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The Foreign-owned Manufacturing Sector in UK Peripheral Regions, 1978–1993: Restructuring and Comparative Performance

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STONE I. and PECK F. (1996) The foreign-owned manufacturing sector in UK peripheral regions, 1978–1993: restructuring and comparative performance, *Reg. Studies* **30,** 55–68. This paper presents an analysis of foreign direct investment (FDI) trends since the late 1970s in the four main peripheral regions of the UK. Using unpublished database sources, it analyses the changing significance of the foreign-owned manufacturing sector in Northern Ireland, Scotland, Wales and the North of England and the sector's performance in terms of number of plants and associated employment alongside that of the indigenous sector in each of the regions. It reveals distinct differences in performance between the regions. Through identifying the main components contributing to overall change, the study provides insights into this aspect of regional restructuring, specifically the importance to employment change of new plants relative to that of closures, acquisitions and *in situ* expansions and contractions. It also shows that the regional differences in overall FDI performance is not merely the outcome of relative success in terms of attracting new plants, but reflects also superior performances in relation to other key components of change. Finally, it is shown that regional foreign-owned manufacturing sector performance does seem to be linked to the patterns of FDI change associated with the main countries/regions of investment origin.

Foreign direct investment UK peripheral regions Industrial restructuring Establishment databases Components of manufacturing change Performance by ownership

STONE I. et PECK F. (1996) L'industrie à capital étranger située aux régions périphériques du Royaume-Uni de 1978 à 1993: restructuration et performance comparative, *Reg. Studies* **30,** 55–68. Cet article présente une analyse des tendances relatives à l'investissement direct étranger effectué depuis la fin des années 70 aux quatre régions périphériques principales du Royaume-Uni. A partir des données officieuses, on analyse l'évolution de l'importance de l'industrie à capital étranger en Irlande du Nord, en Écosse, au pays de Galles et dans le Nord d'Angleterre, ainsi que la performance du secteur en termes du nombre d'établissements et de l'emploi associé par rapport à la performance du secteur autochtone dans chacune des régions. Il laisse voir des différences très nettes dans la performance interrégionale. En identifiant les variables clé qui contribuent au changement global, l'étude permet une compréhension de cet aspect de la restructuration régionale, particulièrement l'importance de la variation de l'emploi des nouveaux établissements par rapport à celle qui s'explique par les fermetures, par les acquisitions, et par les extensions et les contractions sur place. Il laisse voir aussi que les écarts régionaux de la performance globale concernant l'investissement direct étranger résultent non seulement du succès relatif en termes du nombre des nouveaux établissements attirés, mais reflète aussi de meilleures performances relatives aux autres variables clé qui contribuent au changement. Pour conclure, on démontre que sur le plan regional la performance de l'industrie à capital étranger semble être liée

STONE I. und PECK F. (1996) Der in ausländischem Besitz befindliche herstellende Sektor in Randgebieten des Vereinigten Königreichs im Zeitraum 1978–1993: Umstrukturierung und verhältnismäßige Leistung, *Reg. Studies* **30,** 55–68. Dieser Aufsatz stellt eine Analyse der Tendenzen ausländischer Direktinvestierungen (Foreign Direct Investment: FDI) Ende der siebziger Jahre in den vier Hauptrandgebieten des Vereinigten Königreichs vor. Unter Benutzung unveröffentlichter Datenquellen analysiert er die sich wandelnde Bedeutung des in ausländischem Besitz befindlichen Sektors der herstellenden Industrie in Nordirland, Schottland, Wales und dem Norden Englands, und unter dem Aspekt der Niederlassungen und damit verbunden Beschäftigtenzahl die Leistung des Sektors gegenüber dem des einheimischen Sektors in jeder dieser Regionen. Es zeigen sich deutliche Leistungsunterschiede zwischen den Regionen. Indem die Studie die Hauptkomponenten identifiziert, die zum Gesamtwandel beitragen, gewährt sie Einblick in diesen Aspekt der regionalen Umstrukturierung, besonders die Bedeutung für den Wandel im Erwerbsleben, den neue Niederlassungen im Verhältnis zu Schließungen, Werksübernahmen sowie Erweiterungen und Schrumpfungen am Standort mit sich bringen. Sie zeigt auch, daß die regionalen Unterschiede in der gesamten FDI Leistung nicht nur das Ergebnis verhältnismäßigen Erfolgs, vom Erwerb neuer Niederlassungen her gesehen, ist, sondern auch höhere Leistungen in Bezug auf andere Hauptkomponenten des Wandels widerspiegelt.

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à la redistribution de l'investissement direct étranger associée aux principaux pays/régions d'où vient l'investissement.

Investissement direct étranger
Régions périphériques du Royaume-Uni
Restructuration industrielle
Banque de données sur les établissements
Variables qui contribuent au changement industriel
Performance en fonction de la propriété

Abschließend wird gezeigt, das regionale Leistung in ausländischem Besitz befindlicher herstellender Sektoren mit Mustern des Wandels in FDI verknüpft zu sein scheint, die mit den Hauptregionen oder-ländern verbunden sind, aus denen die Investierungen stammen.

Ausländische Direktinvestierungen
Randgebiete des Vereinigten Königreichs
Industrielle Umstrukturierung
Datenbank von Industrieunternehmen
Komponenten des Wandels in der Herstellung
Leistung nach Besitzverhältnissen

INTRODUCTION

The second half of the 1980s saw a boom in foreign direct investment (FDI) into the UK with a third of all inward direct investment entering the EC coming to this country. Attractions such as relatively low labour costs, legislation curbing union power, an easily adopted business culture, language and the political welcome extended to overseas investors, led to pre-recession net inflows which peaked at around £17 billion in 1989 and 1990 (*Business Monitor*, 1991). The demise since the mid-1970s of large sections of British manufacturing capacity, combined with weak policy support for indigenous industry over the 1980s, made the attraction of new manufacturing capability from overseas central to re-industrialization efforts. Apart from the jobs it creates, FDI has traditionally been associated with high-technology products and processes (DUNNING, 1979; DAVIES and LUND, 1989) and levels of capital spending per head and productivity which are well above the national average (FOLEY, 1990). Such investment is thus viewed as particularly important in the diversification and regeneration of regional economies, and promotional agencies at regional and sub-regional scales have over the last decade intensified their efforts to win a larger share of the projects.

Yet in spite of the importance of this sector, our knowledge of its development trends and characteristics is restricted. Published statistics relating to FDI are in a number of respects deficient, hampering efforts at analysing the performance of new and existing foreign manufacturing plants, particularly at a spatially disaggregated scale (BAILEY *et al.*, 1994; for a brief review of the type of data generally available and its problems, see HILL and MUNDAY, 1992a; for an earlier attempt at analysing regional FDI trends, see DICKEN and LLOYD, 1980). The fullest information relating to new investments (number, sector and location) and associated employment is that compiled from regional agency returns by the Invest in Britain Bureau of the DTI. This is limited, however, in that data on foreign investment are not systematically gathered (i.e. they include only those projects notified to the IBB) and figures on job creation refer to *forecasts* of employment over the long term (made by the companies themselves) rather than actual employment.

The problem with this approach to data gathering is illustrated by the findings of the National Audit Office investigation of Locate in Scotland, which measures inward investment employment on the same basis. Of 62 assisted projects set up during 1981–83, reviewed in October 1988, one-third had either failed or not started at all and a further two-fifths had yet to achieve their own projected job target (HM GOVERNMENT, 1990). While IBB figures identify separately jobs in new projects and those claimed to be 'safeguarded' by overseas investment projects, the definition of 'new' investments was widened in 1983 to include not only entirely new projects, but also expansions, joint ventures and acquisitions. Thus, Welsh Development Agency evidence to the Welsh Affairs Committee suggested that only 38 of the 151 projects in Wales during 1985–87 were actually entirely new, and that these provided only half the total number of jobs indicated by the IBB for the three years (HM GOVERNMENT, 1989).

Even if the IBB figures were more reliable, they would still allow only a partial view of what is happening overall in relation to FDI. Insight into the dynamics of change within the foreign-owned manufacturing sector (FOMS) is denied to researchers because figures do not permit the separation of the components contributing to aggregate change. This applies not only to the individual sources of growth (new openings, expansions and takeovers of UK-owned plants) – for which a crude overall measure is at least attempted in official statistics – but in particular to the sources of contraction. Availability of information on the number of closures (and related employment losses) has been curtailed by the withdrawal from publication of the Record of Openings and Closures in 1983, while *in situ* contraction and divestment of assets by foreign-owned companies are not identifiable from published statistics. The main source of information on the overall impact of investment and disinvestment decisions upon the stock of foreign plants and related employment is the Census of Production. Statistics published in the *Business Monitor* (PA 1002) cover the regional distribution of foreign manufacturing employment, output and capital expenditure. Although this has been available since 1979 on an annual basis, the data are relatively slow to be published and, moreover, would appear to underestimate the true

Table 1. Manufacturing employment performance: foreign and UK-owned sectors compared, 1978–93 (000s)

Region	1979		1989		1993	
	Foreign	Indigenous	Foreign	Indigenous	Foreign	Indigenous
Northern Ireland	30·1[2]	100·9	17·7	94·0	27·9	71·1
Scotland	108·1	468·3	81·1	290·9	86·1[1]	261·9
North	49·2[2]	362·1	53·7	220·8	55·7	188·3
Wales	59·0	245·0	60·6	170·5	68·0	135·0

Notes: 1. 1992 figure.
2. 1978 figure.

Sources: Business Monitor PA 1002, 1979, 1989; *Employment Gazette*, 1993; foreign sector figures on employment in foreign-owned sector from Regional FOMS databases.

Table 2. Percentage changes in manufacturing employment: comparison of regional FOMS and UK-owned sector, 1979–93[1] and sub-periods

Region	1979–89		1989–93		1979–93	
	Foreign	UK-owned	Foreign	UK-owned	Foreign	UK-owned
Northern Ireland	−41·1	−6·8	+57·6	−26·4	−7·3	−29·5
Scotland	−25·0	−37·9	+6·2	−10·0	−20·4	−44·1
North	+9·1	−39·0	+3·7	−14·7	+13·2	−48·0
Wales	+2·7	−30·4	+12·2	−20·8	+15·2	−44·9
UK[2]	−25·7	−28·9	n/a	n/a	−20·4	−34·5

Notes: 1. Start date for Northern Ireland and the North is 1978; end date for Scotland is 1992.
2. UK figures relate to 1979–91 and are based entirely on PA 1002 statistics.

Sources: As for Table 1.

employment figure by a considerable margin (see below).

Given the scale of resources devoted to attracting foreign inward investment, and the importance of such investment in terms of regional development and employment, it is surprising that so little is known of the dynamics of FDI at regional and national levels. This paper is an attempt at filling some of the gaps in our knowledge relating to changes in the foreign-owned manufacturing sector (FOMS) at the regional scale. The analysis is directed at the main peripheral regional economies (Scotland, Wales, the North of England and Northern Ireland), and is based largely upon comparable data drawn from independently-held establishment databases covering the period since the late 1970s (see Appendix). Each of the databases has been compiled, up-dated and cross-checked on a systematic and on-going basis throughout the period covered. Although the initial date for both Scotland and Wales is 1979 and that for the North and Northern Ireland is 1978, this difference has minimal impact in terms of comparability of trends, since the overall employment total for overseas plants in Scotland is virtually identical for the two years, and in the case of Wales differs by less than 1% of the total.

The paper contains comparisons of the overall performance of the respective regional FOMS which are more reliable than those available from published statistics, and begins with an analysis of regional FDI performance alongside those of indigenously-owned counterparts. It then proceeds to set the FOMS trends in the context of the spatial distribution of foreign plants within the UK as a whole. This is followed by a section focusing upon the dynamics of FDI change within the regions covered via the application of components of change analysis (CCA). This section offers accurate comparisons of the number of new investments and related employment for each of the regions. It also shows the relative importance of this element – alongside those of closures, net acquisitions and expansion/contraction *in situ* – in aggregate change occurring within the FOMS. This section is very revealing in terms of the relative contributions to overall change of the different components, and of the patterns by region. One aspect which immediately becomes prominent is the role of net acquisitions within aggregate change. The next section examines the relationship between regional FOMS performance and changes in the structure of FDI by country/global region of origin in each of the four regions studied. The conclusion identifies a number of research and policy issues arising out of the findings.

OVERALL FOMS PERFORMANCE

Analysis of the overall employment performance of the foreign sector in the four regions studied (derived from regional FOMS databases) shows a clear contrast between the gains (13% and 15% respectively) in the North and Wales, and contraction (−20% and −7%) in Scotland and Northern Ireland for the period 1978–79 to 1993 (see Tables 1 and 2). This reflects the relative change in the number of plants in the respective regions combined with a significant fall in average plant size. Northern Ireland and Scotland experienced a

comparatively small rise in plant numbers (15 and 24 respectively), compared to the North (+ 102) and Wales (+ 135). The employment figures for Northern Ireland are distorted by the proportionately huge privatization acquisitions since the late 1980s of Shorts Aerospace and the Harland & Woolf shipyard, causing an overall 58% increase for the second sub-period, compared with a contraction of over 40% during 1978–89. Without these exceptional transfers, the Northern Ireland total would be down by around 40% over the whole period – substantially greater than the fall in Scotland of 20%, which is in line with the FOMS employment contraction experienced nationally; *Business Monitor* figures for the UK suggest that, over 1979–91, employment in foreign-owned manufacturing enterprises fell by 20% (Table 2). Given that the North and Wales both performed substantially better than the national FOMS average, this suggests a clear redistribution in favour of these regions.

Three of the regions show an improvement between the periods, reflecting in particular the effects of a huge shake-out in manufacturing in the 1980s and a substantial FOMS growth momentum in the second half of the 1980s which carried through into the recession period. While the North and Wales both returned a net increase in FOMS employment in both sub-periods (the interval between pre-recessionary years 1978 and 1989, and that between 1989 and 1993), the relative performance of the regions reversed as between the periods, as the North's FOMS grew by just under 4% for 1989–93 and Wales took over as the leading regional performer (12% growth in 1989–93). During this period, the North – the best overall performer in the 1980s with FOMS employment growth of 9% – was, in relative terms, the poorest of the four regions. In fact, the North continued to gain FOMS jobs at roughly the same rate as before while the other regions improved their employment performance, suggesting regional volatility in the FOMS as a whole over time. It is worth noting, though, that the North, during 1989–93, still managed to achieve a net gain of foreign *plants* well in excess of those in either Scotland or Northern Ireland.

A crude perspective can be gained on the FOMS performance through comparison with that of the indigenously-owned sector. The FOMS performance was markedly superior in employment terms over the whole period, continuing a trend identified in these regions during the second half of the 1970s (HARRISON, 1982; INDUSTRY DEPARTMENT FOR SCOTLAND, 1983; YOUNG *et al.*, 1988). This pattern was found to be evident for all regions and sub-periods, with the exception of Northern Ireland during 1978–89 (Table 2). While the Northern Ireland FOMS collapsed between these years (by 41%), employment in its indigenous counterpart held up well by comparison with the other regions studied, and that of the UK as a whole. However, the larger-than-average post-1989 contraction in the province's UK-owned sector meant that, for the period as a whole, Northern Ireland conformed to the broader pattern, although its indigenous sector shrank at a rate below that of the other three regions (which ranged from 44% to 48%).

Outwardly, the observed pattern tends to confirm the value of FDI within regional economies in terms of its contribution to employment stability. The extent of the difference between the regions is complicated, however, by the effect of net acquisition of UK-owned plants by foreign companies and this is considered in more detail below. What is clear is that the employment performance of the respective regional foreign-owned sectors is by no means simply a reflection of the general performance of manufacturing employment at the regional level. For example, there is a substantial contrast between the FOMS change in Scotland and that in Wales and the North, and yet the percentage fall in the indigenous manufacturing sector is uniform across the three regions (see Table 2).

Variation in FOMS employment among the four regions has, in combination with trends in the indigenous manufacturing sector, resulted in changes in the relative importance of the FOMS within the regional employment structure. In 1978, reflecting intensive regional policy efforts to attract FDI to the province, 23% of Northern Ireland's manufacturing employment was in foreign-owned plants. Largely as a result of the acquisition of Shorts (and, to a lesser extent, Harland & Woolf) – and in spite of an indigenous performance which was still better than the other regions – by 1993 the share of FOMS employment had risen to 28% (Fig. 1). Indeed all four peripheral regions recorded proportional increases in FOMS employment share. In Wales this proportion increased to no less than one-third of the total manufacturing employment, while the greatest *proportional* rise has been in the North, which lagged substantially behind the other regions at the beginning of the period. Rises in each case are sharply in excess of that for the UK (based on *Business Monitor* figures), reflecting the growing relative importance of the FOMS within the economic structure of peripheral regions compared to the situation elsewhere in the UK.

This relatively greater FDI role within the peripheral regional economies can be shown simply using location quotients (LQs). Each of the four regions finished the period with LQs significantly above 1·00, indicating that the proportion of regional FOMS employment relative to the region's share of UK manufacturing employment was above the national average (Table 3). This represented virtually no change in the cases of Northern Ireland (which started the period well above the UK average) and Scotland, reflecting in both cases the poor FOMS performance. Wales improved its LQ substantially to reach 1·87, while the North recorded the largest proportional rise, increasing from a level below the national average (0·85) to 1·26 in 1993. This is consistent with the trend away from the previous (1970s) pattern (identified by WATTS, 1982) whereby inward

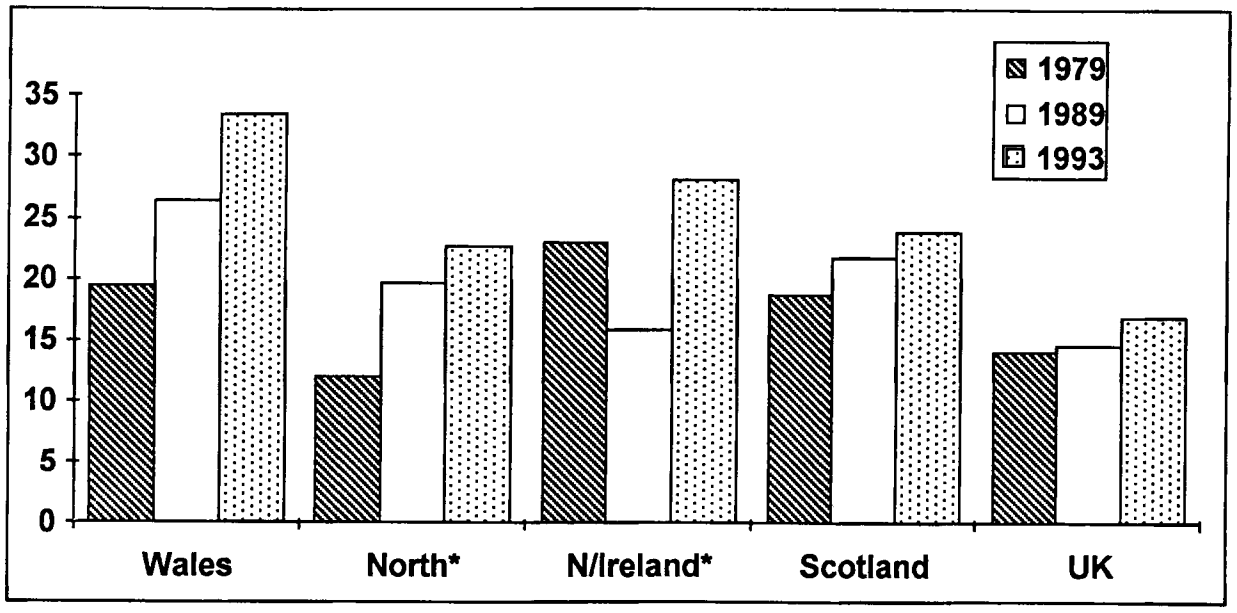

Fig. 1. Foreign-owned sectors' share of regional manufacturing employment (%)
Note: * Based on 1978 figure for foreign employment.

investment was polarized between the core and periphery, towards a situation where the 'inner' peripheral regions have improved their relative standing as the inflows both to the South East and outlying regions have fallen off (HILL and MUNDAY, 1992b). This is apparently also the case in the USA, where a 'more general dispersal of foreign capital' since the 1970s has replaced the previous spatially polarized pattern (GLICKMAN and WOODWARD, 1988).

Finally, it is worth noting the extent to which the figures for employment in foreign-owned enterprises derived from regional FOMS databases diverge from those published in the *Business Monitor* (PA 1002). The latter appear increasingly to underestimate the true size of the FDI sector. Published figures for the late 1970s are not far out of line with those of the databases. This is particularly the case in relation to Northern Ireland and the North, although there is a discrepancy of around 10% for Scotland and Wales. By 1989 the under-counting gap had risen to 30% for Northern Ireland, 33% for Wales, 15% for the Northern Region and 7% for Scotland. Figures are not yet published relating to 1993 but, unless they are sharply increased from 1991 levels (the latest available), similar discrepancies will apply. The most likely explanations of this are: (1) definitional (the regional databases all use place of *ultimate* ownership, thus including as 'foreign' companies which are separately registered in the UK); (2) the failure of CSO data to fully represent acquisitions by the foreign sector (the number of which has increased significantly over the last decade); and (3) the fact that the date for employment totals given in PA1002 lags behind that for the number of plants. Whatever the relative importance of these sources of undercounting, the observed discrepancy raises questions about the true size of the FOMS in other UK regions, and may indicate that nationally the size of the indigenous sector as a whole is being increasingly over-estimated.

Table 3. Location quotients: proportion of regional FOMS employment relative to share of UK manufacturing employment

Region	1979	1989	1993
Northern Ireland	1·60[1]	1·10	1·56
Scotland	1·34	1·49	1·37[2]
North	0·85[1]	1·34	1·26
Wales	1·38	1·78	1·87
UK	1·00	1·00	1·00[3]

Notes: 1. Based on 1978.
2. Based on 1992 figures for foreign employment.
3. Relates to 1991.
Sources: As for Table 1.

COMPONENTS OF FOMS CHANGE BY REGION

Analysis of the various elements making up the overall change in FOMS reveals a dichotomous pattern consistent with that apparent in relation to performance overall. The contrast between Wales and the North on the one hand, and Scotland and Northern Ireland on the other, is sustained across the whole range of individual components of change, although not always in ways which might be expected *a priori* (refer to Table 4 and Figs. 2a and 2b).

Table 4. Components of FOMS change by region 1978–93:[1] *number of plants (and associated employment)*

Region	Initial stock	New creations (+)	Closures (−)	Acquisitions (+)	Divestments (−)	*In situ* change (+)	*In situ* change (−)	Net change	Stock at end of period
Northern Ireland	68	27	28	24	8	18	13	+15	83
	(30,100)	(4,162)	(14,653)	(12,610)	(1,660)	(1,992)	(4,648)	(−2,197)	(27,903)
Scotland	352	144	158	84	46	55	79	+24	376
	(108,065)	(19,219)	(41,760)	(19,272)	(9,261)	(8,407)	(18,148)	(−21,976)	(86,089)
North	154	89	50	79	16	36	53	+102	256
	(49,201)	(14,618)	(10,366)	(15,295)	(3,294)	(3,307)	(13,105)	(+6,455)	(55,656)
Wales	217	129	59	118	53	52	64	+135	348
	(58,900)	(17,000)	(6,700)	(22,600)	(12,400)	(5,500)	(16,800)	(9,100)	(68,000)

Notes: Scotland 1979–92; Wales 1979–93.
Source: Regional FOMS databases.

The relatively superior overall performances of the FOMS in North and Wales is clearly underpinned by *new investments*. These regions exhibit significantly higher gains in terms of number of plants (58% and 59% respectively, compared to 40% and 41% for Northern Ireland and Scotland) for the period 1978–93 (Fig. 2a). The disparity in terms of associated employment creations is even larger, with both Wales and the North showing a rise of nearly 30%, compared to 14% and 18% for Northern Ireland and Scotland (Fig. 2b). It is clear from Table 4 that *new plants play only a limited part in the overall change in FOMS employment*. Turnover of plants is high, and employment in new creations as a proportion of original stock is not infrequently exceeded by several of the other individual components of change.

This is particularly noticeable in the case of *closures* as they have affected the FOMS in Scotland and Northern Ireland. The resulting respective loss in terms of original stock of employment in the two regions is 39% and 49% for the whole period. These figures represent the largest impact in terms of the individual components of change, and indicate that for these regional economies it is the loss of plants through closure which has been a prominent contributor to overall performance. Once again, Wales and the North experienced a markedly different trend, with proportionately fewer closures and comparatively small associated employment losses of 11% and 21% respectively – in both cases well below new creations (Figs. 2a and 2b).

Acquisitions have also played a major role in net FOMS change. Table 4 reveals that, in all four regions studied, at least as much gain in FOMS employment is derived from foreign acquisitions of UK-owned plants as from new openings, in spite of the fact that the *number* of units is generally smaller in the case of takeovers. Once more, if the wholly exceptional takeover of Shorts Aerospace in Belfast is left out of account, the dichotomy is in evidence, with 31% and 38% FOMS employment gains through acquisition activity in the North and Wales, and much lower proportions in Northern Ireland (16%) and Scotland (18%) (Fig. 2b). Transfers from the FOMS to the indigenous sector through *divestments* (including management buy-outs), have generally occurred on a much smaller scale, involving employment totals varying from 6% to 9% of the original stock for Northern Ireland, Scotland and the North, and 21% for Wales. On balance, therefore, ownership transfers have resulted in a considerable net gain to the FOMS in each region, both in terms of number of plants and associated employment (see Figs. 2a and 2b). Indeed, without this contribution, overall shrinkage of the FOMS in Northern Ireland and Scotland would have been more dramatic (i.e. 44% and 30% respectively), and in both the North and Wales *the sector would have failed to achieve net growth over the period*, contracting instead by 11% and 2%. Such plants and jobs are, of course, not new to the region, and while circumstances of takeover often involve plants in danger of closure, it is frequently profitable plants which are attractive acquisitions, and these would have long term prospects if they continued in domestic ownership. Such transfers have obvious implications for the performance of the indigenous sector.

The final element in the components of change analysis relates to *in situ* change among *survivor plants*. The first point to make is that the proportion of plants surviving the period was found to be much higher in Wales and the North (53% and 58%), than in Scotland and Northern Ireland (38% and 32%) (Table 4). This conforms to the identified dichotomy associated with overall performance. Similarly, there is a sharp difference between the net figure for expansions and contractions of surviving plants as between Wales and the North on the one hand and Northern Ireland and Scotland on the other (Fig. 2a). What is interesting, however, is that the better performing regions overall exhibit much greater net contraction in employment due to *in situ* change (20% in the North and 19% in Wales) than either Scotland or Northern Ireland (both 9%) (Fig. 2b). The symmetry is still present as between the two pairs of regions, but the relative magnitudes are the reverse of

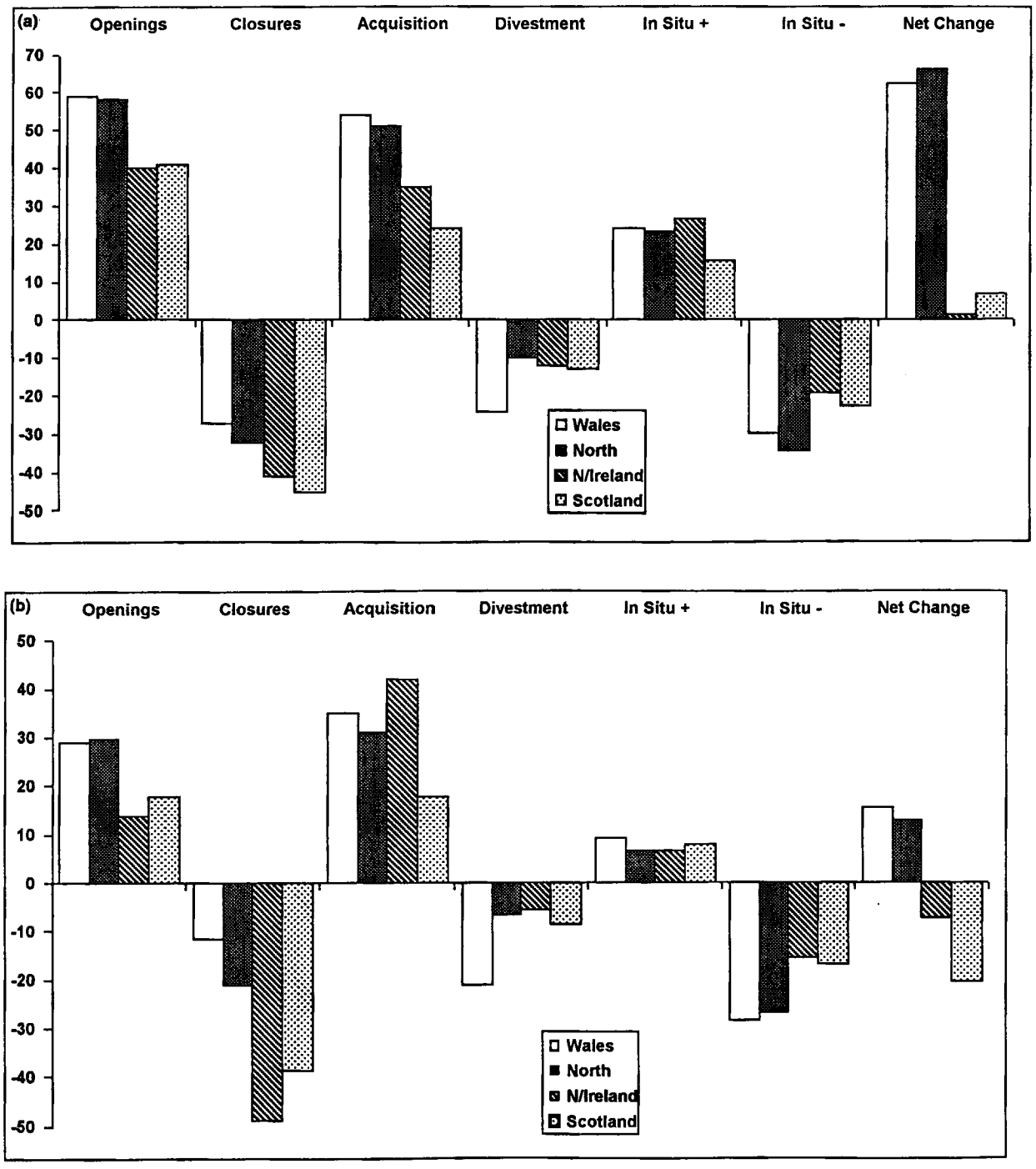

Fig. 2. Components of FOMS change by region, 1978–93: (a) percentage change in number of plants; (b) percentage change in employment

what outwardly might be expected given the wider pattern of performance.

The apparent anomaly may be explained by structural characteristics of inherited plants in the different regions, one element in the framework developed by STAFFORD and WATTS, 1991, for analysing causes of closure. The main influx of post-war US (and EC) investment occurred *earlier* in the case of Northern Ireland and Scotland than in the North and Wales (YOUNG *et al.*, 1988). Plant characteristics associated with age of factory – employment size, product specialization, market orientation and role within the company's European operations overall – would tend to render longer-established plants generally more vulnerable to closure than those established in a subsequent phase of inward investment. On the other hand, in closure decisions, characteristics of individual plants would be weighed against the other main element in

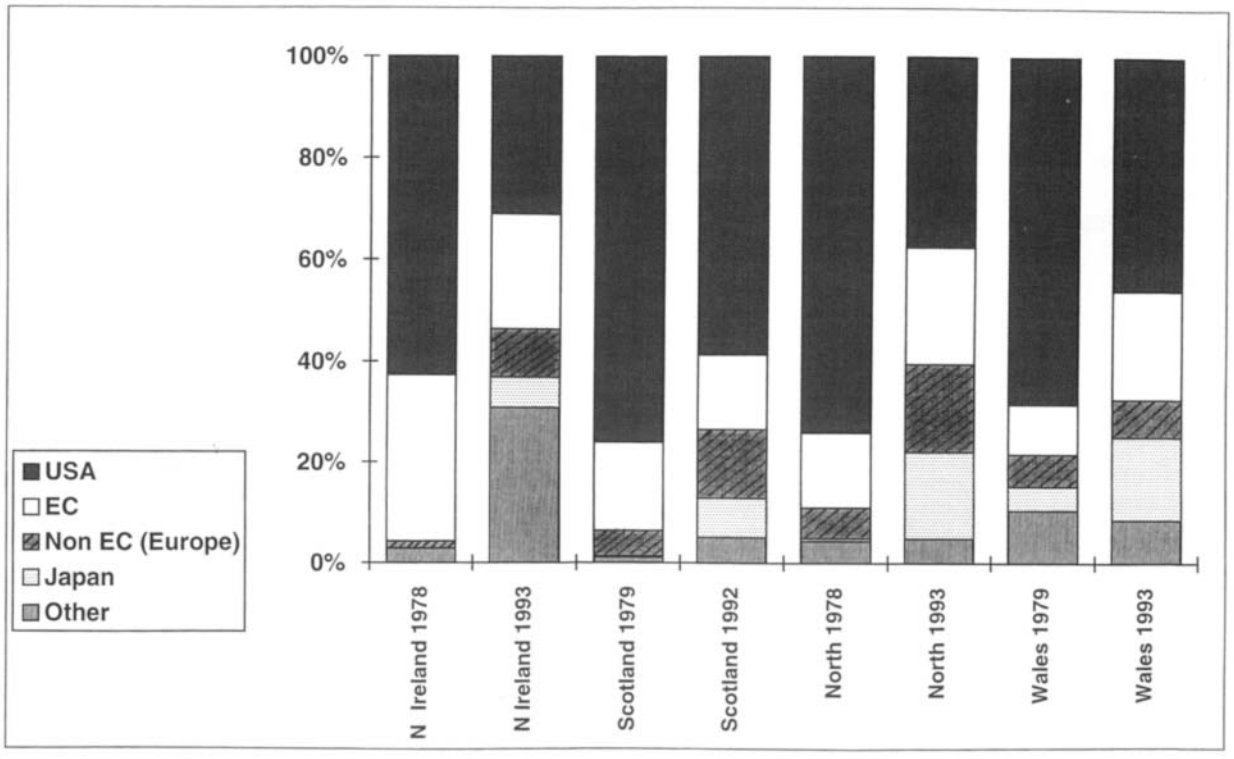

Fig. 3. Stock of foreign-owned sector employment by areas of origin (% total)

Stafford and Watts' analytical framework, namely the external (i.e. regional) factors (see also FOTHERGILL and GUY, 1990). Where it was perceived that a region's operating environment (e.g. labour climate, market access) had improved relative to that of other regions, it may be anticipated that rationalization within multiplant organizations would be more likely to favour such a region. In such circumstances, higher *in situ* employment losses in the North and Wales might represent a positive choice of rationalization to improve the productivity of plants which in a less favourable regional environment might simply have been closed.

SHIFTING PATTERNS OF INVESTMENT ORIGIN AND DESTINATION

The pattern of investment associated with the various geographical areas of FDI origin has been an important element in the identified pattern of differential FOMS growth. There has been a significant change over the period in the nationality structure of overseas ownership at regional level, as is shown in Fig. 3. While it is possible to identify some general changes – common to all the regions – in terms of a shift in the pattern of dependence by country of origin, it is the *relative scale* of these changes as experienced in individual destination regions which has given rise to differences in overall performance.

The context of this section is provided by the concept of globalization, whereby functional integration between internationally dispersed economic activities is intensified. Reduced communication costs, technological change and the facilitation (institutionally and politically) of inter-country flows has widened the range of countries, companies and industrial sectors affected by the process (see, for example, UNITED NATIONS, 1993). This underpins the observed growth in the size of inward FDI flows, the increase in the number of foreign-owned plants operating in the UK and the tendency for such investment to become more pluralistic in origin, spatial distribution and mode of operation.

US plants dominated early post-war flows of FDI into the UK, with Scotland especially being a prime focus for the establishment of branch plants. The USA was a powerful creditor nation and its companies were market leaders in a large number of product sectors, due to technological and economic factors. Such investment was largely 'market seeking' in character: the UK was a large market, amenable to domination strategies and additionally provided access to the markets of EFTA members. Companies from the EEC were also attracted to the UK for market access reasons; like the US companies, European investments involved comparatively large plants. The period since the late 1960s has seen a re-orientation of UK trade and economic links towards the European Community, which itself was gradually increasing its degree of economic integration. UK membership of the Community led to restructuring and rationalization of multiplant structures affecting UK overseas-owned branch plants, part of a general development among MNEs towards pursuing integrated organizational strategies with foreign subsidiaries operating

less as self-contained units identified with the host countries and more as elements in a European or global network of activities (DUNNING, 1993).

The creation of a Single European Market merely intensified this process and has encouraged large companies, in particular, increasingly to pursue 'efficiency seeking' investments along the lines of an EC wide regional division of labour (CANTWELL, 1989). Notwithstanding such developments involving EC firms, it has been suggested that reductions in tariff and non-tariff barriers within the EC will tend to result in lower intra-bloc FDI flows (due to the fall in market seeking investment), but that firms with domestic production bases outside the EC will tend to increase their investment flows to gain access to the integrated market (MOTTA and NORMAN, 1992). Japanese and Far Eastern FDI is the most obvious example of this response, but it has also been an important factor in both North America and non-EC European investment inflows which have contributed to the surge in FDI in the second-half of the 1980s.

There are a number of other important developments affecting the origin and character of FDI flows. These include a general weakening of the competitive position of US companies, with implications for accumulated FDI and the flow of new investment. This process has been uneven across sectors and is particularly pronounced *vis-a-vis* Japanese companies, who have developed a competitive advantage in terms of possession and organization of specific income-generating assets. The recent period has also seen the increased participation in international production of smaller MNEs, reflecting the technological and institutional changes which have facilitated cross-border flows together with the growth in specialized markets and flexible production (PIORE and SABEL, 1984). Other developments include a larger role for mergers and acquisitions in the process of market entry by foreign investors, and a general increase in emphasis upon networks of externalized relationships through various forms of strategic alliances, including joint ventures. Within this framework, EC and non-EC European companies have been especially active in cross-border 'strategic asset acquiring' investment (DUNNING, 1993).

These general trends provide the backdrop to the following examination of the contribution to overall FOMS change in the four regions of company investment and divestment decisions by country or global region of origin. Figures are drawn from Table 5, unless otherwise specified.

US plants

Reflecting the accumulation of investment through to the 1970s, FDI from the United States dominated the overseas-owned sector in all four regions at the beginning of the study period (ranging from 63% to 75% of FOMS employment). Its initial dominance within each region's FOMS has meant that its contraction since the late 1970s has had a major impact on the sector's employment overall. This particularly applies in the case of Northern Ireland, where US plants recorded the largest proportional fall (54%), followed by the North (43%) and Scotland (37%). The impact has been less marked in Wales, which experienced a sharply lower rate of contraction (23%). The contrast between Wales and the North indicates that the performance dichotomy identified in the previous sections is not simply a reflection of the overall performance of the main initial source of overseas investment. In the context of limited employment gain from new investments from other areas of origin, however, the high employment loss through closure recorded among US plants in both Northern Ireland (41% of original US stock) and Scotland (35%) has been of particular importance. While the North, like Wales, experienced a lower proportionate loss through US plant closures, this was outweighed by a high net *in situ* contraction in jobs and the tendency for its new plants from the USA to be small in employment terms relative to those attracted to other regions.

Both Scotland and Northern Ireland have relied significantly upon US investment for their new plants; incoming units into these regions have been large relative to the overall average and account for around half of all employment gains from new set-ups. This share is mainly a reflection of the paucity of supply of new investments from other areas of origin, however. Even Scotland, which was the most successful of the regions in attracting new US plants (linked particularly to its integrated electronics complex), was not far ahead of the other regions in terms of new employment as a proportion of original stock of US employment. United States FDI through acquisition was of small importance, apart from in Wales, where it amounted to almost twice the employment figure for new openings; however, divestments to UK ownership of US plants in each of the regions, including Wales, served to cancel out this source of employment gain.

European Community plants

Overall change affecting EC plants is a clear source of differential performance between the four regions, and the pattern of impact conforms to the broader dichotomy identified. Dependence on EC plants at the outset of the period was most marked in Northern Ireland, where a small number of very large plants helped bring the EC share of FOMS employment to 33% in 1978. Other regions were substantially below this, at 18% (Scotland), 15% (the North) and under 10% (Wales) (Fig. 3). Both Northern Ireland and Scotland have experienced contraction among EC plants (37% and 33% respectively), resulting, in particular, from high job losses from closure among such plants (respectively 69% and 59% of original stock). The North and Wales,

Table 5. Regional components of FOMS change by main area of investment origin 1978–93: employment and (number of plants)

Region	Initial stock	New creations (+)	Closures (−)	Acquisitions (+)	Divestments (−)	*In situ* change (+)	*In situ* change (−)	Net change	Stock at end of period
Northern Ireland									
USA	18,864	2,044	7,815	150	416	999	4,065	− 10,208	8,656
	(33)	(9)	(14)	(2)	(3)	(7)	(8)	(− 5)	(28)
EC	9,938	833	6,828	2,490	388	993	348	− 3,643	6,295
	(30)	(11)	(13)	(17)	(3)	(11)	(3)	(+ 10)	(40)
Non-EC Europe	432	–	–	2,470	–	–	235	+ 2,235	2,667
	(2)	(–)	(–)	(4)	(–)	(–)	(2)	(+ 4)	(6)
Far East	–	1,285	–	–	–	–	–	+ 1,685	1,685
	(–)	(6)	(–)	(–)	(–)	(–)	(–)	(+ 7)	(7)
Other	866	–	10	7,500	856	–	–	+ 7,734	8,600
	(3)	(–)	(1)	(1)	(2)	(–)	(–)	(− 1)	(2)
Scotland									
North America	82,098	10,344	27,648	6,121	8,314	6,500	15,000	− 31,640	50,458
	(242)	(63)	(101)	(32)	(37)	(36)	(58)	(− 50)	(192)
EC	19,059	2,118	11,149	*	*	*	*	− 6,291	12,768
	(57)	(31)	(23)	(21)	(4)	(13)	(14)	(+ 27)	(84)
Non-EC Europe	5,468	2,038	1,912	*	*	*	*	− 6,302	11,774
	(31)	(23)	(19)	(17)	(4)	(2)	(5)	(+ 21)	(52)
Japan	259	4,039	26	2,023	–	*	–	+ 6,468	6,727
	(3)	(17)	(1)	(4)	(–)	(2)	(–)	(+ 20)	(23)
Other	1,181	680	1,025	*	*	*	*	+ 3,181	4,362
	(19)	(10)	(14)	(10)	(1)	(2)	(2)	(+ 6)	(25)
North									
USA	36,465	2,914	8,347	3,038	2,687	1,292	10,721	− 15,595	20,870
	(98)	(28)	(34)	(23)	(10)	(15)	(39)	(+ 2)	(100)
EC	7,309	1,448	1,300	4,902	441	773	1,083	+ 5,472	12,781
	(28)	(17)	(9)	(28)	(2)	(12)	(5)	(+ 39)	(67)
Non-EC Europe	3,008	2,644	272	4,190	16	820	530	+ 6,711	9,719
	(16)	(16)	(4)	(15)	(1)	(7)	(4)	(+ 26)	(42)
Far East	287	7,575	–	1,296	–	418	–	+ 9,289	9,576
	(1)	(26)	(–)	(6)	(–)	(1)	(–)	(+ 32)	(33)
Other	2,132	37	447	1,869	150	4	771	+ 578	2,710
	(11)	(2)	(3)	(7)	(3)	(1)	(5)	(+ 3)	(14)
Wales									
USA	40,700	5,000	4,900	9,400	9,300	2,100	11,600	− 9,400	31,300
	(110)	(40)	(31)	(37)	(31)	(21)	(29)	(+ 15)	(125)
EC	5,600	2,700	1,000	8,000	100	1,000	1,500	+ 9,000	14,600
	(41)	(37)	(14)	(51)	(5)	(13)	(15)	(+ 69)	(110)
Non-EC Europe	3,600	1,500	500	2,000	1,900	900	500	+ 1,500	5,100
	(28)	(15)	(7)	(12)	(9)	(10)	(6)	(+ 11)	(39)
Japan	2,700	6,900	–	*	–	*	*	+ 8,500	11,200
	(5)	(26)	(–)	(2)	(–)	(5)	(1)	(+ 28)	(33)
Other	6,200	800	300	*	1,000	*	*	− 400	5,800
	(33)	(11)	(7)	(16)	(8)	(3)	(13)	(+ 12)	(45)

Notes: 1. Initial figures for Wales and Scotland are 1979; end figures for Scotland relate to 1992.
2. Canada included in 'Other' for all regions apart from Scotland, where it is included in 'North America'.
3. Star (*) indicates data is not available at this level of disaggregation.

Source: Regional FOMS databases.

however, have recorded substantial overall gains from this source; net employment increases of 75% and 160% has taken the EC plants' share of 1993 FOMS employment to 23% and 21% respectively (Fig. 3).

In both these regions, growth has occurred through acquisitions rather than new investments. EC companies account for more plant acquisitions than any other area of origin in both the North and Wales, and resultant job

transfers account for over 90% of net EC employment gains in each. New EC plants in each of the regions have tended to be relatively small – little more than half the average size across the board – thus restricting their employment impact. EC companies also account for a large proportion (three-quarters) of acquisitions in Northern Ireland. Most of these, however, originate from the Irish Republic, whereas in other regions it is Germany, France and Holland which dominate the inflow, with qualitative implications in terms of technological level and market orientation.

The pattern of employment change arising out of net investment flows is consistent with the re-orientation of UK trade since the early 1970s towards the EC and the geographic origin of investment. Research shows that spatial and cultural distance are relevant factors in explaining investment origin (MOLLE and MORSINK, 1990; THOMSEN and WOOLCOCK, 1993), and the investment preference of companies for the core EC countries for the North (where FDI is concentrated in the North East) and Wales might be regarded as consistent with this, as would the dominance of Irish Republic investment within EC investment into Northern Ireland.

Non-EC European plants

This group originates from small countries which have for some time relied upon developing or retaining their competitive position by producing a large part of their output outside the home country. Although their interest in undertaking investment in the UK was heightened in the 1980s by the prospect of the Single European Market (market-seeking FDI), they have also been engaged in 'strategic asset acquiring' to sustain or enhance their competitive position in product areas in which they specialize (e.g. Scandinavian companies in downstream areas of paper and packaging materials).

The spatial pattern of investment by this group among the regions studied is consistent with the observed tendency for cross-border flows to be strongest between adjacent areas. The largest addition to FOMS employment from this source was the North, which saw the share of non-EC European plants rise from 6% to 18% over the period (Fig. 3). This was an important source of FOMS growth in the North, involving a net gain in jobs which was not far short of that from the Far Eastern FDI. The only other region to benefit substantially from non-EC European FDI was Scotland where, apart from Far Eastern investment, this source was the only one which recorded growth over the period (taking the employment share from 5% to 14%). Non-EC European firms have shown little interest in Wales, where their share of FOMS employment increased hardly at all. In Northern Ireland the share of employment accounted for by non-EC European plants would still be around 1% of the total but for a single acquisition (the privatization of the shipyard). Indeed, acquisition has been the main mode of entry for non-EC companies in each of the regions.

Far Eastern plants

The differential impact of investment from the Far East (mainly Japan) has been a factor in the contrasting FOMS performances of Wales and the North on the one hand and Northern Ireland and Scotland on the other. (Note that for Scotland and Wales Table 5 distinguishes Japanese FDI separately; the comparatively small, non-Japanese, Far Eastern investment is contained within 'other'). Although this source has contributed respectively 30% and 21% of the employment from new creations in Northern Ireland and Scotland – in both cases the second largest contribution by origin behind the USA – in both the North and Wales this source is by some margins the largest contributor (52% and 40%) to employment in new plants. The current FOMS employment share of plants of this origin is 6% and 8% in Northern Ireland and Scotland, compared with around 17% for both the North and Wales (Fig. 3).

With only a limited number of UK-based plants at the outset of the period, the Far Eastern sector's performance is effectively determined by *new* plant investments. Japanese companies have generally restricted their acquisition activity to one or two product areas (e.g. tyres). The 26 new plants in each of the North (Far Eastern) and Wales (Japanese only) represent a smaller number of new projects compared with some other areas of origin, but they are distinguished by their relatively high average employment size (nearly 300 in the North and 265 in Wales). This reflects the fact that market leadership in certain product areas – especially vehicles and mass produced consumer items in the field of electronics (involving plants which are relatively large by today's standards) – has shifted towards Far Eastern firms, and also the fact that these plants are oriented towards an EC rather than national or sub-regional market.

The spatial concentration of Far Eastern investment is related to the build-up of linked production, mainly around key assembly plants, based on just-in-time delivery and synchronized production. The Japanese preference for building an industry from scratch – in all its aspects, including supplier network, skill formation, and labour institutions and practices – has frequently led Far Eastern companies to locate in areas without previous experience of their particular industry (GARRAHAN and STEWART, 1992; OLIVER and WILKINSON, 1990; and PECK and STONE, 1992). A combination of EC 'local content' rules, the absence of a pre-existing, local, specialized supplier base, and exacting quality requirements for components has encouraged the formation of integrated industrial clusters involving follow-on investments from the Far East, which have intensified as the core activity has grown.

The process is cumulative in that successful flagship

projects influence (*via* promotion and demonstration effects) other mobile plants not specifically connected with the industrial complex. MCCONNELL, 1980, has argued that, given the high cost of information gathering on location, satisficing rather than optimizing behaviour among potential investors is likely. This would apply particularly to smaller companies with limited experience of operating in an unfamiliar cultural and geographic setting. Analysis of new inward investment by year of entry carried out for the Northern Region suggests strongly that a cumulative process is present.

Other sources

This tends to be a relatively small category in employment terms, and is mainly made up of Canadian FDI. It contains within it some features which particularly affect individual regions. The most obvious example relates to Northern Ireland, where the Canadian acquisition of Shorts Aerospace has had a proportionately large impact upon the size and ownership structure of the FOMS. Scotland has also been affected by changes in Canadian investment; accounting at the outset for 8% of the region's FOMS employment, FDI from this source has contracted to an even greater extent that that of US origin (by 49%), cancelling-out growth from other sources within this category.

CONCLUSIONS

This paper has offered an up-to-date analysis of FDI trends in the four main peripheral regions within the UK. Using data sources which are not in the public domain, it has drawn attention to the changing significance of the FOMS in each of the regions, and the performance of the sector in terms of number of plants and associated employment over the period since the late 1970s. It has identified a distinct gap in terms of performance between Northern Ireland and Scotland on the one hand, and the Northern Region and Wales on the other, and has identified the main components contributing to the overall change. The analysis thus provides an insight into the process by which change comes about, specifically the importance to employment change of new plants relative to that of closures, acquisitions and *in situ* expansions and contractions. In particular, it draws attention to the importance of acquisitions as a contributor to FOMS growth. It also shows that the identified difference in overall FDI performance between the two pairs of regions is not merely the outcome of a relatively better performance in terms of attracting new plants, but reflects also superior performances in relation to other key components of change. Moreover, it has demonstrated that regional FOMS performance does seem to be linked with patterns of FDI change associated with the main countries/regions of investment origin.

This paper follows in the tradition of the empirically-based approach associated with FOTHERGILL and GUDGIN, 1982, who have argued that the most useful work on regional growth and decline has been largely non-theoretical, essentially, 'detailed work on what actually happened' (p. 5). Like shift–share analysis, the technique extensively used by Fothergill and Gudgin, CCA cannot 'explain' performance differences. It can, however, throw light on the process through disaggregating contributing elements in overall change and draw attention to potentially useful lines of investigation.

Thus, whilst a differential impact upon regional FOMS performance of FDI by country/global region of origin is discernible, linking this to specific host region conditions is difficult, especially, as in this case, where all four regions have assisted status and relatively small differences exist between them in relation to variables (e.g. wage rates, financial incentives, availability of labour) which are normally found to be prominent in econometric studies incorporating a wider range of regional types (e.g. HILL and MUNDAY, 1992b; TAYLOR, 1993; and, relating to the USA, GLICKMAN and WOODWARD, 1988). Some relevant influences have been suggested – general ones (e.g. spatial proximity to source country and market access factors), and some which are more specific (e.g. inherited plant structure, clustering and cumulative dynamics) – but these remain somewhat speculative.

In terms of the research agenda on inward investment, the comparatively small part played by entirely new investment projects in overall change within the sector suggests that the focus of FDI research should be wider, particularly given the policy shifts in favour of 'aftercare' and strategies to build upon industrial 'clusters' (BRADLEY and TOMANEY, 1993; BRADLEY *et al.*, 1993), and the increasing competition for new mobile investment. Closures and contractions, and the possible link between them, is one area of interest; acquisitions is another. The process by which decisions are made in relation to such aspects of FDI, and in particular the extent to which *regional* factors (i.e. relating to competitiveness) influence the decision, is a potentially interesting area for research. The findings presented here suggest the presence of a 'regional effect' which extends across the whole range of investment and divestment decisions occurring within the FOMS. The extent to which this is related to perceived competitive advantages of regions such as the North and Wales as production locations (making foreign investors more inclined to acquire plants in these regions or rationalize plants which might otherwise be closed) as opposed to reflecting regional differences in inherited industrial structure (more favourable plant characteristics making it more likely that plants will be kept open or acquired) is an issue still to be explored.

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APPENDIX

Regional FOMS databases

This research is founded upon establishment databases independently compiled for each of the regions concerned. Those for the Northern Region and Northern Ireland have been assembled as a research resource within the Northern Economic Research Unit at the University of Northumbria and include all foreign manufacturing plants (defined in terms of registered head office of ultimate owners, or an overseas holding of at least 50% of share capital) operating (in the case of the Northern Region) since 1970 and (for Northern Ireland) in any of the years 1978, 1989 and 1993. An establishment is defined as a factory (unit) at a single site; no minimum size of employment has been adopted. Data include: location; date established; ownership/nationality details including changes within the foreign sector and between foreign and indigenous sectors; product(s) (4 digit SIC); closure date (if relevant); joint ventures (including ownership share); and employment (full and part-time combined) for key years. The *Northern Region FOMS Database* has been drawn from a number of manufacturing establishment databases originally compiled in the 1970s, updated with the aid of development agency lists of new and existing firms, local authorities (economic development offices, economic bulletins, etc), industrial surveys connected with other research projects, *Who Owns Whom*, industrial directories such as Dun & Bradstreet, local studies library archives and local press. For all surviving plants, details have been verified through telephone contact. The base year population for the *Northern Ireland FOMS Database* was identified with assistance from the Northern Ireland Economic Research Centre, Belfast. Updating in 1989 and 1993 has been carried out using Industrial Development Board lists of existing and new plants, combined with the same range of sources used in relation to its Northern Region counterpart. Again, details have been obtained or verified via telephone. These databases are both accurate and comprehensive in their coverage of the FOMS.

For Scotland, figures relating to the overseas-owned manufacturing sector are drawn from the *Scottish Register of Employment (SRE)* (formerly known as the Regional Data System), which relates to all plants (defined as a factory at a single site) with 11 or more employees. Foreign ownership is defined as those plants with 50% or more of their share capital held by overseas-owned companies. The Industry Department (Statistical Services Unit) at the Scottish Office maintains and regularly up-dates this long-standing (i.e. since 1950) and reliable database, using returns made by the Employment Department, CSO, Scottish Enterprise and direct contact with companies. The latest available up-date relates to 1992.

Welsh FOMS data is based upon the *Welsh Register of Manufacturing Employment (WRME)* set up, like its Scottish counterpart, to monitor developments in manufacturing as a whole, and maintained by the Economics Division at the Welsh Office. The WRME record includes the ultimate country of ownership of individual plants and, in the case of an acquisition by an overseas company, records the year in which transfer of ownership took place. The record is updated regularly using the same range of returns supplemented by direct contact with the companies themselves as in Scotland, and is regarded as the most comprehensive record available for Wales. There is no minimum employment size applied to this database.

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