THE EVOLUTION OF MULTINATIONAL COMPUTER SERVICES AFFILIATES IN IRELAND

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Abstract

This paper examines the development of the overseas information and communications technology (ICT) sector in Ireland by considering the various factors influencing the evolution of Irish-based computer services affiliates. In doing so, it attempts to situate the process of affiliate evolution with the Global Production Network (GPN) framework. Large inflows of ICT-related investment contributed to Ireland’s rapid growth during the 1990s. However, much of this investment involved predominantly cost-driven activities like PC manufacturing and low value-added services like call centres and shared services. As firms have begun relocating these activities to lower cost locations like Eastern Europe and India, Irish-based affiliates must become more involved in knowledge-driven activities in order to maintain their Irish presence. Computer services represent one niche of the multinational ICT sector that already centres on high value-added, knowledge-intensive activities. The study draws heavily upon three key case studies, HP’s European Software Centre, EDS’s Solution Center and IBM’s Global Services division. It finds that factors occurring at four different levels of influence—the industry context, the corporate level, affiliate characteristics and the host economy—affect the development of individual affiliates.

Keywords: Computer Services, Affiliate Evolution, Global Production Networks, Republic of Ireland
1. Introduction

Ireland’s recent economic success as one of Europe’s smallest and most open economies is well known (MacSharry and White, 2000). Several factors such as corporate restructuring, the completion of the single European market and the maturation of a well-educated work-force allowed Ireland to attract a disproportionate share of European inward investment and thereby become more integrated into the world economy (Barry and Bradley, 1997; Breathnach, 1998). Hardware manufacturing of electronics and computer industries dominated earlier waves of inward investment, but from the mid-1990s the focus shifted increasingly towards more sophisticated activities in software and internationally traded services (Bradley, 2002; Grimes, 2003). By examining the computer services sector, this paper explores the growing significance of one segment of the recent wave of services related investment.

These activities require greater attention as the divisions between manufacturing and services become less dichotomous (Zysman, 2002). There exists a need to better understand these activities, given the bias towards large scale manufacturing within the literature (Gripaios et al., 1997). By focusing specifically on affiliate evolution within the computer services sector in Ireland, this paper seeks to understand the activities of multinational firms through the perspective of affiliates instead of headquarters. In doing so it attempts to locate the process of affiliate evolution within the Global Production Network (GPN) framework (Henderson et al., 2002). The GPN framework, or the similar ‘Cross-National Production System’ framework, provides a means for examining the organisational dynamics of transnational affiliates within a multi-scalar perspective (Henderson et al, 2002; Cohen et al., 2000). In an Irish context this involves examining affiliate evolution within the national, European, and global marketplaces.

By exploring case studies from the Irish-based affiliates of three focal computer services firms, this paper begins to examine several of the key processes driving the evolution of these activities in Ireland and their subsequent consequences for regional development. The paper is organised as followed. Section 2 examines FDI-led regional development paying particular attention to the various factors in the industrial system, the host economy, and at corporate and affiliate levels within multinational companies which impact on intracorporate competition and affiliate
evolution. Section 3 provides an overview of the methods and data used in the study, while section 4 explores the evolution of the overseas internationally traded services (ITS) sector in Ireland. Section 5 presents the empirical findings from case studies examining the activities of three leading computer services located in Ireland. Finally, the last section offers several conclusions.

2. FDI-led regional development, affiliate evolution and intracorporate competition

Although the relationship between global FDI flows and territorial economies is a long examined topic, critics like O’Neill (2003) suggest that economic geographers still have much to learn about large corporations. For instance, O’Neill (2003) notes that relatively little is known about how knowledge is generated and transferred throughout the large MNCs and the internal contests that determine intracorporate distribution flows. All of these issues have significant consequences for host regions. That these issues are relatively overlooked is partly the product of researchers privileging the perspectives of MNC headquarters and not giving adequate attention to the multiple sources of power within MNCs (Jones, 2002).

More recently, management scholars (e.g. Anderson et al., 2001, Birkinshaw and Hood, 1998) and economic geographers (e.g. Phelps and Fuller, 2000) are beginning to examine MNC activities from the affiliate perspective. Affiliates serve as an important meeting point between global flows of capital and technology and territorial economies. Through these portals, host economies experience the most direct benefits of inward investment in the form of employment, access to markets and new technologies (Phelps et al., 2003). In addition, MNC affiliates also serve as windows through which host economies in the guise of labour, institutions and local firms, are most likely to influence MNC activities and behaviour. Therefore the manner through which individual affiliates evolve and develop influences greatly inward investment’s potential for value creation, enhancement and capture. The framework put forward by scholars examining Global Production Networks (Henderson et al., 2001) begins to take some of these issues into account. In this paper we adopt a similarly broad framework by attempting to examine how various levels of influence affect the affiliate evolution process.

2.1 Influences of the Industrial System
The wider industrial environment in which affiliates are situated influences fundamentally the nature and extent of both their intra- and inter-firm linkages (Dicken and Malmberg, 2001). As demonstrated by Gereffi and Korzeniewicz’ (1994) work on Global Commodity Chains, the governance practices and structures of that industrial system can be expected to shape an affiliate’s development path. Given new organizational models and forms of competition, market power no longer solely resides with final assemblers, but rather can reside anywhere in the value-chain (Hart and Kim, 2002; Zysman, 2002). Within this ‘Wintelist’ form of competition advantage is gained maintaining control over an open, but owned standard, in any given constituent element of the production process (Zysman, 2002). As a consequence significant competition occurs throughout the value chain and business services and manufacturing become more tightly bound than ever before. As a result, the linear notion of value chains appears rather anachronistic and must be replaced by a global, complex network perspective that reconceptualises what firms opt to do internally and what they elect to outsource (Ernst and Kim, 2002). The rise of the outsourcing market over the last decade, particularly in the area of computer-related service activities, demonstrates the complexity of the industrial organisation in the Wintelist era (McKinsey & Co., 2003).

Within this industry environment, individual TNC affiliates must react to growing competition from external producers and service providers as well as continuous restructuring within the corporation. These challenges mean that affiliate managers must constantly defend and enhance their corporate charter and subversive affiliate management teams are most likely to succeed (Molloy and Delany, 1998). The pace of technological change now requires the development of ‘fast managerial subjects’, capable of coping with permanent emergency in order to ensure the survival of their affiliate (Thrift, 2000).

2.2 The Corporate-Level Context

Home country environments influence firm behaviour in regards to patterns like linkage formation, corporate governance and patterns of R&D (Doremus et al., 1998). This diversity of corporate organizations has consequences for affiliate development, as firm organizations are likely to affect factors such as managerial autonomy and the scope of lateral relationships (Birkinshaw and Morrison, 1995). In addition to home country factors, other factors like corporate culture further affect
affiliate development. Since, intra-firm relationships are not always bound by rationality, they can become highly contestable and are not always governed by the strict logic of capital (Schoenberger, 1997; Taylor and Asheim, 2001).

Rather, the contemporary corporation involves a mix of competition and collaboration, with different interest groups focusing their efforts on their own strategies and agendas. The resulting power configurations within the firms give rise to what Dicken and Malmberg (2001) refer to as ‘networks within networks’. The heterarchy in TNC organisations can give rise to internal competition between affiliates and this internal resource allocation system often favours affiliate-driven initiatives for charter enhancement. Within the boundaries of corporate governance decentralised decision-making can afford affiliate managers with the necessary autonomy to pursue initiatives that primarily benefit their individual affiliate (Birkinshaw and Hood, 1998). Unlike parent-driven evolution where MNC HQs bestow new responsibilities, affiliate-driven capability enhancement involves local managers making strategic moves to build their capabilities and expand their mandate. These intrapreneurial efforts are most common for activities like intermediate services where affiliates are involved in a more open form of internal competition (Phelps and Fuller, 2000).

2.3 The Affiliate-Level Factors

Activities within individual affiliates further represent an important level of analysis. Given the contingency of this process, affiliates situated in similar industrial, corporate and host country contexts may still exhibit different development paths. Several factors influence significantly an affiliate’s development path. At the most basic level, affiliates must successfully meet the requirements of their initial mandate (Schmid and Schurig, 2003). However, superior market performance does not guarantee a high ‘organizational performance’ (Anderson et al., 2001). Superior performance builds an affiliate’s reputation within the corporation but successfully fulfilling its charter is a necessary precondition for affiliate development, but not a sufficient one.

The relationships between affiliate management and the parent company further influence affiliate development. Through these intra-firm relations, affiliate managers gain knowledge about future business opportunities and impending expansions. In doing so they are better positioned to take advantage of these
opportunities. It is further important to note that initiatives and proposals put forward by affiliate managers are often “evaluated more on the qualities of the individual putting them in than on their technical merits” (Birkinshaw and Hood, 1998: 789). Research in the context of territorial innovation models assigns great importance to these informal personal relations (Lagendijk, 2003). These intra-firm relations demonstrate that the scope of these relations are not restricted to the local scale, but rather operate on a multitude of socially constructed, organisational scales (Bunnell and Coe, 2001).

2.4 Host-Economy Factors

The local business environment further influences the process of affiliate evolution. Affiliates with access to critical local sources of information and capabilities are better placed to garner influence on the strategic behaviour of the TNC than those without (Anderson et al., 2001). Affiliates situated in a dynamic local business environment often develop a high degree of decision-making autonomy that allows affiliates to explore a wider range of collaborative arrangements with local partners and key customers (Zanfei, 2000). Moreover, through a sophisticated local customer base and the presence of competitor firms in the host region an affiliate can be expected to sharpen its capabilities and to move towards new responsibilities. The strategic importance of the host country for the TNC in terms of the local skill base, the relative costs of factor inputs and geopolitical situation represents a further influence on affiliate evolution (Amin et al., 1994). Bidding wars for repeat investments will be won most likely by affiliates, whose host country represents a strategically important location for the TNC (Mytelka, 2000).

Access to localised capabilities arises not only from formalised business relations, but local stakeholders attempt to create an environment where firms are able to maximize the regions innovative capacity. As demonstrated by proponents of the ‘new regionalism’ literature (e.g. Cooke and Morgan, 1998; Amin, 1999), firms may enhance their capabilities by connecting to local institutions like development agencies, industry associations and universities, or more broadly speaking, by becoming embedded within a region’s ‘buzz’ (Storper and Venables, 2002; Lagendijk, 2001; Morgan, 1997). For instance, local development agencies attempt to assist the continued development of locally-based affiliates through the provision of
aftercare services. Among other things aftercare programs often involve customized infrastructure, employee training grants, and even efforts to lobby MNC HQs on behalf of the local affiliate (Fuller et al., 2003). Although these efforts can be effective in improving the general business environment in which the affiliate operates, only rarely do they significantly influence firm investment decisions (Mackinnon and Phelps, 2001; Fuller et al., 2003). In spite of the attention garnered by local institutions and stakeholders, the extent to which aftercare and other forms of stakeholder intervention actually enhances the regional development potential of inward investment remains subject to debate (Lovering, 1999; Rodriguez-Pose and Arbix, 2001).

3. Methodology

This paper utilizes a case study method. Due to the uniqueness of individual cases, this method often received criticism because there is a perception that the results have limited potential to be generalised (Markusen, 1999). However, the case study method can still prove effective if conducted in a thorough and critical manner (Flybjerg, 2001). Moreover, case study research supports contextual approaches that recognize the contingency and particularity of subjects, place and time. In doing so they avoid the rigidity associated with approaches that are overly structured in their approach (Lagendijk, 2003). The case study method was further deemed the most appropriate method, given that this study is a pilot study for a future research project.

The case studies presented in the paper are informed by a combination of published data and corporate interviews provide the evidence for this paper. Published data provides breadth to the study by identifying broad trends and patterns. For instance policy documents prepared by agencies like the Irish Industrial Development Agency (IDA Ireland) and Forfás provide an overview of the activities taking place within the ICT and internationally-traded services sectors. In addition, media reports from sources like The Irish Times offered more company-specific information by providing information related to new investments, planned expansions and impending lay-offs or closures.

Whereas the published data provide breadth to the study, five corporate interviews provide more depth by identifying the processes that shape the patterns of

1 Forfás is the national policy and advisory board for enterprise, trade, science, technology and innovation.
three firms within the multinational computer services industry (Schoenberger, 1991). The selected case studies are shown in Table 1. These companies were selected not only because they create substantial employment and revenue, but also because they are among the global leaders in their industry. These interviews were semi-structured and focused around issues such as the nature of their activities, the characteristics of their work-force, the factors driving the evolution of their Irish-based operations and where the affiliate is positioned within their wider corporate network. This approach therefore attempts to understand these affiliates and their activities within a context wider than just the local or regional environment.

4. Multinational Software Activities in Ireland

For much of the past 45 years Irish policy makers used inward investment as a key mechanism through which to generate employment. This investment was most often associated with branch plant manufacturing that involved routine, cost-driven activities (Tomaney, 1995). However, during the 1990s Ireland experienced an economic boom and began attracting higher quality inward investment from areas like electronics, medical devices and pharmaceuticals. The causes and consequences of this growth are discussed in greater detail elsewhere (e.g. Breathnach, 1998; O’Riain, 2000), but it is worth mentioning that this period of growth led to a condition of near full employment. As a result, industrial policy shifted away from an emphasis on employment creation and toward actual development. This shift became a stated policy objective in the most recent National Development Plan.

The industrial development agencies will increasingly work with the existing base of foreign companies in Ireland to ensure that they become more embedded in the Irish economy and that they are constantly moving up the value chain in terms of their Irish operations. This attention to embeddedness and quality will also result in a greater emphasis on the quality of jobs created in new projects attracted to Ireland (Department of Finance, 2000).

Several reasons forced policy makers to prioritise higher quality and more knowledge-intensive activities. The diminishing numbers of greenfield investments (UNCTAD, 2003) means that repeat investments are becoming a more important source of inward investment (Forfas, 2003). Moreover Ireland is losing some of its cost competitiveness in industries like PC manufacturing that had previously led to many of the FDI-created employment (Bradley, 2002).
Internationally-traded services activities represent a key aspect of Ireland’s shift toward more knowledge-intensive activities (Grimes, 2003). Whereas activities like shared services and particularly teleservices are more characteristic of employment-generating activities (Breathnach, 2000), software is viewed as a more knowledge-intensive service activity. Roughly speaking, Ireland possesses two software industries—one focused around a large number of smaller indigenous firms and the other centred on a smaller number of large multinationals (O’Riain, 1997). Ireland’s indigenous software industry employs approximately 14,000 people (NSD, 2004). The indigenous industry produces software products for niche sectors like internet security and e-learning (O’Malley and O’Gorman, 2001). The multinational sector employs almost 16,000 people, but software localization represents the primary activity (NSD, 2004). Localization involves preparing software products for use in international markets. Although designing the software tools necessary to do localization involves rather specialized skills, but doing the actual localization is a more routine, and low-value added activity (White, 2004).

Given the reputation of localization as mid to low value-added activity, the Irish government is keen to promote activities with greater knowledge content. Through its involvement in high profile development projects like the ‘Digital Hub’ in Dublin, the Irish government has attempted to support the development of Irish firms looking to move into emerging areas like Digital Media (Forfas, 2002). Within the multinational software sector moving firms ‘up the value-chain’ involves supporting firm efforts to move into software development and R&D related activities. Several firms involved in telecommunications and computing like Sun Microsystems, Ericsson and Motorola have developed successful software development and R&D centres in Ireland. However other firms have increased their capacity to create value through their involvement in IT services.

In many ways the shift of Irish affiliates into IT services is the by-product of wider shifts in corporate strategy. This was certainly the case for IBM which, during the 1990s, shifted its focus from selling PCs to selling IT Services and Solutions (The Economist, 1998; Balgobin and Pandit, 2001). These services generally bridge the gap between services and manufacturing and can involve a wide array of activities including software development, systems development, maintenance, training, system management or other kinds of IT expertise (Coe, 2000). Table 2 shows the top IT services companies in Ireland according to sales, and these firms reflect the largest
firms globally. Ireland’s small domestic market and limited number of really big clients means that multinational firms dominate this market space. Often these activities are not limited to Ireland alone as Irish-based affiliates also contribute to projects undertaken elsewhere in Europe and particularly in the UK (Wilson, 2003). Nonetheless, the presence of these firms makes Ireland somewhat unique in that it makes Ireland a microcosm of the industry as a whole. The following section examines the manner in which three focal IT services firms developed in Ireland and identifies some of the processes shaping that development.

5. The Evolution of Multinational Computer Services affiliates in Ireland – Case Study Evidence

5.1 Hewlett-Packard

Hewlett-Packard (HP) established its Irish operations in 1986. Starting initially with 30 local sales staff, the company now employs around 4,000 people in sites in Dublin, Leixlip and Galway. These Irish operations include activities such as imaging and printing, software development, computer services and financial services, although interactions between these different operations are limited in nature. The 2002 merger with Compaq Computers influenced considerably HP’s business in Ireland. Compaq had already a sizable presence in Ireland and these operations were integrated within HP’s business. In spite of the large scale restructuring that follow the HP-Compaq merger, only 80 of the 4,200 Irish employees were made redundant. This global restructuring however pushed the Irish-based operations into more diversified businesses.

HP’s European Software Centre in Galway provides an exemplary case for the evolution of the Irish operations. This unit belonged originally to Digital Equipment Corporation (DEC) and emerged from Digital’s hardware manufacturing base that was established initially in 1971. The 1993 closure of the Galway manufacturing base resulted in almost 800 redundancies, but several positive outcomes ensued. This closure released many former Digital employees into the local labour pool and with the support of several economic development organisations, a small cluster of software firms emerged around the Galway region. These activities helped to replace the mature hardware manufacturing activity at a critical juncture (see also Green et al., 2001 on the impact of Digital and its closure for the Galway region).
In spite of the closing of the manufacturing operation, Digital retained a software services and computer engineering operation in Galway that employed 250 people. That this operation remained is partially due to the lobbying efforts of affiliate managers. In subsequent years the centre extended its operational focus towards shared services and software licensing, and began developing a range of international services. When Compaq acquired Digital in 1998, no great changes occurred in the Galway centre and the former Digital services were kept as Compaq services. Since the merger of Compaq with HP, the centre further extended its activities by launching another international service operation.

The Galway centre consolidated its position, extended its responsibilities and increased its employment from 250 to 700 people during a turbulent period of corporate restructuring. The affiliate resisted downsizing by continually developing the capabilities necessary to enter new technological areas and by meeting the needs of a rapidly changing market. Affiliate managers stayed ahead of the curve by monitoring constantly upcoming opportunities in the corporation. The competition for international services projects is judged to be severe, both internally with other affiliates as well as externally with other firms. For instance the Managing Director (MD) of HP’s Galway affiliate, noted that their web services division of the Galway affiliate faced aggressive bidding from external agencies in their attempt to provide web solutions internally to the corporation. A dynamic affiliate management represents a necessary precondition to compete within the internal, corporate market place. According to the Galway affiliate’s MD:

> We saw ourselves developing, from manufacturing back to engineering forward to international customer service operations, and now we are again looking at our R&D, larger development and smaller research so far, and now we are expanding the pure research aspect. […] Every time we want to move something with a service, we have to sell it to our headquarters, we have to justify why it is a good idea and they leave us go ahead. We are a builder of ideas and business for the corporation. The investment in the centre is ongoing and constant all the time (HP Research Interview, 02/02/04).

Personal contacts with other corporate managers not only contributed to the affiliate’s survival during the DEC period, but also remain important for the affiliate’s progression as corporate structures become more complex. As HP continues to make the transition from pure hardware manufacturing towards solution selling, these sources of information provide guidance for future strategic decisions.
So we have to understand the structure of the corporation and to see where we are making a proposal for an international service. We have to see where to correctly position this in the corporation, both structurally and strategically and therefore we need to know the context and the people, and they need to know us, too (HP Research Interview, 02/02/04).

These personal corporate contacts further build the affiliate’s visibility and reputation within the company. Combined with more formal tools such as project reports and customer references, interpersonal networks facilitate the acquisition of projects and guarantee a smooth project flow at the same time.

The corporate relationships that most influence the centre’s development are not with the other Irish HP divisions in Dublin or Leixlip, but rather with other HP affiliates in the US that are within the same line of business. Regional corporate cooperation only arises in peripheral business areas.

They don’t report into each other, they do not really have anything to do with each other, although we do have linkages, we coordinate our efforts from the PR point of view, for example. […] We are a branch of the service division and we are reporting into the US and we are happened to be located in Ireland (HP Research Interview, 02/02/04).

The linkages that provide the greatest foundation for affiliate development are with HP’s California HQ or with key customers. That said, the centre is involved in projects requiring collaboration with other HP units, but again these collaborations are more international than local. For instance, a Grenoble-based HP service affiliate reports into HP Galway. In the area of computer engineering, several American affiliates are tied up with the centre through reporting lines demonstrating the high profile of the Galway affiliate within the company.

At the local level, the Galway affiliate has created linkages with several Irish based vendors and business partners, but these linkages are often the product global partnerships between HP and other multinational IT firms and are not the result of spatial proximity within the region. In contrast, Galway’s two institutions of higher education—the National University of Ireland, Galway (NUIG) and the Galway-Mayo Institute of Technology (GMIT), do provide a specific locational advantage. HP is attempting to produce marketable applications for HP’s services business through its involvement with the Digital Enterprise Research Institute (DERI) at NUIG, which
is conducting research in the ‘semantic web’ area. A graduate recruitment programme in GMIT helps the affiliate to attract talent for the company and through the involvement in GMIT’s curriculum the affiliate develops the special skills necessary for its operations.

The Galway location is also amenable to attracting skilled labour as virtually of the affiliate’s staff has university degrees, while 20 percent have master’s degrees and four percent have PhDs. In competing for many sophisticated projects, the centre’s accumulated skills set proved decisive. The affiliate was chosen to generate the operating system for one of HP’s deep computing government projects for the US Environmental Protection Agency because of the specialised capabilities that had been developed in the area of publishing systems. The Galway affiliate further benefits from returning Irish emigrants. Their internal experience and network of personal contact networks often proves helpful.

5.2 Electronic Data Systems

The US computer services firm, Electronic Data Systems (EDS) first established an Irish presence in 1990. Its Dublin affiliate was the first designated “solution centre” designed to service international clients from a location outside the US. EDS had an extensive international presence before investing in Ireland, but these operations only supplied the local market place and were not intended to be offshore solution centres. The Irish unit was established initially to serve the needs of General Motors, one of EDS’s largest clients, but it was also designed to test the viability of operating outside the US. Ireland was selected for this experiment because of it native English-speaking workforce, the availability of IT skills, the success of other Irish-based TNCs and the government pro-business attitude. The EDS MD further noted the cultural connections between the US and Ireland as a decisive factor influencing the initial investment decision:

Ireland has good relations to the States, is a friendly nation, one could say […] I think there is a cultural acceptance particularly of Irish people in the American business community. If all else is equal the management decision will probably come down in favour of Ireland (EDS Research Interview, 16/2/04).

2 The Semantic Web brings to the World Wide Web (WWW) the idea of having data defined and linked in a way that it can be used for more effective discovery, automation, integration, and reuse across various applications.
As the Irish affiliate performed well for other significant clients, the EDS HQ developed confidence in this model of offshore development. The Irish affiliate was allowed to extend its scope and shifted towards the development of processes, procedures and methodologies for the continued use in offshore software development. EDS established subsequently 17 other centres in places the Czech Republic and Egypt, and did so by using EDS Ireland as a model. As a result, EDS Ireland belongs to a global network of development centres, in which each centre is recognised for its own special competencies. EDS Ireland specialises in the financial and the telecommunication industries, but differs from the other centres because of the project management capabilities and maturity of its processes that has been accumulated since its establishment. The reputation of being a mature affiliate therefore bestows the Dublin affiliate with a superior position in the global network.

Given EDS’s relatively hierarchical governance structure, internal competition among the different EDS solution centres is more managed than open.

There is a global hierarchical infrastructure in place. The centre here reports to our Best Shore function, which then as a business unit reports to the States. And the best shore function is global function, which in essence doesn’t recognise particular country characteristics. So it’s not that Ireland reports to America as a separate business function, we are part of a function (EDS Research Interview, 16/2/04).

Interestingly, the MD also notes that the internal governance system varies corresponding to the industry situation. Since the downturn of the IT sector, hierarchical control has become tighter for the Irish affiliate whereas in the times of the IT boom more responsibilities were allocated within the different countries.

Today affiliates have a relatively passive position in the corporation’s internal competitive processes. The affiliate management must defend the affiliate by adding value within the corporation rather than actively seeking new business opportunities. Personal contact at the corporate level is relatively insignificant for the affiliate’s development. Instead the affiliate performance rates higher than any kind of relationship:

We can foster all the relationships, externally and internally, but at the end of the day a good commercial case has to exist. […] Through your informal networks you can dress up your bottom line to look better. But that only lasts for a short period of time. Eventually the truth comes out. It’s vital to nurture personal contacts, but finally the sums don’t add up (EDS Research Interview, 16/2/04).
The account teams make the decisions about where to allocate different projects by considering factors like the characteristics of the each EDS offshore location and individual customer preferences.

I wouldn’t say that it is competition [among the affiliates] in the brutal sense, but it is aggression on the account teams, looking at the skills that are in each centre, the reputation, the costs associated with doing business in each of the centres. Plus I think we also take into account the fact what’s the desire of the client (EDS Research Interview, 16/2/04).

The Dublin affiliate has a strong connection to the US as reflected by the large number of US customers serviced by Irish project teams. This close relationship benefits the affiliate because it provides employees with access to strong corporate experience. Working for significant US customers further builds the Irish affiliate’s reputation because it means they are involved in “high visibility global projects”.

The reputation of being a mature solution centre with significant project management capabilities supports the Dublin affiliate’s position in the internal, managed competitive organisation of EDS. For instance the affiliate recently gained a project for the Credit Union Business in the US, a project carried out previously by EDS’s solution centre in Mexico:

The decision to send it here was made because of the greater rigidity, the processes and methodologies we are applying, and also because of the fact that there is a maturity of industry knowledge amongst our employees here in Ireland, which is not available in other places (EDS Research Interview, 16/2/04).

In another instance, the Irish affiliate won a project for the Commonwealth Bank of Australia even though EDS has a large presence in the Australian market. Specific programming skills coupled with a native English-speaking workforce brought the decision to undertake the early stage of this project from Ireland. The MD believes that the project may move to another location at a later stage when the development of the applications matures.

Apart from the US cultural connections, the EDS MD cited two other factors that made Ireland an advantageous location. First, the government actively supports and facilitates business. Second, the large pool of well-educated IT professionals in the country is advantageous for any TNC. The skills available in Ireland are also considered to differ from the IT skills in lower cost countries due to the motivation and the attitude of Irish professionals. Unlike firms like IBM and HP, EDS is a pure IT service company and is not involved directly in hardware manufacturing.
Therefore to fulfil its clients’ requirements, it must collaborate with other IT firms specialised in different areas. This range of linkages however, tends to be temporary in nature and can involve working with direct competitors:

If we best serve our client by working jointly with what appears to be our competitor today we will do that. I mean we have no barriers to work with IBM, HP or Accenture here. Our largest native client in Ireland is the Land Registry and we worked with HP pulling our solutions together (EDS Research Interview, 16/2/04).

But again, these relationships emerge on a global corporate level rather than arising from the clustering of IT Multinationals in Ireland. The driving force fostering affiliate development on the local level is the local market. More recently, the affiliate is focusing on the government sector, which, in the MD’s view contains the biggest area of opportunity in Ireland in the coming years.

5.3 International Business Machines

Arriving in 1956, IBM represents one of Ireland’s longest established IT Multinational. IBM’s Irish workforce grew from 400 in 1983, to 4,200 today and makes IBM the country’s third largest employer. IBM’s diversified Ireland operations are located in seven different sites in and around Dublin. The company still manufactures in Ireland, but services represent one of the biggest areas of recent growth. The cultural connections between Ireland and the US contributed to IBM’s development in Ireland. Irish nationals hold several critical senior manager positions within IBM in the US can influence decisions affecting Ireland.

From 1983 to 1996 IBM’s Irish operations remained relatively stable with its primary activities focusing around software development and local sales. Just as IBM transformed itself during the 1990s, so too did IBM’s presence in Ireland undergo a period of dynamic growth as Ireland received several new investments that caused employment to reach 4,200. In 1996, IBM set up a sales and support centre for the European, Middle Eastern and African (EMEA) region. This centre began with 250 employees and now counts 1,300 multilingual staff. The 1997 establishment of IBM’s Technology Campus just outside of Dublin represents the largest single business investment in Irish history, and this in turn was followed by a further investment of $100 million in 2000. The Technology campus employs over 2,200 people that
undertake activities ranging from manufacturing to managing all of IBM’s internal and external websites.

The development of the IBM’s global services division in Ireland started in the early 1990s, coinciding with the closure of IBM’s software lab. IBM’s global restructuring during the late 1980s and early 1990s predicated the closure of its Irish software lab. However, rather than being made redundant the 100 IBM employees affected were instead transferred to a services operations:

They had the perfect skills; they were programmers and software developers. They were perfect to create a services company (IBM Research Interview, 3/3/04).

Over the following years, IBM built up four different lines of services business in Ireland3 and added new responsibilities such as an IBM internal IT department, which resulted in the hiring of another 200 employees. The establishment of the European customer service centre created an additional 380 positions. By acquiring PriceWaterhouseCoopers (PWC) in 2002, IBM became on of the world’s largest consulting firms. This in turn affected the Irish operations as 100 PWC consultants were transferred to IBM’s consulting services arm. As a result of these developments, IBM’s global services division now employs around 1,000 staff.

Given the continuous development of the Irish operations, the local management estimates that Irish operations no longer compete with IBM affiliates in lower cost countries. Instead, the Irish affiliates have reached an advanced level and cooperate with the other IBM units as required by IBM’s global sourcing strategy. The Mexican IBM affiliate, for example, supports certain product applications developed by the Technology Campus outside Dublin. Internal competition for higher value activities is now more likely to occur with affiliates in more developed countries. The management believes the Irish operations compete with US affiliates for repeat investments and this competition is directed towards investments in R&D.

We are today competing with the United States for investment, we have joined the top class league. We are now competing for higher value R&D. Recently we have recently established an IBM Centre for Advanced Studies here in Dublin and there are only seven other of such centres in the world. That’s our competition now (IBM Research Interview, 3/3/04).

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3 The four lines of services operations include business consulting services, integrated technology services, strategic sourcing services and the service delivery line.
The majority of IBM global services division’s clients are still international, but the growth of the Irish market means that the local market will become more important in the future. Nevertheless, the experienced gained from international projects Irish employees with critical skills and capabilities, and contribute to IBM’s competitiveness in the Irish market place:

So it’s a kind of an evolution and people move from international customers to Irish customers. I think that’s strengthens our services base here and gives us more credibility. For example we are working for two banks here, these banks are very big in Ireland but we have people, who have worked in banks ten time the size in the US before. So we can bring those people to play. We redeploy these skills to Irish customers (IBM Research Interview, 3/3/04).

Projects for large international clients have also a positive impact on the affiliate’s reputation, which is a necessary precondition for the further development of IBM in Ireland:

It is of great influence if Deutsche Bank says those guys in Ireland have done a great job and we want to work with them again (IBM Research Interview, 3/3/04).

The intracorporate linkages bearing on IBM Ireland’s development are strong both in the EMEA region as well as with the US, which result from the multifaceted business of IBM Ireland. While the software activities and the manufacturing operations are more closely tied up with the US, the services business is organized on a regional level. This twin approach is considered to benefit IBM Ireland and to increase the affiliate’s scope.

In contrast to the multitude of linkages with other corporate units and clients on the global level, there are limited local linkages. IBM’s sheer size means allows the firm’s first option to be, as described by one IBM manager, an ‘IBM end-to-end solution’. The limited number of local vendor partnerships results from global corporate deals rather than local networking. The Irish IT agglomeration benefits IBM in another way:

Ireland, I suppose, is unusual compared to other countries of its size in that we do have a huge presence of large Multinational, HP, Accenture, Microsoft, all the big players are here. In many cases, we have a microcosm of the world stage. So if we compete in the local market place, we understand the competition on a global base. And I think the stuff we do here is something the corporation can learn from (IBM Research Interview, 3/3/04).

Apart from the high quality local competition, government bodies such as the IDA proved helpful for the development of IBM Ireland. IBM management particularly
appreciates the speed with which projects can be started in Ireland through the support of government agencies, and the experience of establishing the IBM Technology Campus is mentioned as an example.

6. Conclusions

The global ICT sector’s turbulent transformation period impacted upon Irish affiliates in various ways. Ireland’s diminishing cost competitiveness has created numerous redundancies and the relocation of manufacturing activities to lower cost locations. However rather than leaving entirely, IT giants like HP and IBM instead moved their Irish operations into diversified, knowledge-intensive service activities directed towards an international customer base. The industry consolidation in the ICT sector globally through M&As intensified the shift from separate hardware and software manufacturing and towards a focus on providing service-intensive ‘solutions’. This industry shift therefore has significant consequences for Irish based operations.

Changes in the industrial system forced the ICT firms to adjust their corporate organisation in a way that allows them to respond to the segmented and rapidly changing market. The evolution of Irish affiliates mirrors this shift towards multidivisional firm structures with globally networked responsibilities and competencies. Affiliates such as IBM Ireland no longer represent single entities but, rather different divisions exist next to each other and follow their own development paths. This broad spectrum of activities and global relationships developed by individual sites demonstrate the heterarchy amongst contemporary corporate reorganisation. In building affiliate reputations and visibility within the corporation, these multitude of corporate linkages and international customer relationships can serve as key drivers for affiliate development, by enabling these units to compete for new business opportunities. The ability of individual affiliates to reposition themselves within their corporate organisations is contingent on individual corporate structures. As evidenced by the case of EDS in Dublin, there are fewer opportunities for affiliates that skew more toward hierarchical corporate structures. As a result, affiliate evolution is contingent on corporate structures and organisations.

The various corporate structures influence significantly the extent that local managers can influence the process of affiliate evolution. Nonetheless, as shown by
the case of HP in Galway, defending and building an affiliates mandate often involves some subversive development strategies. Personal contact networks further contribute to future affiliate development. These personal networks help to bypass complex bureaucratic structures and facilitate the acquisition of new responsibilities matching the affiliate’s capability profile. In the Irish context, networks are established by returning Irish emigrants, and the cultural connections between the US and Ireland further raise the profile of Irish affiliates. Apart from networking with key corporate decision makers, however, an affiliate’s track record and the maturity of its procedures provide the main foundation for development. Even though Multinationals feature highly political governance structures, an affiliate has to prove its viability before it can bargain and lobby for repeat investments.

The skill base built up within the host economy contributes to the development of capabilities in Irish-based affiliates. Coupled with the pro-foreign investment attitude of the Irish government, the Irish skills provide the base for the affiliates’ evolution into new markets. While the vertical linkages with vendors in the Republic represent the local outcome of global corporate deals, affiliate initiative drives university-oriented collaboration. HP’s involvement in DERI or IBM’s Centre for Advanced Studies allow Irish-based affiliates to compete with affiliates in more developed economies because they provide unique sources of innovation. Accessing the innovative capacity of Irish universities assists in the move into knowledge intensive activities and thereby contributes to affiliate-led development. Moreover, Irish-based affiliates benefit from the competition created by the agglomeration of global computer services firms in Ireland. Coupled with the Irish market’s growing significance, this feature makes Ireland a unique laboratory for affiliates to develop their global competitiveness.

These initial insights about the evolution of computer-services affiliates in Ireland raise challenges for future research related to the processes occurring in Global Production Networks. Affiliates are the nexus through which global flows and regional economies intersect. This research shows that various levels of influence ultimately determine this relationship. More empirical evidence is needed about the individual trajectories of foreign affiliates in host regions. The consequences of globally networked corporations for regional futures are best identified through the use of a case study based and affiliate focused perspective.
Works Cited

*International Journal of Urban and Regional Research* **23** 365-378


*International Business Review* **10** 3-23

*European Management Journal* **19** 301-316

*Economic Journal* **107** 1798-1811

*Journal of International Business Studies* **26** 729-755

*Academy of Management Review* **23** 773-795

*Journal of the Statistical and Social Inquiry Society of Ireland* **XXXI** 1-38

*European Urban and Regional Studies* **5** 305-316

Breathnach P, 2000, “Globalisation, information technology and the emergence of niche transnational cities: the growth of the call centre sector in Dublin”
*Geoforum* **31** 477-485

Bunnell T, Coe N, 2001, “Spaces and scales of innovation”
*Progress in Human Geography* **25** 569-589

Coe N, 2000, “The externalisation of producer services debate: The UK computer services sector”
*The Services Industries Journal* **20** 64-81

BRIE WP 138, University of California, Berkeley


Markusen A, 1999, “Fuzzy concepts, scanty evidence, policy distance: The case for rigour and policy relevance in critical regional studies” Regional Studies 33 869-884


Molloy E, Delany E, 1998, Strategic Thinking for Multinational Subsidiaries (M.D.L. Management Consultants, Dublin)


Phelps N, Fuller C, 2000, “Multinationals, Intracorporate Competition and Regional Development” Economic Geography 76 224-243


Taylor M, Asheim B, 2001, “The concept of the firm in economic geography” Economic Geography 77 315-328

The Economist, 1998, “Blue is the colour” 6 June, p. 65-69


Tomaney J, 1995, “Recent developments in Irish industrial policy” European Planning Studies 3 99-113


### Table 1: Selected Case Studies

<table>
<thead>
<tr>
<th></th>
<th>IBM</th>
<th>EDS</th>
<th>HP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQ Location</td>
<td>Armonk, NY, USA</td>
<td>Plano, TX, USA</td>
<td>Palo Alto, CA, USA</td>
</tr>
<tr>
<td>Irish Location</td>
<td>Dublin</td>
<td>Dublin</td>
<td>Galway</td>
</tr>
<tr>
<td>Irish Employment</td>
<td>4000</td>
<td>500</td>
<td>380</td>
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<tr>
<td>Global Employment</td>
<td>315,889</td>
<td>130,000</td>
<td>142,000</td>
</tr>
<tr>
<td>Turnover in Ireland (€ million)</td>
<td>2500</td>
<td>50</td>
<td>400</td>
</tr>
<tr>
<td>Global Revenue ($ billion)</td>
<td>81.2</td>
<td>21.5</td>
<td>73.1</td>
</tr>
<tr>
<td>Vintage</td>
<td>1956</td>
<td>1990</td>
<td>1971**</td>
</tr>
<tr>
<td>Original Irish Activities</td>
<td>Manufacturing</td>
<td>Offshore Software Development</td>
<td>Software Distribution</td>
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*Affiliate information pertains to HP’s European Software Centre
**Date refers to DEC’s initial investment in Galway
Table 2: Top Irish IT Services Companies by 2002 Sales

<table>
<thead>
<tr>
<th>Company</th>
<th>2002 Sales</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Services</td>
<td>110</td>
<td>380</td>
</tr>
<tr>
<td>IBM Global Services</td>
<td>65</td>
<td>800</td>
</tr>
<tr>
<td>Fujitsu</td>
<td>55</td>
<td>850</td>
</tr>
<tr>
<td>Accenture</td>
<td>50</td>
<td>600</td>
</tr>
<tr>
<td>EDS</td>
<td>23</td>
<td>500</td>
</tr>
<tr>
<td>Cap Gemini Ernst &amp; Young</td>
<td>19</td>
<td>100</td>
</tr>
<tr>
<td>Siemens Business Services</td>
<td>18</td>
<td>200</td>
</tr>
<tr>
<td>BearingPoint</td>
<td>17</td>
<td>100</td>
</tr>
<tr>
<td>Dell</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>Cara Group</td>
<td>14</td>
<td>200</td>
</tr>
<tr>
<td>CSC</td>
<td>-</td>
<td>300</td>
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*Source: Wilson, 2003*