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STRUCTURAL TRANSFORMATION IN THE REGIONS OF THE UNITED KINGDOM

Peter Hall

1966 was a watershed in British economic history: that year, total industrial employment--in mining, construction, and manufacturing--peaked. Thence, it fell dramatically: from 11.5 million to 7 million in 1984, with manufacturing down from 8.7 million to 5.4 million. In the mid-1950s Britain had been perhaps more industrialized than any other country in history, with more workers in industry than in all services; yet by 1983 there were almost two service workers for every industrial worker. The falls during 1966-73 and--even more pronouncedly--1978-83 were among the greatest of any industrial country. Between mid-1979 and mid-1981 alone, manufacturing employment in Britain declined by no less than 14 per cent, from 7.1 to 6.1 million, manufacturing output by 20 per cent; total employment fell by 1.25 million and unemployment more than doubled to 2.3 million, just under 10 per cent.

This paper seeks to analyse and explain the regional consequences of this transformation. First, it details the varying response of the regions to the fundamental challenge of the time: to replace lost goods-handling jobs by service, especially information-handling, jobs. Then, it looks more specifically at the regional location of two growth sectors: high-tech manufacturing and producer services, with a detailed look at two of the latter: computer services and accounting. It then turns to explanation, finding that both Schumpeterian and Marxist explanations have something to offer. Following

the schema of other contributions in this volume, it then turns to specific regional case studies: the South East, Britain's consistently most dynamic region; the neighboring South West, also a strong performer; the industrial heartland of the West Midlands; and Central Scotland. There is then a postscript, which looks at the regional pattern of recovery from recession in the mid-1980s; and a concluding summary.

The Anatomy of Regional Change

The regional impact was far wider than during the Great Depression of 1929-32, including not merely the peripheral industrial regions [the Assisted Areas] worst-hit the last time around, but also the regions of the industrial heartland: Yorkshire-Humberside, the North West, and the West Midlands. Manufacturing employment did not bottom out until 1984. Thus in just five years the manufacturing employment base fell 1.7 million or 24 per cent, a reduction equivalent to more than half the total decline since 1966.¹ This emerges strikingly from Fig. 1a, where the position of both the heartland regions [in the middle] and the peripheral regions [on the right] deteriorates after 1981.

Since productivity was rising on average 3 per cent per annum after 1966, GDP would have needed to grow that fast to maintain employment; but it did not do so in the nation as a whole or in most regions, and in none after 1978. Fig. 1b, which shows GDP in current values, demonstrates that growth fell sharply in the quinquennium after 1976 and again after 1981, and in the last period nowhere exceeded 70 per cent. The regions exhibiting slowest GDP growth during 1976-81 were the West Midlands and Wales; during 1981-86, the North West, North, Wales, and Scotland. The best-performing regions in both periods

Figure 1a: Employment Changes

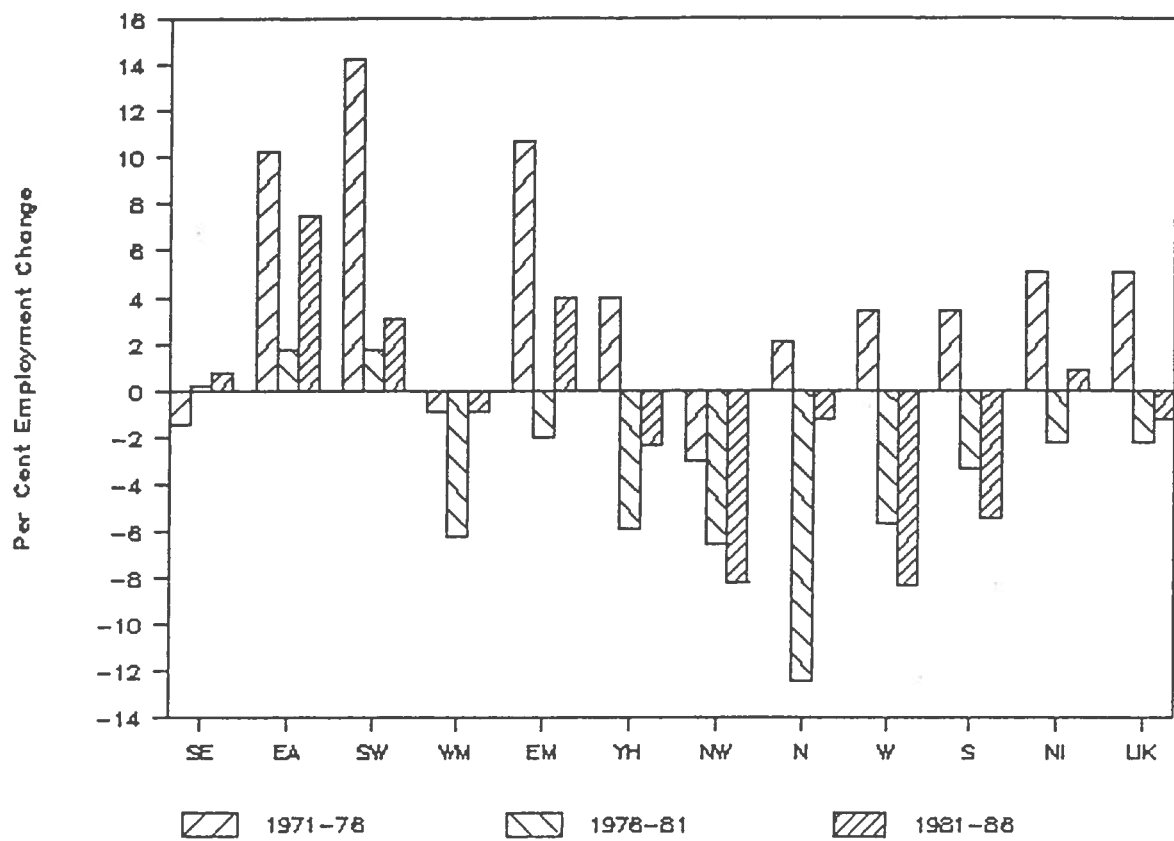
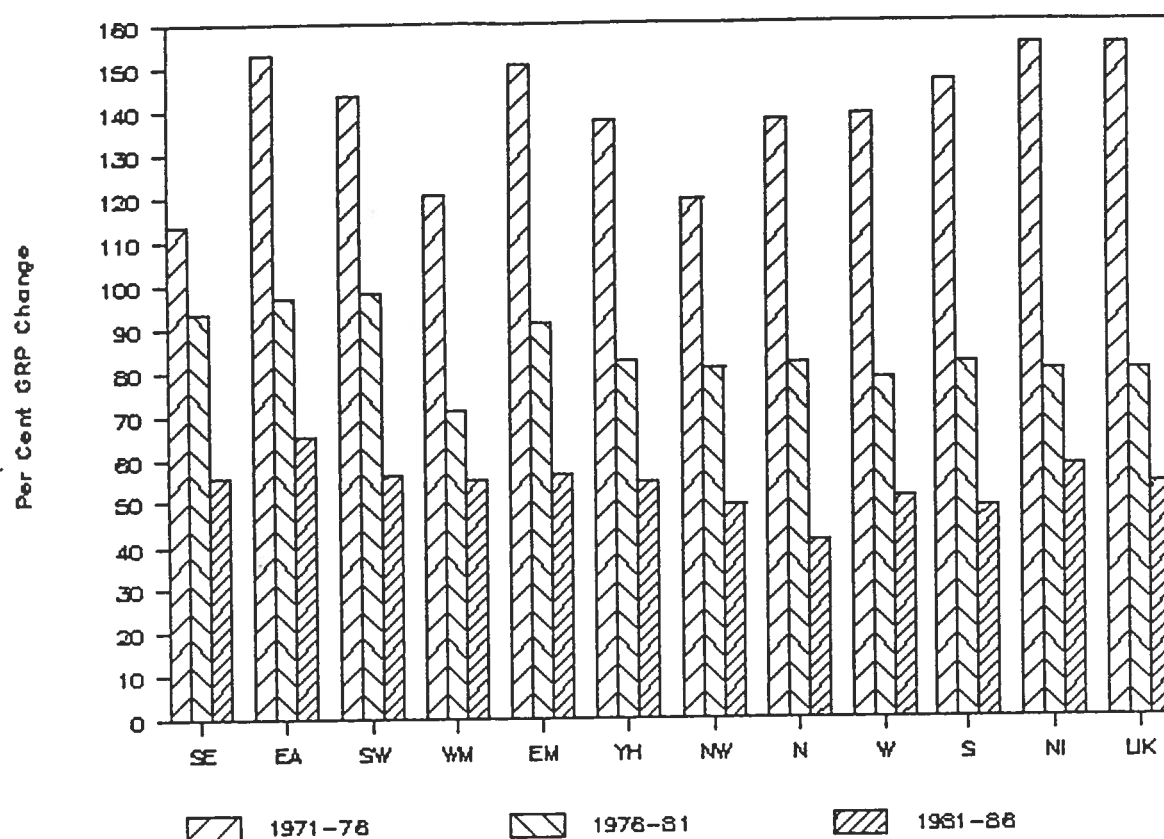


Figure 1b: Gross Domestic Product Changes



were East Anglia, the South West, and East Midlands. Though real GDP in the United Kingdom was almost same in 1981 as in 1974, the industrial heartland regions had declined 5.1 per cent, Assisted Areas had grown 1.7 per cent, and south-east regions over 3 per cent.²

The outcome is that an old theme in British history--regional economic divergence--has reasserted itself; but now the problem area is much larger, including not only the traditionally problematic peripheral regions of Scotland, the North, Wales, and Northern Ireland, but also the industrial heartland of the West Midlands, North West, and Yorkshire-Humberside (Fig. 2). These are regions with large problematic manufacturing sectors. Thus, beginning around 1974 but intensifying after 1979, there has appeared a big gap between the south and east of the country and the industrial heartland.³

Right across the regions, in fact, there has developed a clear inverse relationship between de-industrialisation and tertiarization: those regions that were most manufacturing-dependent--the West Midlands, the North-West, Yorkshire & Humberside, the Northern region, Wales, Scotland, and Northern Ireland--suffered most from manufacturing decline, and gained least from new private sector service jobs.⁴ Yet half the population of the UK live in these regions; and by the mid-1980s, and unemployment rates in all of them exceeded 15 per cent, producing two Britains separated by widening economic and social disparities. Their economic restructuring constitutes a major economic policy challenge.⁵

These trends may be viewed more closely from Figs. 3a and 3b, which groups the 3-digit categories of the Standard Industrial Classification to bring out the distinction between the Production and Service and the Goods-Handling and Information-Handling sectors, summarized in the form of replacement ratios. These represent the degree to which increases in service

Figure 2: Standard Regions



Figure 3a: Services/Production Ratios

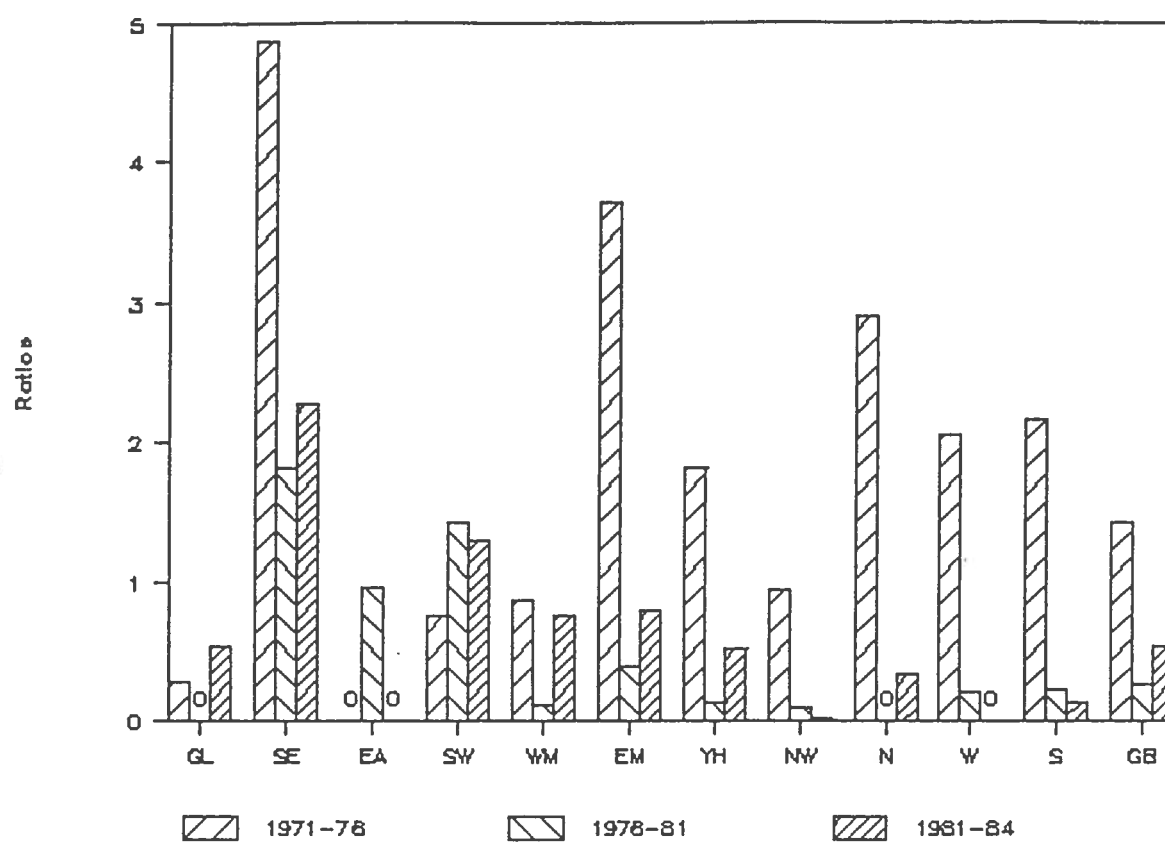
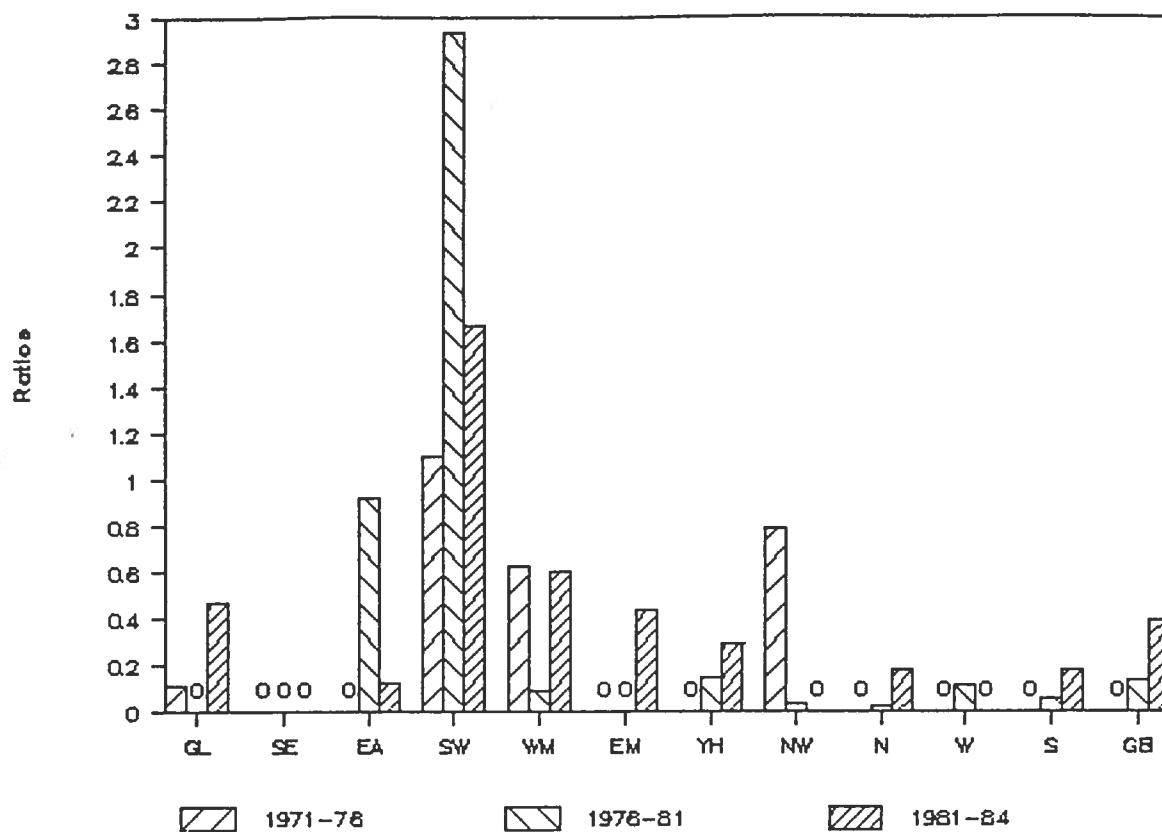


Figure 3b: Information/Goods Ratios



jobs offset losses in production jobs, or, alternatively, the growth of information-processing jobs offset losses in goods-handling jobs. [Zero entries indicate that both trends were moving in the same direction: in other words, both were increasing or both were declining, so that no ratio can be calculated]. In most regions, both ratios were far from adequate after 1976; but the distinction between the three southern regions [except for London] and the rest of the country is extremely striking.

An alternative, more precise attempt to measure the informational economy has been made by Goddard and Gillespie, using an occupational classification. They estimate that in 1981 some 45 per cent of the workforce could be described as informational workers, but with very marked regional variations.⁶ Table 1, derived from their work, shows that London, with 58 per cent of the population in information occupations, and the South East, with 47 per cent, were actually the only places recording above the national average. Viewed more closely, the areas and places that have most successfully adapted their structures are concentrated in a diagonal belt, the "Golden Belt" or "Sunbelt", that includes the outer fringes of the South East and adjacent parts of the South West, West Midland, East Midland, and East Anglia standard regions. "It is in southern England, and especially the 'sunbelt' corridor stretching from Cambridge through Berkshire to Bristol, that Britain's high technology industries and services, and more importantly the core functions of these activities, are concentrating."⁷ Both high technology manufacturing, and producer services, are heavily concentrated in the South East, which has 41 per cent of high tech engineering, 55 per cent of R&D, and 50 per cent of producer service employment.⁸

Significantly, Champion and Green's recent study on the quality of life in contemporary Britain--a follow-up to their earlier work using a wider range

Table 1

INFORMATIONAL OCCUPATIONS AS A PERCENTAGE OF TOTAL EMPLOYMENT

	Per cent
London	57.8
South East	47.3
Great Britain	45.0
North West	43.8
South West	43.7
West Midlands	42.0
East Anglia	41.5
East Midlands	40.9
Yorkshire and Humber	40.3
Scotland	40.0
Wales	39.4
North	38.8

Source: Goddard and Gillespie 1987, 88.

of updated data, consisting of five "static" indices [unemployment rate, unemployment duration, employment in high tech and producer services, mean house price], and five "change" indices [unemployment rate, employment, employment in high-tech and Producer-service industries, population, house price]--shows that the top values on the Amalgamated Index are all in the southern part of the country while the bottom places are all in the North, Midlands, Wales, and Scotland.⁹ The top 35 places fell into a single crescent-shaped zone extending round the western side of London from places like Crawley, Chichester, and Winchester in the south to Cambridge, Newmarket, and Thetford in the north; the sole exception is Stratford upon Avon.¹⁰ This zone corresponds closely to the "Western Crescent" identified by Hall et al [1987] as the major concentration of high-tech industry in the country.

These differences have long historic roots. Recent research has shown that there was a north-south problem in the nineteenth century, based on the concentration of services in the south; the gap widened from the 1850s. This was due not to transfers from the north but to a different economic structure dominated by services, especially in trade that pre-dated the industrial revolution, leading to a growth of financial services and aided by the concentration of government there. But during the long postwar boom of 1945-70, unemployment everywhere sunk to an unprecedentedly low level, and differentials narrowed: the peripheral northern regions [North, Yorks-Humberside, North West] had unemployment that was 90 per cent greater than the three southern regions [South East, East Anglia, South West] in 1931, but this fell to 44 per cent in 1951 and to 37 per cent in 1961; thence the gap increased again, to 42 per cent by 1971, 54 per cent in 1981 and 59 per cent in 1984.¹¹

This, according to the most fashionable analysis, represents the transition from the "modern" or immediate postwar period--characterized by relatively even spread of development opportunities, convergence in income, and unemployment between classes and regions, large-scale production and collective consumption, and considerable use of semi-skilled, sometimes feminized, operator grades--to a "post-modern" economy characterized by rationalization, especially in the big cities, and by flexible production systems, including subcontracting, which affects services as much as manufacturing. Such flexible specialization is characteristic of new industrial areas based on small towns, previously not highly industrialized; they are mainly scattered but with one major concentration in the M4 corridor. Symbolic of these changes are the new high-technology complexes of southern England, dependent on defence procurement; they are found in small towns on London's metropolitan fringe, such as Bracknell, Basingstoke, Chelmsford, Harlow, Reading, Guildford, Aldershot, Crawley, and Southampton.¹²

The Role of High-Technology Manufacturing

In these areas of the "Sunbelt", two kinds of fast-growing activity are found in close spatial and functional association: high-technology manufacturing, and producer or business services.

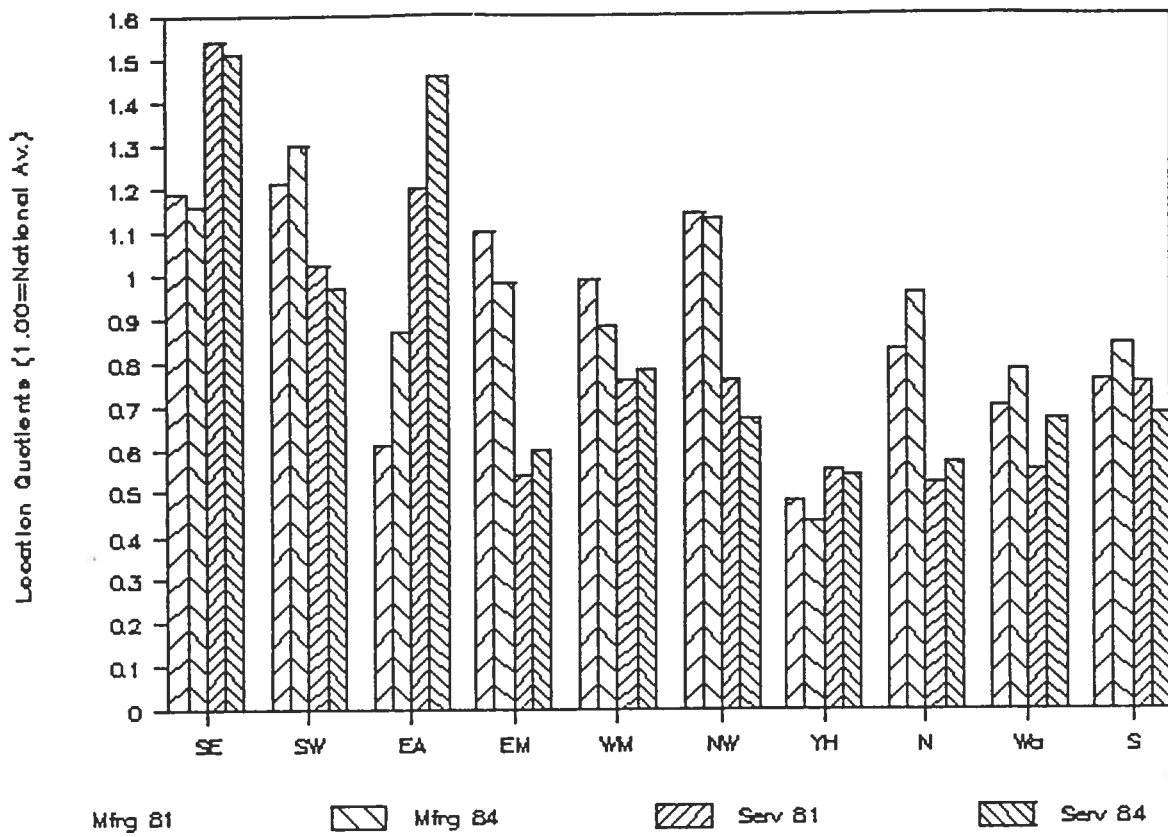
Analyzing the regional distribution of high-tech manufacturing and services, Begg and Cameron note that "The striking feature ... is the concentration of high technology industry in the South of the country, especially in the outer South-East, which exceeds the national share by 53 per cent in 1984."¹³ The South-West and East Anglia also show up strongly. In

high-tech manufactures the pattern is less skewed, partly because of the under-representation of London; whereas in services it is over-represented.

At an urban level, the top 25 high-tech locations contain a high incidence of new towns, mainly but not exclusively in the south; the bottom 25 are old industrial towns, nearly all in the north. Both high-tech manufacturing and services reject locations with a high proportion of traditional economic activities; they are more likely to be found where producer services are also concentrated. This is due to the "image" of an area, the inappropriateness of local skills and the likely difficulty of attracting technological and scientific staff to such locations. A combination of new infrastructure, a 'clean' image, a vigorous labour force, and flexible attitudes by development corporations to land and property requirements for growth combine to attract a markedly above-average share of high-tech, in almost any region.¹⁴

Between 1981 and 1984, East Anglia showed the best record of attracting both high-tech manufacturing and services. The North, Wales, and Scotland also gained; the East and West Midlands and Yorks/Humberside declined [Fig. 4].¹⁵ High-tech manufacturing was not however a source of job gain at the national level. On the contrary: in sharp contrast to the United States, high-tech industry in Great Britain actually showed declining employment in the 1970s. Comparable definitions show a gain of over one million jobs in the United States between 1972 and 1981, 728,000 in the brief period 1977-81; but a loss of 366,000 jobs, 10 per cent, in Great Britain between 1971 and 1981.¹⁶ Within this framework, Greater London was losing high-tech jobs--17,000 or 15.7 per cent over 1975-81 alone--while a "Western Crescent" was gaining. Overall, the Western Crescent--stretching from Hampshire through Berkshire and Buckinghamshire to

Figure 4: High-Technology Industry



Hertfordshire and Cambridgeshire--is by far the outstanding high-tech area of Britain [Table 2].

Underlying these distributions, however, is a more subtle differentiation. The M4 corridor is distinguished both from the high-tech complex in Central Scotland, and from high-tech outgrowths in South Wales, by "its elite occupational structure and its dense decision-making network of activities which have the potential for spawning [and sustaining] new firm foundation to an extent not readily apparent elsewhere."¹⁷ It is also strong in subsectors of electronics that are still experiencing job growth: capital equipment, computers, and computer services. Central Scotland, though quantitatively unimportant in comparison with the M4, is not a pure branch plant economy: it has been fashioned largely through inland investment from the U.S.A. and overseas, but these firms do far more than routine assembly; U.S. firms are often in development work, though not the leading edge R & D.¹⁸ South Wales in contrast is a real branch plant economy, without R & D or an indigenous sector, and its attraction is that it is at the subsidized end of the M4 Corridor. It has more of a "headless" occupational structure, with relatively few technically skilled or managerial employees.¹⁹

The Role of Producer Services

The other crucial component is producer service employment, which--depending on definition--includes between 4.5 and 5 million jobs or 22-24 per cent of total employment.²⁰ The share is growing, for two possible reasons: first, an increasing level of intermediate service inputs for any level of output; second, lower productivity growth in the office-based service sectors than in other sectors of the economy.²¹

Table 2

MAJOR HIGH-TECH CONCENTRATIONS, 1975-81

	Employm. L.Q.		Change 1975-81	
	1981		000s	per cent
1 London Western Crescent				
Greater London	91,400	0.85	-17,000	-15.7
Hertfordshire	45,100	3.60	+5,914	+15.1
Hampshire	33,800	2.00	+2,179	+6.8
Berkshire	19,700	2.04	+7,600	+62.6
Buckinghamshire	6,900	1.15	+1,811	+11.1
Surrey	18,200	1.79	+1,811	+11.1
<u>Total</u>	<u>208,200</u>			
2 North West England				
Greater Manchester	27,300	0.86	-2,980	-9.8
Lancashire	30,000	2.01	+1,392	+4.8
<u>Total</u>	<u>57,300</u>			
3 "Silicon Glen" (Central Scotland)				
Strathclyde	23,600	0.88	-3,847	-14.0
Lothians	9,000	0.93	+1,461	+19.3
<u>Total</u>	<u>32,600</u>			
<u>G.B.</u>	<u>640,900</u>			

Source: Hall 1987, Table 11.2.

Though services as a whole, and consumer services in particular, are distributed broadly in line with population, producer services have deviations which are more similar to manufacturing. Particularly, producer services are concentrated in the South East, with 40.3 per cent; subsidiary concentrations are in the North West [11.3 per cent] and the West Midlands [8.8 per cent]. There is an urban bias, with 45 per cent in Greater London and the former Metropolitan Counties.²² The highest Location Quotients for producer service employment are found in and around London, especially to the west; in East Anglia; in the Bristol area, and in the Exeter-Plymouth corridor; and more patchily in the East Midlands and North West.

Changes in producer service employment occur at two scales, nationally and also regionally within the urban hierarchy, as defined in terms of Local Labour Market Areas [LLMAs]. At the national scale, during 1971-81 the South East's producer service employment grew by 11.4 per cent, less than the 13.4 per cent national average; but the South West grew 42.6 per cent, East Anglia 41.3 per cent, and the East Midlands 34.1 per cent. Numbers actually fell in the North West, while growth was below national average in Scotland, Northern Ireland, the North, and Wales. At a finer geographical scale, at each level in the urban hierarchy, metropolitan areas in the southern half of the country performed more impressively in job generation than did their northern and western counterparts. But everywhere, the intra-regional pattern is more dramatic: both from London and from the major provincial cities, there is very marked deconcentration from cores to smaller places around them. The evidence is set out in Table 3. Thus, producer service employment is concentrating regionally but deconcentrating intra-regionally.²³

This is most evident in the South East. There, much of the growth has occurred outside Greater London, especially in the Outer Metropolitan Area.

Table 3
CHANGES IN PRODUCER SERVICE LOCATION,
BY LOCAL LABOUR MARKET AREAS, 1971-81

	Per cent change		Change in LQ
	Mfrg	Prod Serv	Prod Services
London	-33.8	+14.7	-0.19
Conurbation Dominants	-33.2	+24.2	+0.03
Provincial Dominants	-26.9	+44.3	+0.05
London Subdominant Cities	-16.1	+59.4	+0.04
London Subdominant Towns	-14.9	+61.2	+0.06
Conurbation Subdominant Cities	-32.4	+60.4	+0.14
Conurbation Subdominant Towns	-30.4	+70.7	+0.08

Source: Gillespie and Green 1988, 405.

Only banking, insurance, finance and business services, and miscellaneous services increased in London, but in both cases the absolute increases outside were greater; all other categories declined in London, counteracted by large gains elsewhere in the South East. Producer service employment has participated in these trends, but to a lesser degree than consumer services which have followed population. A measure of this change is that on present trends, by the early 1990s there will be more commercial office floorspace in the rest of the South-East [i.e. outside central London] than in central London itself.²⁴

The growth of employment in the producer services has however provided only a limited and partial compensation for employment losses in manufacturing. Nationally, manufacturing declined by 1,918,000 while producer services grew by only 472,00. Only four of the nineteen urban groups had a positive balance: the Southern and Northern Rural Areas and the Southern Commercial and Service Towns. The limited degree of compensation is particularly evident in the Conurbation Dominant and Subdominant LLMA's: the Dominants recorded 85,000 extra producer service jobs but they lost 686,000 manufacturing jobs. In general the "compensatory effect" is most evident in the southern labour markets outside London, which also have less severe manufacturing job losses than their northern equivalents. Thus the differential effect of producer service growth can be seen as reinforcing rather than reducing the relative job gap between north and south, and reflecting the growth in extensions of head office functions which, despite improvements in technology, remain tied to the Greater South East.²⁵

A particular sub-group, business, information, or office-based services, is even more concentrated close to the capital than are all producer services [Table 4]. It is heavily over-represented in the capital and in the larger

Table 4

BUSINESS AND PRODUCER SERVICES: LOCATION QUOTIENTS, 1981

	All Services	Producer Services	Business Services
London	1.19	1.61	1.85
Conurbation Dominants	1.02	1.06	1.07
Provincial Dominants	1.00	1.01	0.99
London Subdom Cities	1.07	1.04	1.21
London Subdom Towns	0.99	1.03	1.05

Source: Marshall 1988, 72.

cities within its immediate sphere of metropolitan influence. The London Local Labour Market alone possesses over 40 per cent of total national employment.²⁶ Analysis of the distribution of particular types of business service offices reinforces the picture of strong concentration in the South East [Table 5]. Banking, insurance, and financial services increased everywhere during the 1970s, but the lion's share, 49 per cent, went to the South East.²⁷ All services, apart from accountancy, are more represented in the South East than expected on the basis of total employment; market-related services such as marketing and market research are most concentrated, with more than 84 per cent of national offices in the South East and more than 50 per cent in Greater London. Virtually all provincial regions have fewer offices than expected for every service, except for accountancy and to a lesser extent management consultancy.²⁸

There is also evidence that it is the higher-level services that are concentrated in the South East. Provincial areas, especially the major cities, tend to have more branch or subordinate offices belonging to multi-site firms, while the South East has more main offices. This pattern--the marked concentration near the capital, the local decentralization from London and major cities, the slower growth in northern areas--cannot be understood simply in terms of site rentals or changes in communication costs, nor of manufacturing demand; rather, a corporate urban hierarchy exists, with national headquarters and many administrative research and technical functions in the south and east, and branch offices carrying out production activities or serving local markets elsewhere. Banking and insurance have decentralized away from London but gone to smaller labour markets in the South East and in the secondary financial market of the North West; but the growth of international

Table 5

TYPES OF BUSINESS SERVICE:

PERCENTAGES OF NATIONAL OFFICES, 1981

	Managm Consult	Account- ancy	Market Research	Marketing	Adver- tising	Computer Services
Gtr London	23.0	14.2	62.7	59.4	44.7	31.9
South East	25.9	15.7	21.9	25.5	18.9	24.1
North West	11.5	12.8	2.0	2.5	8.8	9.3

Source: Marshall 1988, 176.

trade in financial, engineering, oil, and consultancy services has encouraged growth in and close to London, especially close to international airports.²⁹

A critical role here is played by the location of corporate headquarters. Between 1971 and 1981, the outer South East's share of the top 1000 companies' headquarters rose from 7 to 15 per cent, while the share of the provincial regions fell from 40 to 31 per cent. The implication is that the expansion in the rest of the South-East has been at the expense of provincial cities rather than of central London, which has retained its level of activity. The presence of a headquarters is important because there is clear evidence that they generate a demand for locally generated producer services; branch offices of large multi-locational firms get their services via headquarters which in turn either generate them internally or obtain them locally, i.e. within London and the South East. The North West and West Midlands do better here than Yorkshire-Humberside because their provincial capitals are stronger; Manchester in particular is used by firms in the West Midlands and Yorkshire-Humberside. This indicates that producer service activities can perform a basic role in regional development.³⁰

Increasing globalization helps London as the major corporate complex with good international communications both with the parent country and with potential markets, as well as access to specialist services clients and occupational skills. Dunning and Norman's research shows that in 1976, of 261 U.S.-based business service firms, 95 per cent were in London, and that 82 per cent were in central London. Thus: "The trend towards internalisation of producer-service provision as a consequence of the growth of large multi-site organisations, together with the national and international location behaviour of business and other services is clearly helping to exacerbate the distinction between the core and the periphery within the British economy."³¹

Producer Services: Two Case Studies

Computer Services. There is a close association between the location of high-tech manufacturing and that of producer services, especially those services that depend on information technology. Howell's study of the computer services industry shows that areas that have both specialized in and benefited from computer service activity are found disproportionately in southern England, especially "in a major band running from the west of London down through to Portsmouth [IBM], Cambridge and the Severn Valley", together with a node in the North West. In these regions, Howells finds evidence of a "dual economy", with both an important set of elite multinational computer firms and a high rate of indigenous new firm formation. Wales and the Northern region had each less than 2 per cent of employment. These disadvantaged regions have high rates of new firm formation but also high death rates, and this can do little to overcome the very low levels here.³²

Computer services provide a crucial indicator of the degree to which regions and places are moving toward the informational economy. Information is being increasingly commodified, and also increasingly concentrated in the hands of the transnational corporations which can best exploit its characteristics of high speed digital telecommunications. "Rather than encouraging greater efficiency through more competition, then, the new technologies are facilitating the development of oligopolistic rivalry amongst the biggest companies."³³ And, as already noted, these are highly concentrated in London.

Another illustration of the trend to spatial concentration is provided by Value Added Networks. Run by private companies, and providing specialized services to subscribers, they are a new feature of the competitive telecommunications market in Britain. Of those registered down to October

1985, 164 in number, 125 were in London and the Home Counties; 15 in the South West; 4 in the West Midlands; 3 in the East Midlands; 3 in Yorks and Humber; 0 in the North East; 9 in the North West; 4 in Scotland; 0 in Wales; and 1 in Northern Ireland.³⁴

Even with regard to traditional services, there is clear evidence of marked regional disparity of uptake within most EEC countries. In the UK telephone subscriber takeup varied in 1980/1 from 42 per 100 people in London to 23 in the Northern Region; in France from 40 in Paris to 23 in Franche Comte and Lorraine; in Germany, from 53 in West Berlin to 24 in Regensburg. A specialised service like Prestel, particularly suited to the small user, shows similar big variations in the UK. Similarly, international calls are a small proportion of local calls in the North compared with the South East, even though subscribers in the latter can reach nearly one third of total business phones at the local rate compared with 1 per cent in Newcastle.³⁵

Accountancy. A producer service that has shown exceptionally fast growth over the last two decades is accountancy. Again, it is disproportionately concentrated in the South East [Fig. 5 and Table 6]. In a survey made by Morris, all firms confirmed that the major growth had been in the London office; they also quoted growth in the Outer South East, because of decentralization of back office functions and the growth of business there.³⁶

Toward Explanation

There are two warring theoretical explanations for these trends. One can be called neo-Schumpeterian: it stresses innovation, entrepreneurialism, and new small firm foundation. The other is neo-Marxist: it stresses a new national [and international] division of labour based no longer on industrial

Figure 5: Top U.K. Accountancy Firms

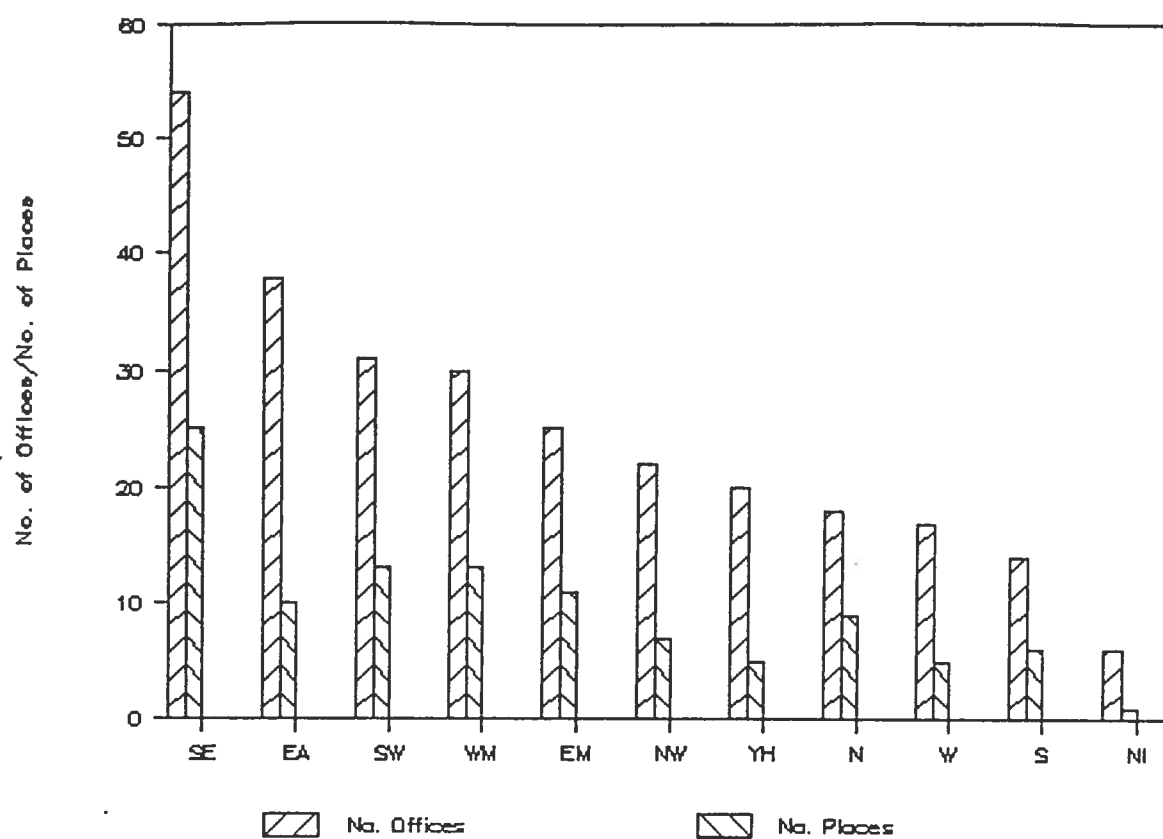


Table 6

TOP TEN U.K. ACCOUNTANCY FIRMS: MAJOR LOCATIONS

Number	Location represented
10	Aberdeen, Birmingham, Bristol, Cardiff, Edinburgh, Glasgow, Leeds, London, Manchester, Newcastle
8	Liverpool, Southampton
7	Leicester, Nottingham, Reading
6	Belfast
5	Sheffield

Source: Morris 1988, 750.

sector but instead on hierarchical function, with increasingly centralized corporate control in huge transnational corporations.

Neo-Schumpeterian Explanations. Goddard and his colleagues have used data from the Science Policy Research Unit to study regional innovation rates. They find a considerably greater rate of product innovation in the South East [88 per cent] than in intermediate [82] or development areas [73]. Further, the variations are greater for single plant innovations where the origin is more clearly local [85, 76, 55]. And only 13 per cent of establishments in the South East had external sources of their product innovation versus 15 per cent in intermediate areas and no less than 33 per cent in development areas.³⁷ They conclude that "the South East region is the primary source of external technical information. In general, plants in development areas mentioned relatively few local useful technical contacts. They appear to prefer or are forced to use technical sources at a greater distance than are firms located elsewhere."³⁸

Worse, innovations in the development areas mainly take the form of process innovations that save labour. Table 7 shows that the North gains fewer jobs through product innovation but loses more jobs through process innovation than the South East, with the most significant losses occurring in northern multi-plant firms.³⁹ Harris has extended this work to show major variations in innovation in manufacturing industry over a long period. Fig. 6 shows that the South East outperformed all other regions, mainly because of a strong structural effect overcoming a large and negative residual effect. But industrial structure appears to have played a particularly detrimental role in the North, South West, and Scotland, while Northern Ireland suffered from a very large negative residual.⁴⁰ Just as theory suggests, the peripheral regions have produced more process innovations, and over time the concentration

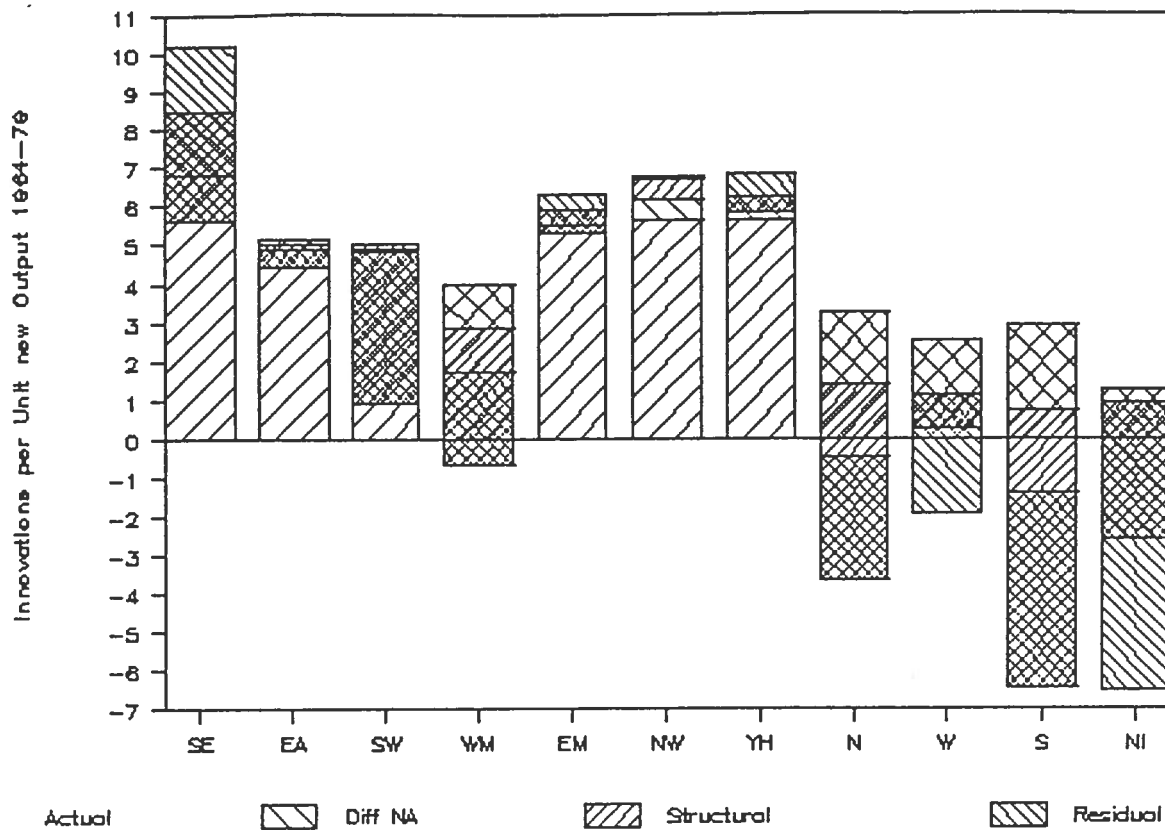
Table 7

EMPLOYMENT EFFECT OF INNOVATION

Mean Employment Effect [first year]				
	Product		Process	
	North	South East	North	South East
Single Plant	+0.25	+1.25	-0.50	+0.20
Multi-Plant	+6.00	+7.45	-6.53	-0.92
Total	+4.30	+4.92	-3.81	-0.49

Source: Goddard et al 1986, 151.

Figure 6: Standardized Innovation Rates



of innovations in larger externally-owned plants has resulted in an ever greater relative importance being placed on process innovations in these regions. At the same time, the concentration of innovations in externally-owned plants, coupled with the growth of the branch-plant economy, has meant a larger proportion of UK innovations emanating from the South East, where these larger firms were located, and fewer from the Development Areas.⁴¹

Significant differences exist in new firm formation rates: they are higher in the prosperous areas and lower in the non-prosperous areas; and these prosperous regions are currently the most entrepreneurial.⁴² Shift-share analysis demonstrates that once agriculture is excluded, the structure of employment in each region is less important in explaining these differences than non-structural factors [Table 8]. Storey and Johnson have generated a composite entrepreneurship index based on six groups of factors shown to be associated with entrepreneurship either positively or negatively.⁴³ This index is found to correlate well with composite take-up indices for four small firm policy instruments: the Loan Guarantee Scheme, the Business Expansion Scheme, the Enterprise Allowance Scheme, and the Small Engineering Firms Investment Scheme. The index, Storey has found, also correlates strongly with rates of new firm formation as shown by registrations for Value Added Tax. He concludes that current policies, which aim at encouraging new firm formation, are actually likely to widen the gap between the prosperous and the less prosperous regions.⁴⁴

Neo-Marxist Explanations. An alternative explanation lies in the thesis that both internationally and inter-regionally, there has emerged a new spatial division of labour based no longer on traditional specialization by industrial sector, but rather on what Massey [1984] calls spatial structures of production: the patterns of control and dependency within capitalist

Table 8
NEW FIRM FORMATION RATES, 1980-1983

	Relative Rate	Structural Component	Fertility Component
North	0.95	-507	-616
Yorks and Humber	0.95	-689	-1696
North West	0.97	-833	-1036
East Midlands	0.98	-455	-501
West Midlands	1.00	-364	+532
East Anglia	0.98	-70	-457
South West	0.94	-371	-2558
South East	1.08	+4450	+11622
Scotland	0.86	-348	-5267
Wales	0.91	-607	-1797
Northern Ireland	0.74	-305	-3405
Unallocated	1.21	+102	+5187

Source: Storey and Johnson 1987, 165.

organization, from the smallest, autonomous single-region firm to the giant transnational corporations. Goddard and Gillespie conclude that "essentially, the existing geography of the information economy reveals the structure of regional dependency in Britain. Many of the information jobs located in London and the South East control economic activities in other parts of the world as well as in other parts of Britain ... The spatial division of information labour which exists in Britain suggests a structure of core-periphery interdependencies which are far from neutral or symmetrical [sic]."⁴⁵ Thus the fact that the North has 80 per cent of its manufacturing controlled from outside provides the reason for the low proportion of informational occupations.⁴⁶ As Hudson puts it, the North East is now a global outpost in the scheme of international capitalism.⁴⁷

The fullest statement of control theory comes from Marshall. He argues that during the interwar and early postwar period, regional differences were dominated by the contrast between the traditional heavy industries in the north and the consumer goods industries of the Midlands and south. This was an inter-sectoral division between raw material and capital goods production, and areas producing for the emerging mass consumer market. But since the mid-1960s there has begun to appear a new division based on intra-sectoral distinctions between territories specializing in different stages or processes of accumulation within the same industries. As a result, there is now a threefold regional distinction in the British space economy: first, mass-production and assembly-line production in areas of semi-skilled low-waged and poorly organized labour, in old mining or heavy industrial regions; second, non-standard, non-assembly-line, non-automated production in old northern industrial cities, which are however disinvesting; and third, higher management, R&D and other control functions in financial and professional

service centres.⁴⁸ And this explains why industrial decline is no longer concentrated, as in the interwar period, in the traditional heavy industrial sectors but has now spread into the consumer manufacturing industries that spearheaded the postwar recovery, especially the industrial heartland of the West Midlands. During the 1950s the West Midlands was last into each cyclical trough and first out, but after 1966 it began to synchronize with national trends. The decline of UK manufacturing has accentuated with each successive cyclical recession since 1966.⁴⁹

Regional Case Studies

The South East: The South East is outstandingly Britain's best-performing region. Yet within it, a glaring contrast exists between a depressed London and a booming ring of counties around it, which constitute the "Rest of the South East" [ROSE] in official statistical terms [Table 9]. Between 1971 and 1981 there was a loss of over 400,000 jobs in London, nearly 11 per cent of the 1971 total, and a gain of 322,000 jobs, just under 10 per cent, in the rest of the region. The gain in the Outer Metropolitan Area was some 6.3 per cent, that in the Outer South East nearly double that. The net result was that the entire South East region shed 92,000 jobs, a slightly lower rate of loss than the country overall [1.3 against 2.3 per cent].⁵⁰ Throughout the region, the picture was consistent: the job loss was in manufacturing jobs. The only exception was London, where there was a marginal loss in service jobs also, and particularly in Inner London, where this loss was more serious. Outside London, the loss in manufacturing jobs was less and the growth in service jobs greater. There was a combination of two processes here: the general secular decline of manufacturing and the rise of service employment

Table 9

EMPLOYMENT CHANGES, SECTORS, SOUTH EAST REGION, 1971-81

	Manufacturing		Services		Total	
	Change	%	Change	%	Change	%
Inner London	-186.7	-40.6	-105.0	-6.1	-318.3	-13.9
Outer London	-192.0	-32.6	+98.7	+10.2	-95.7	-5.8
Greater London	-378.8	-36.1	-6.4	-0.2	-414.0	-10.5
OMA	-125.4	-18.4	+237.2	+25.0	+111.6	+6.3
OSE	-15.3	-3.5	+231.1	+23.9	+210.5	+13.6
ROSE	-140.7	-12.5	+468.3	+24.5	+322.1	+9.7
Western Crescent	-11.1	-3.0	+208.2	+32.1	+196.6	+17.6
Of which:						
4 Growth Areas	-2.0	-0.9	+133.6	+35.0	+134.0	+20.9
ROSE Remainder	-129.6	-17.2	+260.2	+20.5	+125.5	+5.7
South East	-519.5	-23.9	+462.0	+10.0	-91.9	-1.3
Great Britain	-1963.2	-24.9	+1703.0	+14.5	501.2	-2.3

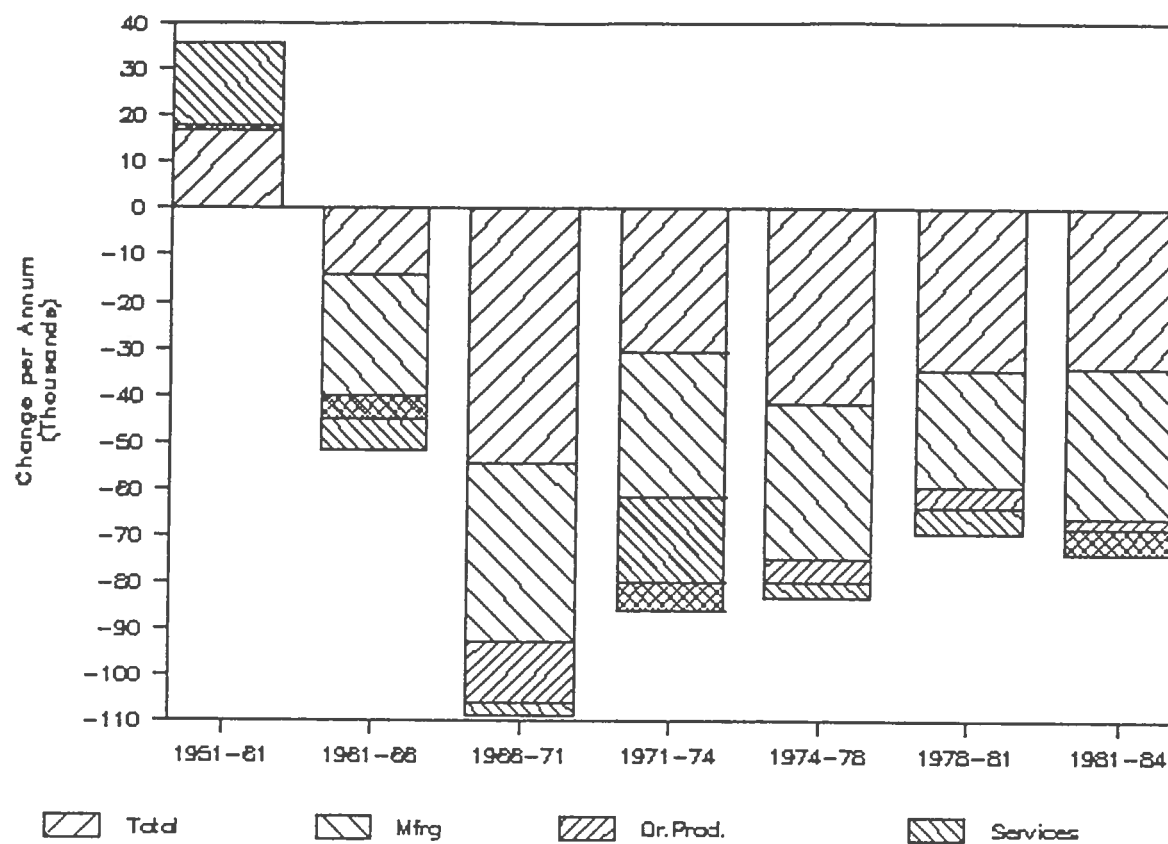
Source: SERPLAN (1985) based on Census of Employment 1971 and 1981.

was accompanied by a relative decentralization of jobs from the region's core to its outer rings.

The latter is significant: London's job decline has occurred despite its apparently favourable industrial structure, showing that a differential "London effect" is at work.⁵¹ Inner London suffered massive manufacturing job losses, and compounded these by losses in service jobs. This is despite the fact that the area contains the information-processing financial and media centre of Britain. But inner London was also a centre for goods-handling service jobs, and these--in docks, in warehousing, in transport--suffered particularly badly from the closure of the London docks and associated activities.⁵² Fig. 7, based on analysis from the ESRC's inner city studies, demonstrates that the loss of manufacturing jobs from London has been a long-continued process, beginning early in the 1960s and continuing almost without pause to the early 1980s. And it has been fairly consistent. The countervailing gains in service employment, in contrast, have been very irregular, occurring in two short bursts in the early 1970s and the early 1980s; otherwise, as already seen, service employment has actually contributed to the general contraction.

The Outer South East in contrast is generally regarded as the country's outstanding growth area. It has been particularly attractive to two dynamic sectors: high-tech manufacturing and producer services. Indeed, in popular legend the M4 Corridor west of London is seen as an internationally outstanding high-tech area, a kind of European Silicon Valley. The reality is somewhat different: the area--which is not a corridor, so much as a wide crescent sweeping around London from Southampton-Portsmouth through Reading to Milton Keynes, Stevenage, and Cambridge--has seen a modest increase in high-tech jobs, but this has done no more than compensate for a loss of such jobs in London. And this helps indicate the underlying mechanism. Over a very long period of

Figure 7: London Employment 1951-84



more than a century there has been a progressive decentralization of high-technology industries out of their origin as small-workshop bases in central and inner London, representing a search for space as the scale of industry grew; the process reached outer London in the 1920s and 1930s, Berkshire and Hampshire in the 1950s and 1960s. Additionally, a very significant role has been played by the Defence Research Establishments, which are located in a crescent west of London for reasons that partly reflect rational location procedure and are partly contingent.⁵³ Overwhelmingly, high-tech industry in the crescent proves to be dependent on contracts from these establishments, often involving close and continuing contact; so that the entire area in some respects resembles an old-fashioned urban industrial quarter write large: a point made by Scott [1986] about the much larger but similar complex in California's Orange County.

The South West: The large and diverse South West region has shown one of the best regional performances in the 1970s and 1980s. At the region's north-east corner, Bristol-Gloucester-Cheltenham represents an extension of the M4 Corridor and is a diversified high-tech industrial region with a particular emphasis on aerospace. Bristol had a relatively strong economic structure derived from its previous industrial history: in the late nineteenth century traditional industries like tobacco and chocolate were transformed and new industries--metal-working, engineering, printing and packaging, and boots and shoes--expanded;⁵⁴ in the early twentieth century, new industries like electrical goods, vehicles, aircraft, and precision instruments provided large pools of jobs. The city came to be dominated by large companies like Imperial Tobacco, Frys, Mardsons, and Robinson [paper and packaging] and Bristol Aeroplane Company; employment was heavily male-dominated. By 1961 manufacturing was 44 per cent of total employment with 64 per cent in three

sectors, : vehicles, food, drink, and tobacco, and paper, printing, and publishing.⁵⁵

During 1971-8, trends in Bristol were an exaggerated version of the national picture: manufacturing employment fell 14.3 per cent, service employment grew by exactly the same percentage. Nearly 80 per cent of the loss in manufacturing came from the three big sectors. Not all the services grew: in utilities, transport and communications, and distribution it declined or grew slowly. The really big increases were in miscellaneous services, insurance banking and finance, and professional and scientific services. The growth in financial services was no less than 61 per cent. More than 80 per cent of the growth in service employment was female.⁵⁶

During 1978-81 total employment shrank, and now service jobs too declined, albeit by only 1.4 per cent, less than the national average. Two of the three main manufacturing sectors suffered big losses but vehicles [aircraft] gained. Within services, only banking insurance and finance and miscellaneous services grew. Overall, 1971-81, Bristol lost 23,663 manufacturing jobs, 22.0 per cent, and gained 21,799 service jobs, 12.6 per cent. By 1981 manufacturing was only 28.1 per cent of employment, services 65 per cent. Male jobs had fallen by over 14,000, female jobs had risen by nearly 13,000; females represented 41 per cent of the workforce.⁵⁷

High-technology industry has remained an important element in manufacturing but--just as in the Western Crescent at the other end of the M4 Corridor--is heavily defence-based. Services have been dominated by financial services, much of them "basic", reflecting the city's increasing nodality as a regional financial and business centre and the associated growth of headquarters; and by miscellaneous services, reflecting a big income multiplier. Thus growth in some areas has been associated with decline in

others; and Bristol's apparent success reflects the fact that employment has declined here less than elsewhere.⁵⁸

However, the benefits are not evenly distributed across the labour market, as is emphasized by the growth in youth and long-term unemployment among less-qualified school leavers and less-skilled workers shaken out of other jobs, who find few openings in the expanding high-tech and office sectors. The result is increasing polarization of the labour market.⁵⁹ Nevertheless, the fact remains that these high-risk groups have a better chance of a job in a growth area such as Bristol, or a new town, or one of the faster-growing towns around the metropolis.⁶⁰

The growth of the south-west economy is not restricted to the Bristol region, though; it extends widely, into remote rural areas like North Devon, 100 miles to the south-west, where employment--especially in manufacturing--grew rapidly during the 1970s. The fastest growth was in female employment, with part-time female jobs growing by one-half. The search for cheap rural labour thus appears more important than "voluntarist" explanations of population growth such businesses started by early retirees. But both explanations may be relevant and they may intertwine.⁶¹

The West Midlands: The West Midlands is perhaps the most spectacular case of the collapse of the industrial heartland. Between 1966 and 1981 369,500 manufacturing jobs were lost in the region, with especially heavy declines during 1971-76 and 1978-81. Down to 1978, these were partly compensated by gains in the service sector, which made up about half the manufacturing loss; from then to 1981 total employment declined by 12 per cent, nearly twice the national rate of decline, and unemployment rose.⁶²

The root cause of the decline was not a fundamental shift away from traditional industries, but a failure of the local economy to diversify. The

contraction of the key manufacturing sectors was faster than in the nation as a whole, and underinvestment has led to poor and declining productivity across the whole of manufacturing. Added to this, there was insufficient compensating service growth; the economy remained over-based on manufacturing. Shift-share analysis shows that structural and differential factors have been about equally important 1971-81.⁶³ "The present downturn in the West Midlands", Spencer and his colleagues conclude, "is not therefore a response to the cyclical slump in the national and international economy but part of a long-term, structural decline in the economy."⁶⁴

The preconditions were evident well before the 1970s, if anyone had been willing to see: over 50 years, the economy had become concentrated into certain sectors and also into a few companies which were not committed to expansion in the region and were increasingly independent of local subcontractors; thus these latter became dangerously dependent on the big companies who were tending to expand elsewhere.⁶⁵ With increasing internationalization of production and the growth of transnational corporations, the local economy was opened up to the global strategy of a small number of companies.⁶⁶ Thus the attempts of firms to diversify brought no comfort; they acquired companies elsewhere and based production there.⁶⁷ The region's top companies recorded disproportionate job loss: the top ten companies shed 38 per cent, 18 per cent of the total manufacturing job loss.⁶⁸

Added to this, there was local decentralization out of the region's industrial core. Advances in transport and communications technology made this feasible; obsolescence and congestion, coupled with capital-labour struggles, made it desirable.⁶⁹ Many observers have concluded that government dispersal policies aided the process, but Spencer and his colleagues disagree;⁷⁰ though

it would be wrong to dismiss its role, its effect on employment has often been overstated.⁷¹

Central Scotland: Glasgow's economy, like Bristol's, was based on eighteenth-century "colonial industries" but was then transformed by the nineteenth-century industries of iron and steel, heavy engineering and shipbuilding.⁷² But employment in these basic industries has fallen over a long period: in the whole of the West Central Scotland conurbation, from 844,000 in 1952 to 686,000 in 1981 and to 640,000 in 1984. The rate of loss steepened, from a negligible 400 a year in the 1950s to 4700 a year in the 1960s and early-mid 1970s and to 25,000 a year in the late 1970s and early 1980s. Manufacturing employment fell from 387,000 in 1961 to 187,500 in 1981, with faster losses in the late 1960s and late 1970s; service employment grew from 350,000 to 431,000 in 1978, since which it has remained stable. The manufacturing loss was most serious in Glasgow itself during the 1960s but in the outer towns during the 1870s.⁷³

Service employment in contrast rose, from 42 per cent of the total in 1961 to 63 per cent in 1981. "It is not an exaggeration to say that in twenty years Glasgow--and the whole conurbation--has gone from being an industrial city with 60 per cent of its labour in manufacturing, to a service centre with 60 per cent of its labour in service occupations."⁷⁴ Reality is now at variance with the myth:

The external, and indeed the self-image of Clydesdale, is of an area populated by hard people doing hard manual jobs. This image still pervades the media and the literary world of books and plays. And yet the modern reality is quite different ... a large proportion of Clydeside's labour force does not have a job at all. Of those that do, relatively few are in traditional sectors. For example, in 1981 for every Glaswegian male employed in manufacturing there were two employed in the service sector.⁷⁵

In the outer conurbation, manufacturing jobs declined dramatically as a proportion of the total, from 46 per cent in 1978 to 35 per cent in 1981; in Glasgow, the change was less dramatic, because both sectors declined. As a result, a massive increase in unemployment has occurred over the last ten to fifteen years: in the latter half of the 1960s there were on average about 35,000 unemployed, by 1984 there was an average of 147,000. Unemployment has risen more sharply in the outer conurbation and among females.⁷⁶

Shift-share analysis shows that essentially, during the 1970s the country caught up with the city's decline: much of the loss during the 1970s represents national trends. The city had a favourable structural component but its industries performed poorly in relation to the national average; the outer conurbation had a poor structure and it was no longer helped, as in the 1960s, by competitive growth.⁷⁷ The root cause of the lack of competitiveness was that labour productivity was low; the best available measure gives only 65.9 per cent of the national average for manufacturing in 1978, and this helps explain why employment declined so rapidly relative to national trends.⁷⁸ Thus the sample of firms "experience low value added per head because they overspend on labour despite lower wage costs in the conurbation";⁷⁹ and this was partly because they are biased toward labour-intensive small-batch, specialist, often customer-specific end of the production spectrum.⁸⁰ The answer would be product innovation. Lever's study concludes that though product innovation is not synonymous with the creation of new firms, the two are often related. So the failure of Clydeside to generate an adequate rate of new-firm [or new-product] formation represents a severe problem.⁸¹

Latterly, in the mid-1980s, the city itself has seen a spectacular revival in the form of service industry growth, associated both with the development of a regional office function and also with the city's position as

a centre of education and culture--the latter symbolised by its position as European Cultural City in 1990. Combined with the spectacular physical rehabilitation of the east side as part of the Glasgow Eastern Area Renewal [GEAR] scheme, and with a vigorous publicity campaign under the slogan "Glasgow's Miles Better", these have transformed Glasgow's international image. But in reality, they have only helped compensate to some degree for the deindustrialisation of the 1970s: the GEAR scheme has had relatively little success in attracting new manufacturing employment to the depressed east side.

Postscript: The Economic Revival of the 1980s

During the economic recovery of 1983-5, employment at last grew again. But the growth took a particular form: it was all in female and self-employed people. There was a gain of 594,000 female jobs and a further loss of 129,000 male jobs.⁸² But more than 80 per cent of the additional female jobs were part-time [Fig. 8]. There is thus an underlying secular trend towards the increasing part-time feminization of the employment structure.⁸³

At the same time, a huge regional gap was observable: the regions of the country that suffered the least from the contraction during the recession gained most from the expansion of employment in the recovery. The main impact of the recession was felt in the "Peripheral North" and the "Industrial Heartland", which recorded 40 per cent of employment in 1979, but 57 per cent of the subsequent decline [Fig. 9]; while the three southern regions, plus the East Midlands, had 52 per cent of employment in 1983 but accounted for 52 per cent of the subsequent increase. The gap is even more notable if London is separated, because employment recovery there has been minimal. The Rest of the South East [outside London], plus East Anglia and the South West, stood out as

Figure 8: Employment Changes, 1979-83-85

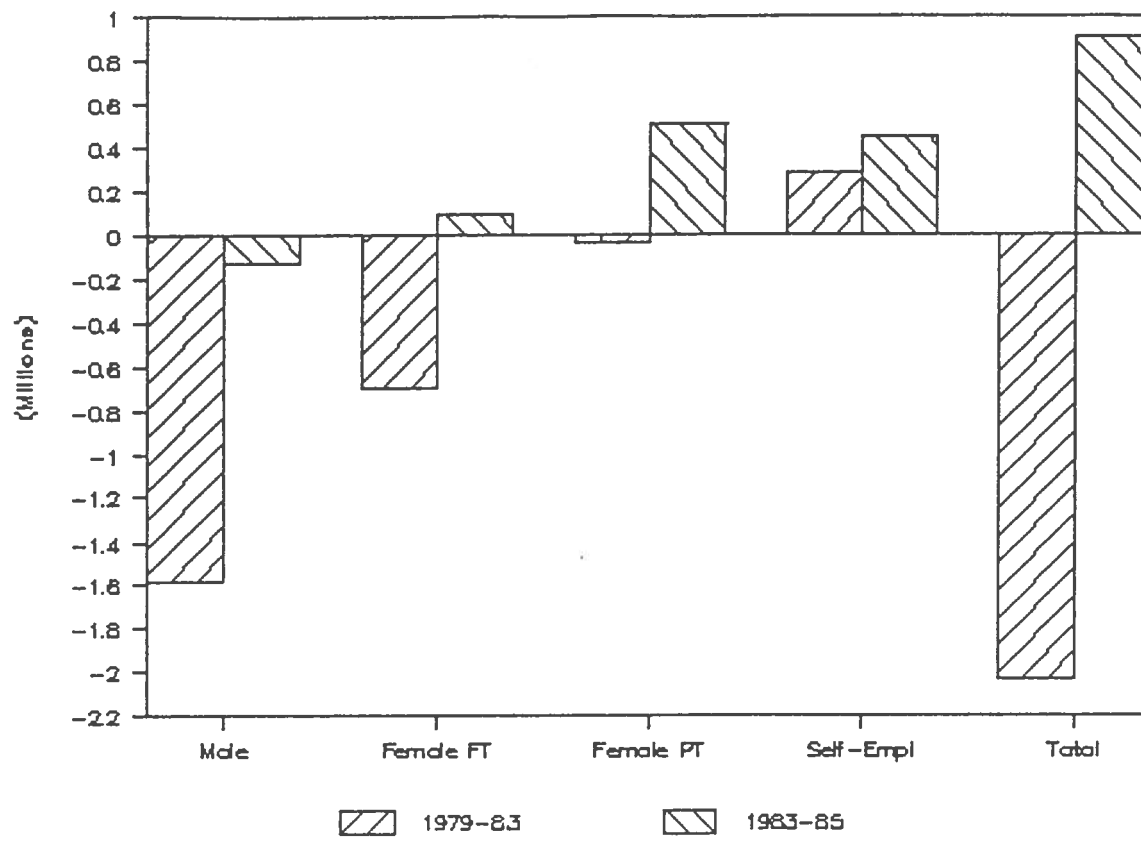
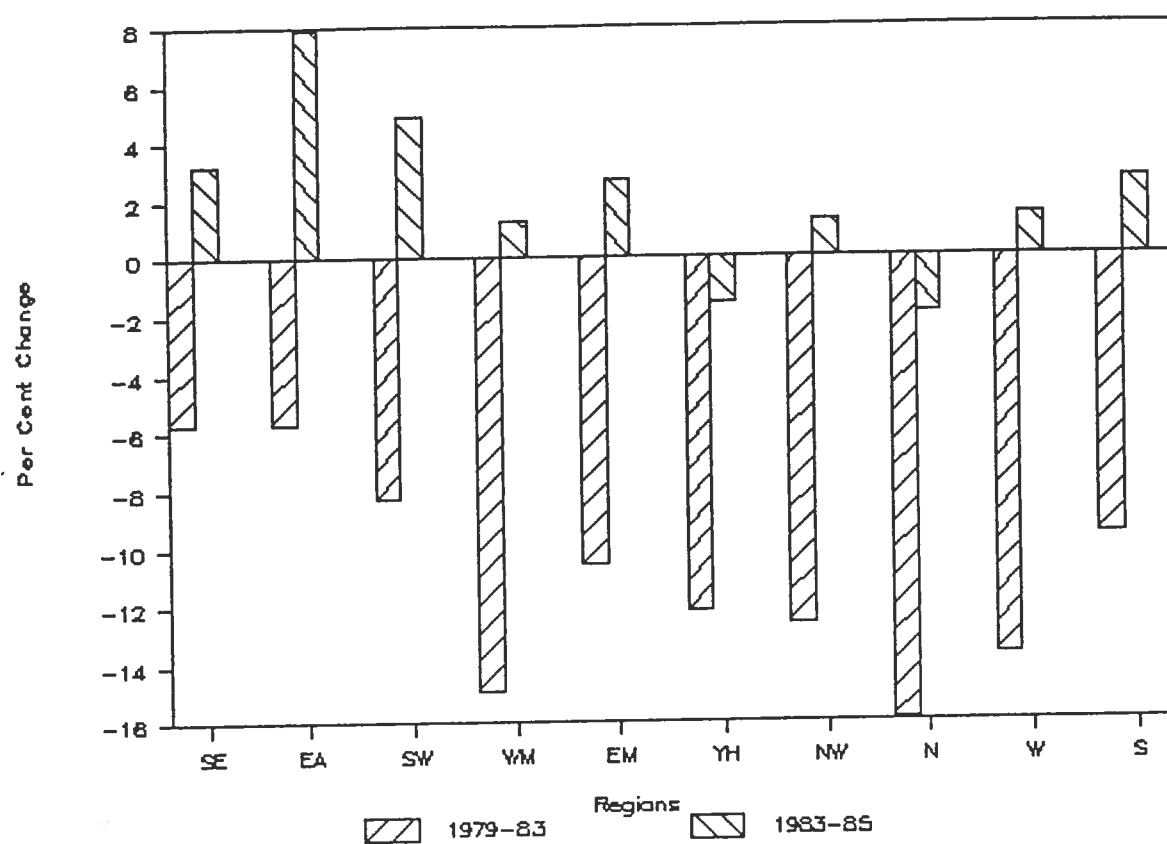


Figure 9: Employment Changes, 1979-83-85



the only really buoyant labour markets. They were the only ones with any growth of male employment and have taken most of the growth in female jobs and of service jobs, which two phenomena are closely related.⁸⁴ The regional dualism is being reflected during the recovery, because of changes in the occupational composition of the manufacturing labour force;⁸⁵ the Heartland regions, as already noticed, have very low new firm formation and weak representation of innovative, technologically advanced industry.⁸⁶ There is some evidence of a revival of the West Midlands region since 1987 based on the development of Birmingham as a regional and national service centre, particularly through the expansion of the National Exhibition Centre and associated business tourism activities, which is promising; but it is too early to say whether this represents a long-term structural recovery.

So a huge paradox remains. The regions that suffered the most massive de-industrialization in the 1970s have shown the least capacity to recover in the 1980s. They have the weakest entrepreneurial traditions, the lowest rates of new formation, and the least evidence of technological innovation. That in turn is because they are locked into a dependency relationship at the periphery of the contemporary capitalist system of organization. In this sense, the Marxist and the Schumpeterian explanations coincide.

That much, now seems agreed. The question is what policy prescriptions are appropriate to this dilemma. On that, there is little agreement and little inspiration.

Conclusion: The Search for Policy

The period of maximum deindustrialization from 1979 to 1983, and the period of recovery that followed it, both occurred under radical right-wing

Conservative administrations led by Margaret Thatcher. It would clearly be impossible to ascribe any causal connection to the former, though Government supporters would certainly claim it for the latter. More significantly, the first Thatcher government carried out the most radical restructuring of British regional policy that had ever occurred since its genesis in the Distribution of Industry Act, 1945. The map of regional aid was redrawn, with the Assisted Areas shrinking to a small fraction of the size they had achieved under the Labour administrations of the late 1970s. And the main negative element of regional policy--the Industrial Development Certificate, which was a prerequisite for any significant industrial development--was simply abolished.

The end of traditional regional policy thus came soon after Thatcher. But it is a moot point whether it would not have come anyway. Traditional policy had worked moderately well in the boom years of the 1960s, when there were plenty of new industrial jobs to be diverted from prosperous to less prosperous regions. That was because industrial firms were making major investments and because these were job-creating. In the trough of 1975-83 firms made very few investments of any kind; if they made them subsequently, they were likely to be job-saving rather than job-creating. The instruments of policy would have had to change because the old ones were no longer relevant. In the transition from an industrial to an informational economy, a different set of instruments, working at a different spatial scale, becomes appropriate.

Thus, conversely, the Thatcher policy involved two major innovations in spatially-targeted industrial development policy. The Enterprise Zones involved a package of measures, including virtual removal of planning restrictions and a ten-year holiday from local property taxes, the shortfall being made good by central government. The Urban Development Corporations involved taking a wide variety of planning and other powers away from local

government altogether in the interests of promoting the fastest possible recycling and redevelopment of derelict industrial and other areas. There has been much argument about the success or otherwise of the EZ policy; the fairest conclusion seems to be that it did generate modest numbers of new jobs, a substantial proportion of which were simply transfers attracted by the incentives, at a rather high cost per job. The verdict on the UDCs cannot yet be reached, because--with the exception of the London Docklands and Merseyside corporations, established in 1980--most are relatively quite new. It does appear that, just like the EZs, their performance has been very variable depending on the location and inherent attractiveness of the site.

Two uncontentious points can however be made about both the EZ and UDC experiments. The first is that they both involved fine spatial targetting, in that the designated zones were relatively small. [Most though by no means all were derelict inner-city areas]. They were thus urban rather than regional policy initiatives. The second is that both were deliberately conceived in terms of policies to encourage the development of land, on the assumption that where development took place, there economic development would follow.

The first feature is significant but it was not novel. British spatial development policy was clearly moving from a coarse-grained regional stance to a fine-grained urban one from 1977, with the publication under a Labour government of the consultants' studies of the problems of the inner cities and the enactment, a year later, of the Inner Urban Areas Act. Only the chosen instruments changed under the Thatcher government. This shift reflected a changed perception of a changed reality: already by the mid-1970s, the major differences in the British economic landscape had become intra- rather than inter-regional.⁸⁷ In particular, both in the North and the South, the fate of

the older industrial and port cities stood in sharp contrast to the relatively prosperous Shire counties around them.

The second feature is more original but not entirely so. Physical regeneration of substantial areas was one of the objectives of the Partnership and Project schemes created under the 1978 Act, and of the similar Glasgow Eastern Area Renewal [GEAR] in Scotland, though there was a great deal of controversy as to whether their provisions could have been entirely effective in this regard. And the New Towns Act of 1946, which provided the model for the UDCs, was ironically a creation of the radical Labour government of Clement Attlee. What was new, and what was certainly contentious, about the Thatcher policy was its emphasis on the most rapid possible commercial realization of the value of the site. Spokespersons for the UDCs might well claim, with some pride, that they had not neglected wider social policies such as provision of low-cost housing or training programmes for unemployed residents. What they would not attempt to deny was that these policies came second.

There is some relationship between these two features. The bundle of policies that is desirable or necessary to achieve the economic regeneration of small areas of dereliction is likely to be substantially different from those needed to turn around an entire decaying region--as GEAR was already demonstrating by the end of the 1970s. In this sense, by 1979 regional policy in Britain was more or less dead, apart from a residue made necessary to enjoy access to EC regional funds. In its place had come a mixture of policies, some spatially specific, some not, to try to regenerate the worst-hit pockets in each region, as appropriate. This may be the most significant policy lesson that British experience has to offer to the rest of the industrial world.

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