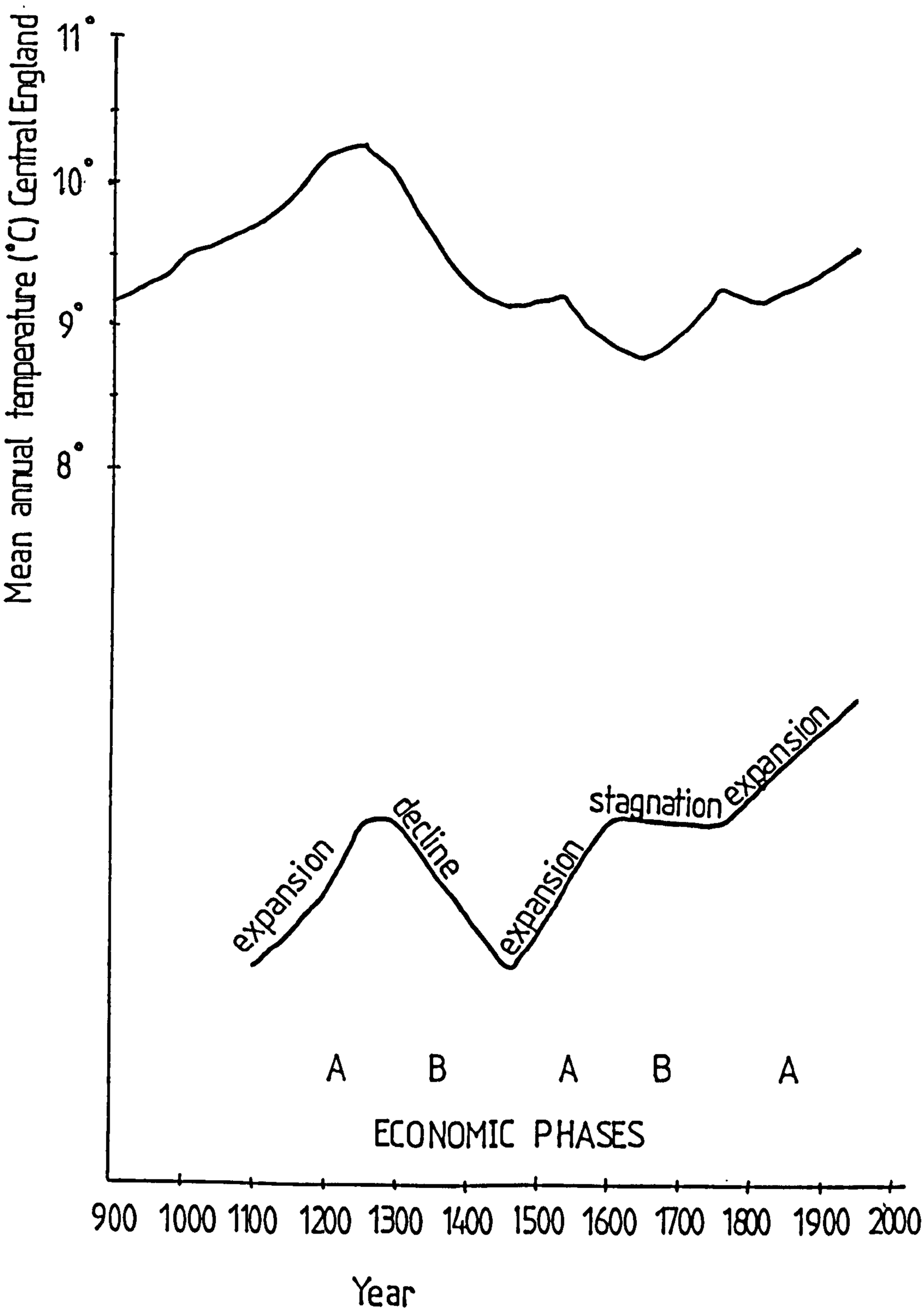
Source: Mitchell and Deane (1962).

Fig 9.3 Average Temperatures in Central England, 1680 to 1960 (from Manley 1964).



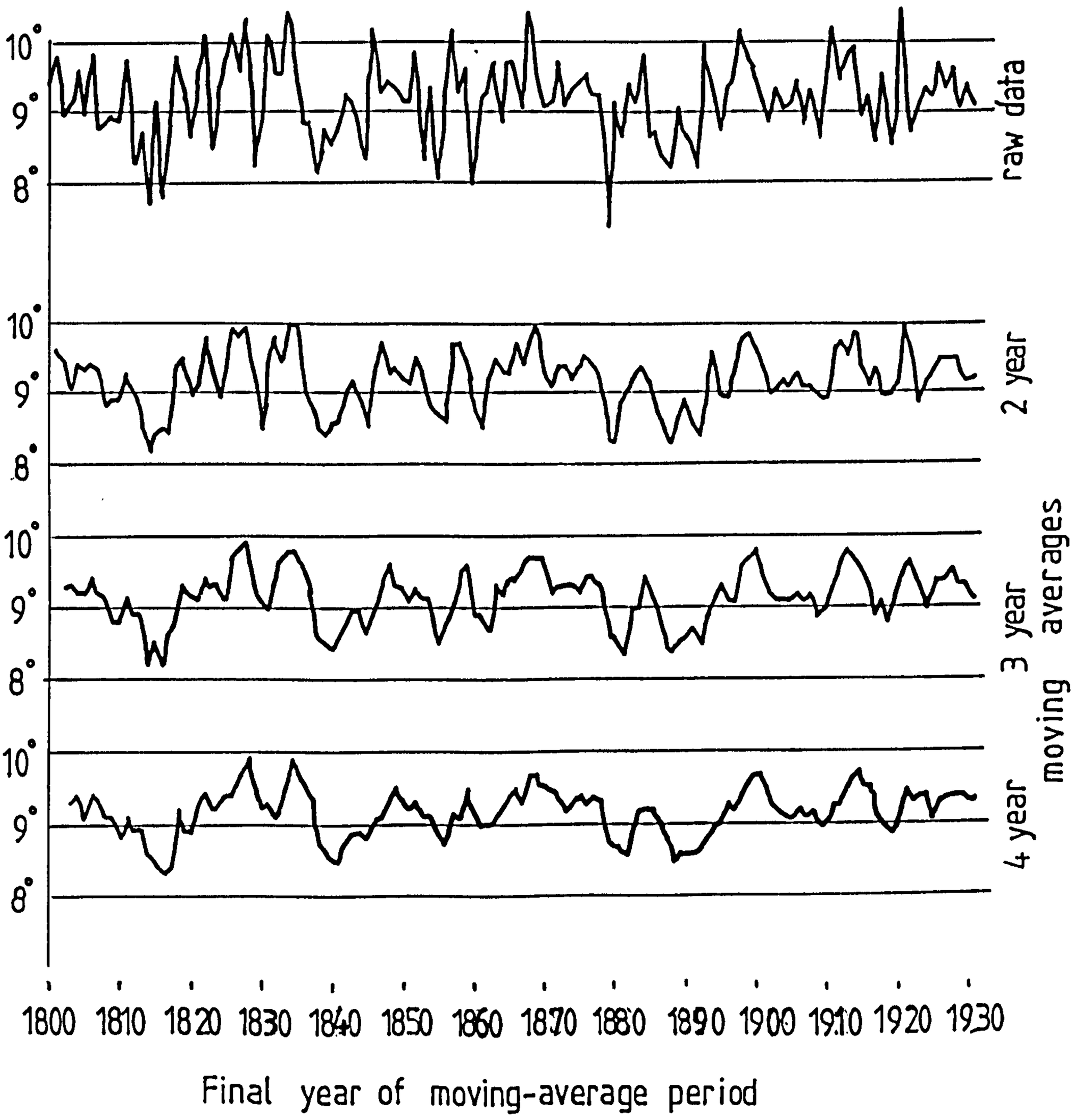
Reproduced from Manley (1964 p.169). Manley uses 10-year moving averages; see Fig 9.5 below for the raw data and shorter period moving averages.

Fig 9.4 Longer Term Climatic Changes in the UK



Source: Manley (1966 p.186) for temperature series (slightly simplified here).
Economic phases according to Wallerstein (1979).

Fig 9.5 Annual Average Temperatures in Central England, 1800 to 1939 (2-, 3- and 4-year moving averages)



Source: Raw data from Manley (1974).

Chapter 10 Conclusions

10.1 On the Methodology of Conclusions

In many respects it is very difficult to write conclusions, to summarise what has been demonstrated in a piece of research work. More often than not, conclusions in existing works seem to refer not so much to what has been *proven* (proof is logically very difficult), but rather to the *assumptions* made once preliminary investigations have taken place. One starts on a research task with naive theoretical assumptions, then gradually builds up a series of preliminary investigations, overturning some of the older assumptions, but creating results which can be used to construct a more sophisticated set of theoretical assumptions. When this stage has been reached the research task is far from over; there is still the problem of "filling in the boxes", of applying these theoretical assumptions to detailed data, in part to test whether the basic theoretical approach is justified, and in part to build up a detailed understanding of the basic data being studied. Typically one moves from small-scale data at the "naive assumption" stage, to large-scale data of the "sophisticated assumption" stage, then back to small-scale data at the "filling in" stage. In the present work the shift was from data on factory closures and local month-by-month unemployment change, through to data on national income, unemployment, migration, etc., when the basic theoretical background was being constructed, and then back to detailed work on the Census of Employment, and on local and regional unemployment statistics.

Very little "naive" research, based on earliest assumptions, remains in the final dissertation, not because the early research has been abandoned but rather because it has been transformed. As one moved away from naive assumptions, questions of whether slumps themselves could be fitted into a broader framework became more important; if one could understand the phenomenon of slump itself, the task of examining the *geography* of slump would be simplified to one of filling in empirical details. Furthermore, in that it soon became clear that a theory of slump was also a theory of the long cycle, the question of broad long-run changes in the regional economy came to be of increasing importance. A "naive" comparison of what was happening in 1980 with what was happening in 1930 and in the years thereafter soon came to have considerable theoretical ramifications.

Chapter 2, outlining a theory of the long cycle, thus belongs essentially to a relatively early part of the research, and indeed was the core of the research work in years two and three (1981, 1982).

Modifications have been made since then, but these have been relatively minor. Any conclusion written up to about 1984 would have concentrated on chapter 2, on the theory of slump which was being developed. Yet at the present stage chapter 2 is best taken as background material for the more detailed work on the British regional system in other chapters. The British regional system has been analysed in terms of changes taking place through various long cyclical phases of slump, post-slump recovery, upswing, downswing (with recessions dominant) and slump again. Most of this analysis took place after 1984, using the earlier analysis of the long cycle to provide a framework in which to analyse recent changes in the British regional system. There is little to suggest that the basic long cycle theory outlined in chapter 2 should not stand, although naturally all results are open to modification.

Less obviously perhaps, chapters 4 (on the inter-war years) and 9 (on the pre-1914 years) belong largely to the same early stage of analysis. The basic point of chapter 2 however was to set slump in a longer-term context, but as of 1981 no post-slump context was available for the 1980s, so examination of any post-slump years had to concentrate on the 1930s. It was found that clear distinctions could be drawn between pre-slump years, slump, and post-slump years, and also that regional patterns of employment change were far more uneven, at the expense of the periphery, in the long cycle downswing (pre-slump and slump) than in the post-slump recovery.

Work on chapter 9 was based on two main themes. Firstly, it is rather too narrow to base a theory of the long cycle solely on events from 1914 to the early 1980s, and the attempt must therefore be made to study the structure of the long cycle before 1914. Secondly, the apparent "reversal of polarity" in 1921 posed a considerable problem. Labour market statistics (population, employment, unemployment) unambiguously point to a South-facing economy from 1921 onwards, whereas up to 1921 a North-facing economy was evident, though with somewhat more ambiguity, from the early 19th century onwards. There was the obvious implication that many of the "19th century" economic structures of the coalfield industrial regions were decaying in the 20th century, and that dominant patterns of new economic growth were bypassing the older industrial areas. This is certainly a basic theme, and has been much used in later detailed research, and yet there is still the problem of whether the coalfield regions were, in fact, economically *dominant* in the 19th century. If they were dominant, this creates *two* reversals of geographical polarity, as before the Industrial Revolution the South was economically dominant. It is just about possible to imagine one major reversal of polarity, but to conceive of two major reversals of polarity goes beyond what is

theoretically plausible. A more likely scenario, argued in chapter 9, is that the South maintained its underlying economic dominance even during the 19th century, but that this dominance was expressed more in terms of the wealth of the bourgeoisie than in terms of expansion of employment and industry. In effect the London economy was an extremely efficient accumulator of surplus value produced elsewhere; London was a "core economy", but was generating only a relatively small industrial working class. All this, at a time when the coalfields were industrialising very quickly, presents an extremely confused labour market picture, especially when given high rates of population growth, and consequent heavy rural unemployment and migration, and massive net emigration abroad as the "white periphery" (Australia, Argentina, Canada, the USA frontier, etc.) was opened up.

As far as study of 20th century patterns of regional employment change is concerned, the two main points to be noted from a study of the pre-1914 British economy are, firstly, that London was economically dominant even before the major rounds of job losses in industrial areas starting in the 1920s, and secondly that industrial economic structures were being built up very quickly in the periphery without a sufficiently diversified economy to make these structures viable in the long run. London's economic dominance was starting to become very clear in the 1880s, despite all the contemporary concerns about unemployment in London, and by the First World War a highly prosperous rentier economy, based to no small extent on foreign development projects, was coming into being. At the same time, signs of slow industrial development were beginning to show in the coalfield regions, while the rapid expansion of employment in coal mining was based on falling productivity and rapidly rising prices, a set of circumstances liable to lead to an extremely severe fall in employment if coal prices should drop. Indeed the geography of unemployment between the wars was dominated by the incidence of job losses in coal mining.

These were the main themes developed during the early years of research work, up to about 1983. At this stage relatively little detailed work had been undertaken on the geography of employment change during the slump, largely because results of the 1981 Census of Employment, the basic source material, were not yet available. The research in chapters 5 to 8 took place predominantly after 1983, but using themes and analyses developed earlier. Conclusions to the research work taken as a whole should concentrate mainly on these later chapters.

10.2 Changes in the British Regional System

The starting point of the whole of the analysis in this thesis lay in the question of regional patterns of deindustrialisation in the British economy of the late 1970s. When work started in late 1979 much concern was being expressed about Britain's industrial decline (Bacon and Eltis 1976, 1978; Singh 1977; Blackaby 1979; the *Cambridge Economic Policy Review*, etc.) but the slump had not set in. Moreover, it was becoming clear from examining *Financial Times* press statements that within multi-plant firms major job losses and factory closures were more frequent in the coalfield regions than in Southern England.

Soon after this research started, the pace of industrial job loss increased dramatically and unemployment increased in line. This connection was strong and immediate and needs emphasis as in the neo-classical labour market theories of the mid and late 1980s mass unemployment has been attributed to almost anything *except* mass industrial job loss, mostly reducing either to the argument that it is the fault of the workers and "excessive" wages (e.g. Minford 1983) or to the circular argument that unemployment is high because the equilibrium rate of unemployment is high (e.g. Layard and Nickell 1987b). A detailed statement about the unfortunate state of current British labour market theory can be left for another work; suffice it to say that in 1980 the present writer had absolutely no reason to doubt that industrial job losses lay behind the massive and apparently uncontrollable increases in unemployment, and that the links could be detected at a local level as well as the national level. Furthermore, it was established beyond reasonable doubt that industrial job losses and increases in unemployment were concentrated in Northern England, Wales, Scotland, Northern Ireland and the West Midlands, and were relatively slight in Southern England. This was seen as a major intensification of what was happening in the late 1970s.

During the "naive" phase of research much attention was given to comparisons between the 1980s slump and the 1930s slump. In 1930 unemployment had increased particularly quickly in Wales, North East England (also the industrial Cumbrian coast), the North West and Northern Ireland, moderately quickly (in the context of the time) in other industrial regions and relatively slowly in Southern England. In 1980 unemployment had increased particularly quickly in the West Midlands, Wales, North East England, the North West and Northern Ireland, moderately quickly (in the context of the time) in other industrial regions and relatively slowly in Southern England. This is a remarkable degree of similarity, even though the degree of divergence between more favoured regions and less favoured regions was much narrower in 1980 than in 1930. A basic research

question is opened up: why should there be such conspicuous similarities between the geographies of two slumps, 50 years apart?

In attempting to answer this question, due recognition has to be given to the wide range of economic experiences of intervening years, to the long phase of full employment after 1945 and to the continuous operation of a regional policy designed to avoid a repeat of the problems of the 1920s and 1930s, as well as to the more specific experiences of long cycle downswing in the 1920s and early 1930s, and the late 1960s, 1970s and early 1980s. At a preliminary level this question can be answered relatively straightforwardly. Table A6 shows that in certain years of major job loss up to 1932 regional differences in rates of employment change were extremely sharp. After the slump more even regional patterns of employment change ensued, with on average the South plus Midlands increasing their employment by a percentage point per annum more quickly than the North. There were of course year-to-year fluctuations in this "annual gap", but these were fluctuations around a clear mean, without any long term trend towards convergence or divergence. In the 1960s this gap noticeably narrowed as a result of the strengthening of regional policy, and indeed there was a brief spell during the mid-1970s in which employment trends were more favourable in the periphery than in the core. In the late 1970s the older 1% per annum differential reasserted itself, while during the slump the annual gap became somewhat wider, averaging 2% per annum (compared with about 6% per annum in the early 1930s). It is not difficult to interpret this in terms of a cumulative causation model with the core regions managing to maintain their prosperity even during the 1930s slump, to expand steadily and attract growth in modern industries during the upswing of the long cycle, and to maintain a relatively stable employment base during the long cycle downswing. In the periphery, in contrast, the 1920s and 1930s recessions destroyed a major part of the industrial base, leaving local demand depressed, yet still leaving enough of the older industries remaining to act as a potential source of job losses in later years. The combination of these factors meant that in the South and Midlands employment expanded steadily throughout the long cycle upswing while in the periphery "new" growth and job loss in older industries broadly cancelled each other out, leaving employment trends static, apart from a brief post-slump burst of employment increase in the mid-1930s (Tables A4, A5, A6).

Thus the post-war boom cured the unemployment problems of the periphery, but it did so indirectly rather than directly. It was the high pressure of demand for labour in the fast-expanding South and Midlands which cured unemployment in the North, and not the growth of the North

itself. The basic post-war economic history of the North can be summarised very briefly:

(1) 1945-1966 static employment, low unemployment

(2) 1966-1983 falling employment, rising unemployment

(3) 1983- ? static employment, high unemployment.

Clearly this is a deeply unsatisfactory situation from a Northern point of view. This poor employment performance has persisted despite a long period of regional policy. In the long run, the major effect of regional policy has been not so much to create a transformation in the economic structure of the periphery but rather to ameliorate the effects of continuing job losses in the still vulnerable older industries. Certainly, economic conditions in the periphery in the late 1960s and earlier 1970s were better than they would have been otherwise, as new factories replaced redundant coal mines, shipyards and textile mills, but seen in the context of the 1980s the benefits of regional policy seem slight. The main problem is that the factories introduced to the peripheral regions through regional policy themselves tended to be highly vulnerable to recession in that they generally represented centres of routine production of low strategic importance to the firm, and liable to be replaced by new factories using cheaper labour in the newly industrialising countries. In effect, regional policy improved the employment performance of the periphery up to 1973, while thereafter a shortage of new regional policy factories and a high rate of closure in existing factories meant that a *deterioration* in the employment performance of the periphery resulted from the workings of regional policy. It is a sad commentary that current unemployment rates in North East England, Wales and Scotland are almost certainly no higher than they would have been if post-war regional policy had never developed.

This point needs to be amplified if the search for a more successful form of regional policy is to be fruitful. Detailed analysis of the geographical structure of 20th century labour markets in Britain has shown that labour markets react quite strongly to changes in the geography of employment, so that net migration from areas of labour surplus to areas of relative labour shortage is substantial. Thus, although a severe round of job losses may push unemployment in a particular town to unusual heights the spontaneous processes of labour migration will tend, even in the absence of significant new job creation in the area, to reduce unemployment to more normal levels. This process is at its most efficient during periods of low unemployment nationally, and during cyclical upswings (implying a time lag between period of job loss and period of maximum efficiency of migration), but can also be observed during the less favourable labour market conditions of the 1970s and 1980s.

In the conditions of the late 1960s, however, major job losses in coal mining would tend in time to be fairly effectively absorbed locally by selective migration, keeping the local economy at fairly close to full employment. The effects of job creation through regional policy have tended to be more to speed up the reduction of unemployment rather than to reduce the ultimate level to which unemployment will return to subsequent to a major round of job losses. The *long-term* effects of regional policy has thus been to increase levels of employment in the assisted regions, and to reduce net emigration, rather than to reduce unemployment. Thus if a regional policy factory employs 200 a few years after it has been built, its effect on the local labour market would not have been to reduce unemployment by 200 but rather to have increased the local population (or slowed the decrease of the local population) by close to 200 workers plus their families. Job creation through regional policy reduces local unemployment, but not by as much as is commonly thought.

If now one takes an even longer-term perspective and considers what might happen to regional policy factories in a later severe recession (1974-76, 1979-82) then much depends on how recession-prone these new factories are. Experience shows that employment in such industries is often highly vulnerable to recession; a concentration of employment at the start of a period of recession will thus tend to accentuate local increases in unemployment during that recession. Furthermore, at a time of mass unemployment localised pools of unusually high unemployment tend to disperse much more slowly than under full employment, so that the effects on unemployment of a job loss event of a particular size tend to be more persistent. It would appear to be the case that from the perspective of a post-slump year the increases in local unemployment attributable to job losses in regional policy factories at least equal the decreases in local unemployment resulting from earlier employment growth in regional policy factories. Thus at present North East England undoubtedly has higher levels of unemployment and population than it would have done in the absence of regional policy, but it is highly unlikely that unemployment rates are significantly higher than they would have been without regional policy.

This does not mean that regional policy was irrelevant or a mistake, but it does suggest that regional policy as it has traditionally operated is not the critical strategic response to create a revival in the North sufficient to deal with the problems of heavy unemployment. Neither is urban policy the solution. A far broader approach to the restructuring of the British economy is required such that the whole of the British industrial economy is far more securely based than has been

the case hitherto, and such that today's employment growth is not simply the prelude to tomorrow's job loss.

Ultimately the key to mass unemployment lies in the decline of industrial employment, while the concentration of unemployment in particular parts of the country results from the concentration of industrial job losses in the localities concerned. The main test of the effectiveness of the regeneration of the economy is whether low and stable rates of unemployment are achieved or, in the shorter term, are realistically in prospect. Two diametrically opposed approaches to the regeneration of the economy and of employment may be noted.

(1) The deindustrialisation-reindustrialisation approach which argues that a programme of reindustrialisation is urgently required to counteract the effects of deindustrialisation, and that deindustrialisation has been unmitigated loss.

(2) The post-industrial approach which argues that the British economy has long passed the stage at which industrial production has been the main engine of growth, that the service sector is the key sector to growth and that it would be folly to attempt to concentrate attention on industry, a proven loser. Industrial decline is seen as being part of the transformation towards a more modern economy.

The post-industrial interpretation is currently fashionable and is framed in such a way as to have appeal as an "official" explanation in that phenomena which might otherwise be regarded as problems (industrial decline, mass unemployment, etc.) can be presented as, at worst, minor accidents on the path of progress. Analytically, however, the post-industrial interpretation must be regarded as flawed. Most notably, if the record of the last ten years or so is supposed to be one of smooth transition to a post-industrial service economy, why is it that industrial decline has *preceded* service sector expansion, rather than following on from service sector expansion and being squeezed by the pressure of demand for services? If the process of post-industrialisation, a *smooth* transition to a service economy, were to be real one would have expected the 1980s to have been a decade of *low* unemployment. In addition, despite all the media attention given to the "yuppie" factor, the bulk of service sector employment growth in recent years has been in low paid sectors, suggesting a partial filling of a labour market vacuum rather than a process of the service sector squeezing out the industrial sector.

Attention therefore returns to the deindustrialisation thesis, to which the present author holds. This argues that Britain's industrial decline has largely been self-inflicted, the results of inept economic policies, of the overdominance of City interests in the formation of

economic policy, of antiproductive national research and development strategies (and particularly overconcentration, encouraged by Government, on military projects) and in more general terms the result of poor competitiveness derived from the lack of a clearly led Government industrial strategy. All these problems have much more severe effects during a long cycle downswing than during a world boom.

Behind all this lies the notion that there is a definite industrial problem and that it is potentially soluble, although powerful vested interests have to be overcome. Some progress has been made in recent years (indeed it would be very surprising if industrial progress were to be lacking in a post-slump recovery), but not nearly enough. In particular the acute balance of payments problems of the late 1980s reflect a situation in which British industrial production is unacceptably low in relation to the level of domestic and world demand for manufactures.

If the problem is examined in cyclical terms, one of the major underlying structural weaknesses of the British economy is that the growth of production tends to follow the growth of consumer demand rather than to lead it. The problem is shown in extreme form in the post-slump years, although earlier parallels may also be noted. One of the great ironies of British economic performance in recent years is that industrial investment can be said to have boomed only when a cyclical peak was already being approached, with the boom in consumer demand being so far out of control as to threaten a serious recession. The severe balance of payments problems of 1988 and 1989 are the result not simply of consumer demand being too high but also of industrial production being too low, in part as a result of the severity of slump, and in part because of the slowness of recovery of industrial investment after the slump. Urgent consideration should have been given between about 1983 and 1985 to devising policies to stimulate major new industrial investment to cope with the post-slump upturn in world demand; instead the central feature of Government industrial policy during these critical years was the provocation of major industrial conflict in the coal mining industry.

Even so, it was possible during the mid-1980s to make the assumption that the Government had learnt from its mistakes of 1979 and 1980 and had quietly dropped its "monetarist" policies for a more pragmatic approach to the economy. The Thatcher Government has never lost its ability to surprise, however, and one of the most remarkable features of the second half of 1988 has been the way that during a time of impending crisis almost exactly the same mistakes are being made as in Mrs. Thatcher's first year as Prime Minister. It appears not to have permeated the collective consciousness of the Government that a policy

of reacting to every new problem by pushing up interest rates and exchange rates will severely undermine productive activity and make recession more intense. One of the more bizarre political spectacles of recent months (late 1988) has been the monthly ritual of the announcement of exceptionally severe balance of payments deficits followed by the announcement of an increase in interest rates, presented as part of the "battle against inflation". These interest rate rises squeeze domestic demand, but they also make British products less competitive on world markets as a result of the associated exchange rate shifts. It is predictable that the end result will not be a correction of the underlying imbalance in the economy, but rather the persistence of the imbalance between production and consumption at a lower level of demand and employment.

There were dangers of a world recession after the international Stock Market crash of October 1987, but these dangers were much exaggerated by commentators with much speculation on the question of whether a slump was imminent. At worst a temporary sharp setback to the process of smooth growth seemed likely to the author. In the event the exaggerated nature of the warnings about slump led paradoxically to market behaviour directed towards intensifying the boom. Thus instead of the much predicted recession came further smooth growth, even accelerated growth. This was a moderate surprise to the author, but a far greater surprise would have been if the much predicted slump had taken place. As of late 1988 and 1989 the dangers of world recession are far more considerable. Two major industrialised countries, the USA and the UK, are presently running unsustainable balance of payments deficits as a result of a consumer boom not fully matched by a production boom. Eventually these deficits will require powerful corrective action, with the likelihood of domestic recession resulting; the longer such actions are delayed the more severe the recession is likely to be. This however implies the reduction of the size of world markets for other producers, and will thus be a source of recession throughout the industrialised world. In most cases the recessions would probably tend to be only moderate in scale, with the prospect of later smooth growth, but in those countries whose structural imbalances will cause the recession it is unlikely that recession alone, implying a weakening of the productive base, will cure the underlying difficulties.

It is impossible to provide a viable interpretation of what is popularly referred to as the North-South divide without examining the questions of broader structural change in the British economy and of the specific features of particular cyclical phases. Ultimately, though, the problems faced by the traditional industrial regions are reflections

of the problems faced by British industry, which themselves reflect at least in part the traditionally low priority given to industrial regeneration and the high priority given to the interests of "the City" when British economic policy has been set. The main post-war phases of the development of the British North-South divide may briefly be summarised.

(1) 1945-1966. A long boom in the world economy. Smooth expansion of the British economy with industrial employment surpassing all previous records. New industrial growth concentrates not in the traditional coalfield industrial areas of Northern England, Scotland and Wales, but in and around the main consumer markets of Southern England and the Midlands. Some signs of renewed employment decline in traditional industries (notably coal, cotton, shipbuilding) from the mid-1950s onwards, prompting increased attention being given to the regional problem in the early 1960s.

Full employment nationally, with labour shortages in the South, resulting from the rapid expansion in employment, but pockets of moderate unemployment in the North.

(2) 1966-1972. The long boom fades and full employment gradually slips away. Industrial employment starts to decline sharply, with major job losses in older industries, notably coal and textiles, not being matched nationally by employment growth in newer industries. Traditional specialised coal mining areas (notably North East England and South Wales) protected from the worst effects of job loss by incoming employment generated by regional policy. Job loss in coal mining slows down considerably towards the end of the period.

Unemployment increasing faster in the North than in the South.

(3) 1972-73. Major international reflation to counter the effects of the 1970-72 recession. Substantial expansion of employment throughout the country with the assisted areas in particular being favoured. Employment declines sharply in London, however, as a result of severe overheating of the local economy, expressed most starkly in high and sharply rising land costs. In earlier phases decentralisation of employment from London to less congested areas was seen as highly desirable; now the decline of employment in London was severe enough to become a major problem.

Sharp reduction in inter-regional unemployment differentials.

(4) 1973-76. Severe recession with newer industries (e.g. electrical engineering) being more severely hit than older industries (e.g. steel, coal). Complicated geography of recession. Heavy job

losses in London, though at a slower pace than in 1972-73; congestion and high costs still a problem. Major job losses in the West Midlands vehicles industry, though more through job losses in this sector being spatially concentrated than through an exceptionally high national rate of job loss in this industry. High rates of job loss in the "branch plant economies" (e.g. South Wales, Merseyside, Durham, Northumberland), but, ironically, low rates of job loss in the "vulnerable" traditional industries such as coal, steel, shipbuilding and chemicals; relatively stable employment therefore in Teesside and Tyne and Wear.

The extent of job loss in London and the West Midlands, and the extent to which recession hit "new" sectors such as electrical goods and vehicles more than "old" sectors such as coal, gives the impression of a weakening North-South divide, and a growing intensity of spatial problems at the urban, rather than the regional, scale. It has to be added that this impression, which dominated late 1970s and early 1980s academic discussion of the British space economy (Townsend 1983 excepted), relates only to a relatively brief phase.

(5) 1977-79. Economic upswing, most marked in Southern England. Signs beginning to appear, especially in North East England, and on Merseyside, of impetus being lost in regional policy as major job losses continue locally even during a cyclical upswing.

(6) 1979-82. Slump. Very severe industrial job losses and sharp increases in unemployment. Geography of slump strongly resembles that of 1929-33 slump, with job losses concentrated in the coalfield industrial areas and net employment *growth* taking place over much of Southern England. London's employment declining during the 1979-82 slump, but at a much slower pace than in the 1970s. Major problems in the car industry led to severe job losses in the West Midlands, which temporarily "joined" the list of depressed regions.

(7) 1982-88. Strong post-slump upswing in financial and other services, although industrial performance less satisfactory in manufacturing. Southern England booms, and the Midlands (both East and West) share in strong upturn, but Northern England and Scotland have relatively static post-slump employment levels. Problems of extreme congestion in South, shown in house prices and in strains upon transport networks, but unemployment still very high in North. Much media attention given to the North-South divide, but no effective Government policy.

(8) 1988-? Cyclical downturn.

It is unclear what the geography of the first post-slump recession will be like, although it is probable that it will be more like the 1974-76 recession, both in terms of severity and geographical impact, than the 1979-82 slump. In particular it is expected that London could well become a major focus of job loss, both because of the fading of the financial services boom, already leading to major City redundancies, and because of the costs of congestion. The rest of Southern England might well still prosper. The major question, though, is still the potential degree of severity of industrial recession. Some financial analysts have suggested that the recent upturn in industrial investment has been strong enough to enable industry to survive the next recession fairly comfortably, and that the main impact of recession will be in the South. This is perhaps too optimistic; undoubtedly British industry is currently, at the start of 1989, more resilient than it was in 1979, and yet it is hard to forsee anything other than a severe squeeze on industry in the next year or so, especially if the Government persists with its present policies. To the present author, it seems more likely that industrial recession will be moderate to moderately severe, concentrated in Northern England and Scotland rather than the Midlands or Wales, and will lead to further substantial increases in unemployment in the industrial areas which can only be partially concealed by changes in the method of calculating unemployment. The labour market situation in the peripheral industrial regions is not one which gives much cause for optimism, either in the short term or in the long term. Such problems are potentially soluble, or potentially nearly soluble, but only with a major reorientation of Government policy.

10.3 Future Directions For Research

Perhaps the most positive research feature of the present work, notwithstanding any major or minor errors which still stand, is the demonstration that it is possible to use detailed labour market statistics to build a coherent picture of the UK's economic geography. Earlier research has tended to make only relatively limited use of labour market data, to test relatively limited general hypotheses concerning change in the space economy, yet one result which emerges clearly from the present analysis is the enormous complexity of patterns of employment change. Year-to-year shifts in the economic climate are seen to lead to considerable variations in the geography of employment change, with reversals of earlier patterns being not uncommon, for example the change in the fortunes of London between the 1970s and the 1980s. The patterns of change are too complex for the simple hypothesis-testing approach to be of much explanatory value; instead one must wade into a complicated data set, identify any peculiarities, and interpret and attempt to explain such peculiarities. If one really wants to understand Britain's changing economic geography, one needs to know what happened where, when and why. Quite often in geographical research the "when" question has been neglected, making it difficult to answer the "why" question.

While seemingly endless pages of Census of Employment statistics and unemployment data present the researcher with an apparently forbidding task, it is in fact humanly possible to bring the data to order. To provide a detailed comparison between two Censuses of Employment would represent perhaps slightly more than a year's research work and would provide invaluable information, on which policy formulation could be based, concerning shifting patterns of employment and prosperity. Since the Census of Employment is at present taken only once every three years, a far longer interval than it takes to analyse the data properly, analysis of each Census of Employment as it ~~it~~ is completed would make a fully viable and highly useful long-term research project.

It may well be that the economic record of the next twenty or so years will not stimulate much research into the contemporary long cycle. The likelihood, suggested by long cycle theory itself, is that the economy will be on a continuous upswing with only relatively mild recessions, so that long cycle theory, an important and distinctive tool for analysing the complex trends and counter-trends of the 1960s, 1970s and 1980s, may well add relatively little to the analysis of the 1990s or 2000s. However, two points, bearing in mind the lessons of the 1960s, should be borne in mind. Firstly, the presence and

continuance of upswing is a fundamental part of the dynamics of the capitalist economy, and is largely independent of policy, so that the presence of a long boom does not necessarily imply that the economic policies being followed are correct; the relevance of this in the context of the late 1980s is obvious. Secondly, once any substantial departure from the long boom takes place, as happened in the late 1960s, there is a great danger that recessionary forces will accumulate, leading to a long cycle downswing and eventually to slump. Policy makers around the year 2010 would do well to heed these points in order to avoid a rerun of the 1970s.

As far as long cycle research is concerned, the most interesting unaccomplished tasks involve the examination of the 19th century long cycles. In chapter 2 above it was found essential to sketch the main cyclical features of the 19th century in order to develop the theory of the long cycle, but one is fully conscious that only the preliminaries have been accomplished. In particular, insofar as the long cycle theory as developed here is also a theory of slump, a much closer analysis of the slump decades of the 1840s and the 1880s is required, charting the period before slump, the slump itself and the form of the post-slump upswing. There is a major additional complication in studying the 1880s in that a major expansion of investment in the "white periphery" was a central feature of the post-slump upswing, creating an intense boom in the late 1880s in the white periphery, but leading to a secondary slump in the early 1890s, perhaps even more severe than that of the 1880s, in the periphery and the USA. It is perhaps partly because of this early 1890s experience that most authorities place the lower turning point of the long cycle in the mid-1890s rather than the mid-1880s, although in the present theoretical perspective what is involved is a collapse of a post-slump boom, as seen also in 1847, 1937 and arguably 1987 (the Stock Market crash) rather than a long cyclical slump. For the analysis of the "imperial" long cycle, perhaps more than for any other long cycle, a close understanding of the propagation of international economic impulses is required. One must add that the question of why primary producing Third World countries have significantly later dates for post-slump recovery than advanced industrial economies also needs attention.

Another important project, at the interface of natural and social science, would be to examine in more detail relationships between climatic shifts and business cycles of various lengths, particularly in the context of 19th century Britain. After chapter 2 had been completed, the author became aware of the possibility that the assumed long cyclical shifts of the 19th century might in fact be little more

than reflections of climatic change. Preliminary research in chapter 9.8 above appears to show that cyclical turning points in the 19th century economic series tend to lead rather than to lag climatic shifts, indicating that the 19th century economic long cycle is not climatically determined. There is perhaps scope for more detailed examination of this point. Also, given the increased awareness of the possibility of a major global climatic warming, broader examination of the links between climatic change and economic change would appear to be a fruitful field of research.

Moving on to the economic history of Britain after 1918, possibly the most interesting lead for further research in chapter 4 concerns the post-1932 years, and the economic geography of recovery. There are obvious comparisons to be drawn between the 1930s and the 1980s and yet in the 1930s the industrial economy responded more vigorously to the post-slump upturn than in the 1980s with the result that even the traditional and depressed industrial areas showed substantial increases in employment. In the present thesis it has not proven possible to penetrate far beneath the surface patterns of industrial change in the mid-1930s; possibly the most promising approach for further work would be a comparative business history approach, using archive material to attempt to reconstruct the detailed influences leading to a rapid expansion in industrial activity after the 1930s slump.

As far as chapter 5 is concerned, perhaps the interesting questions for future research concern not so much the general regional patterns of economic change which have been discussed, but rather the comparisons and contrasts between the operation of labour markets at full employment and the operation of labour markets at less than full employment. Quite clearly it would not be possible to conduct analysis of labour markets at full employment without engaging in historical analysis.

The disappearance of full employment since the mid-1960s has of course been the central research theme of this thesis, around which all else revolves. Careful study of year-by-year, and occasionally month-by-month, statistics on industrial employment change, total employment change and unemployment has shown conclusively (it is hoped) that the main reason for the existence of mass unemployment in Britain has been the loss of industrial jobs starting in the 1960s, accelerating through the 1970s and reaching its maximum severity in 1980 and 1981. Spatial patterns of unemployment largely reflect spatial patterns of employment change, although the functioning of spatial labour markets, involving a spatial redistribution of labour in response to patterns of employment opportunity, modifies this basic pattern. This may sound

almost too obvious to be a conclusion, with little being said here that could not have been said in 1981, but it is the filling in of detail, the making comprehensible what would otherwise have been background noise, that is important.

Quite possibly the current work has implications for the way industrial geography should be studied; too often there seems to be a major gap in the level of analysis between interview work covering in detail what is happening semi-contemporaneously, and historical work which makes comparisons of levels of employment at intervals of perhaps five or ten years, but says little of detailed patterns of change within such an interval. In historical analysis the most fruitful approach seems to be to study each arm of each business cycle, rather than to study a simple before and after pattern.

The geography of unemployment is a subject which has received virtually no proper attention, an astonishing state of affairs given the well-recognised extent of the North-South divide. As far as the author knows, the current work is the only recent work which (a) relates patterns of unemployment change to patterns of employment change, (b) recognises the elementary statistical point that one needs to examine percentage point changes in unemployment rather than percentage changes in unemployment to gain an unbiased picture of what is happening, *and* (c) studies patterns of unemployment change across short time intervals. Much more research is needed to fill this very basic gap in the literature; the present work is only a beginning, with little attention paid to regional patterns of unemployment change after 1984.

Yet the analysis needs to be broadened as well as deepened. A closer analysis of the structure of the business cycle is required. The essential problem seems to be to understand what is happening on each arm of the business cycle, and on various points of each arm of the business cycle. An attempt has been made to examine what has been happening to the labour market at various stages of the business cycle, but quite clearly there are pressures building up in the productive and financial economy long before any overt labour market effects are felt.

What the author has in mind is not simply another set of abstract theoretical models, involving lagged relationships or differential equations, to mimic empirically observed cyclical movements in the economy, nor even the construction of a series of reference cycles (O'Dea 1974; *Economic Trends*, various) to show how a composite cycle can be constructed from a large number of statistical series with various leads and lags. The problem is rather to build up the structure of the business cycle from the day-to-day and week-to-week working of the economy, noting how pressures build up and how they disperse. Quite

clearly, close scrutiny of the financial press is required, and quite clearly it will be impossible to study more than a few business cycles in the detail required. Perhaps some of the most interesting cycles to examine in this context are those of the 1960s, since the very important question of how the long boom disintegrates is still unanswered, or at best half-answered. Obviously analysis of the slump could be extended still further, although given that the slump is an extremely atypical business cycle and that it is unlikely that there will be another slump in the next three decades, then the slump is not the best cycle or recession to study if one wants to develop practical suggestions for economic policy formation. There is more to be learnt from the 1960s, when the problems of maintaining a 3% growth rate over a long period of time became apparent.

Such historical studies would be, in a sense, relatively straightforward in that the researcher, although working with irretrievably incomplete material, always has the benefit of hindsight. A more exciting option is the study of a recession, or a full cycle, as it actually takes place. As these words are written, at the beginning of 1989, there can be little doubt that the downswing of the business cycle is imminent. What is not clear is whether the economy is headed for, in the current jargon, a "hard landing" or a "soft landing"; long cycle theory suggests a relatively soft landing while examination of Government economic policies and priorities suggests a hard landing. To attempt to track down all the options and possibilities before they harden into historical fact, and to see a given outcome as one of a range of possibilities, is a highly important exercise. The present author tried it in 1980 but much to his regret the written work was not completed until 1989. A repeat, with much less historical background to be researched, would, it is hoped, be ready much quicker with no need to write the equivalents of chapters 2, 3, 4, 5, 6 and 9 in the present work.

There is potentially an enormous amount which can be learnt about economic structure in this way, whether one is dealing with the historical record or contemporary events. One of the present writer's central methodological beliefs is that the most appropriate way to tackle complex economic questions is to examine the detailed chronological structure of events; only in this way does it seem possible to infer with confidence the nature of causal relationships in the historical record.

This takes discussion back to the *terra incognita* of the 19th century. Even the basics of labour market structure are obscured through lack of statistical information. For employment data one has to

rely on the Census of Population, but this merely gives a snap-shot at ten-yearly intervals, and thus is useless at indicating short-term changes in the labour market; furthermore no clear distinction between employment and unemployment is made in the early Censuses. For unemployment the information available is incomplete and heavily filtered, with different data sources suggesting radically different interpretations; there is hope, however, that significant advances can be made in understanding patterns of 19th century unemployment and concealed unemployment if critical use is made both of pauperism data and of trade union unemployment data.

There is also the problem that while such themes as the export of capital have been well covered in the literature, there is a noticeable absence of any account which gives a more general view of the detailed chronology of economic change in late 19th century Britain. Ironically the first half of the 19th century is much better covered in this respect, in works such as Smart (1910, 1917), Matthews (1954) and Boot (1984). The apparent lack of detailed work covering the structures of economic change over short periods in the downswing from the early 1870s to the mid-1880s is deeply felt. There have been numerous academic debates on whether there was a "Great Depression", whether foreign investment was good or bad for Britain, and so on, but there has been little discussion of year-by-year patterns of economic change in what was undoubtedly one of the most crucial phases in the development of the modern capitalist economy. This, surely, can be remedied.

This section has concentrated mainly on how the current research could be extended. Quite clearly these suggestions, as well as the text of the thesis, reflect the intellectual temperament of the author, with a preference for detailed analysis of complex data sets in order to unravel complexity. No doubt others would wish to develop themes in different directions. For example, much emphasis has been given to displacement effects in the labour market, in which it is often not so much the skilled industrial workers affected by redundancy who bear the chief burden of unemployment, but more likely the teenager denied opportunity to work because the job that he or she would otherwise have filled is occupied by a skilled ex-industrial worker or someone whose opportunities for advancement have been blocked by the re-entry of the redundant industrial worker on the labour market. Such a process clearly exists, and is responsible for unemployment being concentrated among younger age groups. This process has been assumed, and dealt with in statistical terms; another researcher with a different intellectual temperament might see scope for a detailed local research interview programme here. These approaches are of course complementary; there is no question of one

approach being "right" and the other "wrong". The present author does, however, have strong doubts about the validity of another general approach which appears under more specific forms as applied neo-classical economics, cliometrics, or quantitative human geography. The issue at stake is not quantification as such, but rather how statistical material is analysed. The "quantitative" approach is based essentially on the testing, by means of inferential statistics, of a series of true/false hypotheses on a historical data set. This approach at best oversimplifies and at worst badly distorts. The chief use of statistical material in the present thesis is to provide a more precise form of description than is possible with unquantified material alone. Once one has reached a sufficiently sophisticated level of description, the process of explanation can be placed on a much firmer footing.

10.5 Full Employment in a Free Society?

If social science research is not to be an inward-looking activity, perhaps doing little more than acting as part of the acculturation of the next generation of the middle class as research results become disseminated via text-books and lectures, then practical and political implications need to be considered. Regrettably, under current political circumstances there are diminished possibilities for reputable social science being used as an input into Government policy now or in the forseeable future. Furthermore it hardly accords with principles of scientific honesty to distort one's analysis, dilute one's conclusions or reverse one's policy recommendations to such an extent that the Government would see it as possible to implement the policies recommended. Such a conjunction of circumstances is of course highly frustrating to the author; one would dearly wish to offer practical solutions to the problem of mass unemployment, but no solution is truly practical unless it has a chance of being put into practice.

The framing of policy recommendations is therefore no easy task. There is a temptation, which must be resisted, to withdraw into an impotent "radicalism" which suggests that since the capitalist state will not, especially under present circumstances, carry out policies in favour of the working class, then debate on policy is meaningless. A more impressive option is to attempt to develop a set of genuinely workable alternative policies, to explain what these policies are intended to accomplish, and to focus more clearly on the political reasons why the Government in power would not wish to follow such policies. The intention is thus to stir up debate, to work towards changing the climate of political opinion, rather than to attempt to offer any direct contribution towards the framing of Conservative economic policy. While the beneficiary of the desired shift in political opinion would be the Labour Party, as being the party most likely to be politically sympathetic towards the aims and analysis presented here, it should be noted that the author is neither a spokesman for, a member of, nor even an uncritical supporter of, the Labour Party. Indeed some of the most important changes of political ideas would have to take place *within* the Labour Party. Above all a sharpening of policy is required to present radical solutions to real and persistent problems; the trap of reacting to prolonged Opposition by diluting policies must be avoided. First of all, then, one would desire a more dynamic Labour Party, more receptive to new ideas. This would still only be a small step towards the ultimate implementation of a policy designed to regain full employment; elections still have to be won.

All that is possible at present is to set up a series of policy proposals and objectives which cannot be implemented at present but might well be implemented in a modified form at a future date. In forming political programmes value judgments are undoubtedly of critical importance, and these should be stated explicitly. Such judgments are in the form of an assessment of what is morally right and wrong, what is fair and unfair, and not in the form of whether soap powder A or B is preferred. The present writer's own basic value judgments, set in the context of the British experience of the 1980s, are as follows:

(1) Mass unemployment is grossly unfair, and wrong.

(2) The most important political task in the socio-economic sphere is to eliminate mass unemployment as soon as is possible.

(3) Any political programme which does not seek to eliminate mass unemployment, or does not place a high priority on eliminating mass unemployment, is reactionary and needs to be opposed.

(2) and (3) above are value judgments, yet they rest analytically and historically on the notion that it is technically possible to eliminate mass unemployment in current and recent past circumstances, and given a reasonable amount of time. In other circumstances, for example during the early part of a slump, it would be technically impossible to return the economy to full employment, and the priority would be to stem the rise in unemployment as much as possible.

In slightly more general terms, therefore, the desired objectives of economic policy should be:

(a) To ride out any recession with as little structural damage as possible.

(b) To take full advantage of any economic recovery, and, if there is substantial unemployment at the start of that recovery, to remove as much unemployment as possible.

There do not appear to be any technical reasons, despite the present (1988-89) balance of payments crisis, why full employment should not be achievable in, say, the lifetime of two Governments committed to full employment, although the task will undoubtedly be difficult. The task will be even harder if, as a combined result of structural imbalances in the economy and the Government's handling of the economic problem, a "hard landing" occurs and unemployment again starts to increase substantially. If the eventual elimination of mass unemployment is a genuine priority, the effort needed to reduce unemployment would have to be intensified significantly.

One is fully aware that in capitalist terms mass unemployment is not a technical problem in that it does not impede the working of the capitalist economy, (provided the state takes efforts to keep welfare

payments down), and indeed may well enhance the working of the capitalist economy by creating downward pressure on wages and by eliminating acute labour shortages. Mass unemployment is of itself not an economic problem or a cause of economic decay, but rather a residual of accumulated economic difficulties of the past. Economic difficulties cause mass unemployment, but mass unemployment does not, on the whole, cause economic difficulties. Thus any Government following a purely capitalist logic would give a low priority to reducing unemployment, especially if increases of employment take place outside the private sector. It would of course be electorally unpopular if the Government were seen to be doing nothing about mass unemployment, but in the context of a post-slump recovery these electoral problems can be averted. Firstly, sustained and rapid growth is normal during post-slump recovery leading to spontaneous growth in employment and a reduction in unemployment. This of course is a process which is independent of Government policy. Scientifically it would be a careless mistake to assume that high growth rates have come into being *because* of Government policy in that firstly, rapid growth has been international in scope; secondly, high growth rates can be explained reasonably elegantly and convincingly in cyclical terms (chapter 2 above); and thirdly, that a degree of skill in economic management would have to be assumed which was clearly absent before 1982. Of course political pronouncements do not have to be rooted in scientific accuracy, and quite understandably the Government has not been reluctant to claim that its own policies have been responsible for economic regeneration, rising real wages and the start of a reduction in unemployment. One can hardly criticise the Government for making such claims, but the Opposition parties lay themselves open to considerable criticism for not convincingly disputing such claims. All this is merely the normal rough-and-tumble of party politics; what is more reprehensible both in terms of political honesty and in terms of the welfare of the people directly affected, is the Government's decision to restrict the availability of unemployment benefit in order to exaggerate, just before a General Election, the fall in unemployment which resulted from the post-slump boom (chapter 7 note 84).

Given its own set of economic priorities and class interests, it is not wholly surprising that the Government has done little to reduce unemployment by an amount greater than that determined by the general cyclical upswing in the economy. This is doubly unfortunate in that economic conditions between 1983 and 1988 were particularly favourable for engineering a major reduction in unemployment, given an international economic upswing in the advanced industrial economies, and given that the effects of North Sea oil and the expansion of invisible earnings in the

insurance industry (chiefly through modernisation in Lloyd's) made it possible in Britain for consumer demand to expand unusually quickly without (until 1988) running into balance of payments difficulties. Economic conditions in future will almost certainly be more difficult and the spectre of rising unemployment from a very high base figure will again be present. A window of opportunity for dealing with mass unemployment will have been passed by.

Even to conceive of a set of economic policies for eliminating mass unemployment requires a much broader perspective on the economy than is taken by the Government. What must be avoided is any notion that what is optimal for the capitalist interest is automatically optimal for the national economy. Without investigating too deeply here Keynes's theory of effective demand, one can suggest that two central components are that the equilibrium position of the economy is determined by capital rather than by labour, and that if the position is one of equilibrium at less than full employment then this is because capitalist income is maximised at less than full employment. It is almost self-evident that the optimum position for workers as a class is that of full employment. The author intends to develop this line of argument in a later work.

To put the basic propositions less formally, the rich have nothing to gain, and probably a lot to lose, from a policy of full employment, while ordinary people can hardly fail to gain from a full employment policy, whether through gaining jobs or through broadening their range of employment opportunities. If the gains and losses are added, and results expressed at the national level rather than at a class level, the UK as a whole would gain rather than lose from a full employment policy, as with increased employment total production, and hence total income, would increase.

All this may sound unrealistically "radical" in the context of the late 1980s, yet in substance is little different from the prevailing approach of the late 1940s, 1950s and 1960s, when it was generally accepted that the free market (or, less euphemistically, the capitalist interest), when left to itself, would not create optional economic conditions for the mass of people, and that it was a primary duty of the state, and of elected Governments, to *intervene* in the economy to create more socially acceptable economic conditions. This basic principle may be supported without necessarily giving support to the specific policy measures which were applied in particular historical circumstances. What is important, though, is that an intellectual framework is created that is broad enough to encompass the possibility of a full employment policy, broad enough to avoid the restrictive assumption of an identity of interest between capitalists and the national economy.

The intellectual climate changed considerably during the economic downswing which intensified during the 1970s, and increasingly it came to be suggested that Keynesian policies aggravated, or even were directly responsible for, economic stagnation and price inflation. This is largely a myth, just as it was a myth that Keynesian policies created the post-war long boom, and just as it is a myth that free market economic policy created the upswing after the slump of the early 1980s; these myths all attribute to Government policy changes which were in fact caused by deeper and more powerful conjunctural shifts in the capitalist economy itself.

The net result of the uncertainty of the 1970s was a return, most noticeably in Britain, to a "free market" conception of economic policy, in which it is denied that the state has any useful role, other than as a monetary authority, in managing the economy, and in which it is argued that leaving all important decisions to the free market (capitalist interest) will promote the national economic interest most effectively. Yet it is precisely the existence and persistence of mass unemployment that demonstrates clearly the difference between the capitalist interest and the national interest; the capitalist equilibrium provides a level of employment below the socially optimal level of employment. In certain circumstances jobs are lost, and unemployment created, because the optimal level of employment for the firm is below that which previously existed, while in other circumstances unemployment persists because it is not worthwhile for the capitalist sector to expand employment sufficiently to regain full employment.

If any progress is to be made towards full employment it is necessary to abandon the unduly restrictive assumptions of free market economics. It is not enough to suggest, however, that the state has a role to play; one must also consider, with rather more attention than in the heyday of Keynesian post-war policy, what type of role the state ought to play. Much too little attention has been paid in Britain, for example, to the possible entrepreneurial role of the state; too often enterprise has been assumed to be best left to capitalists, with nationalisation representing the transfer of less successful industries from undynamic private enterprise to undynamic state ownership. The Enterprise Board concept of the late 1970s, continued by various local authorities in the 1980s, is more promising, but given that the world economic crisis was far advanced by the time these initiatives were set up, much of this investment was directed to stemming decline rather than promoting advance. State enterprise and the state-backed (as opposed to capitalist backed) entrepreneur provide, or could provide, important new possibilities for expansion.

Another problem with the free market approach is that it does little to identify long-term strategic weaknesses in the economy. Government is far better placed than the market, with its short-term bias, to identify such weaknesses and to deal with them. In particular, the position of manufacturing in the economy is still a major source of weakness, about which almost nothing has been done in the last ten years. It may well be objected that manufacturing profits are at present (1988-89) at historically very high levels, indicating the opposite of an industrial problem, but this would miss the point for two basic reasons. Firstly, profits are cyclically highly variable, and a peak in profits is likely to represent a cyclical peak, and furthermore the peak of an unusually strong cycle, more than it represents any long-term transformation. Secondly, and even more critically, to judge the state of manufacturing industry solely by profitability would be to judge the situation in purely capitalist terms, rather than in terms of the interests of the economy as a whole.

The problem with Britain's industrial base is that it is currently much too small in relation to national economic requirements. Most of Britain's current economic difficulties stem from precisely this. The central theme of this thesis is that mass unemployment in Britain has arisen from mass job loss in industry, with rapid cutbacks of employment in times of economic difficulty, and only slow expansion of employment (or maybe even a continued slow seepage of labour) during more favourable times. In terms of employment policy it is imperative from the national point of view to enhance the job-generating ability of industry during cyclical upswings and to stem industrial job losses during recessions. The former is to be achieved more by "industrial" policy than by "economic" policy, while the priority for attaining the latter objective is to abstain during periods of financial crisis from measures which place undue strain on the industrial sector.

Another problem directly related to inadequate expansion in the industrial sector is of course the balance of payments crisis, which has already provoked the Chancellor of the Exchequer into announcing a series of interest rate increases designed to dampen down consumer demand, but which will also have the effect of squeezing industrial investment both by increasing the costs of production and by reducing demand. Such a policy treats the balance of payments difficulties as merely a short-term problem, requiring nothing more than short-term remedies. Such a point of view is seriously mistaken; the balance of payments problem is the outward expression of the chronic inability of British manufacturing to respond strongly enough to create a balanced national economy. In the 1970s and early 1980s the problem was seen outwardly largely in terms of

industrial job losses and accumulating unemployment; in the later 1980s the problem is seen in terms of a major, and new, balance of payments deficit in manufactures which completely overturns the traditional trading relations on which Britain's external balance relied. Traditionally, Britain has been a heavy importer of food and raw materials, but has been a major net exporter of manufactures and services. Now, services and North Sea oil have to support the large trading deficits in manufactures and non-oil primary products. This is an extremely precarious balance which relied during the mid-1980s on high production and prices in the oil industry. The post-1986 downturn in the oil industry has exposed very clearly the underlying problems of the British economy (see Table 8.28). Any sensible economic policy in future years will have to tackle these underlying problems, which might well be expected to become more serious in future years as the support given to the inland economy by North Sea oil revenues gradually fades away.

There have been claims by Government, and in various media outlets, that the last few years have seen a favourable transformation of the industrial economy, in contrast with the "stagnation" of the 1970s. Some of these claims are nonsensical; if output in a particular sector in 1988 has reached record levels, just surpassing a previous peak in, say, 1979, then any economically literate observer would point to stagnation rather than to success in the case involved. Other claims deserve more attention, for example the claim that faster than usual rates of productivity growth, exceeding even those of the early 1960s, result from a transformation of industry.

Figures for manufacturing investment (*Economic Trends, Annual Supplement* 1988, p.58; *Economic Trends* various) show investment rising sharply through the 1950s and very early 1960s, and then fluctuating cyclically with no real tendency to increase in the longer term. After 1979 investment fell sharply, standing at 62.7% of 1979 levels in 1982. The subsequent cyclical increase in investment was slower than the initial decline, and in 1987 manufacturing investment was at only 89.7% of 1979 levels. By this time a fierce consumer boom was in place, and industrial investment expanded sharply, overtaking 1979 levels in 1988. It seems almost certain that 1988 represents a cyclical peak, however. Comparing cyclical peaks, and disregarding fluctuations within the cycle, manufacturing investment has remained static, as has manufacturing output (up 1.1% between 1979 and 1987; up 6.9% between 1979 and 1988). There is little sign of a major transformation here.

Where the record appears more impressive is in any series in which the number of manufacturing workers appears as the denominator, simply because of the intense decline of employment in manufacturing.

Thus if manufacturing output is static and employment falls by a third in a limited enough time, then the combination of these two highly unsatisfactory series is a rise in manufacturing productivity. Even so, technical reasons need to be considered as to why the *rate of growth* of productivity is high, when investment is not particularly high. The basic point would appear to be that while manufacturing investment is low it has not fallen as sharply, from 1979 to 1987, as has manufacturing employment. Therefore investment *per worker* has been very high, with the obvious implication being a high rate of growth of productivity. Naturally, a high rate of growth of productivity is welcome, but it does not of itself indicate that Britain's industrial problems have successfully been solved. There is an urgent need to transform the industrial sector from one of moderate investment, moderate output growth, high productivity growth and static or declining employment to one of high investment, high output growth, high productivity growth and rising employment. A significant improvement in the balance of payments on manufactures, representing a reversal of the major deterioration since 1979, would represent a sign that the problems were beginning to be confronted successfully.

Without a close first hand knowledge of the internal workings of British industry, it would be presumptious to suggest detailed industrial policies at this stage. In any case, strategy must precede tactics, a clear understanding of objectives must precede detailed policy statements. Some key elements suggest themselves, however:

(1) A macroeconomic strategy designed to help "industry" rather than "the City", with the objectives being cheap money and a relatively low exchange rate, rather than dear money and a high exchange rate. The destructive mistake of responding to any signs of economic difficulty by pushing up the interest rate must be avoided.

Such a policy will doubtless be unpopular with the City, and past experience suggests that the City could well try to stage a "crisis of confidence". Such pressure needs to be resisted by a determined Government.

(2) Various state enterprise schemes, aimed not so much at nationalising existing private sector industry (full employment is a much more important goal than state ownership), but rather the raising of capital from state resources to accelerate the process of new industrial development. The building of reserves of industrial expertise within the state apparatus is seen as an important part of the development of the "enterprise state".

(3) The return to a more vigorous regional policy. Here it is

necessary to be clear about objectives. One obvious and fully acceptable aim of a renewed regional policy is to absorb at least part of the excess unemployment in depressed areas. What regional policy *cannot* do is "solve" the regional problem, give the assisted regions extra immunity to future recessions or eliminate inter-regional differentials in unemployment. If one is seeking to avoid future recessions being particularly severe in the industrial areas, the primary task is to stabilise the industrial base as a whole, rather than to bring new waves of industry to the assisted regions.

The strategy being considered here represents part of the stabilisation process rather than an alternative to it. If one examines a time series for fixed investment in manufacturing industry (*Economic Trends Annual Supplement, Economic Trends,* various) it becomes clear that investment in plant and machinery is high by previous standards, while investment in new building and works is low by previous standards; the implication is that while industry is successfully re-equipping itself, it is not generating much expansion in floorspace or employment terms. It is important to generate such expansion, and one obvious priority would be for the state to take the lead in factory building, with particular preference being given to medium size towns in areas of high unemployment, provided such towns both have space for expansion of industry and housing, and are within reasonable daily travelling distance of depressed conurbations. Planning major new industrial expansion within the cities themselves would go against the grain of industrial location trends; it is better to work with the grain. The point of locating such advance factories in less prosperous regions is not just to absorb local unemployment, but also to provide a genuine encouragement to industrial growth by locating such factories in areas where industrial labour is readily available.

Regional policy is one aspect of industrial floorspace policy; Fothergill, Monk and Perry (1987) examine the question in more detail, focussing attention on the *quality* of industrial floorspace, and arguing that qualitative deficiencies in industrial premises have impeded industrial expansion. The logic of their position is for a policy of renewal of industrial property in existing locations, notably the larger cities. These aspects are perhaps best regarded as complementary rather than contradictory; the objective would be, as far as possible, that no firm, be it small, medium or large, should have its expansion potential

blocked by site problems or, at a time of mass unemployment, by labour shortages.

(4) A research and development policy which reduces the excessive proportion of national R & D expenditure on military and big technology projects, and encourages the development of civilian R & D. Recognition needs to be given also to the importance of basic scientific research, and semi-applied research, in non-industrial institutions as a medium and long term spur to industrial growth.

(5) An attempt to modify corporate taxation structures so that maximum profits would tend to be attainable at a higher level of output and employment than would otherwise be the case.

The industrial sector is not the only sector in which expansion is strategically important. There is also the need to re-expand public sector services, notably health and education, in order to overcome the Government-imposed stagnation of the last decade. The current conjunction of underfunded public sector services, a large Budget surplus and record balance of payments deficits is, in economic terms, bizarre. Given the size of the Budget surplus which developed during the post-slump recovery, there is no real excuse for the NHS or education to be underfunded. Furthermore a given amount of expenditure on public sector services would lead to a considerably smaller leakage from the national economy in terms of imports than would a similar amount of consumer expenditure "in the high street". There is the implication that an increase in public sector spending, and a shift from private consumption to public consumption, would ease balance of payments problems less painfully than would a simple squeeze on consumption.

There were times in the 1970s when the cost of financing public sector services appeared to strain national resources, but this represented a temporary problem at a time of recession, and not evidence that public sector services are intrinsically uneconomic. Such services do not directly generate profits for capitalists, but it would be a very narrow view of the economy to suggest that only that which increases capitalist income is economic. Public sector services provide employment and, for the most part, genuinely useful employment. Furthermore it would be a cardinal mistake to assume that the benefits of health care and education go only to those receiving health care and education, and that therefore the optimum provision of these services (give or take a bit of "charitable" work) should be determined through price, by the individual's calculation of cost and benefit. In the long run a healthy, dynamic, productive economy with opportunities for all depends on a healthy, well educated workforce. Such a dynamic economy could readily

afford to pay for good health care for all. There may of course be temporary difficulties in funding during times of recession, and this may require temporary checks on expansion plans, but the commitment to expansion in the longer term is needed and should be made.

Detailed blueprints for reducing unemployment and for climbing back to full employment must wait. Firstly though it is necessary to have a Government (or even an Opposition) committed to these objectives. For any Government in such a way committed, a basic three point strategy is required.

(1) To encourage the accelerated development of the industrial base (and to attempt to cushion industries through any international recession).

(2) To reverse the current decay in the public sector services, and to generate significant expansion, and significant new employment, in these services.

(3) To show sufficient resolve to resist any City attempts to undermine a national full employment strategy.

In addition to longer term strategies for eliminating unemployment, any incoming Government with a commitment to social justice will need to take *immediate* measures to improve, through more generous social security benefits, the financial position of the unemployed, the irregularly or casually employed, and others in poverty. This, it is hoped, is so obvious as not to require elaboration.

When such a basic programme for both the short and the long term is under way, only then can we speak of a Government with a definite commitment to full employment. What is required in the long term is not help for the unemployed but the abolition of mass unemployment, not help for the poor but the elimination of poverty, not prosperity for most but opportunity for all. So far only the easy options have been taken and the reduction in unemployment, in relation to what is required, has been modest. It is more than overdue to direct ouselves, once again, to the creation of full employment in a free society.

Appendix Tables

Table A.1 Initials used as abbreviations for U.K. regions in text of thesis

(i) Contemporary (post-1974) regions

SE	South East	YH	Yorkshire and Humberside
EA	East Anglia	NW	North West
SW	South West	N	North
WM	West Midlands	Wa	Wales
EM	East Midlands	Sc	Scotland
		NI	Northern Ireland

Earlier regions with different names but covering broadly similar areas as the above are initialled according to the post-1974 names, thus

London and South East is included under South East
North Midlands is included under EM
Midlands (where EM and WM are not amalgamated under a composite Midland region) is included under WM
Eastern is included under EA
Yorkshire and Lincolnshire is included under YH

(ii) Regional initials not in current use

L London; S Southern (western part of Outer South East - see Table A.2); M Midland (composite of East Midlands and West Midlands); Y (Yorkshire) North Eastern, 1936-1946; East and West Ridings, 1946-1962; YNE North Eastern, 1923-1936; Ire Ireland (before creation of Irish Free State)

Table A.2 below presents a more detailed description, by county of regions at any particular point in time.

Table A.2 Approximate Composition of Regions, 1923-1985, in Department of Employment, etc., Statistics.

1923-1936

L - Broadly the City of London and Metropolitan Police Districts.

SE - As present SE, but includes East Anglia and excludes London and some counties west of London (Berkshire, Hampshire, Oxfordshire).

SW - As present SW, but with addition of Berks., Hants., Oxon.

M - Present EM and WM, plus Huntingdonshire and the Soke of Peterborough (now part of EA).

YNE - Durham, Northumberland (pre-1974 counties) plus YH plus remainder of historic Lincolnshire (apart from Stamford district, in M).

NW - As present NW, plus Cumberland and Westmorland (present-day Cumbria).

Sc - As present, but including Berwick district.

Wa,NI-As present.

(Note: Here and below some minor differences between pre-war definitions, and post-1974 definitions, due to new county boundaries and new counties, have been ignored).

1936

New region formed:

N - Broadly as present Northern region, thus Northumberland, Durham, Cleveland district of Yorkshire (all from previous YNE region) plus Cumberland and Westmorland (from NW region).

NW - Loss of territory to N (see above).

YH - Loss of territory to N (see above).

In all three cases, the post-1936 regions correspond reasonably closely, at least insofar as major urban areas are concerned, with current regions. *Care must be taken not to confuse YH (then referred to as the North-Eastern Division) with the Durham-Northumberland coalfield.*

1937

SE - Expanded to include the bulk of Berkshire (previously in SW) and Hunts. and the Soke of Peterborough (previously in M).

YH - Gained remaining part of Lincolnshire (Stamford district) from M.

M,SW- Changes as described above.

1939

Considerable subdivision of regions, to correspond with provincial organisation for civil defence.

L - London, Middlesex,parts of Essex, Kent, Surrey and Herts.

SE - Sussex, plus remainder of Kent.

EA - As present regions, plus Bedfordshire and the remainders of Essex and Hertfordshire, but minus Soke of Peterborough.

1939

S - Broadly the western part of current SE region (Oxon, Bucks., Berks., Hants., Isle of Wight, remainder of Surrey and easternmost part of Dorset).

SW - As present, except for slight differences in boundaries.

WM - As present, with minor differences.

EM - As present, with minor differences.

Y - East and West Ridings of Yorkshire, plus York CB.

NW - Broadly as present, plus Cumberland and Westmorland.

N - As present, along with North Riding of Yorkshire.

Sc,Wa,NI - As present.

There were various modifications to these regions during the war, the most important being that in January 1940, the South-Eastern Division was merged with the Southern Division, although the territory involved was transferred to the London Division in July of that year.

1951 to date

The regions used have been broadly similar to those currently in use. The main changes have been

(a) The separation of SE and EA regions in 1965.

(b) The transfer of South Humberside from EM to YH in the same year.

(c) Various realignments of regional boundaries resulting from the 1974 reorganisation of counties. Employment data from 1971 to 1974 have been based on post-1974 regions.

In calculating employment totals, the Bournemouth/Poole area has been regarded as part of SW region throughout.

Fig A2 shows the composition of regions as they stand at present.

Fig A.2 Regions and Counties of Great Britain

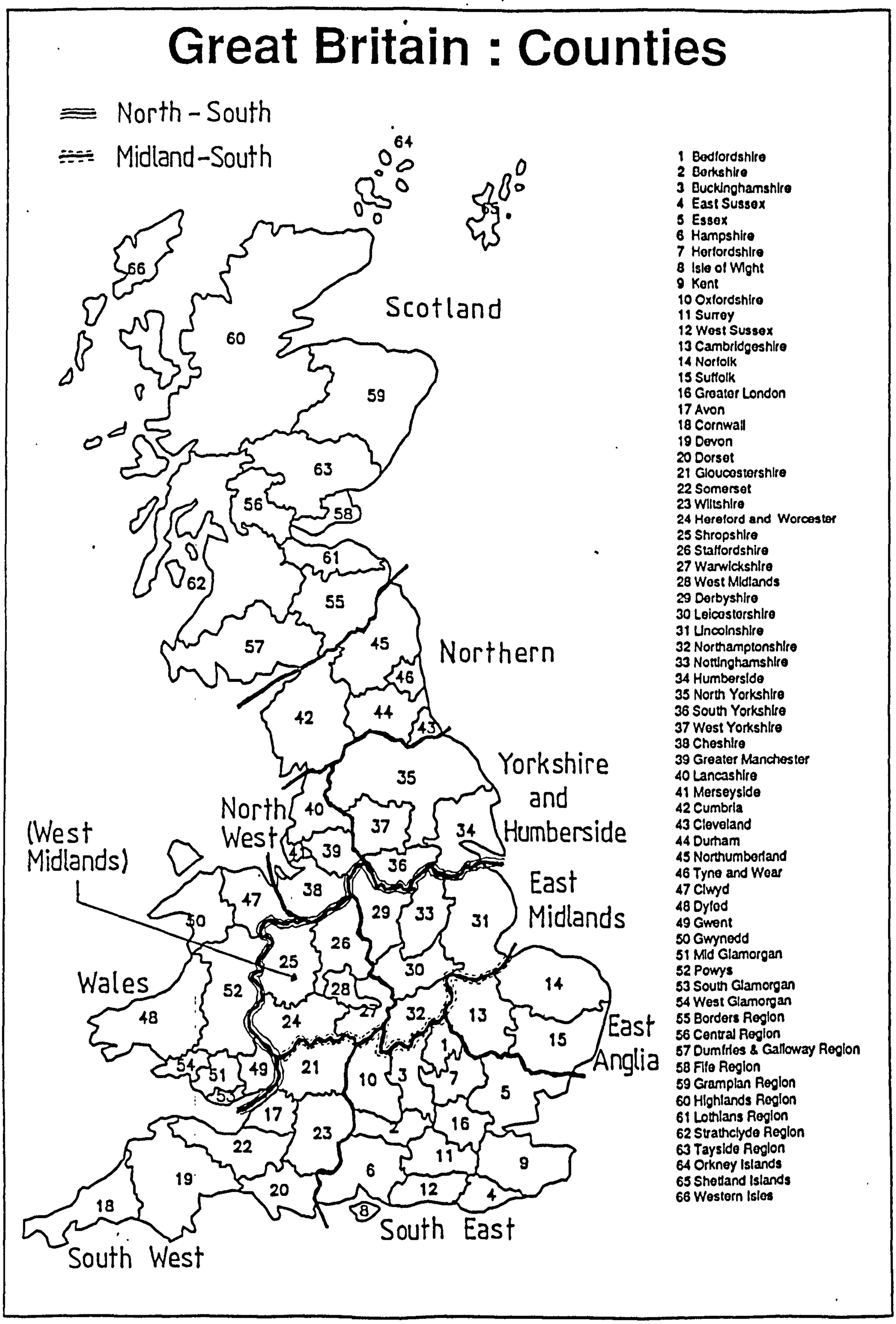


Table A.3 The Distribution of Population of Great Britain Between Regions, 1701-1981 (percentage figures)

Date	SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	"Inner Britain)
1701	*23.3*	*7.5*	*15.4*	*7.5*	*8.5*	*4.6*	*4.9*	*7.0*	*6.0*	*15.1*	*62.2*
1751	*22.9*	*6.5*	*13.2*	*7.5*	*7.5*	*5.1*	*5.8*	*6.7*	*6.1*	*16.9*	*57.6*
1781	*23.0*	*6.3*	*13.6*	*8.2*	*7.7*	*6.1*	*6.5*	*6.6*	*5.9*	*16.0*	*58.8*
1801	24.6	5.8	12.7	8.0	7.4	6.6	8.1	6.2	5.5	15.1	58.5
1811	24.8	5.5	12.5	8.1	7.4	6.8	8.7	5.5	5.4	14.9	58.3
1821	24.8	5.5	12.3	7.8	7.3	6.9	9.3	5.6	5.6	14.7	57.7
1831	24.6	5.4	12.1	7.9	7.2	7.2	10.2	5.4	5.5	14.4	57.2
1841	24.0	5.1	11.7	8.1	7.1	7.5	11.1	5.5	5.6	14.1	56.0
1851	24.5	4.9	10.7	8.2	6.9	7.7	12.0	5.6	5.7	13.9	55.2
1861	25.3	4.3	9.9	8.6	6.6	7.8	12.7	5.9	5.7	13.2	54.7
1871	26.1	3.9	9.1	8.6	6.3	8.3	13.0	6.3	5.5	12.9	54.0
1881	26.7	3.5	8.0	8.4	6.4	8.6	13.8	6.6	5.3	12.8	53.0
1891	27.7	3.2	7.4	8.2	6.4	8.7	14.1	6.7	5.4	12.2	52.9
1901	28.3	2.9	7.0	8.1	6.5	8.7	14.1	6.8	5.4	12.1	52.8
1911	28.7	2.8	6.7	8.0	6.6	8.7	14.0	6.9	5.9	11.7	52.8
1921	28.8	2.7	6.5	8.2	6.6	8.5	13.9	7.1	6.2	11.4	52.8
1931	30.0	2.6	6.4	8.4	6.7	8.8	13.7	6.8	5.8	10.8	54.1
1951	30.8	2.7	6.8	9.1	7.1	8.4	13.1	6.4	5.3	10.4	56.5
1961	31.6	2.7	6.8	9.3	7.2	8.1	12.7	6.3	5.2	10.1	57.6
1971	31.7	3.1	7.2	9.5	7.3	8.0	12.3	6.1	5.1	9.7	58.8
1981	31.2	3.5	7.6	9.5	7.6	8.0	11.9	6.0	5.2	9.5	59.4

Sources: 1701, 1751, 1781; Deane and Cole (1962), p.103 and p.6 (Scotland, but 1781 calculated by exponential interpolation), 1801 onwards; Census data, taken from Mitchell and Deane (1962), and from Lee (1979). Lee's regionalisation of pre-1974 counties has been used throughout, and 1981 figures have been calculated to fit accordingly.

Fig 3.1 and Table 3.4 are modifications of this table. A correction has been made for Lee's figures for 1871, in which Surrey has been double-counted. Figures for the South East in Lee (1979) should read 6,807,207 (not 7,172,486) and for Great Britain 26,072,284 (not 26,437,563).

Table A.4 Number of insured employees in employment, mid-year by region, 1923-1988

Number of employees ('000s)

	L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1923	1810	698	697	1523	1742	1781	585	1118	214	10168
1924	1854	740	721	1573	1794	1850	585	1150	218	10485
1925	1946	780	739	1598	1603	1885	541	1119	201	10412
1926	1979	810	754	1516	1624	1769	497	1095	207	10251
1927(a)[1]	2049	846	788	1647	1761	1932	509	1166	226	10924
1927(b)[1]	1980	819	762	1597	1696	1881	488	1148	221	10592
1928	2041	811	757	1546	1639	1815	450	1115	201	10375
1929	2114	860	782	1621	1727	1846	467	1128	224	10769
1930	2088	869	784	1557	1585	1625	425	1055	206	10195
1931	2083	879	779	1486	1450	1580	410	979	200	9846
1932	2067	868	760	1493	1443	1625	381	950	188	9775
1933	2147	925	781	1582	1536	1676	403	985	198	10233
1934	2241	964	806	1663	1585	1712	416	1026	207	10620
1935	2282	1005	836	1725	1612	1730	421	1044	204	10859
1936(a)[2]	2406	1065	914	1827	1742	1791	430	1092	211	11478

	L	SE	SW	M	YH	NW	N	Wa	Sc	NI	UK
1936(b)[2]	2585	886	914	1827	1198	1737	598	430	1092	211	11478
1937(a)[3]	2700	917	931	1935	1261	1836	651	479	1153	229	12092
1937(b)[3]	2700	996	876	1910	1262	1836	651	479	1153	229	12092
1938	2679	1002	891	1853	1226	1758	635	444	1164	195	11847
1939	2758	1037	954	1985	1328	1882	682	514	1248	229	12617
1940[4]											

	SE	EA	S	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1945[5,6]	2849	674	617	695	1370	954	1237	1993	888	657	1442	343	13719
1946	3323	751	674	764	1437	1042	1366	2163	933	666	1541	339	14999
1947[7]	3462	775	692	776	1490	1059	1385	2219	970	690	1604	364	15486
1948[7,8]	5073	1043	939	1060	1961	1369	1774	2892	1220	925	2096	470	20820
1949[8]	5123	1054	927	1058	1955	1390	1772	2891	1222	916	2094	470	20870
1950[8]	5190	1074	941	1068	1975	1407	1800	2917	1243	923	2111	470	21120
1951(a)[8]	5188	1078	950	1063	2015	1450	1825	2958	1240	915	2108	470	21260

Number of employees ('000s)

	SE	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1951(b)[8]	7046	1110	2006	1407	1823	2923	1216	910	2077	443	20961
1952	7122	1121	2008	1403	1786	2878	1211	912	2060	427	20927
1953	7182	1126	1996	1419	1779	2879	1223	922	2076	432	21033
1954	7325	1147	2056	1435	1806	2927	1233	924	2102	442	21398
1955	7475	1165	2124	1458	1821	2955	1242	933	2112	443	21728
1956	7591	1174	2135	1478	1847	2956	1267	939	2122	447	21958
1957	7674	1181	2118	1490	1855	2956	1268	936	2119	447	22046
1958	7653	1174	2112	1482	1832	2921	1273	921	2074	432	21875
1959	7720	1196	2122	1482	1821	2894	1263	922	2067	441	21929
1960	7902	1219	2205	1521	1853	2935	1270	941	2090	453	22390
1961	8047	1253	2223	1555	1872	2965	1277	953	2104	451	22701
1962	8198	1271	2254	1568	1884	2953	1274	954	2121	452	22928
1963(a)	8243	1287	2255	1573	1890	2930	1257	958	2091	457	22942
1963(b)[9]	8281	1293	2260	1578	1892	2938	1260	961	2099	457	23018
1964(a)[9]	8372	1313	2299	1600	1909	2973	1272	974	2125	464	23300

Number of employees in employment ('000s)

	SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1964(b)[10]	(8420)		1320	2311	(3468)		2978	1277	979	2121	465	23340
1965	7962	597	1326	2346	1413	2081	2984	1301	985	2139	475	23622
1966	8013	609	1339	2375	1426	2094	2999	1309	986	2143	482	23783
1967	7881	606	1315	2300	1424	2034	2926	1279	952	2100	477	23305
1968	7856	607	1312	2271	1398	2002	2899	1255	950	2086	480	23125
1969(a)[11,12]	7835	626	1295	2271	1402	1997	2883	1253	936	2091	485	23085
1969(b)[11,12]	7791	632	1304	2278	1395	2001	2892	1258	942	2098	485	23085
1970	7698	637	1310	2259	1392	1976	2842	1270	935	2077	487	22891
1971(a)[13]	7616	620	1308	2218	1363	1924	2779	1242	930	2018	482	22509
1971(b)[13]	7242	607	1426	2207	1413	1916	2656	1206	962	2002	473	22110
1972	7256	622	1447	2172	1425	1913	2636	1206	973	1988	470	22108
1973	7346	652	1512	2242	1474	1966	2689	1248	1000	2050	479	22658
1974	7366	665	1519	2247	1483	1991	2701	1245	992	2084	494	22787
1975	7318	671	1523	2212	1486	1985	2674	1266	998	2076	494	22703
1976	7245	669	1514	2186	1497	1968	2638	1255	995	2071	492	22530
1977	7226	681	1543	2202	1517	1984	2646	1256	998	2070	493	22616
1978(a)[14]	7289	680	1563	2210	1533	1981	2654	1240	1009	2066	503	22728
1978(b)[14]							2648		1015			
1979[15]	7430	707	1587	2226	1557	2004	2680	1248	1031	2106	519	23095
1980[15]	7453	715	1586	2202	1542	1968	2624	1204	1003	2084	514	22895
1981(a)[15]	7245	678	1547	2059	1461	1856	2430	1109	935	2001	484	21805
1981(b)[16]	7263	681	1541	2051	1467	1852	2466	1122	939	2002	505	21891
1982	7146	679	1528	1982	1452	1807	2371	1093	906	1950	498	21414
1983	7082	688	1515	1942	1426	1772	2302	1057	888	1899	495	21067
1984	7182	704	1542	1965	1443	1768	2289	1059	886	1901	497	21238
1985	7283	735	1563	1998	1511	1780	2286	1072	877	1904	498	21509
1986	7351	763	1568	2018	1518	1788	2263	1086	862	1888	489	21594
1987	7448	796	1594	2052	1528	1803	2263	1090	864	1886	491	21816
1988	7568	834	1599	2096	1559	1819	2264	1105	874	1888	497	22104

Notes: Table A4

1 1927(a) and earlier: Number of employees in employment aged 16 and over. 1927(b) and later: Number of employees in employment aged 16-64.
2 Changes in regional definition in 1936. See Table A2.
3 Minor changes in regions in 1937; see Table A2.
4 Regional labour force statistics not available for war years.
5 Unemployment at July subtracted from June count of insured employees, there being no unemployment figures available for June 1945. This makes a negligible difference to the employment totals.
6 Y, NW and N figures are estimates, since 1945 unemployment figures are available only for pre-1946 regions, rather than for for the post-1946 regions presented above. It has been assumed for current purposes that the regional proportional distribution of unemployment was identical in 1945 and 1946.
7 Major extension of national insurance scheme in 1948. No direct comparisons between 1947 and 1948 figures are possible.
8 Employment statistics, 1948-1951(b)-taken from the *Gazette* in the relevant years; Employment statistics, 1951(b)-1963(a) taken from the *Gazette*, January 1965, pp.5-9, using the series with Dorset taken as part of SW region. This series preferred to the series given in the *Historical Abstract*, as it is based on a set of regions more closely resembling current regions.
9 1963(b) and 1964(a) taken from the *Gazette*, December 1965, pp.534-537.
10 Statistics from 1964(b) to 1968 taken from the *Historical Abstract*, Table 131. There appear to be no statistics for post-1965 regions for the year 1964 in some regions, namely SE, EA, EM, YH. For the purposes of other tables, notably Table A5, the following estimates for employment in 1964 (in thousands) were used: SE 7837; EA 583; EM 1400; YH 2068. These correspond to percentage changes of SE +1.6; EA +2.4; EM +0.9; YH +0.6, which would appear to reproduce the approximate levels of regional differences in the rate of employment change during this period.
11 Employment statistics 1969-1971 taken from *British Labour Statistics Yearbook* 1971 p.130. The relevant Yearbooks (1969, 1970, 1971) also provide a more detailed sectoral disaggregation of employment.
12 1969(b) figures incorporate improved information on the location of employees in the distributive trades, and are directly comparable with 1970 and 1971 figures. The effect of using improved information was to reallocate about 50,000 employees from the South East and East Midlands to other regions (Gazette, 1970, pp.288-289). 1969(a) figures are directly comparable with 1968 and earlier figures.
13 Change from card count to Census of Employment data (see Buxton and MacKay 1977 pp.64-68). Figures for 1971 to 1978 apply to post-1974 regions (Table A2), and have been taken from the data on the *National Online Manpower Information System*. These figures differ from those published in the *Gazette* and *Yearbook* for 1971, 1972 and 1973, which are based on pre-1974 regions. Figures for 1974, 1975 and 1976 correspond almost exactly to those published in the *Gazette*, the discrepancy always being less than 0.1%. 1977 figures show a similar degree of correspondence, except for East Anglia, where the Gazette gives a figure of 681,000 employees, while NOMIS gives a figure of 679,000 employees. There are, unfortunately, substantial discrepancies for 1978 between the *Gazette* figures, not cited here, and the NOMIS figures; the figures presented in the *Gazette* are to be

regarded as unreliable. In all cases the NOMIS data are to be preferred, being the product of a revised examination, rather than an initial examination, of Census of Employment data.

14 Published employment figures for the North West and Wales, and figures given by NOMIS (1978(b), in Table A4) are not comparable with earlier years because of the transfer, through a realignment of boundaries, of about 6,000 employees in the Broughton area of Clwyd, from Cheshire (North West) to Clwyd (Wales) (*Gazette*, 1981 pp.141). Revised figures (1978(a) in Table A4) are comparable with earlier years.

15 These figures are estimates, based on interpolations between the June 1978 and September 1981 Censuses of Employment. It is possible (see chapter 8.1 and Table 8.2) that the official figures overestimate employment in mid-1979 by perhaps 50,000 and underestimate employment in mid-1980 by perhaps 30,000; this will obviously have implications for regional figures.

16 All employment figures from 1981(b) onwards taken from the *Gazette, Historical Supplement*. 1981(a) figures are in a continuous series from earlier figures; 1981(b) figures are in a continuous series with later figures. This break in series needs to be kept in mind when calculating percentage changes between years (Tables A5, A6).

Table A.5 Annual Percentage Employment Change by Region, 1923-1988

Year ending	L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1924	+2.4	+6.0	+3.4	+3.3	+3.0	+3.9	0.0	+2.9	+1.9	+3.1
1925	+5.0	+5.4	+2.5	+1.6	-10.6	+1.9	-7.5	-2.7	-7.8	-0.7
1926	+1.7	+3.8	+2.0	-5.1	+1.3	-6.2	-8.1	-2.1	+3.0	-1.5
1927	+3.5	+4.4	+4.5	+8.6	+8.4	+9.2	+2.4	+6.5	+9.2	+6.6
1928	+3.1	-1.0	-0.7	-3.2	-3.4	-3.5	-7.8	-2.9	-9.0	-2.0
1929	+3.6	+6.0	+3.3	+4.9	+5.4	+1.7	+3.8	-1.2	+11.4	+3.8
1930	-1.2	+1.0	+0.3	-3.9	-8.2	-12.0	-9.0	-6.5	-8.0	-5.3
1931	-0.2	+1.2	-0.6	-4.6	-8.5	-2.8	-3.5	-7.2	-2.9	-3.4
1932	-0.8	-1.3	-2.4	+0.5	-0.5	+2.8	-7.1	-3.0	-6.0	-0.7
1933	+3.9	+6.6	+2.8	+6.0	+6.4	+3.1	+5.8	+3.7	+5.3	+4.7
1934	+4.3	+4.2	+3.2	+5.1	+3.2	+2.1	+3.2	+4.2	+4.5	+3.8
1935	+1.8	+4.3	+3.7	+3.7	+1.7	+1.1	+1.2	+1.8	-1.4	+2.3
1936	+5.4	+6.0	+9.3	+5.9	+8.1	+3.5	+2.1	+4.6	+3.4	+5.7

	L	SE	SW	M	YH	NW	N	Wa	Sc	NI	UK
1937	+4.4	+3.5	+1.9	+5.9	+5.3	+5.7	+8.9	+11.4	+5.6	+8.5	+5.3
1938	-0.8	+0.6	+1.7	-3.0	-2.9	-4.2	-2.5	-7.3	+1.0	-14.8	-2.0
1939	+2.9	+3.5	+7.1	+7.1	+8.3	+7.1	+7.4	+15.8	+7.2	+17.4	+6.5

	SE	EA	S	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1947	+4.2	+3.2	+2.7	+1.6	+3.7	+1.6	+1.4	+2.5	+4.0	+3.6	+4.1	+7.4	+3.2
(1948													(+34.4)
1949	+1.0	+1.1	-1.3	-0.2	-0.3	+1.5	-0.1	-0.0	+0.2	-1.0	-0.1	-	+0.2
1950	+1.3	+1.9	+1.5	+0.9	+1.0	+1.2	+1.6	-0.9	+1.7	+0.8	+0.8	-	+1.2
1951	-0.0	+0.4	+1.0	-0.5	+2.0	+3.1	+1.4	+1.4	-0.2	-0.9	-0.1	-	+0.6

	SE	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1952	+1.1	+1.0	+0.1	-0.3	-2.0	-1.5	-0.4	+0.2	-0.8	-3.6	-0.2
1953	+0.8	+0.4	-0.6	+1.1	-0.4	+0.0	+1.0	+1.1	+0.8	+1.2	+0.5
1954	+2.0	+1.9	+3.0	+1.1	+1.5	+1.7	+0.9	+0.2	+1.3	+2.3	+1.7
1955	+2.0	+1.6	+3.3	+1.6	+0.8	+1.0	+0.8	+1.0	+0.5	+0.2	+1.5
1956	+1.6	+0.8	+0.5	+1.4	+1.4	+0.0	+2.0	+0.6	+0.5	+0.9	+1.1
1957	+1.1	+0.6	-0.8	+0.8	+0.4	0.0	+0.1	-0.3	-0.1	0.0	+0.4
1958	-0.3	-0.6	-0.3	-0.5	-1.2	-1.2	+0.4	-1.6	-2.1	-3.4	-0.8
1959	+0.9	+1.9	+0.5	0.0	-0.6	-1.0	-0.8	+0.1	-0.3	+2.1	+0.2
1960	+2.4	+1.9	+3.9	+2.6	+1.8	+1.4	+0.6	+2.1	+1.1	+1.3	+2.1
1961	+1.8	+2.8	+0.8	+2.2	+1.0	+1.0	+0.6	+1.3	+0.7	+0.1	+1.4
1962	+1.9	+1.4	+1.3	+0.8	+0.6	-0.4	-0.2	+0.1	+0.8	+0.4	+1.0
1963	+0.5	+1.3	+0.0	+0.3	+0.3	-0.8	-1.3	+0.4	-1.4	+1.4	+0.1
1964	+1.1	+1.5	+1.7	+1.4	+0.9	+1.2	+1.0	+1.4	+1.2	+1.5	+1.2

	SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1965	(+1.7)		+0.5	+1.5	(+0.7)		+0.2	+1.9	+0.6	+0.8	+2.2	+1.1
1966	+0.6	+2.0	+1.0	+1.2	+0.9	+0.6	+0.5	+0.5	+0.1	+0.2	+1.5	+0.7
1967	-1.6	-0.5	-1.8	-3.2	-0.1	-2.9	-2.4	-2.2	-3.4	-2.0	-1.0	-2.0
1968	-0.3	+0.2	-0.2	-1.3	-1.8	-1.6	-0.9	-1.9	-0.2	-0.7	+0.6	-0.8
1969	-0.3	+3.1	-1.3	0.0	+0.3	-0.2	-0.6	-0.2	-1.5	+0.2	+1.0	-0.2
1970	-1.2	+0.8	+0.5	-0.8	-0.2	-1.2	-1.7	+1.0	-0.7	-1.0	+0.4	-0.8
1971	-1.0	-2.7	-0.2	-1.8	-2.1	-2.6	-2.2	-2.2	-0.5	-2.8	-1.0	-1.7
1972	+0.2	+2.4	+1.4	-1.6	+0.8	-0.1	-0.8	+0.0	+1.1	-0.7	-0.6	-0.0
1973	+1.2	+4.8	+4.5	+3.2	+3.5	+2.8	+2.0	+3.5	+2.9	+3.1	+1.9	+2.5
1974	+0.3	+2.0	+0.5	+0.2	+0.6	+1.3	+0.4	-0.3	-0.8	+1.7	+3.1	+0.6
1975	-0.7	+1.0	+0.2	-1.5	+0.2	-0.3	-1.0	+1.6	+0.6	-0.4	0.0	-0.4
1976	-1.0	-0.2	-0.6	-1.2	+0.8	-0.9	-1.4	-0.9	-0.2	-0.2	-0.4	-0.7
1977	-0.3	+1.7	+2.0	+0.7	+1.4	+0.8	+0.3	+0.1	+0.2	-0.0	+0.2	+0.3
1978	+0.9	-0.1	+1.3	+0.3	+1.1	-0.2	+0.3	-1.3	+1.2	-0.2	+2.0	+0.5
1979	+1.9	+4.0	+1.5	+0.7	+1.6	+1.2	+1.2	+0.6	+1.6	+1.9	+3.2	+1.6
1980	+0.3	+1.1	-0.1	-1.1	-1.0	-1.8	-2.1	-3.5	-2.7	-1.0	-1.0	-0.9
1981	-2.8	-5.2	-2.5	-6.5	-5.3	-5.7	-7.4	-7.9	-6.8	-4.0	-5.8	-4.8
1982	-1.6	-0.3	-0.8	-3.4	-1.0	-2.4	-3.9	-2.6	-3.5	-2.6	-1.4	-2.2
1983	-0.9	+1.3	-0.9	-2.0	-1.8	-1.9	-2.9	-3.3	-2.0	-2.6	-0.6	-1.6
1984	+1.4	+2.3	+1.8	+1.2	+1.2	-0.2	-0.6	+0.2	-0.2	+0.1	+0.4	+0.8
1985	+1.4	+4.4	+1.4	+1.7	+4.7	+0.7	-0.1	+1.2	-1.0	+0.2	+0.2	+1.3
1986	+0.9	+3.8	+0.3	+1.0	+0.5	+0.4	-1.0	+1.3	-1.7	-0.8	-1.8	+0.4
1987	+1.3	+4.3	+1.7	+1.7	+0.7	+0.8	+0.0	+0.4	+0.2	-0.1	+0.4	+1.0
1988	+1.6	+4.8	+0.3	+2.1	+2.0	+0.9	+0.0	+1.4	+1.2	+0.1	+1.2	+1.3

Source: calculated from Table A4

In recent years, figures presented here might not be identical to figures presented in the text. The present figures are based on most recent revisions, as of early 1989, while other figures would have been based on earlier estimates.

Alternative series, 1929-39, based on Beck 1951, Tables 16 and 17.

Year ending	LSE	SW	M	YNE	NW	Wa	Sc	NI	UK
1930	0.0	+0.9	-3.5	-5.6	-10.4	-6.9	-4.3	-7.9	-4.1 (-5.3)
1931	-0.2	-1.4	-5.5	-10.0	-3.1	-6.9	-6.9	-4.3	-4.2 (-3.4)
1932	-1.2	-1.8	0.0	-0.7	+1.2	-6.3	-2.7	-1.8	-1.0 (-0.7)
1933	+4.1	+2.5	+5.9	+5.3	+3.4	+5.7	+3.3	+0.9	+4.3 (+4.7)
1934	+5.1	+3.8	+5.9	+3.3	+2.8	+1.6	+4.7	+7.6	+4.3 (+3.8)
1935	+2.1	+2.6	+3.6	+1.2	+0.8	+3.0	+2.2	-0.3	+2.0 (+2.3)
1936	+5.8	+6.3	+5.8	+6.9	+3.1	-0.8	+5.2	+7.5	+5.2 (+5.7)
1937	+2.6	+5.8	+6.4	+7.0		+13.9	+5.5	+2.9	+6.0 (+5.3)
1938	+1.9	+4.5	-2.0	-2.5		-3.3	+1.2	-7.6	-0.3 (-2.0)
1939	+2.4	+6.6	+6.2	+6.8		+11.9	+4.9	+11.4	+5.4 (+6.5)

Table A.6 Annual Percentage Employment Change, North, Midlands South, 1923-1984

Year ending	South	Midlands	North	South plus Midlands	Annual gap	UK
1924	+3.4	+3.3	+2.9	+3.4	+0.5	+3.1
1925	+4.5	+1.6	-4.4	+3.6	+8.0	-0.7
1926	+2.3	-5.1	-2.9	-0.1	+2.8	-1.5
1927	+4.0	+8.6	+7.7	+5.4	-2.3	+6.6
1928	+1.3	-3.2	-3.9	-0.1	+3.8	-2.0
1929	+4.1	+4.9	+3.3	+4.3	+1.0	+3.8
1930	-0.4	-3.9	-9.2	-1.5	+7.7	-5.3
1931	0.0	-4.6	-5.7	-1.3	+4.4	-3.4
1932	-1.2	+0.5	-0.7	-0.7	0.0	-0.7
1933	+4.3	+6.0	+4.6	+4.8	+0.2	+4.7
1934	+4.1	+5.1	+3.1	+4.4	+1.3	+3.8
1935	+2.8	+3.7	+1.3	+3.1	+1.8	+2.3
1936	+6.4	+5.9	+5.1	+6.2	+1.1	+5.7
1937	+3.7	+5.9	+6.5	+4.4	-2.1	+5.3
1938	0.0	-3.0	-3.4	-0.9	+2.5	-2.0
1939	+3.9	+7.1	+8.5	+4.8	-3.7	+6.5
1947	+5.4	+2.8	+3.2	+4.6	+1.4	+3.2
(1948						)
1949	+0.6	+0.5	-0.1	+0.5	+0.6	+0.2
1950	+1.4	+1.0	+1.1	+1.3	+0.2	+1.2
1951	+0.1	+2.5	+0.6	+0.8	+0.2	+0.6
1952	+1.1	-0.1	-1.3	+0.7	+2.0	-0.2
1953	+0.8	+0.1	+0.4	+0.6	+0.2	+0.5
1954	+2.0	+2.2	+1.3	+2.0	+0.7	+1.7
1955	+2.0	+2.6	+0.8	+2.2	+1.4	+1.5
1956	+1.4	+0.9	+0.8	+1.3	+0.5	+1.1
1957	+1.0	-0.1	+0.0	+0.7	+0.7	+0.4
1958	-0.3	-0.4	-1.3	-0.3	+1.0	-0.8
1959	+1.0	+0.3	-0.5	+0.8	+1.3	+0.2
1960	+2.3	+3.4	+1.5	+2.6	+1.1	+2.1
1961	+2.0	+1.4	+0.8	+1.8	+1.0	+1.4
1962	+1.8	+1.2	+0.1	+1.6	+1.5	+1.0
1963	+0.6	+0.3	-0.5	+0.5	+1.0	+0.1
1964	+1.2	+1.6	+1.1	+1.4	+0.3	+1.2
1965	+1.5	+1.3	+0.8	+1.4	+0.6	+1.1

Year ending	South	Midlands	North	South plus Midlands	Annual gap	UK
1966	+0.8	+1.1	+0.5	+0.9	+0.4	+0.7
1967	-1.6	-2.0	-2.4	-1.7	+0.7	-2.0
1968	-0.3	-1.5	-1.0	-0.6	+0.4	-0.8
1969	-0.2	+0.1	-0.3	-0.1	+0.2	-0.2
1970	-0.8	-0.6	-1.0	-0.8	+0.2	-0.8
1971	-1.0	-1.9	-2.2	-1.3	+0.9	-1.7
1972	+0.5	-0.7	-0.3	+0.2	+0.5	-0.0
1973	+1.9	+3.4	+2.7	+2.3	-0.4	+2.5
1974	+0.4	+0.5	+0.8	+0.4	-0.4	+0.6
1975	-0.4	-0.9	-0.1	-0.5	-0.4	-0.4
1976	-0.9	-0.4	-0.8	-0.7	+0.1	-0.7
1977	+0.2	+1.0	+0.3	+0.4	+0.1	+0.3
1978	+0.9	+0.6	+0.1	+0.8	+0.7	+0.5
1979	+2.0	+1.1	+1.4	+1.7	+0.3	+1.6
1980	+0.3	-1.0	-2.0	-0.1	+1.9	-0.9
1981	-2.9	-6.0	-6.2	-3.8	+2.4	-4.8
1982	-1.4	-2.4	-2.9	-1.7	+1.2	-2.2
1983	-0.7	-1.9	-2.5	-1.0	+1.5	-1.6
1984	+1.5	+1.2	-0.1	+1.4	+1.5	+0.8
1985	+1.6	+3.0	+0.2	+2.0	+1.8	+1.3
1986	+1.1	+0.8	-0.5	+1.0	+1.5	+0.4
1987	+1.6	+1.2	+0.3	+1.5	+1.2	+1.0
1988	+1.7	+2.1	+0.6	+1.8	+1.2	+1.3

Source: calculated from Table A4

See also Fig. 3.2.

Table A.7 Monthly Unemployment Rates by Region, 1912-1988

Since this is a particularly bulky data series, if presented complete, the full monthly series is presented only for selected years, notably those in periods of slump and those for which the available data are not widely available.

The series is subdivided as follows:

Series (a) 1913-1915
Monthly, based on Labour Exchange data, and *not* trade union data. Source: *Gazette*.

Series (b) 1915-1922
Figures for August 1921, covering men over 18 only, from Astor (1923 p.16). Unfortunately, the *Gazette* gave no official series for overall regional unemployment rates in the early post-war years, although it would doubtless be possible to construct such a series. Regional unemployment rates in particular sectors are given in Tables 4. , 4. and 4. .

Series (c) 1922-1929
Quarterly, Series (i) based on Tables 110, 162 of the *Historical Abstract*, series (ii) based on the *Gazette*.

Series (d) 1929-1933
Monthly, from *Gazette*.

Series (e) 1934-1940
Bimonthly, from *Gazette*.

Series (f) 1940-1966
Annually. 1940-47 from Beck (1951) Table 43; 1948-64 from *Gazette;* 1965-66 *Historical Abstract* Table 169.

Series (g) 1966-1979
Quarterly.

Series (h) 1979-1984
Monthly.

Series (i) 1984-1988
Bimonthly.

Series (a)

		SE	SW	WM	Y+EM	NW	Wa	Sc+N	Ire	UK
1913	J	9.4	4.9	3.6	3.6	3.7	2.4	3.0	8.2	5.0
	F	8.6	4.6	3.3	2.7	2.9	2.6	2.6	8.2	4.4
	M	6.0	4.4	2.7	2.1	2.6	2.6	1.9	8.4	3.5
	A	4.5	3.8	2.3	1.7	1.9	2.3	1.7	7.6	2.8
	M	4.1	4.0	2.4	1.7	2.0	2.7	1.7	6.5	2.7
	J	4.6	4.0	2.2	1.6	1.9	2.2	1.7	5.9	2.8
	J	5.7	4.8	2.6	1.6	2.0	1.7	1.8	5.6	3.1
	A	4.9	4.9	3.1	2.0	2.4	2.1	1.8	5.8	3.1
	S	5.7	5.4	3.6	2.3	2.9	2.8	2.2	6.6	3.7
	O	6.0	4.8	3.0	2.4	2.8	2.3	2.0	6.0	3.6
	N	7.0	5.4	3.2	2.8	3.3	2.0	2.2	7.6	4.1
	D	7.2	5.8	3.6	3.6	4.2	2.6	2.8	9.2	4.6

		L	SE	SW	WM	Y+EM		NW	Wa	N	Sc	Ire	UK
1914	J	10.5	6.6	6.9	4.3	4.1		4.7	3.0	3.2	3.1	10.6	5.5
	F	8.7	4.4	5.5	3.5	3.3	3.4	4.2	2.2	2.5	2.7	8.2	4.4
	M	6.7	3.3	4.9	3.3	2.7	2.9	3.4	2.1	2.1	2.2	6.9	3.6
	A	5.6	2.7	4.1	3.2	2.8	2.8	3.2	1.8	2.1	2.1	6.5	3.3
	M	5.9	2.4	4.3	3.0	2.5	2.6	3.1	2.7	1.9	2.0	5.7	3.2
	J	7.2	2.6	4.5	3.3	2.5	2.2	3.1	2.4	2.1	2.1	5.7	3.5
	J	7.0	3.1	4.0	3.5	2.4	2.5	3.3	3.5	2.2	2.3	5.3	3.6
	A	9.5	4.8	5.4	7.6	6.0	5.7	7.4	3.6	3.3	4.1	9.5	6.2
	S	10.0	4.4	4.8	5.5	4.2	4.9	6.3	2.8	2.9	3.4	8.6	5.4
	O	8.1	3.2	3.9	3.5	3.1	3.4	5.0	2.1	2.4	2.5	7.0	4.2
	N	7.6	3.3	5.5	3.0	2.9	3.0	3.8	2.0	1.8	2.3	6.3	3.7
	D	5.8	3.0	3.2	2.8	2.6	3.0	3.4	2.2	1.5	2.0	6.9	3.3
1915	J	4.7	2.8	2.2	2.0	2.4	2.5	2.5	1.6	1.0	1.5	6.3	2.6
	F	3.9	2.3	1.8	1.4	1.6	1.9	1.7	1.4	0.8	1.2	6.2	2.0
	M	2.4	1.7	1.5	0.9	0.9	1.4	1.1	1.1	0.6	0.8	5.4	1.4
	A	1.7	1.1	1.2	0.8	0.8	0.9	1.0	1.2	0.4	0.6	5.7	1.1
	M	1.7	0.8	0.8	0.5	0.6	0.6	0.8	0.8	0.4	0.3	4.9	0.9
	J	1.9	0.8	0.9	0.5	0.6	0.6	0.8	0.8	0.4	0.3	4.9	0.9
	J	2.4	1.2	1.2	0.5	0.5	0.5	0.7	0.8	0.3	0.5	4.2	1.0

Series (b) 1915-1922

		L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1921	Aug	13	12	15	18	18	16	12	21	25	16

Series (c) 1922-1929

(i) *Historical Abstract*

		L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1922	Dec	11.1	12.1	12.7	12.8	13.3	16.2	8.9	16.0	22.0	13.4
1923	Mar	10.2	10.1	11.0	9.7	10.7	13.6	7.2	13.9	18.0	11.2
	Jun	9.5	8.2	9.4	9.3	10.8	14.3	5.8	13.0	15.1	10.7
	Sep	9.3	8.5	9.8	10.0	12.2	14.5	5.8	13.6	15.4	11.2
	Dec	9.4	9.8	10.2	9.5	11.7	15.3	5.6	13.0	15.3	11.2
1924	Mar	8.6	7.2	8.9	7.1	8.7	12.1	5.0	11.2	13.8	9.1
	Jun	7.6	5.4	7.3	7.5	8.9	11.5	6.0	10.8	15.1	8.7
	Sep	8.3	6.9	8.5	8.7	11.6	12.5	12.1	12.2	16.1	10.3
	Dec	8.8	8.0	9.9	9.9	13.2	12.0	14.3	14.2	17.6	11.3
1925	Mar	8.2	6.3	8.3	7.8	13.9	10.2	14.4	14.1	20.6	10.5
	Jun	6.7	4.5	7.2	10.8	16.5	11.5	16.2	15.6	24.0	11.5
	Sep	6.3	4.8	7.9	9.0	15.8	12.5	26.3	15.1	24.4	11.8
	Dec	5.7	5.3	7.8	7.0	13.6	9.7	13.2	14.8	24.0	9.8

(ii) *Gazette*

1925	Sep	6.9	4.9	8.2	9.8	16.5	12.9	20.7	15.5	24.5	12.0
	Dec	6.5	5.8	8.4	7.7	14.1	10.3	13.4	15.4	25.7	10.5
1926	Mar	6.5	5.1	8.0	6.9	12.5	10.9	12.8	13.4	23.6	9.8
	Jun	7.3	5.9	8.4	14.8	19.9	18.3	21.7	17.9	25.5	14.6
	Sep	6.7	4.8	7.7	13.2	19.6	17.3	20.6	17.3	22.1	13.9
	Dec	6.5	5.7	8.6	9.9	17.0	13.0	17.6	16.0	19.9	11.9
1927	Mar	6.4	5.3	7.3	8.2	14.6	9.7	16.5	11.7	14.6	9.9
	Jun	5.2	3.9	6.2	8.3	12.4	9.6	18.1	9.7	11.5	8.9
	Sep	5.3	4.7	7.0	7.8	13.1	10.6	22.2	8.9	10.6	9.4
	Dec	5.6	6.2	8.4	8.0	12.8	11.0	23.3	10.2	11.6	9.8
1928	Mar	5.4	5.4	7.9	7.8	12.9	10.7	20.7	10.7	12.8	9.6
	Jun	5.2	4.4	7.4	11.1	15.2	12.3	21.3	11.1	19.4	10.8
	Sep	5.5	5.1	7.9	10.9	16.2	13.8	22.7	11.7	20.3	11.5
	Dec	5.7	6.2	8.6	9.6	15.5	12.8	22.8	13.2	17.2	11.2
1929	Mar	6.0	5.7	8.1	8.3	13.3	11.9	18.2	12.3	15.3	10.1
	Jun	5.0	4.0	7.0	9.4	12.7	12.8	17.9	11.1	14.2	9.8

Series (d) 1929-1933

		L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1929	Jul	4.9	4.0	7.0	9.8	12.7	12.9	18.5	11.2	14.7	9.9
	Aug	4.9	4.3	7.1	9.5	12.8	14.2	17.3	11.3	14.9	10.1
	Sep	5.0	4.8	7.6	9.0	12.7	13.6	19.6	11.3	15.0	10.1
	Oct	5.4	5.5	8.2	8.8	13.4	13.6	19.7	11.6	14.8	10.4
	Nov	5.9	6.6	9.2	8.8	14.0	14.2	20.8	12.5	15.2	11.0
	Dec	5.9	6.9	9.2	9.1	14.1	14.4	20.7	12.9	15.2	11.1
1930	Jan	7.4	8.2	9.9	10.8	15.9	16.6	19.7	14.0	17.2	12.6
	Feb	7.5	8.2	9.7	11.1	16.3	18.2	20.9	14.6	17.4	13.1
	Mar	7.4	7.7	9.6	12.6	16.7	19.5	23.9	17.0	20.4	14.0
	Apr	7.3	7.5	9.7	13.6	17.7	20.7	24.6	16.8	21.9	14.6
	May	7.3	7.0	9.3	13.8	18.3	23.5	27.7	17.4	22.9	15.3
	Jun	7.3	6.4	9.0	15.3	19.3	24.6	25.5	17.7	23.6	15.8
	Jul	7.8	6.9	9.5	16.6	21.9	26.2	26.9	18.9	26.4	17.1
	Aug	8.0	7.3	9.9	16.4	22.3	27.6	25.7	19.7	27.1	17.5
	Sep	8.4	8.1	10.6	16.5	23.0	27.7	27.7	20.7	27.7	18.1
	Oct	9.2	8.9	12.1	16.2	24.2	27.4	30.3	21.4	27.3	18.7
	Nov	10.0	10.3	13.3	16.4	24.0	27.6	28.6	22.7	28.1	19.1
	Dec	9.8	11.1	13.2	18.6	24.5	29.3	31.2	23.5	33.4	20.2
1931	Jan	12.2	13.1	15.1	19.4	26.0	29.7	30.6	25.7	30.9	21.5
	Feb	12.4	12.9	14.7	19.8	26.7	29.5	32.2	26.4	30.0	21.7
	Mar	12.0	12.1	14.4	20.8	27.8	27.4	31.5	26.4	29.7	21.5
	Apr	11.6	11.1	13.7	20.0	26.5	27.4	31.2	26.0	29.1	20.9
	May	11.4	10.8	13.1	19.6	25.7	27.2	34.1	26.9	28.5	20.8
	Jun	11.6	10.2	13.4	22.0	29.6	28.2	32.5	26.2	27.8	21.8
	Jul	12.1	10.6	13.5	22.3	30.6	29.5	32.8	28.2	27.9	22.6
	Aug	12.4	11.1	13.8	21.9	30.1	30.0	33.5	27.8	28.4	22.7
	Sep	12.9	12.3	14.6	21.8	30.1	31.3	34.4	28.2	29.0	23.2
	Oct	13.4	13.3	16.1	19.8	27.0	28.2	33.3	27.0	26.0	21.9
	Nov	13.6	14.0	16.5	19.1	26.1	26.4	33.7	27.0	25.2	21.4
	Dec	13.1	14.4	16.4	19.3	25.2	25.2	31.7	26.9	25.5	20.9
1932	Jan	15.0	16.5	18.1	20.3	26.4	26.3	35.1	27.9	26.1	22.4
	Feb	14.7	16.2	18.0	19.7	26.7	25.4	34.9	27.5	25.0	22.0
	Mar	14.0	14.9	16.8	18.4	25.8	23.4	33.1	26.9	24.1	20.8
	Apr	13.5	14.4	16.6	19.6	27.6	24.0	34.9	26.9	24.1	21.4
	May	13.5	13.9	16.8	20.1	28.9	26.7	34.3	27.1	25.2	22.1
	Jun	13.2	13.0	16.0	21.5	29.9	25.6	38.2	26.6	26.9	22.3
	Jul	13.2	13.4	16.6	21.6	30.7	25.9	38.8	28.8	30.2	22.9
	Aug	13.0	13.2	16.5	21.6	31.0	27.5	39.9	27.7	29.8	23.1
	Sep	13.2	14.2	17.1	21.4	30.0	27.4	38.2	27.9	28.3	22.9

		L	SE	SW	M	YNE	NW	Wa	Sc	NI	UK
1932	Oct	13.0	14.1	17.9	19.0	28.6	25.5	38.3	27.7	27.7	21.9
	Nov	13.2	14.8	18.3	18.9	29.2	25.6	38.3	28.2	28.5	22.2
	Dec	12.9	14.5	17.8	18.7	27.6	24.8	37.2	28.4	28.6	21.7
1933	Jan	14.8	16.4	19.3	20.6	29.0	25.7	37.2	29.6	29.7	23.1
	Feb	14.8	15.7	18.5	20.4	29.1	25.6	35.4	28.7	29.6	22.8
	Mar	13.9	14.1	17.5	19.8	28.2	25.4	35.6	27.7	29.2	22.0
	Apr	12.9	12.5	16.4	19.6	27.4	25.1	35.9	27.1	28.8	21.4
	May	12.1	11.2	15.1	18.3	27.5	24.0	34.9	26.2	27.8	20.5
	Jun	11.4	9.6	14.3	17.8	25.9	23.1	34.3	24.8	25.9	19.5
	Jul	11.1	9.7	14.3	17.7	25.7	23.4	34.6	25.9	26.2	19.6
	Aug	10.6	9.1	13.8	17.7	26.0	23.2	33.6	24.5	25.1	19.2
	Sep	10.5	9.4	14.1	15.9	24.5	22.4	32.5	24.6	24.5	18.5
	Oct	10.2	9.6	14.8	14.6	23.6	21.7	34.6	24.4	24.1	18.1
	Nov	10.1	10.2	14.8	13.7	23.2	21.6	33.4	24.9	24.2	17.9
	Dec	9.9	10.8	15.4	13.2	21.6	20.7	33.6	25.2	24.7	17.6

Series (e) 1933/4 to 1940

1934	Feb	10.9	10.9	15.2	13.7	22.5	21.8	33.8	25.3	26.0	18.2
	Apr	9.2	8.6	13.2	12.5	21.2	20.7	33.0	23.5	23.7	16.7
	Jun	8.4	7.0	11.5	13.6	23.4	20.0	33.2	21.7	22.4	16.5
	Aug	8.3	7.2	11.5	14.3	23.2	21.0	30.8	21.5	22.9	16.6
	Oct	8.7	8.4	13.1	12.1	22.0	20.7	32.0	22.0	23.6	16.4
	Dec	8.6	9.1	13.1	11.5	20.6	20.1	31.9	22.9	24.3	16.1
1935	Feb	10.1	10.4	14.3	12.8	22.8	21.3	33.8	23.6	26.7	17.5
	Apr	8.5	8.3	11.9	11.2	20.3	19.6	32.0	21.7	25.3	15.7
	Jun	8.2	7.0	10.4	11.7	22.2	19.2	30.6	20.1	25.2	15.5
	Aug	7.7	6.6	9.8	11.5	20.3	19.6	29.9	20.0	28.1	15.0
	Oct	7.7	7.6	11.0	9.8	19.1	19.0	30.9	20.1	23.4	14.6
	Dec	7.7	8.4	11.1	9.6	17.9	18.2	29.2	20.5	22.7	14.2
1936	Feb	9.1	9.9	12.2	10.7	18.8	19.1	32.2	21.2	24.4	15.4
	Apr	7.5	7.5	9.8	9.3	17.8	17.5	31.2	19.5	22.6	13.8
	Jun	6.7	5.9	8.0	9.2	18.4	16.5	30.1	17.3	22.6	13.1
(Jul		6.5	5.6	7.8	9.4	16.6	16.2	28.5	18.0	23.3	12.7

	L	SE	SW	M	YH	NW	N	Wa	Sc	NI	UK
(Jul	6.5	5.6	7.8	9.4	14.2	16.0	21.3	28.5	18.0	23.3	12.7
Aug	6.3	5.6	7.8	9.1	12.9	16.1	21.4	27.4	17.2	23.1	12.3
Oct	6.4	6.8	8.8	7.7	11.8	15.9	21.3	28.3	17.0	22.5	12.1
Dec	6.5	7.8	9.0	7.7	11.6	15.7	21.4	26.3	17.5	24.5	12.2

		L	SE	SW	M	YH	NW	N	Wa	Sc	NI	UK
1937	Feb	7.3	8.4	9.6	7.6	11.0	15.0	20.3	26.0	17.6	25.1	12.2
	Apr	6.1	6.8	7.9	6.6	10.0	13.5	18.5	23.1	16.2	23.5	10.8
	Jun	5.8	5.2	6.6	6.7	12.3	13.0	16.9	20.7	14.2	22.2	10.3
	Aug	5.6	4.9	6.2	7.1	9.6	13.4	15.9	19.4	14.1	21.8	9.9
	Oct	6.0	6.4	7.3	6.9	9.8	13.0	16.2	21.3	14.5	22.6	10.2
	Dec	7.1	8.1	8.6	8.5	12.7	15.5	18.9	21.9	17.6	27.1	12.2
1938	Feb	8.6	9.2	9.4	9.6	13.3	17.8	17.6	23.8	17.0	29.5	13.2
	Apr	7.8	7.7	8.1	10.0	12.9	17.7	17.0	25.9	16.8	29.4	12.9
	Jun	7.7	6.9	7.6	11.1	14.0	20.1	18.5	25.8	15.8	28.7	13.4
	Aug	7.4	6.8	6.9	11.7	14.6	18.2	19.2	24.2	15.5	27.7	13.0
	Oct	8.3	8.4	8.5	10.0	13.0	17.1	19.0	23.6	15.6	25.8	12.7
	Dec	8.5	9.3	8.6	9.4	12.8	16.9	19.4	25.3	16.7	26.1	12.9
1939	Feb	9.1	9.1	9.0	9.5	13.1	17.2	20.1	25.9	17.1	26.9	13.4
	Apr	7.8	7.8	7.2	8.4	11.8	15.2	17.7	21.0	15.4	25.3	11.6
	Jun	6.6	5.7	5.1	7.0	9.9	13.6	14.9	16.8	12.7	21.0	9.7
	Aug	5.8	5.0	4.4	7.7	8.4	11.9	13.3	15.2	11.7	19.9	8.8

		L	SE	S	EA	SW	WM	EM	YH	NW	N	Sc	Wa	NI	UK
1939	Oct	9.6	9.2	6.6	9.0	6.6	6.1	5.6	7.9	11.6	13.7	11.8	15.3	21.2	9.7
	Dec	9.1	8.9	6.1	9.0	6.2	5.3	5.5	7.4	10.3	13.4	10.6	15.8	22.4	9.1
			SE												
1940	Feb	9.3	8.7	12.3	6.3	7.2	8.0	9.2	10.7	14.9	11.3	17.5	23.6	10.2	
	Apr	6.9	5.0	7.1	4.2	3.3	3.8	5.2	6.8	9.9	8.5	13.4	20.3	6.8	
	Jun	5.9	3.9	5.2	2.9	2.1	2.8	4.2	5.1	7.7	6.8	9.2	20.7	5.3	

Series (f) 1940-1966 - June figures (July figures from 1940 to 1945)

		SE	EA	S	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1940	July	6.1	5.2	6.8	2.8	2.3	3.3	4.2	5.1	9.0	11.3	7.0	21.5	5.8
1941	Jun	1.5	1.8	1.2	1.7	0.7	1.0	1.7	2.4	2.5	4.2	3.0	12.2	2.1
1942		1.1	0.9	0.6	0.8	0.4	0.3	0.6	1.0	1.3	2.0	1.7	4.9	1.1
1943		0.6	0.5	0.4	0.4	0.4	0.2	0.5	0.7	1.0	1.4	1.3	5.1	0.8
1944		0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.4	1.0	1.4	1.2	4.3	0.6
1945(July)		0.4	0.4	0.3	0.4	0.6	0.2	0.5	0.6	1.5	3.3	1.6	5.1	0.9
1946(June)		1.1	1.0	1.1	1.3	1.2	0.7	1.5	3.1	5.4	9.1	4.6	8.6	2.6
1947		0.9	0.8	0.7	1.1	0.8	0.6	1.1	5.1	1.5	6.0	3.3	7.0	1.9
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1948(July)		0.9	0.7	1.1	1.1	0.6	0.4	0.8	1.8	2.4	4.3	2.6	5.6	1.5
1949		0.9	0.7	1.1	1.1	0.6	0.4	0.8	1.5	2.3	3.6	2.5	6.0	1.4
1950		1.0	0.9	1.1	1.2	0.5	0.5	0.9	1.5	2.6	2.4	2.7	5.6	1.5

	SE	EA	S	SW	WM	EM	Y	NW	N	Wa	Sc	NI	UK
1951	0.6	0.6	0.8	0.9	0.3	0.3	0.6	1.0	1.8	2.2	2.0	5.1	1.0
1952	1.2	1.1	1.2	1.2	1.0	1.1	2.3	4.9	2.3	2.6	3.2	10.6	2.3
1953	1.0	0.9	1.1	1.3	1.0	0.6	1.1	1.8	2.1	2.8	2.7	7.9	1.6
1954	0.8	0.9	0.8	1.1	0.5	0.5	0.8	1.3	2.0	2.1	2.4	6.3	1.2
1955	0.6	0.7	0.7	0.9	0.5	0.5	0.7	1.4	1.6	1.6	2.2	6.8	1.1
1956	0.6	0.7	0.7	0.9	1.2	0.5	0.6	1.2	1.3	1.9	2.1	5.9	1.1
1957	0.8	1.0	0.9	1.3	1.2	1.0	0.8	1.4	1.4	2.1	2.3	6.8	1.3
1958	1.2	1.4	1.4	1.8	1.5	1.5	1.9	2.6	2.1	3.7	3.5	9.3	2.1
1959	1.0	1.2	1.3	1.7	1.3	1.3	1.7	2.5	3.0	3.4	3.9	7.6	2.0
1960	0.8	0.9	1.3	0.7	0.9	1.0	1.8	2.5	2.3	3.2	6.1		1.5
1961	0.8	0.8	1.1	0.8	0.7	0.8	1.4	2.0	2.1	2.8	6.9		1.3
1962	1.1	1.1	1.4	1.6	1.2	1.4	2.3	3.2	2.6	3.3	7.1		1.8
						YH							
1963	1.2	1.2	1.6	1.6		1.7	2.8	4.0	3.0	4.3	7.4		2.2
1964	0.9	1.0	1.3	0.8		1.2	1.9	3.1	2.4	3.3	6.5		1.5

	SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1965	0.7	1.0	1.2	0.6	0.8	0.9	1.4	2.1	2.1	2.5	5.8	1.3
1966	0.7	1.0	1.2	0.6	0.8	0.9	1.2	2.0	2.2	2.4	6.0	1.2

Series (g) 1966-1979

1966	Sep	0.9	1.4	1.6	1.0	1.1	1.2	1.5	2.6	2.8	2.8	5.9	1.5
	Dec	1.6	2.1	2.8	3.7	1.7	1.8	2.1	3.6	3.9	3.7	7.4	2.5
1967	Mar	1.7	2.4	2.7	2.3	1.9	2.0	2.6	3.8	4.1	4.0	8.1	2.6
	Jun	1.5	1.7	2.0	2.2	1.6	1.9	2.3	3.7	3.7	3.5	7.7	2.3
	Sep	1.6	1.8	2.3	2.6	1.7	2.2	2.6	4.2	4.0	3.8	7.5	2.5
	Dec	1.7	2.1	2.8	2.4	1.9	2.5	2.5	4.4	4.2	4.0	7.4	2.6
1968	Mar	1.8	2.2	2.7	2.4	1.9	2.6	2.5	4.5	4.1	4.0	7.1	2.6
	Jun	1.5	1.8	2.1	2.0	1.7	2.4	2.3	4.3	3.6	3.6	7.0	2.3
	Sep	1.5	1.8	2.3	2.1	1.9	2.6	2.4	4.9	4.0	3.6	6.9	2.5
	Dec	1.6	1.9	2.7	1.9	1.9	2.6	2.3	4.9	4.0	3.7	7.5	2.5
1969	Mar	1.8	2.3	2.9	2.0	2.1	2.7	2.6	4.9	4.2	3.8	7.5	2.6
	Jun	1.4	1.7	2.3	1.8	1.8	2.3	2.3	4.3	3.6	3.4	6.8	2.2
	Sep	1.5	1.8	2.6	2.4	1.9	2.7	2.5	5.0	4.3	3.6	7.3	2.4
	Dec	1.6	2.1	3.0	1.8	2.1	2.8	2.5	4.9	4.1	3.9	7.1	2.5
1970	Mar	1.9	2.4	3.1	2.2	2.4	3.0	2.7	4.9	4.1	4.2	7.0	2.7
	Jun	1.5	1.8	2.4	2.4	2.2	2.6	2.5	4.3	3.4	3.9	6.2	2.4
	Sep	1.7	2.0	2.7	3.1	2.4	3.0	2.9	4.8	4.1	4.4	7.3	2.6
	Dec	1.6	2.4	3.0	2.2	2.3	3.2	2.9	4.7	4.0	4.8	7.2	2.7
1971	Mar	2.0	3.2	3.5	3.2	3.1	3.6	3.7	5.3	4.6	5.7	7.5	3.2

		SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1971	Jun	1.8	2.9	2.9	3.2	2.9	3.7	3.6	5.3	4.2	5.7	7.3	3.2
	Sep	2.0	3.2	3.4	5.7	3.3	4.4	4.6	6.4	5.0	6.3	8.8	3.7
	Dec	2.3	3.4	4.1	5.1	3.4	4.6	4.7	6.6	5.3	6.6	8.5	4.0
1972	Mar	2.5	3.5	3.9	4.0	3.4	4.6	5.1	6.7	5.3	7.0	8.3	4.2
	Jun	1.9	2.5	3.0	3.4	2.8	3.8	4.5	5.7	4.3	6.0	7.7	3.5
	Sep	2.1	2.5	3.1	3.7	3.0	4.3	5.1	6.7	5.0	6.6	8.4	3.9
	Dec	1.9	2.5	3.1	3.0	2.6	3.6	4.4	5.8	4.5	5.9	7.2	3.4
1973	Mar	1.7	2.3	2.8	2.5	2.3	3.2	4.1	5.1	3.9	5.3	6.8	3.1
	Jun	1.4	1.7	2.1	2.0	1.9	2.6	3.3	4.3	3.1	4.3	6.0	2.5
	Sep	1.3	1.6	2.1	2.1	1.9	2.7	3.3	4.4	3.3	4.1	6.4	2.5
	Dec	1.2	1.6	2.2	1.7	1.7	2.3	2.8	4.0	3.1	3.7	5.4	2.2
1974	Mar	1.6	2.0	2.6	2.1	2.1	2.7	3.4	4.5	3.8	4.1	5.5	2.7
	Jun	1.4	1.7	2.2	1.9	2.0	2.3	3.0	4.1	3.2	3.6	5.2	2.3
	Sep	1.7	2.0	2.8	2.5	2.4	2.9	3.9	5.3	4.3	4.1	6.8	2.8
	Nov	1.7	2.2	3.2	n.a.	2.3	2.7	3.7	4.8	3.9	4.0	6.1	2.8
1975	Mar	2.2	3.0	4.1	3.0	3.0	3.3	4.4	5.1	4.6	4.5	6.4	3.4
	Jun	2.4	3.1	4.0	3.6	3.2	3.4	4.8	5.4	4.8	4.6	7.1	3.7
	Sep	3.3	3.9	5.2	5.3	4.2	4.7	6.2	6.8	6.6	5.6	9.1	4.9
	Dec	3.6	4.3	5.9	5.3	4.3	4.9	6.3	6.6	7.0	6.0	9.1	5.1
1976	Mar	4.0	4.7	6.3	5.5	4.4	5.2	6.5	6.7	7.0	6.6	9.2	5.4
	Jun	4.1	4.8	6.1	5.5	4.7	5.6	7.0	7.7	6.9	6.5	9.9	5.6
	Sep	4.5	4.9	6.5	6.3	5.1	5.8	7.4	8.1	7.7	7.3	11.1	6.1
1977	Jan	4.6	5.3	7.1	5.6	5.0	5.6	7.2	8.0	8.0	8.4	10.9	6.1
	Mar	4.3	5.3	6.8	5.3	4.8	5.3	6.8	7.6	7.4	7.9	10.1	5.8
	Jun	4.4	5.3	6.6	5.4	5.1	5.6	7.4	7.7	7.4	8.4	10.9	6.1
	Sep	4.9	5.6	7.2	6.6	5.5	6.4	8.2	9.3	8.8	8.5	12.3	6.7
	Dec	4.4	5.3	7.1	5.5	5.0	5.9	7.5	8.7	8.5	8.4	11.2	6.2
1978	Mar	4.3	5.3	6.9	5.3	5.0	5.8	7.2	8.7	8.3	8.6	11.4	6.0
	Jun	4.1	4.9	6.2	5.3	5.1	5.8	7.5	8.9	7.9	8.3	11.4	6.0
	Sep	4.3	4.8	6.3	6.0	5.2	6.3	7.9	9.1	8.7	7.9	12.5	6.3
	Dec	3.7	4.5	6.1	5.2	4.7	5.6	6.9	8.4	8.0	7.6	10.8	5.6
1979	Mar	3.8	4.7	6.0	5.3	4.8	5.8	7.0	8.6	8.1	8.0	10.8	5.8
	Jun	3.5	4.2	5.3	5.2	4.6	5.5	7.0	8.6	7.3	8.1	10.9	5.5
Series (h) 1979-1984													
Jul		3.8	4.3	5.7	6.1	4.9	6.1	7.6	9.3	8.4	8.3	12.4	6.0
Aug		3.9	4.3	5.7	6.0	4.9	6.1	7.6	9.1	8.4	8.2	12.3	6.0
Sep		3.7	4.1	5.5	5.8	4.6	5.8	7.3	8.8	8.0	7.8	12.0	5.7
Oct		3.6	4.1	5.6	5.6	4.6	5.6	7.0	8.6	7.9	7.9	11.2	5.6
Nov		3.6	4.1	5.6	5.5	4.5	5.5	7.0	8.6	7.9	7.9	10.8	5.6

		SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1979	Dec	3.5	4.1	5.6	5.4	4.6	5.6	7.0	8.6	7.9	8.0	10.9	5.6
1980	Jan	3.9	4.5	5.9	5.7	5.0	6.1	7.6	9.3	8.3	9.0	11.3	6.1
	Feb	3.9	4.6	5.9	5.8	5.1	6.2	7.6	9.5	8.4	9.0	11.4	6.2
	Mar	3.9	4.6	5.8	5.9	5.0	6.2	7.7	9.4	8.4	8.9	11.3	6.1
	Apr	3.9	4.7	5.7	6.2	5.3	6.5	7.9	9.9	8.9	8.9	11.7	6.3
	May	3.9	4.7	5.5	6.3	5.3	6.4	7.9	9.7	8.8	8.7	11.6	6.2
	Jun	4.2	5.0	5.9	6.9	6.1	7.2	8.8	10.7	9.0	9.9	12.5	6.9
	Jul	5.0	5.7	6.7	8.5	6.9	8.4	9.9	11.8	10.7	10.5	14.4	7.8
	Aug	5.4	6.1	7.1	9.1	7.3	8.8	10.4	12.0	11.2	10.7	15.0	8.3
	Sep	5.6	6.2	7.2	9.5	7.4	9.0	10.5	12.1	11.6	10.7	15.2	8.4
	Oct	5.6	6.4	7.5	9.6	7.5	9.0	10.6	12.1	11.8	10.9	15.3	8.5
	Nov	5.9	6.8	8.0	10.1	7.9	9.5	10.9	12.6	12.3	11.3	15.6	8.9
	Dec	6.2	7.2	8.4	10.5	8.2	9.9	11.3	13.2	12.6	11.6	16.0	9.3
1981	Jan	6.8	7.8	9.0	11.4	8.9	10.7	12.1	14.1	13.3	12.7	16.8	10.1
	Feb	6.9	8.1	9.1	11.8	9.1	10.8	12.3	14.2	13.4	12.7	16.9	10.3
	Mar	7.1	8.4	9.2	12.2	9.3	11.1	12.5	14.4	13.7	12.9	17.0	10.4
	Apr	7.3	8.4	9.3	12.6	9.5	11.2	12.8	14.5	13.8	12.9	16.9	10.6
	May	7.4	8.5	9.2	12.9	9.6	11.5	13.1	14.6	13.9	12.8	17.3	10.7
	Jun	7.8	8.7	9.5	13.4	10.4	12.1	13.7	15.5	14.0	13.7	17.7	11.2
	Jul	8.4	9.3	10.0	14.4	11.0	12.9	14.6	16.2	15.0	14.3	18.4	11.9
	Aug	8.8	9.3	10.3	15.0	11.1	13.3	15.0	16.6	15.5	14.6	18.5	12.3
	Sep	9.1	9.6	10.5	15.3	11.3	13.6	15.2	16.8	15.8	14.5	19.4	12.6
	Oct	9.1	9.6	10.7	15.3	11.0	13.4	15.1	16.5	15.9	14.6	19.1	12.5
	Nov	9.0	9.5	10.7	15.0	10.7	13.1	15.0	16.5	15.9	14.6	18.6	12.4
	Dec	8.9	9.6	10.7	15.0	10.7	13.1	14.9	16.4	15.8	14.6	18.5	12.3
1982	Jan	9.3	10.2	11.1	15.5	11.3	13.6	15.4	17.1	16.4	15.5	19.2	12.9
	Feb	9.3	10.2	11.0	15.3	11.1	13.4	15.2	16.7	16.2	15.3	19.0	12.8
	Mar	9.2	10.0	10.8	15.1	10.9	13.2	15.0	16.4	15.8	14.9	18.7	12.5
	Apr	9.2	10.0	10.7	15.2	11.0	13.2	15.3	16.7	15.9	14.8	18.9	12.6
	May	9.1	9.9	10.3	15.0	10.9	13.1	15.1	16.4	15.6	14.5	19.1	12.4
	Jun	9.3	10.0	10.7	15.3	11.5	13.6	15.7	17.1	15.4	15.3	19.7	12.8
	Jul	9.7	10.5	11.1	16.2	12.1	14.3	16.2	17.9	16.3	15.6	20.4	13.4
	Aug	10.3	10.8	11.4	16.6	12.3	14.7	16.7	18.3	16.8	15.9	20.8	13.8
	Sep	10.5	10.9	11.6	16.9	12.4	15.0	16.9	18.5	17.2	15.8	21.6	14.0
	Oct(a)	10.4	10.8	11.6	16.6	12.1	14.6	16.6	18.0	17.2	15.8	21.0	13.8
	Oct(b)	9.2	9.9	11.0	15.6	11.4	14.0	15.3	17.6	15.9	14.6	19.7	12.7
	Nov	9.2	10.1	11.3	15.6	11.5	14.1	15.3	17.6	16.1	14.7	19.4	12.7
	Dec	9.3	10.3	11.5	15.7	11.7	14.3	15.5	17.8	16.3	14.9	19.4	12.8

		SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1983	Jan	9.7	10.9	12.0	16.3	12.3	14.8	16.1	18.5	16.9	15.8	20.0	13.4
	Feb	9.7	10.9	11.9	16.2	12.3	14.7	15.9	18.1	16.7	15.6	19.8	13.3
	Mar	9.6	10.8	11.8	16.1	12.2	14.5	15.8	17.9	16.5	15.3	19.6	13.2
	Apr	9.6	10.8	11.5	16.2	12.2	14.6	16.0	18.0	16.5	15.1	20.1	13.2
	May	9.1	10.2	10.8	15.6	11.6	13.9	15.5	17.4	15.7	14.5	19.9	12.7
	Jun	8.9	9.7	10.3	15.3	11.3	13.5	15.3	17.1	15.2	14.4	19.6	12.4
	Jul	9.1	9.6	10.4	15.3	11.4	13.6	15.5	17.1	15.2	14.7	20.2	12.6
	Aug	9.1	9.5	10.4	15.2	11.3	13.5	15.5	17.0	15.1	14.6	20.2	12.5
	Sep:	9.5	10.0	11.1	15.9	11.9	14.5	16.3	18.4	16.3	15.1	21.4	13.2
	Oct	9.4	10.0	11.1	15.4	11.5	13.9	15.8	17.7	15.8	14.8	20.7	12.9
	Nov	9.4	10.0	11.3	15.1	11.5	13.8	15.8	17.6	15.8	14.8	20.7	12.8
	Dec	9.3	10.0	11.4	15.0	11.6	13.8	15.8	17.6	15.8	14.8	20.5	12.8
1984	Jan	9.7	10.5	11.8	15.4	12.1	14.3	16.2	18.1	16.3	15.7	21.1	13.3
	Feb	9.5	10.6	11.6	15.4	11.8	14.4	16.2	18.1	16.4	15.6	21.1	13.2
	Mar	9.4	10.4	11.4	15.2	12.1	14.1	16.0	17.9	16.1	15.2	20.8	13.0
	Apr	9.3	10.2	11.2	15.1	12.0	14.0	15.7	17.8	15.9	14.9	20.7	12.8
	May	9.2	10.0	10.9	15.1	11.9	14.0	15.7	17.9	15.9	14.7	20.8	12.8
	Jun	9.1	9.6	10.5	14.9	11.7	13.7	15.3	17.7	15.3	14.6	20.5	12.5
	Jul	9.3	9.8	10.8	15.1	12.0	14.1	15.7	18.0	15.7	14.9	20.9	12.8
	Aug	9.4	9.8	10.9	15.2	12.0	14.1	15.8	18.0	15.7	14.9	20.8	12.9
	Sep	9.9	10.2	11.6	16.0	12.7	15.2	16.5	19.3	17.1	15.5	21.9	13.6
	Oct	9.7	10.1	11.7	15.7	12.5	14.8	16.1	18.8	16.8	15.2	21.0	13.3
	Nov	9.7	10.2	11.9	15.4	12.3	14.8	16.1	18.9	16.9	15.2	20.8	13.3
	Dec	9.7	10.3	12.0	15.4	12.4	14.7	16.1	18.8	16.9	15.2	20.5	13.3

Series (i) 1985-1988, bimonthly.

1985	Feb	10.1	11.1	12.5	15.8	13.0	15.1	16.4	18.8	17.3	15.8	21.2	13.6
	Apr	9.9	10.8	12.0	15.5	12.8	15.0	16.2	18.8	16.9	15.7	21.0	13.3
	Jun	9.4	9.7	11.0	14.6	11.6	14.3	16.2	17.9	16.5	15.4	19.6	13.0
	Aug	9.7	9.6	11.3	14.9	11.7	14.5	16.5	18.1	16.7	15.6	19.4	13.2
	Oct	9.8	9.9	11.7	15.0	11.7	14.8	16.6	18.2	17.4	15.7	19.7	13.4
	Dec	9.7	10.2	12.0	14.8	11.8	14.9	16.5	18.2	17.3	15.7	19.6	13.4
1986	Feb	9.3	10.4	12.4	15.0	12.2	15.3	16.9	18.4	18.2	16.4	20.5	13.6
	Apr	9.1	10.1	11.8	14.8	12.0	15.3	16.8	18.2	17.8	15.9	20.5	13.6
	Jun	8.7	9.6	11.1	14.5	11.8	14.9	16.4	17.9	16.8	15.7	20.5	13.0
	Aug	8.9	9.7	11.4	14.7	11.9	15.0	16.6	17.7	16.8	16.0	21.1	13.2
	Oct	8.6	9.5	11.4	14.6	11.6	14.8	16.2	17.9	16.8	16.2	21.2	13.0
	Dec	8.6	9.7	11.6	14.3	11.6	14.8	16.1	17.3	16.8	16.1	20.9	13.0
1987	Feb	8.5	9.6	11.6	14.2	11.8	14.9	16.4	17.9	16.9	17.1	21.0	13.0
	Apr	8.0	9.1	10.8	13.6	11.5	14.4	15.9	17.1	16.1	16.3	20.6	12.5

		SE	EA	SW	WM	EM	YH	NW	N	Wa	Sc	NI	UK
1987	Jun	7.2	8.2	9.6	12.9	10.6	13.6	15.0	16.2	14.9	15.3	20.4	11.2
	Aug	7.1	7.9	9.6	12.6	10.4	13.2	14.8	15.7	14.8	15.1	20.6	11.0
	Oct	6.6	7.4	9.3	12.1	9.9	12.8	14.2	15.5	14.6	14.6	20.2	10.6
	Dec	6.3	7.3	9.4	11.7	9.7	12.6	13.9	15.2	14.4	14.6	19.6	10.4
1988	Feb	6.1	7.3	9.3	11.4	9.8	12.5	13.8	15.1	14.3	14.6	19.4	10.8
	Apr	5.6	6.7	8.4	10.9	9.4	12.1	13.2	14.7	13.8	13.9	19.2	10.3
	Jun	4.9	5.9	7.4	10.1	8.5	11.2	12.4	13.7	12.5	13.0	18.8	9.5
	Aug	4.7	5.5	7.2	9.9	8.4	10.9	12.2	13.3	12.2	12.8	19.1	9.3
	Oct	4.3	5.0	6.8	8.9	7.6	10.1	11.3	12.5	11.6	11.9	17.9	8.6
	Dec	4.0	4.8	6.7	8.4	7.4	9.7	11.0	12.3	11.3	11.8	17.5	8.4

Notes:

The need for continual recalculation of the denominator in the unemployment rate makes it effectively impossible to produce a definitive unemployment rate; different versions, using identical unemployment totals, may produce unemployment rates differing by up to 0.5%, and occasionally more. Many minor jumps in the unemployment rate indicate no more than rebasing.

A more serious problem is that changing legislation affecting both the scope of the national insurance scheme, and the official definition of unemployment, might well substantially affect measured unemployment rates. Most notably,

(1) Compared with late 1970s definitions, unemployment rates before 1948 are overestimates of perhaps a third; for comparability inter-war figures should be reduced by about a quarter. To simplify, inter-war figures measure working class unemployment rates, while post-1948 figures measure total unemployment rates.

(2) Again compared with late 1970s definitions, unemployment rates from late 1982 are significantly understated, the degree of understatement increasing through time. From late 1985 onwards, official unemployment rates have been published using a denominator including, for the first time, members of HM Forces and an estimate of the self-employed. In the present table, the "old" denominator of employed plus unemployed has been used instead to provide long term comparability.

Such a discontinuity is relatively easy to correct for but more serious problems occur in attempting to account for the various legislative means used to whittle away the unemployment total. There is a significant discontinuity in October 1982, and another in early 1983, involving the removal of about 150,000 men over 60 from the unemployment register between March and July, while the reduction of unemployment recorded from early 1987 onwards can only be regarded as grossly exaggerated (chapter 7 note 84). Thus the 0.7 point drop in unemployment between August 1988 and October 1988 is probably due entirely to legislative changes, and the removal of under-18s from eligibility for unemployment benefit, while perhaps half of the earlier drop in unemployment is due to increasing stringency of tests to determine eligibility for benefit. The "real" unemployment rate at the end of 1988 is perhaps around 10½% rather than 8½% as recorded in the appendix table or the official figure of around 7½%.

The experience of the early 1980s has shown also that the employment prospects of young people are particularly sensitive to recession, with at one stage nearly 400,000 under 18s being registered as unemployed. It seems highly likely, therefore, that when the next recession comes, the real

increase in unemployment will be greatly understated by the official figures, which will ignore increases in unemployment among under 18s.

It is of course extremely difficult to determine what regionally differentiated impacts such measures have.

Table A8 Index of Regional Unemployment Inequality, 1912-1988

Series (a) 1912-1922

(Regional unemployment figures not available, 1915-1922, so no Cn index can be calculated)

		Un	Cn
1912	Sept	3.7	
	Dec	5.1	
1913	Mar	3.5	1.7
	Jun	2.8	1.3
	Sept	3.4	1.5
	Dec	4.6	1.9
1914	Mar	3.6	1.2
	Jun	3.5	1.4
	Sept	5.4	1.9
	Dec	3.3	1.1

1915	June	0.9	0.8
1916	June	0.5	
1917	June	0.7	
1918	June	0.8	

(December 1918 - October 1919: no figures available)

		Un
1919	Dec	6.6
1920	Mar	3.6
	Jun	2.6
	Sept	3.8
	Dec	7.9

1921	Jan	11.2
	Feb	13.1
	Mar	15.4
	Apr	20.2
	May	23.4
	Jun	22.4

		Un
1921	July	17.9
	Aug	15.6
	Sept	14.2
	Oct	14.5
	Nov	17.2
	Dec	18.0
1922	Jan	17.7
	Feb	17.1
	Mar	16.0
	Apr	15.9
	May	14.6
	Jun	13.7

	Sept	12.7
	Dec	12.8

August 1921: Un = 16 Cn = 2.6

(based on Astor 1923)

Unemployment rates up to December 1921 incorporate figures for the whole of Ireland; from January 1922 they exclude the Irish Republic.

Source: *Gazette; Historical Abstract*, Table 160.

Intervals: As in Table A

Un is the UK percentage unemployment rate
Cn is the weighted mean deviation from the national average of regional unemployment rates.

Series (b) 1922-1929

		Un	Cn			Un	Cn			Un	Cn
1922	Dec	13.4	1.9	1925	Mar	10.5	2.7	1927	Jun	8.9	2.6
1923	Mar	11.2	1.7		Jun	11.5	3.5		Sept	9.4	3.1
	Jun	10.7	1.9		Sept	11.8	4.4		Dec	9.8	2.9
	Sept	11.2	2.2		Dec	9.8	3.3	1928	Mar	9.6	3.0
	Dec	11.2	2.1	1926	Mar	9.8	3.0		Jun	10.8	3.5
1924	Mar	9.1	1.7		Jun	14.6	4.8		Sept	11.5	3.9
	Jun	8.7	1.7		Sept	13.9	4.7		Dec	11.2	3.7
	Sept	10.3	2.0		Dec	11.9	3.9	1929	Mar	10.1	3.1
	Dec	11.3	2.0	1927	Mar	9.9	2.9		Jun	9.8	3.2

Series (c) 1929-1933

		Un	Cn			Un	Cn			Un	Cn
1929	July	9.9	3.2	1931	Jan	21.5	6.4	1932	July	22.9	6.6
	Aug	10.1	3.4		Feb	21.7	6.6		Aug	23.1	6.8
	Sept	10.1	3.4		Mar	21.5	6.3		Sept	22.9	6.5
	Oct	10.4	3.4		Apr	20.9	6.4		Oct	21.9	6.3
	Nov	11.0	3.5		May	20.8	6.6		Nov	22.2	6.3
	Dec	11.1	3.5		Jun	21.8	6.9		Dec	21.7	6.1
1930	Jan	12.6	3.6		July	22.6	7.3	1933	Jan	23.1	5.7
	Feb	13.1	4.0		Aug	22.7	7.1		Feb	22.8	5.6
	Mar	14.0	4.6		Sept	23.2	7.3		Mar	22.0	6.0
	Apr	14.6	4.8		Oct	21.9	6.1		Apr	21.4	6.0
	May	15.3	5.7		Nov	21.4	5.6		May	20.5	6.2
	Jun	15.8	5.8		Dec	20.9	5.2		Jun	19.5	6.0
	July	17.1	6.4	1932	Jan	22.4	5.1		July	19.6	6.2
	Aug	17.5	6.6		Feb	22.0	5.1		Aug	19.2	6.2
	Sept	18.1	6.8		Mar	20.8	5.0		Sept	18.5	6.1
	Oct	18.7	6.9		Apr	21.4	5.6		Oct	18.1	6.0
	Nov	19.1	6.5		May	22.1	6.2		Nov	17.9	6.1
	Dec	20.2	6.8		Jun	22.3	6.1		Dec	17.6	5.7

Series (d) 1934-1940

		Un	Cn			Un	Cn			Un	Cn
1934	Feb	18.2	5.8	1936	Apr	13.8	5.6	1938	Jun	13.4	5.0
	Apr	16.7	6.0		Jun	13.1	5.7		Aug	13.0	4.7
	Jun	16.5	6.3		Aug	12.3	5.2		Oct	12.7	4.1
	Aug	16.6	6.2		Oct	12.1	5.1		Dec	12.9	4.3
	Oct	16.4	6.1		Dec	12.2	5.0	1939	Feb	13.4	4.3
	Dec	16.1	6.0	1937	Feb	12.2	4.7		Apr	11.6	3.9
1935	Feb	17.5	6.1		Apr	10.8	4.5		Jun	9.7	3.5
	Apr	15.7	6.0		Jun	10.3	4.3		Aug	8.8	3.0
	Jun	15.5	6.2		Aug	9.9	4.0		Oct	9.7	2.3
	Aug	15.0	6.1		Oct	10.2	3.9		Dec	9.1	2.2
	Oct	14.6	6.1		Dec	12.2	4.5	1940	Feb	10.2	2.1
	Dec	14.2	5.5	1938	Feb	13.2	4.3		Apr	6.8	1.9
1936	Feb	15.4	5.4		Apr	12.9	4.6		Jun	5.3	1.7

Series (e) 1945-1966 (June figures, except 1945 (July))

	Un	Cn		Un	Cn		Un	Cn
1945	0.9	0.6	1953	1.6	0.7	1960	1.5	0.8
1946	2.6	1.8	1954	1.2	0.6	1961	1.3	0.7
1947	1.9	1.6	1955	1.1	0.7	1962	1.8	0.8
1948	-	-	1956	1.1	0.5	1963	2.2	1.1
1949	1.4	0.8	1957	1.3	0.5	1964	1.5	0.8
1950	1.5	0.7	1958	2.1	0.8	1965	1.3	0.8
1951	1.0	0.6	1959	2.0	1.0	1966	1.2	
1952	2.3	1.3						

Series (f) 1966-1979

		Un	Cn			Un	Cn			Un	Cn
1966	Sept	1.5	0.7	1971	Mar	3.2	1.0	1975	Sept	4.9	1.2
	Dec	2.5	0.9		Jun	3.2	1.1		Dec	5.1	1.2
1967	Mar	2.6	0.8		Sept	3.7	1.5	1976	Mar	5.4	1.2
	Jun	2.3	0.7		Dec	4.0	1.4		Jun	5.6	1.2
	Sept	2.5	0.8	1972	Mar	4.2	1.4		Sept	6.1	1.3
	Dec	2.6	0.8		Jun	3.5	1.3	1977	Jan	6.1	1.4
1968	Mar	2.6	0.8		Sept	3.9	1.5		Mar	5.8	1.3
	Jun	2.3	0.8		Dec	3.4	1.3		Jun	6.1	1.4
	Sept	2.5	0.8	1973	Mar	3.1	1.2		Sept	6.7	1.5
	Dec	2.5	0.9		Jun	2.5	1.0		Dec	6.2	1.6
1969	Mar	2.6	0.8		Sept	2.5	1.0	1978	Mar	6.0	1.6
	Jun	2.2	0.8		Dec	2.2	0.9		Jun	6.0	1.6
	Sept	2.4	0.9	1974	Mar	2.7			Sept	6.3	1.6
	Dec	2.5	0.9		Jun	2.3	0.8		Dec	5.6	1.5
1970	Mar	2.7	0.8		Sept	2.8	1.0	1979	Mar	5.8	1.6
	Jun	2.4	0.7		Nov	2.8			Jun	5.5	1.6
	Sept	2.6	0.9	1975	Mar	3.4	1.0				
	Dec	2.7	1.0		Jun	3.7	1.0				

Series (g) 1979-1984

		Un	Cn			Un	Cn			Un	Cn
1979	July	6.0	1.7	1981	May	10.7	2.5	1983	Mar	13.2	2.8
	Aug	6.0	1.7		Jun	11.2	2.6		Apr	13.2	2.9
	Sept	5.7	1.6		July	11.9	2.6		May	12.7	2.9
	Oct	5.6	1.5		Aug	12.3	2.7		Jun	12.4	2.9
	Nov	5.6	1.5		Sept	12.6	2.8		July	12.6	2.9
	Dec	5.6	1.6		Oct	12.5	2.7		Aug	12.5	2.8
1980	Jan	6.1	1.7		Nov	12.4	2.7		Sept	13.2	3.0
	Feb	6.2	1.7		Dec	12.3	2.7		Oct	12.9	2.8
	Mar	6.1	1.7	1982	Jan	12.9	2.8		Nov	12.8	2.9
	Apr	6.3	1.8		Feb	12.8	2.7		Dec	12.8	2.8
	May	6.2	1.8		Mar	12.5	2.7	1984	Jan	13.3	2.9
	Jun	6.9	2.0		Apr	12.6	2.7		Feb	13.2	2.8
	July	7.8	2.2		May	12.4	2.7		Mar	13.1	2.8
	Aug	8.3	2.2		Jun	12.8	2.8		Apr	12.9	2.8
	Sept	8.4	2.2		July	13.4	2.9		May	12.8	2.8
	Oct	8.5	2.2		Aug	13.8	2.9		Jun	12.6	2.8
	Nov	8.9	2.2		Sept	14.0	2.9		July	12.9	2.8
	Dec	9.3	2.3		Oct	13.8	2.8		Aug	12.9	2.8
1981	Jan	10.1	2.4		Nov	12.7	2.8		Sept	13.6	3.0
	Feb	10.3	2.5		Dec	12.8	2.9		Oct	13.4	2.8
	Mar	10.4	2.5	1983	Jan	13.4	3.0		Nov	13.4	2.8
	Apr	10.6	2.4		Feb	13.3	2.9		Dec	13.4	2.8

Series (h) 1985-1988

		Un	Cn			Un	Cn			Un	Cn
1985	Feb	13.7	2.8	1986	Jun	13.0	3.3	1987	Oct	10.6	3.3
	Apr	13.5	2.8		Aug	13.2	3.3		Dec	10.4	3.3
	Jun	12.9	2.9		Oct	13.0	3.2	1988	Feb	10.8	3.3
	Aug	13.1	2.9		Dec	13.0	3.2		Apr	10.3	3.3
	Oct	13.3	2.9	1987	Feb	13.0	3.4		Jun	9.5	3.2
	Dec	13.3	2.9		Apr	12.5	3.4		Aug	9.3	3.3
1986	Feb	13.5	3.2		Jun	11.2	3.4		Oct	8.6	3.0
	Apr	13.5	3.2		Aug	11.0	3.3		Dec	8.4	3.0

Source: Based on Tables A4, A8.

The Cn figure is the weighted mean deviation of regional unemployment rates from the national unemployment rate; the difference in unemployment rates between "average" high unemployment regions and "average" low unemployment regions is typically about *twice* the Cn figure.

Table A9 Trade Union Unemployment Rates, 1851-1914

Year	Un	Year	Un	Year	Un	Year	Un	Year	Un	Year	Un
1851	3.9	1862	8.4	1873	1.2	1884	8.1	1895	5.8	1906	3.6
1852	6.0	1863	6.0	1874	1.7	1885	9.3	1896	3.3	1907	3.7
1853	1.7	1864	2.7	1875	2.4	1886	10.2	1897	3.3	1908	7.8
1854	2.9	1865	2.1	1876	3.7	1887	7.6	1898	2.8	1909	7.7
1855	5.4	1866	3.3	1877	4.7	1888	4.8	1899	2.0	1910	4.7
1856	4.7	1867	7.4	1878	6.8	1889	2.1	1900	2.5	1911	3.0
1857	6.0	1868	7.9	1879	11.4	1890	2.1	1901	3.3	1912	3.2
1858	11.9	1869	6.7	1880	5.5	1891	3.4	1902	4.0	1913	2.1
1854	3.8	187(	3.9	1881	3.5	1892	6.1	1903	4.7	1914	3.3
1860	1.9	1871	1.6	1882	2.3	1893	7.5	1904	6.0		
1861	5.2	1872	0.9	1883	2.6	1894	6.9	1905	5.0		

Source: Mitchell and Deane (1962, pp.64-65).

This table gives approximate indications of cyclical movements in unemployment, rather than precise figures. Early figures for unemployment in recession are much exaggerated compared to later figures, since the earlier figures were heavily weighted towards the cyclically vulnerable engineering, metal and shipbuilding unions. The following comparison makes this point clearly, showing that the apparent decline in cyclical unemployment peaks is largely illusory.

Year	Unemployment	
	All unions	Engineering, metal and shipbuilding
1858	11.9	12.2
1879	11.4	15.3
1886	10.2	13.5
1909	7.7	13.0

Table A10 Increases in Unemployment by County, 1976-1985

Tables A10(i) to A10(xi)

Unemployment rates by County ranked according to increases in unemployment, 1976-1984

Table	Interval	Unemployment rate, U.K. Unadjusted			Seasonally adjusted		
		Start of Period	Finish of Period	Change	Start of Period	Finish of Period	Change
A10(i)	June 1976-June 1979	5.6	5.5	-0.1	5.4	5.3	-0.1
A10(ii)	June 1979-June 1980	5.5	6.9	+1.4	5.3	6.4	+1.1
A10(iii)	June 1980-Sept 1980	6.9	8.4	+1.5	6.4	7.4	+1.0
A10(iv)	Sept 1980-Dec 1980	8.4	9.3	+0.9	7.4	8.8	+1.4
A10(v)	Dec 1980-Feb 1981	9.3	10.3	+1.0	8.8	9.5	+0.7
A10(vi)	Feb 1981-June 1981	10.3	11.2	+0.9	9.5	10.6	+1.1
A10(vii)	June 1981-Dec 1981	11.2	12.3	+1.1	10.6	11.6	+1.0
A10(viii)	Dec 1981-July 1982	12.3	13.4	+1.1	11.6	12.3	+0.7
A10(ix)	July 1982-Apr 1983	12.0*	13.2*	+1.2			
A10(x)	Apr 1983-July 1984	13.2*	12.8*	-0.4			

* - unemployment on post-1982 basis

In all subsequent tables in this series,
x after a figure (e.g. -0.1x in Table A10(i)) indicates the change in the unemployment rate in the UK as a whole
and brackets around a county, e.g. (Highlands .....), indicates a county in which seasonal fluctuations in unemployment are extreme and often irregular.

(i) June 1976-June 1979

		June 1976	June 1979	+/-
1 (Highlands	Sc	5.9	8.2	+2.3)
2=Cleveland	N	8.1	9.8	+1.7
South Glamorgan	Wa	5.7	7.4	+1.7
Strathclyde	Sc(M)	7.9	9.6	+1.7
5=West Glamorgan	Wa	6.1	7.4	+1.3
Tayside	Sc	6.3	7.6	+1.3
7 Clwyd	Wa	8.7	9.4	+1.2[1]
8=Gwent	Wa	7.4	8.5	+1.1
Grampian	Sc	3.3	4.4	+1.1
10=Fife	Sc	6.4	7.3	+0.9
Lothians	Sc	5.5	6.4	+0.9
12=Dyfed	Wa	6.8	7.5	+0.7
Central	Sc	6.1	6.8	+0.7
14 Lincolnshire	EM	5.6	6.2	+0.6
Durham	N	7.7	8.3	+0.6
Northumberland	N	7.0	7.6	+0.6
Tyne and Wear	N(M)	9.0	9.6	+0.6
Mid Glamorgan	Wa	8.5	9.1	+0.6
19 Merseyside	NW(M)	10.8	11.3	+0.5
20 Dumf. & Galloway	Sc	7.4	7.8	+0.4
21 Cheshire	NW	5.8	6.1	+0.3
22=Nottinghamshire	EM	5.1	5.2	+0.1
South Yorks.	YH(M)	6.3	6.4	+0.1
24=Staffordshire	WM	4.1	4.1	0
Cumbria	N	5.9	5.9	0
26=Heref. & Worcs.	WM	4.6	4.5	-0.1x
Salop	WM	6.0	5.9	-0.1x
Humberside	YH	6.9	6.8	-0.1x
29=Buckinghamshire	SE	3.3	3.1	-0.2
Avon	SW	5.8	5.6	-0.2
West Yorks.	YH(M)	5.3	5.1	-0.2
North Yorkshire	YH	4.0	3.8	-0.2
33 Gt. Manchester	NW(M)	5.8	5.5	-0.3
34=Greater London	SE(M)	3.8	3.4	-0.4
Oxfordshire	SE	4.5	4.1	-0.4
Cambridgeshire	SE	4.5	4.1	-0.4
Somerset	SW	4.6	4.2	-0.4
Leicestershire	EM	4.7	4.3	-0.4
39=Kent	SE	5.4	4.9	-0.5
West Sussex	SE	3.1	2.6	-0.5
West Midlands	WM(M)	6.1	5.6	-0.5
Derbyshire	EM	4.7	4.2	-0.5
Lancashire	NW	6.1	5.6	-0.5
Borders	Sc	3.7	3.2	-0.5
45 Norfolk	EA	5.6	5.0	-0.6
46(Cornwall	SW	9.6	8.9	-0.7)
47=East Sussex	SE	5.6	4.8	-0.8
Hertfordshire	SE	3.1	2.3	-0.8
Wiltshire	SW	5.4	4.6	-0.8
Northamptonshire	EM	4.5	3.7	-0.8
Powys	Wa	5.5	4.7	-0.8
52=Suffolk	EA	5.0	4.0	-1.0
(Gwynedd	Wa	9.1	8.1	-1.0)
54=Berkshire	SE	3.6	2.5	-1.1
Devonshire	SW	7.9	6.8	-1.1
Gloucestershire	SW	5.3	4.2	-1.1
57=Bedfordshire	SE	5.1	3.9	-1.2
Hampshire	SE	5.2	4.0	-1.2
Surrey	SE	3.2	2.0	-1.2
60 Essex	SE	6.0	4.6	-1.4
61(Isle of Wight	SE	5.4	3.9	-1.5)
62 Dorset	SW	6.2	4.3	-1.9
(Orkneys	Sc	3.4	6.1	+2.7
(Shetlands	Sc	3.5	2.7	-0.8
(Western Isles	Sc	14.5	11.3	-3.2

[1] taking into account a boundary change in travel to work areas

(ii) June 1979-June 1980

		June 1979	June 1980	+/-
1 Clwyd	Wa	8.5	12.2	+3.7
2 Northamptonshire	EM	3.7	6.3	+2.6
3=Strathclyde	Sc(M)	9.6	12.1	+2.5
Cleveland	N	9.8	12.3	+2.5
5=Salop	WM	5.9	8.1	+2.2
Staffordshire	WM	4.1	6.3	+2.2
Fife	Sc	7.3	9.5	+2.2
8=Gt. Manchester	NW(M)	5.5	7.4	+1.9
Lancashire	NW	5.6	7.5	+1.9
10=West Yorks.	YH(M)	5.1	6.9	+1.8
Humberside	YH	6.8	8.6	+1.8
12=West Midlands	WM(M)	5.6	7.3	+1.7
Central	Sc	6.8	8.5	+1.7
14=(Isle of Wight	SE	3.9	5.5	+1.6)
South Yorks.	YH(M)	6.4	8.0	+1.6
Merseyside	NW(M)	11.3	12.9	+1.6
Tyne and Wear	N(M)	9.6	11.2	+1.6
Tayside	Sc	7.4	9.0	+1.6
19=Lincolnshire	EM	6.2	7.7	+1.5
20=Cheshire	NW	6.1	7.5	+1.4x
Mid Glamorgan	Wa	9.1	10.5	+1.4x
22=Leicestershire	EM	4.3	5.6	+1.3
Cumbria	N	5.9	7.2	+1.3
Durham	N	8.3	9.6	+1.3
Dumf. & Galloway	Sc	7.8	9.1	+1.3
26=Essex	SE	4.6	5.8	+1.2
Derbyshire	EM	4.2	5.4	+1.2
Nottinghamshire	EM	5.2	6.4	+1.2
Lothian	Sc	6.4	7.6	+1.2
30=Heref. & Worcs.	WM	4.5	5.6	+1.1
Northumberland	N	7.6	8.7	+1.1
Powys	Wa	4.7	5.8	+1.1
West Glamorgan	Wa	7.4	8.5	+1.1
34=Buckinghamshire	SE	3.1	4.1	+1.0
Kent	SE	4.9	5.9	+1.0
35=Hampshire	SE	4.0	4.9	+0.9
Surrey	SE	2.0	2.9	+0.9
38=Cambridgeshire	EA	4.1	4.9	+0.8
Suffolk	EA	4.0	4.8	+0.8
Gloucestershire	SW	4.2	5.0	+0.8
Wiltshire	SW	4.6	5.4	+0.8
Gwent	Wa	8.5	9.3	+0.8
South Glamorgan	Wa	7.4	8.2	+0.8
Borders	Sc	3.2	4.0	+0.8
45=Bedfordshire	SE	3.9	4.6	+0.7
East Sussex	SE	4.8	5.5	+0.7
Greater London	SE(M)	3.4	4.1	+0.7
Oxfordshire	SE	4.0	4.7	+0.7
Norfolk	EA	5.0	5.7	+0.7
Devonshire	SW	6.8	7.5	+0.7
Somerset	SW	4.2	4.9	+0.7
Grampian	Sc	4.4	5.1	+0.7
53=Berkshire	SE	3.9	4.4	+0.5
Hertfordshire	SE	2.3	2.8	+0.5
Avon	SW	5.6	6.1	+0.5
Dorset	SW	4.3	4.8	+0.5
North Yorkshire	YH	3.8	4.3	+0.5
Dyfed	Wa	7.5	8.0	+0.5
(Gwynedd	Wa	8.1	8.6	+0.5)
60=(Highlands	Sc	8.2	8.6	+0.4)
West Sussex	SE	2.6	3.0	+0.4
62 (Cornwall	SW	8.9	8.9	0)
(Western Isles	Sc	11.3	13.5	+2.2
(Orkneys	Sc	6.1	6.6	+0.5
(Shetlands	Sc	3.0	3.3	+0.3

(iii) June 1980-September 1980

			June 1980	Sept 1980	+/-
1	West Glamorgan	Wa	8.5	11.7	+3.2
	Gwent	Wa	9.3	12.4	+3.1
3	West Midlands	WM(M)	7.3	10.1	+2.8
4	Dyfed	Wa	8.0	10.6	+2.6
5	Heref. & Worcs.	WM	5.6	8.1	+2.5
6	Northamptonshire	EM	6.3	8.7	+2.4
7=	Mid Glamorgan	Wa	10.5	12.8	+2.3
	South Glamorgan	Wa	8.2	10.5	+2.3
9=	Salop	WM	8.1	10.3	+2.2
	Staffordshire	WM	6.3	8.5	+2.2
11=	West Yorks.	YH(M)	6.9	8.9	+2.0
	(Gwynedd	Wa	8.6	10.6	+2.0)
13	Clwyd	Wa	12.2	14.1	+1.9
14=	Essex	SE	5.8	7.6	+1.8
	Humberside	YH	8.6	10.4	+1.8
	Gt. Manchester	NW(M)	7.4	9.2	+1.8
	Cleveland	N	12.3	14.1	+1.8
	Powys	Wa	5.8	7.6	+1.8
19	Merseyside	NW(M)	12.9	14.6	+1.7
20=	Gloucestershire	SW	5.0	6.6	+1.6
	Wiltshire	SW	5.4	7.0	+1.6
	North Yorkshire	YH	4.3	5.9	+1.6
	Cheshire	NW	7.5	9.1	+1.6
	Durham	N	9.6	11.2	+1.6
	Northumberland	N	8.7	10.3	+1.6
26=	Berkshire	SE	4.4	5.9	+1.5x
	Suffolk	EA	4.8	6.3	+1.5x
	Leicestershire	EM	5.6	7.1	+1.5x
	South Yorks.	YH(M)	8.0	9.5	+1.5x
	Lancashire	NW	7.5	9.0	+1.5x
31=	Bedfordshire	SE	4.6	6.0	+1.4
	East Sussex	SE	5.5	6.9	+1.4
	Greater London	SE(M)	4.1	5.5	+1.4
	Norfolk	EA	5.7	7.1	+1.4
	Somerset	SW	4.9	6.3	+1.4
36=	Buckinghamshire	SE	4.1	5.4	+1.3
	Kent	SE	5.9	7.2	+1.3
	Surrey	SE	2.9	4.2	+1.3
	Dorset	SW	4.8	6.1	+1.3
	Derbyshire	EM	5.4	6.7	+1.3
41=	Hampshire	SE	4.9	6.1	+1.2
	Avon	SW	6.1	7.3	+1.2
	Devonshire	SW	7.5	8.7	+1.2
	Nottinghamshire	EM	6.4	7.6	+1.2
	Tyne and Wear	N(M)	11.2	12.4	+1.2
	Tayside	Sc	9.0	10.2	+1.2
47=	West Sussex	SE	3.0	4.1	+1.1
	(Cornwall	SW	8.9	10.0	+1.1)
	Cumbria	N	7.2	8.3	+1.1
50=	(Isle of Wight	SE	5.5	6.5	+1.0)
	Oxfordshire	SE	4.7	5.7	+1.0
	Cambridgeshire	EA	4.9	5.9	+1.0
	Strathclyde	Sc(M)	12.1	13.1	+1.0
54=	Hertfordshire	SE	2.8	3.6	+0.8
	Borders	Sc	4.0	4.8	+0.8
	Central	Sc	8.5	9.3	+0.8
57=	Dumf. & Galloway	Sc	9.1	9.7	+0.6
	Lothians	Sc	7.6	8.2	+0.6
59	Grampian	Sc	5.1	5.6	+0.5
60	Lincolnshire	EM	7.7	8.0	+0.3
61=	Fife	Sc	9.5	9.6	+0.1
	(Highlands	Sc	8.6	8.7	+0.1)
	(Orkneys	Sc	6.6	7.5	+0.9
	(Western Isles	Sc	13.5	14.0	+0.5
	(Shetlands	Sc	3.3	3.2	-0.1

(iv) September 1980-December 1980

		Sept 1980	Dec 1980	+/-
1 (Cornwall	SW	10.0	14.0	+4.0
2 (Isle of Wight	SE	6.5	10.0	+3.5)
3 (Gwynedd	Wa	10.6	13.3	+2.7)
4 Dorset	SW	6.1	8.2	+2.1
5 (Highlands	Sc	8.7	10.7	+2.0)
6 Dumf. & Galloway	Sc	9.7	11.6	+1.9
7=Devonshire	SW	8.7	10.5	+1.8
Durham	N	11.2	13.0	+1.8
9=East Sussex	SE	6.9	8.4	+1.5
Norfolk	EA	7.1	8.6	+1.5
Borders	Sc	4.8	6.3	+1.5
12=Cleveland	N	14.1	15.5	+1.4
Tayside	Sc	10.2	11.6	+1.4
14=Lincolnshire	EM	8.0	9.3	+1.3
Humberside	YH	10.4	11.7	+1.3
Dyfed	Wa	10.6	11.9	+1.3
18=West Midlands	WM(M)	10.1	11.3	+1.2
Clwyd	Wa	14.1	15.3	+1.2
20=Kent	SE	7.2	8.3	+1.1
Northamptonshire	EM	8.7	9.8	+1.1
North Yorkshire	YH	5.9	7.0	+1.1
West Glamorgan	Wa	11.7	12.8	+1.1
25=West Sussex	SE	4.1	5.1	+1.0
Lancashire	NW	9.0	10.0	+1.0
Mid Glamorgan	Wa	12.8	13.8	+1.0
28=Heref. & Worcs.	WM	8.1	9.0	+0.9x
Staffordshire	WM	8.5	9.4	+0.9x
South Yorks.	YH(M)	9.5	10.4	+0.9x
Gt. Manchester	NW(M)	9.2	10.1	+0.9x
Cumbria	N	8.3	9.2	+0.9x
33=Essex	SE	7.6	8.4	+0.8
Cambridgeshire	EA	5.9	6.7	+0.8
Leicestershire	EM	7.1	7.9	+0.8
West Yorks.	YH(M)	8.9	9.7	+0.8
Cheshire	NW	9.1	9.9	+0.8
Fife	Sc	9.6	10.4	+0.8
Strathclyde	Sc(M)	13.1	13.9	+0.8
40=Bedfordshire	SE	6.0	6.7	+0.7
Berkshire	SE	5.9	6.6	+0.7
Buckinghamshire	SE	5.4	6.1	+0.7
Hampshire	SE	6.1	6.8	+0.7
Wiltshire	SW	7.0	7.7	+0.7
Derbyshire	EM	6.7	7.4	+0.7
Nottinghamshire	EM	7.6	8.3	+0.7
Gwent	Wa	12.4	13.1	+0.7
Grampian	Sc	5.6	6.3	+0.7
49=Hertfordshire	SE	3.6	4.2	+0.6
51=Suffolk	EA	6.3	6.8	+0.5
Avon	SW	7.3	7.8	+0.5
Northumberland	N	10.3	10.8	+0.5
55=Greater London	SE(M)	5.5	5.9	+0.4
Somerset	SW	6.3	6.7	+0.4
Merseyside	NW(M)	14.6	15.0	+0.4
South Glamorgan	Wa	10.5	10.9	+0.4
59=Oxfordshire	SE	5.7	6.0	+0.3
Gloucestershire	SW	6.6	6.9	+0.3
Powys	Wa	7.6	7.9	+0.3
62 Surrey	SE	4.2	4.4	+0.2
(Western Isles	Sc	14.0	17.3	+3.3
(Shetlands	Sc	3.2	4.2	+1.0
(Orkneys	Sc	7.5	8.4	+0.9

(v) December 1980-February 1981 (March 1981 not available because of Civil Servants Dispute)

		Dec 1980	Feb 1980	+/-
1=Powys	Wa	7.9	9.4	+1.5
Central	Sc	10.6	12.1	+1.5
Fife	Sc	10.4	11.9	+1.5
4=Lincolnshire	EM	9.3	10.7	+1.4
Borders	Sc	6.3	7.7	+1.4
6=West Midlands	WM(M)	11.3	12.6	+1.3
Staffordshire	WM	9.4	10.7	+1.3
8=Norfolk	EA	8.6	9.8	+1.2
Strathclyde	Sc(M)	13.9	15.1	+1.2
10=Oxfordshire	SE	6.0	7.1	+1.1
Cambridgeshire	EA	6.7	7.8	+1.1
Heref. & Worcs.	WM	9.0	10.1	+1.1
Salop	WM	11.4	12.5	+1.1
Gt. Manchester	NW(M)	10.1	11.2	+1.1
Cleveland	N	15.5	16.6	+1.1
Grampian	Sc	6.3	7.4	+1.1
Tayside	Sc	11.6	12.7	+1.1
18=Leicestershire	EM	7.9	8.9	+1.0x
South Yorks.	YH(M)	10.4	11.4	+1.0x
Humberside	YN	11.7	12.7	+1.0x
Lancashire	NW	10.0	11.0	+1.0x
Durham	N	13.0	14.0	+1.0x
Northumberland	N	10.8	11.8	+1.0x
Lothians	Sc	8.7	9.7	+1.0x
25=Buckinghamshire	SE	6.1	7.0	+0.9
Hampshire	SE	6.8	7.7	+0.9
North Yorkshire	YH	7.0	7.9	+0.9
Tyne and Wear	N(M)	13.0	13.9	+0.9
Clwyd	Wa	15.3	16.2	+0.9
Dyfed	Wa	11.9	12.8	+0.9
(Gwynedd	Wa	13.3	14.2	+0.9)
32=Bedfordshire	SE	6.7	7.5	+0.8
East Sussex	SE	8.4	9.2	+0.8
Essex	SE	8.4	9.2	+0.8
Greater London	SE(M)	5.9	6.7	+0.8
Hertfordshire	SE	4.2	5.0	+0.8
Kent	SE	8.3	9.1	+0.8
Suffolk	EA	6.8	7.6	+0.8
Avon	SW	7.8	8.6	+0.8
(Cornwall	SW	14.0	14.8	+0.8)
Devonshire	SW	10.5	11.3	+0.8
Dorset	SW	8.2	9.0	+0.8
Derbyshire	EM	7.4	8.2	+0.8
West Yorks.	YH(M)	9.7	10.5	+0.8
Merseyside	NW(M)	15.0	15.8	+0.8
Cheshire	NW	9.9	10.7	+0.8
Cumbria	N	9.2	10.0	+0.8
Gwent	Wa	13.1	13.9	+0.8
South Glamorgan	Wa	10.9	11.7	+0.8
50=Berkshire	SE	6.6	7.3	+0.7
Surrey	SE	4.4	5.1	+0.7
Northamptonshire	EM	9.8	10.5	+0.7
Nottinghamshire	EM	8.3	9.0	+0.7
Dumf. & Galloway	Sc	11.6	12.3	+0.7
55=West Sussex	SE	5.1	5.7	+0.6
Gloucestershire	SW	6.9	7.5	+0.6
Somerset	SW	6.7	7.3	+0.6
Wiltshire	SW	7.7	8.3	+0.6
West Glamorgan	Wa	12.8	13.4	+0.6
Mid Glamorgan	Wa	13.8	14.4	+0.6
(Highlands	Sc	10.7	11.3	+0.6)
62 (Isle of Wight	SE	10.0	10.5	+0.5)
(Western Isles	Sc	17.3	19.5	+2.2
(Orkneys	Sc	8.4	9.4	+1.0
(Shetlands	Sc	4.2	5.2	+1.0

(vi) February 1981-June 1981

		Feb 1981	Jun 1981	+/-
1 Bedfordshire	SE	7.5	9.4	+1.9
2=West Midlands	WM(M)	12.6	14.2	+1.6
South Yorks.	YH(M)	11.4	13.0	+1.6
Cheshire	NW	10.7	12.3	+1.6
5=Staffordshire	WM	10.7	12.2	+1.5
Derbyshire	EM	8.2	9.7	+1.5
Nottinghamshire	EM	9.0	10.5	+1.5
8 Gt. Manchester	NW(M)	11.2	12.6	+1.4
9=West Yorks.	YH(M)	10.5	11.7	+1.2
Merseyside	NW(M)	15.8	17.0	+1.2
Cleveland	N	16.6	17.8	+1.2
12=Salop	WM	12.5	13.6	+1.1
Lincolnshire	EM	10.7	11.8	+1.1
Northamptonshire	EM	10.5	11.6	+1.1
Tyne and Wear	N(M)	13.9	15.0	+1.1
16=Hampshire	SE	7.7	8.7	+1.0
Leicestershire	EM	8.9	9.9	+1.0
Humberside	YH	12.7	13.7	+1.0
Durham	N	14.0	15.0	+1.0
West Glamorgan	Wa	13.4	14.4	+1.0
Central	Sc	12.1	13.1	+1.0
Strathclyde	Sc(M)	15.1	16.1	+1.0
23=Essex	SE	9.2	10.1	+0.9x
Gloucestershire	SW	7.5	8.4	+0.9x
Lancashire	NW	11.0	11.9	+0.9x
Fife	Sc	11.9	12.8	+0.9x
Lothians	Sc	9.7	10.6	+0.9x
28=Kent	SE	9.1	9.9	+0.8
Oxfordshire	SE	7.1	7.9	+0.8
Surrey	SE	5.1	5.9	+0.8
Northumberland	N	11.8	12.6	+0.8
32=Berkshire	SE	7.3	8.0	+0.7
Buckinghamshire	SE	7.0	7.7	+0.7
Hertfordshire	SE	5.0	5.7	+0.7
Cambridgeshire	SE	7.8	8.5	+0.7
Gwent	Wa	13.9	14.6	+0.7
Mid Glamorgan	Wa	14.4	15.1	+0.7
Tayside	Sc	12.7	13.4	+0.7
39=Greater London	SE(M)	6.7	7.3	+0.6
Suffolk	EA	7.6	8.2	+0.6
Avon	SW	8.6	9.2	+0.6
Wiltshire	SW	8.3	8.9	+0.6
Cumbria	N	10.0	10.6	+0.6
44=Somerset	SW	7.3	7.8	+0.5
Dyfed	Wa	12.8	13.3	+0.5
46=Fife	Sc	11.9	12.3	+0.4
47=West Sussex	SE	5.7	6.0	+0.3
Heref. & Worcs.	WM	10.1	10.4	+0.3
Powys	Wa	9.4	9.7	+0.3
50=South Glamorgan	Wa	11.7	11.9	+0.2
Grampian	Sc	7.4	7.6	+0.2
52=East Sussex	SE	9.2	9.3	+0.1
Devonshire	SW	11.3	11.4	+0.1
Dorset	SW	9.0	9.1	+0.1
Borders	Sc	7.7	7.8	+0.1
56=Norfolk	EA	9.8	9.7	-0.1
Clwyd	Wa	16.2	16.1	-0.1
58 North Yorkshire	YH	7.9	7.6	-0.3
59(Highlands	Sc	11.3	10.5	-0.8)
60(Gwynedd	Wa	14.2	13.0	-1.2)
61(Cornwall	SW	14.8	13.3	-1.5)
62(Isle of Wight	SE	10.5	8.3	-2.2)
(Western Isles	Sc	19.5	20.0	+0.5
(Shetlands	Sc	5.2	5.6	+0.4
(Orkneys	Sc	9.4	9.0	-0.4

(vii) June 1981-December 1981

		June 1981	Dec 1981	+/-
1 (Isle of Wight	SE	8.3	13.6	+5.3)
2 (Gwynedd	Wa	13.0	16.5	+3.5)
3 (Cornwall	SW	13.3	16.6	+3.3)
4 (Highlands	Sc	10.5	13.0	+2.5)
5 Powys	Wa	9.7	12.0	+2.3
6 Devonshire	SW	11.4	13.5	+2.1
7=Clwyd	Wa	16.1	17.9	+1.8
Dyfed	Wa	13.2	15.0	+1.8
9=West Midlands	WM(M)	14.2	15.9	+1.7
Norfolk	EA	9.7	11.4	+1.7
South Glamorgan	Wa	11.9	13.6	+1.7
12=East Sussex	SE	9.3	10.9	+1.6
Heref. & Worcs.	WM	10.4	12.0	+1.6
14 Mid Glamorgan	Wa	15.1	16.6	+1.5
15=Dorset	SW	9.1	10.5	+1.4
Northumberland	N	12.6	14.0	+1.4
West Glamorgan	Wa	14.4	15.8	+1.4
Dumf. & Galloway	Sc	12.7	14.1	+1.4
Lothians	Sc	10.6	12.0	+1.4
20=Bedfordshire	SE	9.4	10.7	+1.3
Greater London	SE(M)	7.3	8.6	+1.3
Salop	WM	13.6	14.9	+1.3
Staffordshire	WM	12.2	13.5	+1.3
South Yorks	YH(M)	13.0	14.3	+1.3
Humberside	YH	13.7	15.0	+1.3
26=West Sussex	SE	6.0	7.2	+1.2
Merseyside	NW(M)	16.9	18.1	+1.2
Cumbria	N	10.6	11.8	+1.2
29=Buckinghamshire	SE	7.7	8.8	+1.1x
Essex	SE	10.1	11.2	+1.1x
Kent	SE	9.9	11.0	+1.1x
Avon	SW	9.2	10.3	+1.1x
Gt. Manchester	NW(M)	12.6	13.7	+1.1x
Cheshire	NW	12.3	13.4	+1.1x
Gwent	Wa	14.6	15.7	+1.1x
36=Somerset	SW	7.8	8.8	+1.0
Lancashire	NW	12.0	13.0	+1.0
38=Hertfordshire	SE	6.2	7.1	+0.9
Cleveland	N	17.8	18.7	+0.9
40=Tyne and Wear	N(M)	15.0	15.8	+0.8
Central	Sc	13.1	13.9	+0.8
Grampian	Sc	7.6	8.4	+0.8
Strathclyde	Sc(M)	16.1	16.9	+0.8
44 Berkshire	SE	6.6	7.3	+0.7
45=Suffolk	EA	8.2	8.8	+0.6
Nottinghamshire	EM	10.5	11.1	+0.6
North Yorkshire	YH	7.6	8.2	+0.6
Borders	Sc	7.8	8.4	+0.6
49=Hampshire	SE	8.7	9.2	+0.5
Oxfordshire	SE	7.9	8.4	+0.5
Cambridgeshire	EA	8.5	9.0	+0.5
West Yorks.	YH(M)	11.7	12.2	+0.5
53=Surrey	SE	5.9	6.2	+0.3
Durham	N	15.0	15.3	+0.3
Fife	Sc	12.8	13.1	+0.3
Tayside	Sc	13.4	13.7	+0.3
57=Derbyshire	EM	9.7	9.9	+0.2
Leicestershire	EM	9.8	10.0	+0.2
59=Gloucestershire	SW	8.4	8.5	+0.1
Northamptonshire	EM	11.6	11.7	+0.1
61 Lincolnshire	EM	11.8	11.8	0
62 Wiltshire	SW	8.9	8.8	-0.1
(Orkneys	Sc	9.0	11.2	+2.2
(Western Isles	Sc	20.1	21.1	+1.0
(Shetlands	Sc	5.3	6.2	+0.9

(viii) December 1981-July 1982

		Dec 1981	July 1982	+/-
1 Derbyshire	EM	9.9	12.0	+2.1
2 Humberside	YH	15.0	16.7	+1.7
3=Durham	N	15.3	16.9	+1.6
Gwent	Wa	15.7	17.3	+1.6
5=Wiltshire	SW	8.8	10.3	+1.5
Shropshire	WM	14.9	16.4	+1.5
Merseyside	NW(M)	18.1	19.6	+1.5
Northumberland	N	14.0	15.5	+1.5
Tyne and Wear	N(M)	15.8	17.3	+1.5
Central	Sc	13.9	15.4	+1.5
11=Cambridgeshire	EA	9.0	10.4	+1.4
Gt. Manchester	NW(M)	13.7	15.1	+1.4
Cleveland	N	18.7	20.1	+1.4
14=Essex	SE	10.9	12.2	+1.3
Nottinghamshire	EM	11.1	12.4	+1.3
South Yorks.	YH(M)	14.3	15.6	+1.3
Lancashire	NW	13.0	14.3	+1.3
Mid Glamorgan	Wa	16.6	17.9	+1.3
19=Heref. & Worcs.	WM	12.0	13.2	+1.2
Staffordshire	WM	13.5	14.7	+1.2
West Yorks.	YH(M)	12.2	13.4	+1.2
Cheshire	NW	13.4	14.6	+1.2
Fife	Sc	13.1	14.3	+1.2
Strathclyde	Sc(M)	16.9	18.1	+1.2
25=West Midlands	WM(M)	15.9	17.0	+1.1x
Lincolnshire	EM	11.8	12.9	+1.1x
Northamptonshire	EM	11.7	12.8	+1.1x
Lothians	Sc	12.0	13.1	+1.1x
29=Hampshire	SE	9.2	10.2	+1.0
Suffolk	EA	8.8	9.8	+1.0
Gloucestershire	SW	8.5	9.5	+1.0
Leicestershire	EM	10.0	11.0	+1.0
33=Greater London	SE(M)	8.6	9.5	+0.9
33=Kent	SE	11.0	11.9	+0.9
Oxfordshire	SE	8.4	9.3	+0.9
36=Hertfordshire	SE	7.1	7.9	+0.8
Avon	SW	10.3	11.1	+0.8
38=Buckinghamshire	SE	8.8	9.5	+0.7
East Sussex	SE	10.9	11.6	+0.7
Cumbria	N	11.8	12.5	+0.7
41=West Sussex	SE	7.2	7.8	+0.6
Tayside	Sc	13.7	14.3	+0.6
43=Berkshire	SE	7.3	7.8	+0.5
Surrey	SE.	6.2	6.7	+0.5
Dyfed	Wa	15.0	15.5	+0.5
South Glamorgan	Wa	13.6	14.1	+0.5
47=Norfolk	EA	11.4	11.8	+0.4
Clwyd	Wa	17.9	18.3	+0.4
Borders	Sc	8.4	8.8	+0.4
Dumf. & Galloway	Sc	14.1	14.5	+0.4
51=Devon	SW	13.5	13.8	+0.3
Somerset	SW	8.8	9.1	+0.3
West Glamorgan	Wa	15.8	16.1	+0.3
Grampian	Sc	8.4	8.7	+0.3
55=Bedfordshire	SE	10.7	10.9	+0.2
(Highlands	Sc	13.0	13.2	+0.2)
57=Dorset	SW	10.5	10.5	0.0
Powys	Wa	12.0	12.0	0.0
59 North Yorkshire	YH	9.2	9.1	-0.1
60 (Gwynedd	Wa	16.5	15.1	-1.4)
61 (Cornwall	SW	16.6	15.1	-1.5)
62 (Isle of Wight	SE	13.6	11.9	-1.7)
(Western Isles	Sc	21.1	24.4	+3.3
(Orkneys	Sc	11.2	13.1	+1.9
(Shetlands	Sc	6.2	6.7	+0.5

Note: Shropshire in this table is identical to Salop in earlier tables, the county name having officially been changed at this stage.

(ix) July 1982-April 1983

(July 1982 figures on "old" basis; April 1983 figures on "new" basis; +/- figures take account of change of basis of calculation)

		July 1982	Apr 1983	+/-			July 1982	Mar 1983	+/-
1	(Isle of Wight	SE	11.9	14.5	+3.2)	34=Cambridgeshire	EA	10.4	10.7	+0.9
2	(Gwynedd	Wa	15.1	16.4	+2.7)	Suffolk	EA	9.8	10.4	+0.9
3	Dyfed	Wa	15.5	16.4	+2.6	Avon	SW	11.1	11.0	+0.9
4	(Cornwall	SW	15.1	16.4	+2.5)	Durham	N	16.9	17.5	+0.9
5	Powys	Wa	12.0	12.4	+2.0	Clwyd	Wa	18.3	18.3	+0.9
6=Norfolk		EA	11.8	13.0	+1.8	39=West Yorks.	YH(M)	13.4	13.4	+0.9
	Lincolnshire	EM	12.9	13.7	+1.8	40=Berkshire	SE	7.8	7.5	+0.7
8=South Glamorgan		Wa	14.1	14.1	+1.7	Gt. Manchester	NW(M)	15.1	14.6	+0.7
	West Glamorgan	Wa	16.1	15.8	+1.7	42=Devonshire	SW	13.8	13.7	+0.6
10	Heref. & Worcs.	WM	13.2	14.0	+1.6	Derbyshire	EM	12.0	11.7	+0.6
11	East Sussex	SE	11.6	12.2	+1.5	Tyne and Wear	N(M)	17.3	17.1	+0.6
12=Bedfordshire		SE	10.9	11.2	+1.4	Mid Glamorgan	Wa	17.9	16.8	+0.6
	Gloucestershire	SW	9.5	10.1	+1.4	46=Buckinghamshire	SE	9.5	9.3	+0.5
	West Midlands	WM(M)	17.0	17.0	+1.4	Hampshire	SE	10.2	9.8	+0.5
	Borders	Sc	8.8	10.0	+1.4	Hertfordshire	SE	7.9	7.7	+0.5
16=South Yorks.		YH(M)	15.6	16.2	+1.3	Surrey	SE	6.7	6.7	+0.5
	(Highlands	Sc	13.2	14.2	+1.3)	50=Northamptonshire	EM	12.8	12.1	+0.3
18=Greater London		SE(M)	9.5	9.6	+1.2	Nottinghamshire	EM	12.4	12.3	+0.3
	Kent	SE	11.9	12.2	+1.2	Gwent	Wa	17.3	16.8	+0.3
	Dorset	SW	10.5	11.2	+1.2	53=West Sussex	SE	7.8	7.3	+0.2
21	Shropshire	WM	16.4	15.8	+1.1	Wiltshire	SW	10.3	10.2	+0.2
	Leicestershire	EM	11.0	10.9	+1.1	Strathclyde	Sc(M)	18.1	17.4	+0.2
	North Yorkshire	YH	9.1	9.2	+1.1	56=Staffordshire	WM	14.7	13.9	+0.1
	Merseyside	NW(M)	19.6	19.0	+1.1	Humberside	YH	16.7	16.0	+0.1
	Lancashire	NW	14.3	14.0	+1.1	Cumbria	N	12.5	12.0	+0.1
	Central	Sc	15.4	15.5	+1.1	Dumf. & Galloway	Sc	14.5	13.7	+0.1
	Grampian	Sc	8.7	9.0	+1.1	60 Oxfordshire	SE	9.3	8.3	-0.2
	Lothian	Sc	13.1	12.4	+1.1	61 Fife	Sc	14.3	13.2	-0.6
	Tayside	Sc	14.3	14.6	+1.1	62 Northumberland	N	15.5	13.5	-1.1
30=Essex		SE	12.5	12.6	+1.0					
	Somerset	SW	9.1	9.8	+1.0	(Shetlands	Sc	6.7	7.3	+2.1
	Cheshire	NW	14.6	13.6	+1.0	(Western Isles	Sc	24.4	22.5	+1.1
	Cleveland	N	20.1	20.5	+1.0	(Orkneys	Sc	13.1	12.5	+1.0

(x) April 1983-July 1984

		Apr 1983	July 1984	+/-
1 (Highlands	Sc	14.2	15.1	+0.9)
2 Fife	Sc	13.2	13.7	+0.5
3=Greater London	SE(M)	9.6	10.0	+0.4
Tyne and Wear	N(M)	17.1	17.5	+0.4
5=Cleveland	N	20.5	20.7	+0.2
Lothian	Sc	12.4	12.6	+0.2
7=Shropshire	WM	15.8	15.9	+0.1
Nottinghamshire	EM	12.3	12.4	+0.1
North Yorkshire	YH	9.2	9.3	+0.1
10=Derbyshire	EM	11.7	11.7	0.0
South Glamorgan	Wa	14.1	14.1	0.0
Strathclyde	Sc(M)	17.4	17.4	0.0
13=Hampshire	SE	9.8	9.7	-0.1
Avon	SW	11.1	11.0	-0.1
Central	Sc	15.5	15.4	-0.1
16=Buckinghamshire	SE	9.3	9.1	-0.2
Essex	SE	12.6	12.4	-0.2
Oxfordshire	SE	8.3	8.1	-0.2
Leicestershire	EM	10.9	10.7	-0.2
Gt. Manchester	NW(M)	14.6	14.4	-0.2
Cheshire	NW	13.6	13.4	-0.2
22=Berkshire	SE	7.5	7.2	-0.3
Hertfordshire	SE	7.7	7.4	-0.3
Kent	SE	12.2	11.9	-0.3
South Yorks.	YH(M)	16.2	15.9	-0.3
Merseyside	NW(M)	19.0	18.7	-0.3
Mid Glamorgan	Wa	16.8	16.5	-0.3
Powys	Wa	12.4	12.1	-0.3
29=Gloucestershire	SW	10.1	9.7	-0.4x
Northumberland	N	13.5	13.1	-0.4x
Tayside	Sc	14.6	14.2	-0.4x
32=East Sussex	SE	12.2	11.7	-0.5
Cambridgeshire	EA	10.7	10.2	-0.5

		Mar 1983	July 1984	+/-
32=Somerset	SW	9.8	9.3	-0.5
Grampian	Sc	9.0	8.5	-0.5
36=Dorset	SW	11.2	10.6	-0.6
Lancashire	NW	14.0	13.4	-0.6
38=Wiltshire	SW	10.2	9.5	-0.7
Northamptonshire	EM	12.1	11.4	-0.7
West Yorks.	YH(M)	13.4	12.7	-0.7
Durham	N	17.5	16.8	-0.7
West Glamorgan	Wa	15.8	15.1	-0.7
43=West Sussex	SE	7.3	6.5	-0.8
Humberside	YH	16.0	15.2	-0.8
45 Dumf. & Galloway	Sc	13.7	12.8	-0.9
46=Surrey	SE	6.7	5.7	-1.0
Devonshire	SW	13.7	12.7	-1.0
Heref. & Worcs.	WM	14.0	13.0	-1.0
(Gwynedd	Wa	16.4	15.4	-1.0)
50=Bedfordshire	SE	11.2	10.1	-1.1
Lincolnshire	EM	13.7	12.6	-1.1
52=Suffolk	EA	10.4	9.2	-1.2
West Midlands	WM(M)	17.0	15.8	-1.2
Dyfed	Wa	16.4	15.2	-1.2
55 Staffordshire	WM	13.9	12.5	-1.4
56=Norfolk	EA	13.0	11.5	-1.5
Cumbria	N	12.0	10.5	-1.5
Gwent	Wa	16.8	15.3	-1.5
Borders	Sc	10.0	8.5	-1.5
60 (Cornwall	SW	16.4	14.7	-1.7)
61 Clwyd	Wa	18.3	16.5	-1.8
62 (Isle of Wight	SE	14.5	12.2	-2.3)
(Western Isles	Sc	22.5	21.5	-1.0
(Orkneys	Sc	12.5	10.7	-1.8
(Shetlands	Sc	7.3	5.4	-1.9

(xi) September 1984-September 1985

		Sept 1984	Sept 1985	+/-
1 Dyfed	Wa	16.7	18.4	+1.7
2 Fife	Sc	14.8	15.9	+1.1
3 Northumberland	N	15.3	16.3	+1.0
4=South Yorks.	YH(M)	17.5	18.4	+0.9
Clwyd	Wa	18.0	18.9	+0.9
6=Norfolk	EA	11.4	12.2	+0.8
North Yorkshire	YH	10.3	11.1	+0.8
8=Somerset	SW	10.2	10.9	+0.7
Cumbria	N	12.1	12.8	+0.7
(Gwynedd	Wa	17.6	18.3	+0.7)
11=Lincolnshire	EM	13.0	13.6	+0.6
Powys	Wa	12.9	13.5	+0.6
Dumf. & Galloway	Sc	13.2	13.8	+0.6
(Highlands	Sc	14.7	15.3	+0.6)
15=East Sussex	SE	10.3	10.8	+0.5
(Cornwall	SW	16.4	16.9	+0.5)
Devon	SW	13.1	13.6	+0.5
Heref. & Worcs.	WM	13.7	14.2	+0.5
Nottinghamshire	EM	13.0	13.5	+0.5
Gwent	Wa	17.5	18.0	+0.5
Mid Glamorgan	Wa	19.2	19.7	+0.5
23=Suffolk	EA	9.2	9.6	+0.4
Dorset	SW	10.9	11.3	+0.4
Shropshire	WM	16.5	16.9	+0.4
Staffordshire	WM	14.1	14.5	+0.4
Derbyshire	EM	13.7	14.1	+0.4
West Yorks.	YH(M)	14.1	14.5	+0.4
Tyne and Wear	N(M)	20.3	20.7	+0.4
Strathclyde	Sc(M)	18.6	19.0	+0.4
Tayside	Sc	14.6	15.0	+0.4
32=Gloucestershire	SW	10.4	10.7	+0.3
Wiltshire	SW	9.9	10.2	+0.3
32=Lancashire	NW	14.2	14.5	+0.3
36=Gt. Manchester	NW(M)	15.5	15.8	+0.3
South Glamorgan	Wa	14.5	14.8	+0.3
37=Hampshire	SE	9.8	10.0	+0.2
(Isle of Wight	SE	12.9	13.1	+0.2)
West Sussex	SE	7.0	7.2	+0.2
Avon	SW	11.6	11.8	+0.2
Humberside	YH	17.0	17.2	+0.2
Merseyside	NW(M)	21.3	21.5	+0.2
43=Bedfordshire	SE	10.6	10.7	+0.1
Kent	SE	12.4	12.5	+0.1
West Midlands	WM(M)	17.0	17.1	+0.1
Lothian	Sc	12.7	12.8	+0.1
47=Warwickshire	WM	13.0	13.0	0.0
West Glamorgan	Wa	16.8	16.8	0.0
Borders	Sc	9.0	9.0	0.0
Grampian	Sc	7.6	7.6	0.0
52=Berkshire	SE	7.5	7.4	-0.1
Cheshire	NW	14.1	14.0	-0.1
Central	Sc	16.2	16.1	-0.1
55=Buckinghamshire	SE	8.6	8.4	-0.2
Essex	SE	12.5	12.3	-0.2
Oxfordshire	SE	8.3	8.1	-0.2
Cambridgeshire	EA	9.9	9.7	-0.2
Leicestershire	EM	11.1	10.9	-0.2
Northamptonshire	EM	12.3	12.1	-0.2
61=Hertfordshire	SE	7.8	7.4	-0.4
Cleveland	N	23.5	23.1	-0.4
(Orkneys	Sc	10.7	10.7	0.0
(Shetlands	Sc	5.4	5.1	-0.3
(Western Isles	Sc	19.3	18.9	-0.4

Bibliography

1 Sources of statistical material
  (i) UK Government, official labour market statistics
  (ii) UK Government, other official statistics
  (iii) International organisations, official statistics
  (iv) Others

2 Main bibliography
  (i) Books, periodicals, etc. (named articles)
  (ii) Newspapers, etc.
  (iii) Supplementary bibliography; recent references not cited in main text.

UK official publications which are not primarily statistical in nature, for example the reports of Royal Commissions, are included in bibliography 2(i), under Great Britain.

1 Sources of statistical material

1(i) UK Government, official labour market statistics.

The one indispensable source is the *Gazette*, published by the Department of Employment. This publication has been referred to so frequently, and has had so many changes of title, that the one word abbreviated title seems simplest and most logical. The current title is *Employment Gazette;* earlier designations are listed below. Other publications, which abstract statistical material from the *Gazette*, are also given abbreviated titles; *Historical Abstract; Yearbook*.

These published sources, if used intelligently, can provide a highly detailed picture of changes in the state of the labour market. It should be emphasised, however, that up-to-date statistical material is presented on the basis of the best information available *at the time*, and that revisions are frequently made when new material becomes available. This has no real effect on the figures given of the number unemployed, which are based on regular monthly counts, but can have a considerable effect on figures for the number employed, and by this route on the percentage unemployment rate. The general principle adopted has been to use the latest revised figures whenever possible. Unfortunately the final figures do not always get published, so that for example there are discrepancies in the *Gazette* figures for employment taken from the Census of Employment, and the actual Census of Employment figures themselves, held on NOMIS (see below). In such circumstances the NOMIS figures are to be regarded as more reliable. In addition, NOMIS Census of Employment figures are far more detailed, particularly at the sub-regional level, than *Gazette* figures, and this source has been essential in the research work involved in preparing chapters 6 and 8.

(a) Published sources

Gazette, monthly, 1893 to date. Full titles: *Labour Gazette*, May 1893-January 1905; *Board of Trade Labour Gazette*, February 1905-June 1917; *Labour Gazette*, July 1917-May 1922; *Ministry of Labour Gazette*, June 1922-May 1968; *Employment and Productivity Gazette*, June 1968-December 1970; *Department of Employment Gazette*, January 1971-December 1979; *Employment Gazette*, January 1980 to date.

Historical Abstract. Full title: Department of Employment and Productivity (1971) *British Labour Statistics: Historical Abstract 1886-1968*, HMSO, London.

Yearbook (1969-1976; no longer published). Full title: *British Labour Statistics: Year Book*.

In addition, twenty-two editions of the *Abstract of Labour Statistics of the United Kingdom* were published at irregular intervals from 1894 to 1937.

In recent years the *Gazette* has published various *Historical Supplements*, giving longer continuous runs of statistics than the main body of the *Gazette*. The most recent issues (as of early 1989) have been in February 1987 and October 1987.

(b) Unpublished sources:

A variety of unpublished statistical material, at a wide range of spatial scales, is available on NOMIS, the National Online Manpower Information System. For a brief description, see A.R. Townsend, M.J. Blakemore and R. Nelson (1987) 'The NOMIS data base: availability and uses for geographers', *Area*, 19, 43-50.

The only statistical material extracted from this system has concerned the Census of Employment, although much information at a very local level about, for example, unemployment is also available. There are confidentiality constraints on the use of Census of Employment material, and I have tried to maintain these as far as reasonably possible. Obviously, if a reduction in employment from 2,500 to 500 is recorded and reported as having taken place in a particular sector in a particular location, it should not take too much extra research work to find out which firm is involved. In such cases there is a potential conflict between the need to protect confidentiality and the need to present information which makes local labour market changes intelligible. The general policy followed is that it is important to record sharp changes in local employment levels, and to record which sectors these changes took place in, but relatively unimportant for present purposes to identify particular firms involved. No attempt has been made to use Census of Employment information to attempt to identify spatial strategies, whether implicit or explicit, by any multi-plant corporation.

It should of course be added that even if a large job loss can be traced to a particular firm, no blame necessarily attaches to that firm. The central argument of the thesis is, after all, that mass unemployment arises, not from industrial firms *recklessly* shedding labour, but rather from a deteriorating economic environment in which the large majority of firms have had no rational economic alternative other than to cut back employment. Given the overall context, it is hoped that no reasonable observer could conclude that unpublished official statistics have been abused to undermine confidentiality on commercially sensitive information.

Census of Employment, annually, 1971-1978, then 1981, 1984, 1987. Unpublished information used includes employment totals, at all levels of sectoral disaggregation down to the Minimum List Heading, for counties and travel-to-work areas. Published information is presented in the *Gazette*.

1(ii) UK Government, other official statistics

(a) Statistical abstracts

Annual Abstract of Statistics 1840 to date (no issues from 1941 to 1947 inclusive). Earlier title, up to 1940; *Statistical Abstract for the United Kingdom.*

Economic Trends Monthly, 1953 to date. Also *Economic Trends Annual Supplement* 1975 to date.

Monthly Digest of Statistics 1946 to date.

Regional Trends, annual, 1965 to date. Earlier titles: *Abstract of Regional Statistics*, 1965-74; *Regional Statistics*, 1975-1980.

(b) Specialised sources

British Business, weekly, 1979 to date.

Census of Great Britain; Census of England and Wales; Census of Scotland, decennial, 1801 to date. Shortened in text to Census or to Census of Population.

Census of Production 1907, 1924, 1930, 1935, 1948, 1951, 1954, 1958, 1963, 1968, and annually from 1970.

Housing and Construction Statistics, quarterly, 1966 to date. Earlier title: *Housing Statistics: Great Britain*, 1966-71. Also annual edition, 1979 to date.

Population and Vital Statistics: local and health authority areas, annual. See also *OPCS Monitor, Reference PP1 84/2* (1984) for annual estimates of population from 1971 to 1980, updated to take account of the 1981 Census.

Population Projections, annual, 1971 to date.

Population Trends, quarterly, 1975 to date.

Scottish Economic Bulletin, twice a year, 1972 to date.

United Kingdom Balance of Payments, annual, 1948 to date.

United Kingdom National Accounts, annual, 1949 to date. Earlier title: *National Income and Expenditure*,1948-1973.

(iii) International organisations, official statistics.

(a) Labour market statistics

International Labour Office, Geneva, *Bulletin of Labour Statistics*, quarterly, 1965 to date. Prior to this date, the *International Labour Review* (1921 to date) carried regular statistical material; this journal is still extant, but no longer carries detailed labour market statistics.

International Labour Office, Geneva, *Year-book of Labour Statistics* 1935 to date.

(b) Other statistical material

International Monetary Fund, *International Financial Statistics*, monthly, 1948 to date.

United Nations, *Statistical Yearbook* 1948 to date.

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Other international organisations, for example the EEC and OECD, also produce sets of international economic statistics, with the OECD regularly producing economic surveys, with statistical material, on each member country.

1(iv) Other major sources of statistical material, usually based indirectly on official statistics.

Abbreviated titles only are presented here; full publication details are given in 2(i).

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2 Main bibliography

The following is a list of references cited in the text rather than any attempt at an exhaustive bibliography. Even on the "core subject" of the thesis the author is aware that much of the potentially relevant material has not been cited. On more "peripheral" questions, one is aware that the referencing might well seem unduly arbitrary to the specialist, with much complicated debate reduced to a few, possibly unrepresentative, key references. It is hoped in such cases that those references which have been cited provide enough bibliographical leads into earlier academic debates.

No attempt has been made to introduce material into the list of references to provide a more complete literature survey. Some important recent works, published too late to be discussed in the main text, are listed in supplementary bibliography 2(iii).

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