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The Services Sector

Proinnsias Breathnach

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The term 'services' refers to a disparate group of occupations which, together, comprise the so-called 'tertiary' sector of economic activity. What distinguishes service activities from those in the primary (extraction of resource from the natural environment) and secondary (transformation of natural resources into usable products) sectors is that they are not directly involved in the production of material goods. The European Union's General Industrial Classification of Economic Activities (generally known as the NACE classification), as adapted by Ireland's Central Statistics Office, subdivides services into nine broad categories: wholesale and retail trade; hotels and restaurants; transport, storage and communications; banking and financial services; real estate, renting and business activities; education; health and social work; and a residual 'other services' category. Other, more conceptual classifications distinguish, on the one hand, between consumer services (provided to the general public) and producer services (provided to businesses) and, on the other, between 'physical' services (e.g., transport, retailing, restaurants) and 'informational' services (e.g., administration, research, education, audiovisual entertainment). Indeed, so important have information-related activities become in modern advanced economies that it has been suggested that they should be allocated to a separate 'quaternary' sector of economic activity (Gottmann, 1961).

These latter divisions of services have important spatial implications. It was once widely held that services were 'parasitic' activities, supported by the circulation of the wealth created in the materially productive economic sectors. It was further thought that the spatial distribution of services was determined by the distribution of the population which in turn was determined by the spatial configuration of material production. While this is true to a certain extent (particularly in relation to consumer services), the rapid growth over the last 50 years in the importance of both producer and informational services (which themselves overlap to a considerable extent) drew increasing attention to the fact that many of the key elements of these service categories possess an independent spatial dynamic of their own (Marshall and Wood, 1995; Illeris, 1996). The implications of this in the Irish context will be discussed further below.

In the advanced economies, services today account for the great bulk of employment, following a process of 'tertiarisation' which began in earnest in most of the countries involved from the mid-twentieth century. Key factors in this tertiarisation process have been the growth of administrative bureaucracies

in both the public and private sectors, in response to the growing organisational complexity of advanced economies and the increasing role of government in modern societies; the increasing demand by firms for specialised business services in response to both organisational and technological complexity; and the fact that, past a certain threshold level, additional income is increasingly spent on services rather than material goods. In addition, growing mechanisation and automation have greatly reduced the need for primary and secondary sector workers relative to the output of these sectors. Contraction of employment in these sectors, therefore, has contributed to the tertiary sector's growing share of total employment. However, the wealth generated in material production continues to be a major driver of advanced economies, a fact which tends to be overlooked by the popularisation of such ideas as that of the 'post-industrial' (Touraine, 1971; Bell, 1973) or 'informational' (Castells, 1996) society.

The remainder of this chapter is divided into three main sections. Initially, the development of services employment in Ireland is described and analysed. This is followed by an account of the sectoral and spatial development of key elements of the services sectors, divided, respectively, between producer (especially software, financial services and back-office services) and consumer (public services, shopping, entertainment) services. The chapter concludes with some observations on the future prospects of the services sector, particularly in terms of its potential for contributing to long-term economic development in Ireland.

DEVELOPMENT OF SERVICES EMPLOYMENT IN IRELAND¹

The 1926 census of population showed that one-third of those at work in Ireland were engaged in services, compared with over one-half in agriculture. By mid-2005, the number of service workers had tripled in absolute terms and doubled in proportionate terms to two-thirds of the workforce. However, even this is still quite low by comparison with many other advanced countries such as the USA, the UK and the Scandinavian countries, where the tertiary sector's share of total employment is now well over three-quarters. This is despite the very rapid decline in the relative share of the agricultural sector (to just 6 per cent in 2005), and is mainly attributable to the unusually large current size of the construction sector and the fact that, uniquely among advanced economies, manufacturing employment actually grew strongly in Ireland in the 1990s (see Chapter 9).

Not only did the size of the services sector in Ireland grow enormously in the twentieth century, but its composition also changed dramatically. In 1926, by far the biggest services subsector was private domestic service, which accounted for over one-fifth of all service workers, was overwhelmingly female in make-up, and was generally very poorly paid. By 2002 (according to the census of population for that year), the number of workers in this category was just 2,500, compared with 85,500 in 1926. The rapid decline of this sector (and of the state's security forces) is the main reason for the very modest overall growth which occurred in services employment up to 1961. These declines were more

than counter-balanced by significant growth in most other services categories, and particularly the professions (mainly teachers, but also including health and legal workers and religious). In the 1960s, accelerated economic growth and the opening up of the Irish economy were accompanied by significant new trends in services employment. Drawing on path-breaking contemporary work elsewhere in the advanced economies (Thorngren, 1970; Törnqvist, 1970; Goddard, 1975), Bannon (Bannon, 1973; Bannon et al., 1977) was to the fore in focusing attention on the major growth in office-based 'white collar' employment which was occurring in Ireland in the 1960s and 1970s. Office work, involving the 'handling' (generation, processing, storage and transmission) of information, accounted for just 6 per cent of total employment in 1946; by 1971 this had risen to 15 per cent.

While much of the growth of office employment is accounted for by the expansion of administrative bureaucracies in both the public and private sectors, an increasingly important driver of growth in this sector has been financial and business services. The contribution of this service category to the extraordinary rise in employment in Ireland since the early 1990s has been particularly spectacular. While there had been strong growth in services employment over the period 1961–91 (up 59 per cent to 663,000, representing 58 per cent of total employment), this was largely counter-balanced by declining agricultural employment, so that total employment only grew by 9 per cent. However, over the period 1991–2002, services employment grew by a further 56 per cent (or, in absolute terms, by 50 per cent more than in the previous three decades). Services accounted for almost four-fifths of the overall growth of 43 per cent in employment which occurred in this eleven-year period (construction and manufacturing accounting for the remainder). Table 10.1 allows us to identify some of the more salient features of this recent surge in services employment in Ireland.

This shows that by far the most rapid growth in services employment occurred in the 'Other business services' category: indeed, over a quarter of the overall growth in employment was accounted for by this sector. By far the single biggest contributor to this sector's spectacular expansion was the 'Computer and related activities' subcategory, which includes both software and computer services. In 1991 this category was actually included in the manufacturing sector under the heading 'Repair and maintenance of data processing equipment'. Between it and its associate subsector 'Manufacture of data processing and office equipment', total employment in 1991 came to only 9,000. On its own, the computer services category employed 34,000 people in 2002. Other above-average growth sectors included 'Recreation, culture and sport' (albeit from a small initial base), 'Finance, insurance and real estate' and 'Health and social work', whereas 'Public administration and defence', 'Transport, storage and communications', 'Wholesaling and retailing' and 'Education' were relatively slow growth sectors. From a national economic point of view, an important finding from this table is that about two-thirds of the growth in services employment occurred in sectors (public administration, education and health, financial and business services) in which education and remuneration tend to be

Table 10.1 Change in services employment, 1991–2002

Sector	1991			2002			Total	Δ%	Δ%
	Male	Female	Total	Male	Female	Total			
Wholesaling & retailing	94,386	62,186	156,572	119,495	99,670	219,165	+26.6	+60.3	+40.0
Hotels, restaurants & bars	24,894	27,017	51,911	36,413	45,005	81,418	+46.6	+66.5	+56.8
Transport, storage & communications	55,422	13,975	69,397	71,316	25,539	96,855	+28.7	+82.7	+39.6
Public administration & defence	52,158	23,383	75,541	51,716	43,030	94,746	-0.8	+84.0	+25.4
Finance, insurance & real estate	23,074	24,223	47,297	33,773	44,747	78,520	+46.4	+84.7	+66.0
Other business services	22,710	19,632	42,342	81,076	62,349	143,425	+257.0	+217.6	+238.7
Education	29,094	46,020	75,114	35,478	73,823	109,301	+21.9	+60.4	+45.5
Health & social work	21,679	65,128	86,807	29,168	114,352	143,520	+43.5	+75.6	+65.3
Recreation, culture & sport	8,802	5,565	14,367	16,580	13,065	29,645	+88.4	+134.8	+106.3
Other services	18,840	24,481	43,321	11,921	22,767	34,688	-36.7	-7.0	-20.0
Total	351,059	311,610	662,669	486,936	544,347	1,031,283	+38.7	+74.7	+55.6

Note: Due to a revision of the NACE classification scheme, some minor subcategories could not be unambiguously assigned to one or other of the above categories. This will not have significantly affected the overall reliability of the categories used.

Sources: Census of Population, 1991, 2002

high, as against one-third for those sectors (wholesaling and retailing, transport and communications, and recreation) where the opposite tends to apply.

Another key feature to be drawn from Table 10.1 is the crucial role played by women workers in the recent surge of services employment growth, accounting for two-thirds of the total, despite accounting for less than half of total employment at the beginning of the period. Women now make up over one-half of all service workers. An important aspect of this growth is that the two traditional bastions of female employment – education and health – were not among the leading areas of recent growth. Apart from the small recreational services sector, the most rapid growth occurred in business and financial services and public administration (where high skills and pay prevail) as well as transport and communications. By contrast, below-average growth was experienced in wholesaling and retailing and hotels, restaurants and bars. From this, it is clear that the common image of female employment in the post-industrial informational economy being mainly confined to low-level employment categories (unskilled, part-time, casual) certainly does not apply, at least in the Irish case (Breathnach, 2002b).

Despite the fall in the overall rate of economic growth in Ireland (albeit to still quite high levels) in the early part of the twenty-first century, the strong growth in services employment has not only continued, but actually accelerated, growing by 55,000 per year (according to the National Household Survey, which is not strictly comparable to the census of population in methodology and findings) between mid-2002 and mid-2005 compared with an annual growth of 33,500 in the intercensal period 1991–2002. On this occasion, the strongest growth has occurred in the health services, followed by ‘other’ services and financial and business services.

RECENT DEVELOPMENTS IN PRODUCER SERVICES

The rapid expansion of the financial and business services sectors (which embrace most producer services) in the 1990s and early 2000s can be attributed to two parallel processes. On the one hand, general growth in the economy and in the public sector has generated a burgeoning demand for these services in such areas as banking, real estate, advertising and technical consultancy. On the other hand, an increasing proportion of inward investment projects secured by the Industrial Development Agency (IDA) has been in ‘international’ (i.e., export) services. Over the period 2000–04, just under 50 per cent of new jobs created in IDA projects were in services which, by 2004, accounted for 35 per cent of all IDA-sponsored employment.

Spatial Concentration

A key feature of recent growth in producer services employment has been its disproportionate concentration in the Dublin region. Thus, in 2002, the East region (Dublin and the adjoining counties of Meath, Kildare and Wicklow) accounted for 39 per cent of the national population and 42 per cent of the workforce, but no less than 60 per cent of all employment in financial and business services.

This tendency for business services to congregate in the main metropolitan regions can be attributed to a number of factors, the most important of which are the fact that the main customers for such services (government ministries and corporate head offices) also tend to be heavily concentrated in such areas (Daniels, 1979): the strong network linkages which exist between producer service suppliers (Bannon, 1973; Goddard, 1973), and the availability of an advanced support infrastructure for office activities (including, in particular, telecommunications infrastructure) in the world's leading cities (Sassen, 1991). Thus, in the Irish case, Bannon and Blair (1985) found that, on the basis of a range of indicators including the location of head offices and senior executives, quality of amenities and facilities and communications infrastructure, Dublin was more than five times more attractive as a location for service functions than Cork (Ireland's second city) and even more so in relation to the other main provincial centres.

Software

Foreign investors in international services have been, if anything, even more inclined to locate in the Dublin area. Investment in this area has been concentrated in three main sectors: software, financial services and back-office services. Software has been perhaps the most spectacular success story of the recent Irish development experience. American firms in this sector initially began to use Ireland in the 1980s as a cheap base for duplication of manuals and disks and subsequently for the adaptation (localisation) of American software for European markets. One consequence of this high-volume business is that, in the early 2000s, Ireland became the world's foremost exporter of software products (accounting for 10 per cent of Ireland's total exports), with Microsoft's large-scale operation in south County Dublin playing the leading role in this respect. In the 1990s the industry moved up the value chain, with existing firms evolving into, and new incoming firms engaging directly in, the more creative software development and technical support elements of the industry. Sectoral employment rose from 8,000 in 1991 to 31,500 in 2001 but then fell to 24,000 in 2004, mainly as a result of the 'dot.com' collapse in 2001.

Uniquely among the foreign business sectors operating in Ireland, the foreign software industry has helped generate a substantial indigenous counterpart (O'Gorman et al., 1997; HotOrigin, 2001). This is partly explained by the fact that, unlike most high-tech manufacturing sectors, major capital investment is not required by firms setting up in the software sector. The growth of indigenous software has been partly built on outsourcing of particular aspects of the business to indigenous suppliers, and partly on Irish employees of foreign firms setting up their own companies to exploit market niches initially identified while working in the foreign sector. An important feature of the indigenous software sector is that, rather than being heavily dependent on the foreign sector as a market outlet, it has become strongly export-oriented in its own right, with Irish firms becoming world leaders in niche sectors such as credit card security and educational software. Indigenous firms made up almost one-half of total

sectoral employment in 2004 and generated over two-thirds of their revenues from exports.

In 2005, the Irish software industry employed some 32,000 people and displayed many of the characteristics of an industrial cluster of the type identified by Porter (1990) as crucial in establishing sustainable competitive advantage in the global economy. This involves a high level of interfirm linkage in terms of subsupply business, information sharing and movement of personnel. Another key characteristic of industrial clusters – their tendency to be spatially concentrated – is also apparent in the Irish software industry, in which the great majority of firms and workers are located in the Dublin region. The locational dynamics of the industry (in particular the key role of interpersonal contacts) and the declining role of routine activities indicate that this tendency to geographical concentration is unlikely to change substantially in the foreseeable future.

International Financial Services

The international financial services sector has been equally concentrated in Dublin – in this case a direct consequence of the establishment in the national capital of the International Financial Services Centre (IFSC) in 1987 (Murphy, 1998). Initially designed to both create employment and rejuvenate part of Dublin's derelict docklands, the IFSC sought to attract investment by offering the same low corporation tax rate (10 per cent) as was available to manufacturing industry. As firms seeking to avail of this concession were required to locate in the Dublin area (but not necessarily in the IFSC itself), the development of this sector of activity was entirely confined to the national metropolis. This restriction became increasingly significant as the IFSC grew in size over time, to a situation whereby in 2004 there were 443 international financial services firms operating in Dublin (Finance Dublin Yearbook, 2005) along with 700 other IFSC-licensed firms acting through third-party intermediaries. It is difficult to determine the amount of employment generated by these firms, as many also conduct other activities not related to the IFSC, while a considerable amount of spin-off employment has been created in other firms supplying services (e.g., auditing) and other inputs to the IFSC firms. However, direct employment in IFSC-licensed firms was put at 10,700 in 2005.² The main areas of activity engaged in by these firms tend to be in routine sectors such as fund administration, asset financing and corporate treasury management, although there is also considerable active involvement in insurance and banking. However, the original aim of establishing an active trading floor in financial instruments has not been realised.

Back-office Services

The third main sector of inward investment in services is that of back-office services. This sector originated with the attraction to Ireland in the early 1990s of a large number of international telephone call centres, created as part of a trend towards pan-European rationalisation of operations by transnational firms in the wake of the implementation of the Single European Market in

1993 (Breathnach, 2000). Eventually, some 50 (mainly American) such centres, employing 12,000 people, were set up in Ireland. These – again – were almost all located in the Dublin area, mainly due to their requirements for workers with a range of European languages. Many of these operations have since diversified into other – and generally more high-skilled, albeit still quite routine – activities such as financial and supply chain management, and sales and marketing. Simultaneously, many existing foreign firms, especially in manufacturing, have added on such ‘shared services’ facilities to their previous production operations. In many cases, foreign firms have set up fully fledged European operational headquarters in Ireland, leading Internet firms Yahoo, eBay and Google being important recent examples.

A Spatial Policy for Producer Services

The growth of Dublin-focused inward investment in services has been the main reason why the East region’s share of employment in IDA-sponsored firms rose from one-third in 1993 to almost one-half in 2004. However, IDA attempts to promote a greater spatial spread of foreign services projects have been meeting with increasing success in recent years. They have been assisted in this process by the removal of the restriction to a Dublin location of international financial services firms, growing labour shortages (especially for skilled workers) in the Dublin region; rising living (including housing) and operating costs which are encouraging both firms and workers to seek alternative locations in which to operate and live, and growing familiarity among foreign firms with the operating environment outside Dublin. The upgrading of the telecommunications infrastructure in the regions, increasing supplies of good-quality business graduates from regional Institutes of Technology, and the creation of a network of IDA-owned business parks have also played important roles in this respect (Slattery, 2005).

Inward investors are, almost by definition, inherently mobile and open to considering a range of alternative locations. Domestic firms, by contrast, tend to be much more resistant to new locational possibilities. Furthermore, unlike the manufacturing sector (see Chapter 9), the Irish government has never formulated a specific policy designed to encourage the movement of services firms, as such, to less advantaged regions (Bannon and Lombard, 1996). Nor have past endeavours by governments in other countries been encouraging in this respect (Daniels, 1982). However, in recent years, there has been a growing trend for large firms in advanced economies to relocate routine back-office activities such as call centres and data processing to remote locations, mainly in order to avail of sharp inter-regional differences in operating costs (Wilson, 1995; Richardson and Marshall, 1996). It may be that rising costs in Dublin vis-à-vis the rest of the country may induce a similar response in Ireland, although for the moment Irish firms remain firmly committed to the long-established pattern of keeping all of their central administrative staff in a single location (and typically in a single building) even though the bulk of the work involved is routine and relatively easily relocated, especially in the context of modern information technology.

Meanwhile, the Irish government has been pursuing a fairly active policy of relocating its own civil service staff to provincial centres. Over the last 30 years some 4,000 civil servants have been relocated, and in December 2003 the government announced its most ambitious relocation programme yet, with over 10,000 staff to be moved to 53 different locations, including entire government departments. It remains to be seen whether these targets will be met, as there has been considerable opposition to the programme, especially among more senior civil servants. The programme has also been criticised for its apparent lack of cohesion with the government's National Spatial Strategy, launched in 2002, whose main focus is the development of a small number of major provincial urban centres as regional 'gateway' cities (see Chapters 2, 3 and 4). The successful implementation of this strategy could also lead to a significant level of decentralisation of private services, seeking out the new market opportunities and enhanced infrastructures which strong regional centres would offer. However, a major weakness in the spatial strategy is the absence of any reference to the devolution of administrative functions to the regional level, as a tier of regional government could play a key role in promoting the coordinated development of the gateway cities while also generating additional demands for private producer service providers (Breathnach, 2002a). The absence of any provision for such a tier of government, coupled with the nature of the government's 2003 relocation programme, does appear to indicate a lack of real commitment to the realisation of the spatial strategy.

RECENT DEVELOPMENTS IN CONSUMER SERVICES

Public Services

In the absence of a coherent national spatial strategy, the Irish government is also likely to face growing challenges in terms of the territorial arrangements for the delivery of public services such as health, education and community care. The key challenge in this respect is to achieve an acceptable balance between the popular demand for maximum access to such services and the need for efficient utilisation of scarce public funds in delivering these services. At the time of writing, for example, the whole question of the spatial arrangements for the provision of different levels of hospital service is a matter of considerable public controversy. Because of the highly centralised nature of Ireland's system of administration, a wide range of services are provided by central government which are the responsibility of subnational government in most other European countries (Breathnach, 2000b). This leads to particular problems of bureaucratic inflexibility and a lack of coordination at territorial level between various state services, including a patchwork of territorial systems within which these services are administered.

Meanwhile, even with regard to the limited range of services which *are* provided through the local government system, territorial problems arise, particularly relating to frequent cases where urban centres have expanded beyond their narrowly defined official boundaries without appropriate adjustments to these

boundaries. The resulting inefficiencies have been well highlighted by the cases of Limerick and Waterford cities, where, for example, the establishment of major industries and shopping centres in suburban locations generates income streams from local taxation for adjacent county councils, while much of the infrastructural costs associated with the developments have to be borne by the cities themselves; or where the city councils have to build and maintain social housing developments in adjoining jurisdictions due to a lack of developable land within their own boundaries.

Shopping and Entertainment

While for most people shopping remains primarily a functional task, essential for human reproduction, increasingly in advanced economies it is also seen as an important form of recreation – indeed, in the USA it is now regarded as the second most popular leisure activity after watching television (Castells, 1996). Rising living standards and increased leisure time due to a shorter working week have meant that the economic importance of recreational activity has grown enormously in recent decades in advanced economies. This applies a fortiori to Ireland, where average living standards (measured in terms of per capita Gross National Disposable Income at constant prices) more than doubled over the period 1990–2004.

In terms of spatial consequences, much of the additional consumer spending has been devoted to home-based entertainment such as high-end TV, DVD and hi-fi systems, computers, playstations and broadband. Over the period 1998–2004 the number of households with a home computer almost tripled from 229,000 (19 per cent of all households) to 649,000 (46 per cent); furthermore, where only one-quarter of houses with computers in 1998 were connected to the Internet, by 2004 this proportion had risen to over 80 per cent. Much of Irish people's rising spending power has also gone into travel abroad (see Chapter 12). But perhaps the main spatial consequence of increased consumer spending has been the way it is increasingly channelled into major shopping centres which attract customers from extensive regional hinterlands (Parker, 1997). In Ireland (as elsewhere), increasing levels of car ownership, higher purchasing power and less spare time for casual shopping have meant that shopping increasingly takes the form of planned 'expeditions' to such centres. As a result, in the countryside, smaller urban centres, and in the cities, smaller neighbourhood shopping districts have been increasingly excluded from the consumption landscape as consumers travel growing distances to larger centres.

In Ireland, the first planned, purpose-built shopping centre (consisting of anchor grocery/department store and associated specialist outlets) was opened in Stillorgan in south County Dublin in 1966. Since then, there has been a proliferation of such centres in the suburban peripheries of all the main cities and towns (Parker, 1999, 2002). The inauguration of The Square shopping centre in Tallaght in south County Dublin in 1990 raised the concept of the shopping centre to a new level, and was quickly followed by similar centres in Blanchardstown and Liffey Valley near Lucan. All three of these were originally conceived as 'town centres' for their immediate suburban hinterlands, but their

locations adjacent to the M50 orbital motorway and major roads leading out of Dublin have allowed them to draw custom from much further away. Key additional features of these centres have included the establishment of clusters of large-scale 'warehouse' outlets nearby and the incorporation of non-retail activities such as multiplex cinemas, restaurants, and health and fitness centres. The addition of musical performances, art exhibitions and other forms of 'spectacular' entertainment (Harvey, 1989) contributes further to the total recreational experience which such centres offer.

Urban central business districts, which in the past enjoyed a virtual monopoly on high-end shopping and cultural markets, have sought to counter the drain of customers to suburban competitors through such devices as multistorey car parks, pedestrianisation, street entertainment, spectacular enclosed shopping malls such as the St Stephen's Green and Jervis centres in Dublin, and the redevelopment of derelict precincts as new entertainment districts, such as Temple Bar in Dublin and the area just north of Patrick Street in Cork. Meanwhile, the growing demand for 'convenience' shopping outlets has been increasingly met by the incorporation of retail and catering functions into petrol filling stations (by definition highly accessible) and the proliferation of late-opening smaller 'symbol' supermarkets such as Londis, Centra and Supervalu (see Chapter 21).

CONCLUSION

With most commentators expecting Ireland's still vigorous economic growth to continue at least for the medium term, further absolute and relative expansion of the services sector seems assured. A key question in terms of Ireland's long-term development prospects centres around the extent to which services activities will themselves act as drivers of overall economic growth rather than constituting a spin-off from growth generated elsewhere. Conventional economic development theory emphasises the importance for small economies of creating an export base, the circulation of whose revenues creates an internal multiplier effect within these economies (Brookfield, 1975). Traditionally, manufacturing or the primary sector provided the foundation for successful basic sectors; however, in the case of Ireland, services are now increasingly filling this role. Although it can be notoriously difficult to monitor and quantify service exports (especially those delivered electronically), Central Statistics Office figures indicate that, in the period 1998–2004, when Ireland's merchandise exports grew by 16.5 per cent, services exports actually trebled in size. As a result, the share of total exports accounted for by services doubled, from 17 to 34 per cent, over this period. Predictably, from what has been written above, the great bulk of services exports are accounted for by software (35 per cent), financial services, including leasing and insurance (33 per cent) and other business services (26 per cent).

Clearly, therefore, Ireland has, in recent years (and mainly through the efforts of the IDA) created a strong and rapidly growing export base in international services. And with some segments of the modern manufacturing sectors recently beginning to display signs of vulnerability (see Chapter 9), the IDA is looking

increasingly to the services sector as the main source of further export base growth. This, to a considerable extent, will involve continued expansion of existing areas of strength, i.e., software and financial services, and the emerging areas of shared services and administrative functions. At the same time, new areas of potential opportunity are also being opened up. These include scientific and industrial research, with existing manufacturing firms being a key target in this respect. The IDA is also seeking to build on Ireland's existing strengths in the areas of software, entertainment and culture in exploiting a range of e-business (i.e., services delivered electronically) niches, including design, operation and maintenance of websites; production of online games and other entertainment forms, and e-learning (Forfás, 2002, undated).

The success of this strategy is intimately interconnected with developments in spatial strategy. With the over-heated Dublin region portraying various forms of stress such as labour shortages, traffic congestion and high housing costs, increasingly the potential for attracting new inward investment in services will depend on the ability to offer potential investors acceptable alternative locations. Given the specific nature of the service activities concerned, with their high demand for highly educated workers (who in turn have their own demands in terms of social and cultural facilities) and office and communications services and infrastructures, it will be necessary to concentrate on the selective development of a small number of key centres where these locational requirements can be supplied to a high standard. The rudiments of such an approach have already been delineated in the National Spatial Strategy (NSS). However, for reasons already adverted to above and in Chapter 8, there are indications that the NSS are still unrealised due to a lack of political will on the part of government combined with inadequacies in implementation mechanisms. How these twin challenges are dealt with will have profound implications for national and regional economic development in Ireland in the forthcoming decades.