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# Revisiting the 'Informational City': space of flows, polycentricity and the geography of knowledge-intensive business services in the emerging global city-region of Dublin.

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# Revisiting the 'Informational City': space of flows, polycentricity and knowledge-intensive business services in an emerging global city.

**Abstract:**

The paper engages with the notion that the new spatial logic, underpinned by information and communication technology (ICT) and the 'space of flows', manifests itself in the form of 'informational cities' described as multinuclear spatial structures or polycentric city-regions in the knowledge-based economy. Focusing on the geography of knowledge-intensive business services (KIBS) the paper argues that there is little evidence of such polycentric pattern emerging within the Greater Dublin Region. The exploration of factors underpinning weak decentralisation tendencies of KIBS opens for reconsideration the concept of the 'informational city'.

knowledge-intensive business services polycentricity city-region Dublin

JEL classifications: R12, R30, L80, O18

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Revisiter la cité de l'information : espace de flux, polycentricité et géographie des secteurs à haute densité intellectuelle aux

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entreprises basés sur la connaissance dans la nouvelle ville-région de Dublin.

Martin Sokol, Chris van Egeraat et Brendan Williams

**Résumé**

Cet article s'intéresse au fait que la nouvelle logique spatiale, sous-tendue par les technologies de l'information et de la communication (TIC) et les espaces de flux se manifeste sous la forme de cités de l'information décrites comme des structures spatiales à noyaux multiples ou de villes-régions polycentriques dans l'économie de la connaissance. S'appuyant essentiellement sur la géographie des secteurs à haute densité intellectuelle (KIBS), les auteurs font valoir qu'il y a peu de preuves de l'émergence de tels modèles polycentriques au sein du grand Dublin. L'analyse de facteurs confirmant de faibles tendances à la décentralisation des KIBS invite à reconsidérer le concept de cité de l'information.

Secteurs à haute densité intellectuelle, polycentricité, ville-région, Dublin

Classement JEL : R12, R30, L80, O18



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**Neubewertung der 'Informationsstadt': Raum der Ströme, Polyzentrizität und die Geografie von wissensintensiven Geschäftsdiensten in der entstehenden globalen Stadtregion von Dublin**

Martin Sokol, Chris van Egeraat and Brendan Williams

Abstract:

In diesem Beitrag befassen wir uns mit der Vorstellung, dass sich die neue räumliche Logik dank der Informations- und Kommunikationstechnologie und des 'Raums der Ströme' in Form von 'Informationsstädten' manifestiert, die als multinukleare Raumstrukturen oder polyzentrische Stadtregionen in der wissensbasierten Wirtschaft beschrieben werden. Wir konzentrieren uns auf die Geografie von wissensintensiven Geschäftsdiensten und argumentieren, dass innerhalb der Großregion Dublin nur wenige Anzeichen für das Entstehen solcher polyzentrischer Muster vorliegen. Die Untersuchung von Faktoren, die

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schwachen Dezentralisierungstendenzen von wissensintensiven Geschäftsdiensten zugrundeliegen, führt zu einer Neubewertung des Konzepts der 'Informationsstadt'.

Wissensintensive Geschäftsdienste
Polyzentrizität
Stadtregion
Dublin

JEL classifications: R12, R30, L80, O18

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# Revisión de la 'Ciudad Informativa': espacio de flujos, policentralidad y la geografía de los servicios comerciales con alto nivel de conocimientos en el área emergente y global de la región metropolitana de Dublín

Martin Sokol, Chris van Egeraat and Brendan Williams

**Abstract:**

Este ensayo trata sobre la noción de que la nueva lógica espacial, respaldada por las tecnologías de la información y la comunicación (TIC) y el 'espacio de flujos', se manifiesta en forma de 'ciudades informativas' descritas como estructuras multinucleares espaciales o regiones metropolitanas policéntricas en la economía basada en el conocimiento. Centrándonos en la geografía de servicios comerciales con alto nivel de conocimientos, en este artículo sostenemos que existen pocas evidencias de este modelo policéntrico en la región metropolitana de Dublín. El análisis de los factores detrás de las tendencias débiles de descentralización de los servicios comerciales con alto nivel de conocimientos nos lleva a reconsiderar el concepto de la 'ciudad informativa'.

Servicios comerciales con alto nivel de conocimientos
Policentralidad
Región metropolitana
Dublín

JEL classifications: R12, R30, L80, O18

## 1. Introduction

The twin processes of globalisation and knowledge-intensification of the economic processes said to be resulting in the emergence of the 'global knowledge-based economy' have raised serious questions about the future of cities and regions. A commonplace view is that the new global knowledge-based economy will bring about new spatial forms or even an entirely 'new spatial logic' (CASTELLS, 1989) superseding spatial forms, or the existing spatial logic of industrial capitalism. In recent decades, this 'new spatial logic' has been subject to an intensifying debate. Interestingly, there has been a strong convergence of views among the leading scholars identifying 'polycentricity' or 'multinuclearity' as a defining feature of the city-region of the 21st century – in the form of 'multi-core metropolis' (HALL, 1999, 18-19), 'multiclustered agglomerations' (SCOTT *et al*., 2001, 18), 'new geographies of centrality' SASSEN, 2001, 85) or 'multifunctional, multinuclear spatial structures' (CASTELLS, 1989, 167). More recently, HALL and PAIN (2006) have used terms such as 'polyopolis', 'polycentric metropolis' or 'polycentric mega-city region' to describe what they call a 'new spatial phenomenon' (ibid, 14). Importantly, spatial structures that are characterised by some form of polycentricity are also favoured by policy-makers who often see them as a way of ensuring more balanced development at various spatial scales (e.g. EC, 1999).

However, there are two key questions that the polycentric debate needs to address: (1) whether a 'multinuclear' or 'polycentric city-region' is indeed emerging as a dominant spatial form of the knowledge-based economy, and if so, (2) whether such a city-region contributes to balanced spatial development. The challenges in addressing these two questions are significant. One of the key problems is the fact that the concept of polycentricity is itself subject to an important debate that leaves a definition of a 'polycentric city-region' somewhat problematic and inconclusive (e.g. RICHARDSON and JENSEN, 2000; JENSEN and RICHARDSON, 2001; BAILEY and TUROK, 2001; KLOOSTERMAN and MUSTERD, 2001; KLOOSTERMAN and LAMBREGTS, 2001; DAVOUDI, 2003; TUROK and BAILEY, 2004; PARR, 2004). In the absence of a generally accepted conceptual framework, this paper will refer to definitions proposed most recently by HALL and PAIN (2006) – who view 'polycentric mega-city regions' as emerging through a 'long process of very extended decentralisation from large central cities to adjacent smaller ones' (ibid, 3) or 'outward diffusion from major cities to smaller cities within their spheres of influence' (ibid, 12). Clearly, definitional issues alone would deserve a detailed discussion or even a full paper (see other contributions in this issue) but this is not the intention of this paper.

Instead, this paper focuses on the factors impinging upon the fundamental process through which a 'polycentric mega-city region' is supposed to be created – i.e. the process of 'decentralisation' or 'outward diffusion'. The paper will do so by engaging with the conceptual approach of the 'space of flows' (CASTELLS, 1989, 2000). There are at least two good reasons for this. First, it has been argued recently that a 'polycentric mega-city region' is in fact 'based on Castells's "space of flows"'(HALL and PAIN, 2006, 12). The second reason is that CASTELLS (1989) developed a fairly comprehensive theoretical framework that may help to understand the emergence of such a city-region. Indeed, some years ago, CASTELLS (1989) predicted the emergence of 'informational cities' in a form of 'multifunctional, multinuclear spatial structures' resulting from the balance of centralising and decentralising effects of the 'space of flows' in the 'information age' dominated by information and communication technologies (ICT).

The main aim of the paper is to examine key aspects of the Castells's theory (summarised in Section 2) in the light of empirical evidence from the Greater Dublin region. The choice of Dublin can be justified on two grounds. Firstly, Dublin has been strongly exposed to the forces of globalisation over the last two decades. The increasing linkages with the global economy have recently led researchers from the Globalisation and World Cities Study Group and Network (GaWC) to label Dublin an 'emerging global city' (see TAYLOR *et al.*, 2002, 100). Secondly, it could be argued that hand-in-hand with its globalisation, Dublin experienced unprecedented economic growth, part of which was a significant expansion of internationally traded services (BREATHNACH, 2000; GRIMES, 2003; GRIMES and WHITE, 2005) and knowledge-intensive business services (KIBS). Importantly, CASTELLS (1989) and HALL and PAIN (2006) alike, see KIBS as the major driving force behind the emergence of the 'multinuclear' or 'polycentric' spatial structures.

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With both key ingredients present – high exposure to globalisation processes and a strong presence of KIBS – Dublin is a good case for examination of whether the 'new spatial logic' is taking roots (and if so, whether more balanced development is emerging as a result).

However, following the examination undertaken in Section 3 it will be argued that the geography of KIBS in and around Dublin does not seem to imply that either dramatically new 'spatial logic' or more balanced development is emerging. The subsequent sections of the paper will therefore examine factors that impinge upon the processes of centralisation and decentralisation in the region, in order to establish why centralising tendencies are dominant and whether there are factors that may encourage decentralisation of KIBS in the future. In doing so, the paper will aim to argue that, in addition to the role of ICT (over)emphasised by Castells, a much more complex set of factors shaping the geography of KIBS is in operation, thus highlighting the need to re-conceptualise the 'informational city'. The paper will suggest that there is a need for a conceptual approach that would be more sensitive to a number of other crucial factors such as the role of the state (in its various geographical scales), the labour market conditions and locational strategies of KIBS themselves, the importance of which will be highlighted by the evidence presented in Sections 4, 5 and 6. Furthermore, and importantly, it will be argued that a combined effect of these factors may not necessarily support the emergence of 'polycentric' spatial structures. Finally, Section 7 will summarise the arguments and highlight challenges for policy-making.

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## 2. 'Space of flows' and the 'new spatial logic'

The concept of the 'space of flows' is frequently used, but also often-misinterpreted. Manuel Castells, the originator of the concept, himself contributed to the confusion by offering alternative definitions and interpretations of the 'space of flows' (cf. CASTELLS, 1989 vs. CASTELLS, 2000). This paper will use the original conceptual approach developed by CASTELLS (1989) in his seminal work *The Informational City*. In it he provides the clearest expression of what he means by 'space of flows' while using a conceptualisation which is directly relevant to the polycentricity debate (see HALL and PAIN, 2006, 3-4). It is worth mentioning that, in his later writings, Castells has shifted his analytical focus and changed vocabulary somewhat. However, his emphasis on information and communication technologies remained intact (see CASTELLS, 2000, 2001, 2004) and the continued relevance of *The Informational City* for his concept of the 'space of flows' has been explicitly acknowledged (see CASTELLS, 2000, 409, note 3).

Key arguments of CASTELLS (1989) could be summarised as follows. The starting point of Castells's theorisation is a suggestion that prevailing spatial forms are inextricably linked with dominant social organisation of societies. In other words, if a new social organisation sets in, new spatial form will follow. According to CASTELLS (1989) new social organisation is indeed emerging, giving a birth to an entirely new 'spatial logic'. It was the advent of information and communication technologies (ICT) that provided a trigger for transformation towards a new mode of socio-technical organisation -

'informational mode of development' (see also CASTELLS, 2000). He agues that through this transformation the economy becomes *informational*, because 'the production of surplus derives mainly from the generation of knowledge and from the processing of necessary information' (CASTELLS, 1989, 136; see also CASTELLS, 2000, 77 and CASTELLS, 2004, 8-13). He puts forward a hypothesis that this new 'informational mode of development', together with the process of restructuring of capitalism, forms a 'fundamental matrix of institutional and economic organisation in our societies' (CASTELLS, 1989, 2).

CASTELLS (1989) offers a detailed description of this new organisational matrix and the way it impacts on cities and regions. He asserts that one of the key features of this new matrix is the 'large-scale organisation', in particular the large private corporation (CASTELLS, 1989, 137). While small and medium enterprises may continue to play a dynamic role in the economy, their 'role is auxiliary in relation to processes that depend largely on the commanding heights of the economy' (ibid, 137) dominated by large corporations. Castells also makes a point that although informational mode of development penetrates all spheres of the economy (including agriculture and manufacturing; ibid, 167), it is a 'nucleus of information-intensive industries whose organisation and spatial logic occupies the top of the functional and economic corporate hierarchy' (ibid, 144; see also TAYLOR et al., 2002 for similar a argument). Castells's definition of 'information-intensive industries' corresponds to KIBS, including banking and finance, insurance, legal service, engineering, accounting and other business services (see CASTELLS, 1989, 144). In other words Castells argues that KIBS play a pivotal role in shaping the new spatial structure (see also TAYLOR et al., 2002) and its potentially polycentric form (see also HALL and PAIN, 2006).

CASTELLS (1989) then offers more details on how this new (polycentric) spatial structure will come about. He suggests that, thanks to new information technologies, large office-based information-intensive corporations (read KIBS) are dramatically transforming their organisational and spatial structure, resulting in a 'complex, hierarchical, diversified organisational structure' characterised by a 'variable geometry depending upon time, place, and realm of activity' (ibid, 168). He argues that in terms of spatial structure these corporations are undergoing a 'two-fold process of simultaneous centralisation and decentralisation' (ibid, 151). By centralisation he means 'metropolitanisation' of service activities (ibid, 151) or reinforcement of decision-making in corporate cores of major central business districts (CBD; ibid, 167). By 'decentralisation' he understands a spread of service activities over three spatial levels: from inner cities to the suburbs of metropolitan areas; from metropolitan to non-metropolitan areas and small cities; and between regions[1] (ibid, 152). He argues that the process of office centralisation or decentralisation is differentiated according to the different types of office functions and their place in the hierarchy of the corporation (ibid, 159), resulting in a 'complex territorial development process' (ibid, 169). This complex process – where *'neither centralisation nor decentralisation is dominant'* (ibid, 169; emphasis added) - impacts on the urban-regional structure and transforms metropolitan areas into ‘multifunctional, multinuclear spatial structures’ (ibid, 156 and 167)[2].

Importantly, all various office functions within a corporation (from head office to back offices) regardless of their actual location have to be interrelated and interconnected by the means of ‘communication flows’ (CASTELLS, 1989, 169) via ICT infrastructure[3]. Consequently, the ‘space of organisations in the informational economy is increasingly a *space of flows*’ (ibid, 169). Crucial for the understanding of this emerging ‘new spatial logic’, however, is the recognition that the ‘space of flows’ and the creation of ‘multifunctional, multinuclear spatial structures’ is not an undifferentiated process (ibid, 167). Rather, it follows a ‘hierarchical and functional logic’ (ibid, 167). In other words, flows are ‘structured’ and possess ‘directionality’ (ibid, 170) as a result of both hierarchical corporate structure and ICT infrastructure available. It follows then, that the impact of the ‘new spatial form’ on balanced development may be problematic (see also SCOTT et al, 2001). Castells (1989) fully acknowledged this and indeed predicted the increase of spatial and social inequality (ibid, 346).

In drawing these conclusions, CASTELLS (1989) relied on the data from the United States which he regarded as ‘the most advanced society … in the production and use of new information technologies’ (ibid, 4). However, he contends that by identifying socio-spatial effects of macro-processes that are fundamental to all advanced capitalist societies, his theory is ‘intended to aid understanding of the techno-economic transformation of the urban-regional process in a broad range of social contexts' (ibid, 5). This paper will explore the factors behind this urban-regional process in the context of Dublin, an emerging global city-region.

## 3. Dublin: towards an informational city?

Dublin - with its high exposure to globalisation and large presence of knowledge-intensive service firms is a good case to study the effects of the Castells's 'informational' mode of development. In terms of size, Dublin would also qualify as one of the 'large metropolitan area' analysed by CASTELLS (1989, 145, Table 3.6), although arguably at the lower end of the scale - population of the Greater Dublin region in 2001 was 1.64 million of which the Dublin metropolitan area accounted for 1.12 million inhabitants.

The key aim of our investigation is to establish whether the forces of simultaneous centralisation and decentralisation are present in and around Dublin resulting in the emergence of the new urban form or 'multifunctional, multinuclear spatial structure'. Following CASTELLS (but see also HALL and PAIN, 2006), three main spatial levels are considered here: (1) Dublin's city centre / CBD, (2) the Dublin metropolitan area, and (3) the Greater Dublin region. For the purposes of this paper, the *Greater Dublin region* is defined as a functional urban region comprising the Dublin metropolitan area and four surrounding local authorities in its 'hinterland' (County Louth, County Meath, County Kildare and County Wicklow). In turn, the *Dublin metropolitan area* is defined as comprising the following four 'metropolitan' local authorities: Dublin

City, Fingal, Dublin South and Dun Loaghaire-Rathdown. Finally, *Dublin's CBD* is defined as comprising three postcode areas in the very centre of Dublin City - Dublin 1, Dublin 2 and Dublin 4.The focus of our study is on decentralisation within the Dublin metropolitan area (from city centre to suburbs) and within the Greater Dublin region (from Dublin to surrounding urban centres).

In order to examine decentralising tendencies from Dublin to surrounding hinterland, nine major urban centres outside Dublin City have been selected. While still relatively small, all these urban centres have experienced dramatic population growth in the last decade or so (see Table 1). Our interest was to find out whether these centres (all within a 100km radius of Dublin) are also becoming major locations for KIBS.

< please insert Table 1 about here>

In line with the 'informational city' hypothesis, our main interest focuses on specialised KIBS[4]. The following eight KIBS sectors have been considered: banking/finance, insurance, management consultancy, accountancy, law, advertising, logistics and design consultancies. Some of them (e.g. international financial services within banking/finance/insurance) could be labeled as 'internationally traded services' (cf. BREATHNACH, 2000; GRIMES, 2003; GRIMES and WHITE, 2005), while others are predominantly oriented to domestic markets (e.g. domestic banking, domestic insurance, law and accountancy firms, management consultancies, architecture firms, etc.)

with either national or regional market scope. In some cases, however, market boundaries are much harder to establish (e.g. in logistics). There are also instances where domestic KIBS and foreign-oriented KIBS simply provide markets for each other.

To date, the above KIBS sectors have not been comprehensively studied in the Irish context. Certainly, the existing literature provides useful insights into the growth of internationally traded services in Ireland (BREATHNACH, 2000; GRIMES, 2003; GRIMES and WHITE, 2005), some of which may be part of larger manufacturing or software-producing corporations. However, our present study represents the first attempt to examine service-specific KIBS firms while focusing on their locational pattern within the Greater Dublin region.

This is not an easy task given that there are no reliable statistics on the subject. Our own attempt to provide a preliminary picture at the level of the Greater Dublin region is captured on Fig.1. In line with Castells' hypothesis, it focuses on the spread of operations of multi-location KIBS firms. It is based on information collected from various sources, including sectoral organisations, regulatory bodies and corporate sources. Although the figure needs to be treated with caution, it nevertheless clearly shows that, in the case of the Greater Dublin region, there is very little evidence of decentralisation of KIBS outside the metropolitan area (see also EGERAAT *et al*, 2006).

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<please place Figure 1 about here>

Indeed, in the urban centres around Dublin larger, multi-office KIBS are very rare. They can be found, however, in sectors like accounting and design consulting (architecture or engineering) but these are typically operating within regional or national market scopes of service provision. The only other significant KIBS presence outside Dublin metropolitan area consists of a network of operations of financial services (banking and insurance). Almost exclusively, however, these networks are made up of local (retail) branches. Perhaps more importantly, there is also a small number of decentralised back offices or call centres from major financial players (headquartered in Dublin). One way or another, the operations that have been decentralised are clearly subordinated to a higher level of decision-making invariably located in the capital city. The operations in question are, in other words, part of a highly hierarchical corporate structure and highly centralised functional/informational flows dominated by a single centre – Dublin, thus compounding uneven regional geography. It is therefore hard to talk about a “balanced” polycentricity, i.e. balanced spread of KIBS functions across the region.

The potential for the increased presence of decentralised operations in Dublin’s hinterland in the future should not be underestimated. However, at the present time, at the regional level at least (i.e. *outside* Dublin’s metropolitan area), a ‘multifunctional, multinuclear spatial structure’ does not seem to be a dominant feature (see also SOKOL and EGERAAT, 2005a, 2005b).

The picture is more complex when one considers processes *within* the metropolitan area of Dublin. Here, there is some evidence to suggest that a limited decentralisation is taking place, in line with what CASTELLS (1989) calls 'suburbanisation' of business activities and HALL and PAIN (2006, 11) identify as decentralisation to 'edge city' locations. Indeed, in the last two decades or so, Dublin has experienced a major upsurge in construction of office space in its suburbs (MacLARAN and O'CONNELL, 2001; MacLARAN and KILLEN, 2002; BERTZ, 2002). Some of these developments can be seen as contributing to the emergence of 'edge cities' in Dublin, especially around the M50 C-ring motorway (WILLIAMS and SHIELS, 2000; MacLARAN, 2004). We found several examples of KIBS moving their entire operation or parts of their operations into such sites including those in Tallaght and Sandyford-Leopardstown. Other sub-urban office parks and office locations capable of accommodating KIBS include Blanchardstown, Palmerstown, Citywest and Parkwest, among others. However, relatively high vacancy rates in some of these office developments (MacLARAN, 2004; BERTZ and FOLEY, 2006) suggests that decentralisation to suburban locations has clear limits. Indeed, the bulk of Irish KIBS remain stubbornly anchored in Dublin's CBD - an epicentre of metropolitan, regional and national KIBS activity[5]. As for those operations that *have* been decentralised to suburbs, these rarely outstrip the volume and quality of functions of their parents in Dublin's city centre, again suggesting imbalances in corporate spatial structure. In addition, the current pattern of office suburbanisation within metropolitan Dublin could be seen as "highly inappropriate and inefficient" (MacLARAN and KILLEN, 2002, p. 34), not least because it encourages the emergence of an unsustainable, car-dependant urban form. Therefore, the evolving forms *within* the metropolitan area of Dublin cannot be automatically equated with a balanced and sustainable polycentric development.

In conclusion, the above picture of KIBS geography does not seem to imply that either dramatically new ‘spatial logic’ or more balanced development is emerging in and around Dublin. To understand the reasons behind this we gathered qualitative evidence via interviews allowing us to gain insights into the factors that underpin both the current and future locational patterns of KIBS. The aim of the interviews was to help us (a) to explain why decentralisation of KIBS operations in and around Dublin has been rather limited so far, and (b) to ascertain whether there are any factors that may act as impulses for a larger-scale decentralisation process in the near future.

More than 100 semi-structured interviews took place in the Greater Dublin region. Of this number, over 20 interviews were undertaken with institutional players, such as sectoral or local ‘gatekeepers’ including representatives of relevant local authorities, industry associations, professional bodies and sectoral experts. Nearly 90 interviews were conducted with senior business managers of multi-location KIBS in the eight aforementioned sectors. The sampling strategy for firm interviews aimed at achieving, wherever possible, a cross-section of firms by urban centre, market scope and sector (see SOKOL and EGERAAT, 2005a, 2005b, for more details).

A wealth of qualitative data has been produced through this interviewing effort. Despite this, we do not claim that this data is representative of the entire population of KIBS in the region. Generalisations are also difficult because of a huge diversity that exists between and within KIBS sectors. We do not have a space to elaborate on this here, although responses from managers of KIBS presented below provide a good illustration of this. However, what emerged clearly from the interviews is that, rather than resulting from some universal 'spatial logic' driven by ICT, the geography of KIBS is contingent on a host of complex factors. We focus here on three factors that appear to be dominant: (1) firms' own corporate strategies (2) the conditions of the labour market and (3) the role of state. As will be demonstrated below, these three factors are highly interrelated and are strongly influencing each other, while interacting with a plethora of other overlapping factors.

## 4. Corporate strategies and their spatial implications

In line with Castells' arguments, it can be said that corporate strategies of KIBS play a pivotal role in understanding the geography of knowledge-intensive services. These strategies can also be seen as resulting from a series of tensions, one of which is a 'locational tension' (see HOYLER and PAIN, 2001). In the case of Dublin, one needs to understand why this locational tension is predominantly resolved through locating in the city centre (CBD) and whether there are factors or tensions that may encourage more decentralisation in the future.

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The interviews helped us to identify reasons behind the concentration of KIBS in Dublin metropolitan area. Respondents in all sectors strongly emphasised that Dublin represents both the most important market for their services and provides much of their labour. Many managers also highlighted the connectivity to transport infrastructure both nationally (roads, rail) and internationally (airport). A senior management consultant summed-up the importance of Dublin as follows: “So the talent pool is here. The client base is here. The infrastructure is here, so that’s why we are here” (Interview, mc04-07, 2004).

As for the location decisions *within* the metropolitan area, the three issues of clients, labour and (transport) infrastructure again dominated, strongly favouring locations of KIBS in the centre of Dublin. On the client accessibility side, face-to-face contacts remain critical for most KIBS and proximity to, or accessibility to/by clients is regarded as essential. Due to the predominantly radial transport pattern in Dublin this is best achieved in the city centre. The same applies to accessibility by staff (see Section 5).

There are further advantages that the CBD has to offer. Several respondents, for instance, pointed to the importance of proximity of related professional services. Senior managers in design and advertising firms perceived the area as displaying a ‘cluster effect’ (e.g. Interview, dc08-20, 2004). A number of respondents also praised the relative spatial compactness of the CBD which allows them to walk to most of their business meetings. Other important factors contributing to the attractiveness of the city centre location include the need for a prestigious location, the office building as a form of investment asset, better opportunities for sub-letting (vacant) office space, proximity to amenities and the attractiveness of urban environment including opportunities for socialising.

In addition to the above factors that continue to play a key role in the 'traditional' clustering of service firms in Dublin 2 and Dublin 4 areas (see BANNON, 1973), government policy has undeniably influenced the emergence of a major concentration of KIBS in the International Financial Service Centre (IFSC) in the former Docklands area in Dublin 1 (see Section 6). Importantly, interviewed IFSC companies seem to be relatively happy to stay in the area, despite the fact that the importance of some of the original incentives has been recently weakening. For these companies, due to the nature of their operations, the reliability of telecommunication infrastructure is also a major concern. In fact, as one of the informed banking experts noted, it is evident that ICT infrastructure, connecting Dublin with the rest of the world, was critical to the development of international financial services in IFSC (Interview, ii02-00, 2004).

While the advantages (or 'economies') of locating in Dublin's city centre are considerable, managers of firms also identified factors that may promote centrifugal tendencies and eventual decentralisation of certain KIBS away from the CBD. Among the disadvantages that managers associated with city-central location were classic 'diseconomies' factors such as traffic congestion

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and cost (and in some cases unsuitability) of office accommodation, but also lack of parking spaces for staff and clients (restricted by local planning authorities). However, despite these constraints, the pull of the CBD remains strong at the moment.

The question is whether there are any factors that may change this current pattern in favour of decentralisation in the future. However, we found very little evidence for this. Very few KIBS firms that we interviewed were actively considering relocating to suburban locations (e.g. around the M50), and it is not clear whether such a move will eventually materialise. Indeed, there is a concern among many managers that the expected benefits of relocation to suburbia (such as cheaper office accommodation) may not compensate for the lost advantages of a central location. While one or two firms indicated that a 'signature building' may attract them to a sub-urban site, others expressed concern that office parks in the edges of Dublin may become 'ghosts towns'. Keeping city-central location is therefore seen as the safest bet.

Even less impetus among KIBS managers is for decentralisation to locations *outside* the metropolitan area. We found that there are huge perceived risks of such a dramatic locational change. Indeed, when asked about the implications of a potential move to smaller urban centres around the capital city, most firms indicated that they would be risking losing either staff or clients, or both. In the case of an architectural practice, a move outside Dublin would be a matter of "losing soul" too (Interview, dc03-25, 2004).

While the potential relocation of entire KIBS firms into suburbs or beyond is very limited, in some cases, large players are decentralising *parts* of their operations. The banking sector is perhaps the best example of this process. As explained by a Deputy CEO of a major bank, amid competitive pressures, location becomes "an important dimension to cost management" (Interview, bk01-02, 2004). Consequently, some more routine, back office operations are being relocated to Dublin's suburbs or further afield. The distance from Dublin may be an important element in locational decision-making where the intention of tapping into a particular labour market outside the reach of the capital city (see below) has to be balanced against the requirement of an easy managerial reach (a comfortable car drive from a Dublin head office). However, it would be too early to consider this process of back-office decentralisation as a beginning of a new multinucleated or polycentric city-region. In fact, sceptics could argue that there is no guarantee that this decentralisation will automatically favour urban centres within the Greater Dublin Region. Indeed, some operations may simply be outsourced or decentralised to more remote parts of Ireland or even internationally, with Dublin's hinterland losing to cheaper locations in Eastern Europe or Asia, for instance.

Having said this, it is important to recognise that for large international financial services players, Dublin itself is a "decentralised" location (Interview, bk14-00, 2004) within much larger corporate networks. In other words, Dublin can be at the receiving end of functions relocated from other (even higher cost) locations such as London. Exceptionally, large international players may even choose smaller urban centres outside Dublin metropolitan area as a location for their decentralised operations (as was the case of one insurance company). Such a move would benefit from advantages of escaping Dublin's expensive office accommodation while still tapping into the labour pool of the capital. This latter case also leads us to consider the operation of labour market and its impact on geography of KIBS.

## 5. Labour market as a locational factor

It could be argued that skilled labour in general, and "knowledge workers" in particular, are critical for *operation* of KIBS. Consequently, labour market conditions also seem to play an important role (in fact, sometimes the key role) in determining *locations* of KIBS activities. As revealed by the interviews in the Greater Dublin region, labour markets also have a significant "inertia" effect on the "movement" of offices. Once established, it is often considered problematic (if not impossible) to relocate an office to a new location, largely because of the reluctance of its staff to move. As a manager of a Dublin-based logistics company plainly put it, "people would not move" (Interview, log00-08, 2004). The interviewee added "we could not just move this office out of here to Naas and 95 percent of our staff living in Dublin" (Interview, log00-08, 2004). A business person in the insurance sector contemplated a hypothetical move from Dublin to Drogheda (some 50km north of Dublin) in the following way:

> "How could you operate in Drogheda? Half your management team would leave; all the sales people would look for a new job in Dublin…" (Interview, in00-07, 2004).

Interestingly, for a regionally-based, out-of-Dublin design practice, moving to a new location is not an option either. As the manager of the firm maintains this would result in losing half of its staff and therefore would represent a "suicide in this business" (Interview, dc04-27, 2004). What the above statements point at is that the labour market in the Greater Dublin Region is characterised by a significant "spatial rigidity". This "rigidity" applies to moves both between urban centres in the region and within the Dublin metropolitan area. Indeed, within Dublin itself, several managers indicated that a move to a different location (from the city centre to suburbs, or from one part of the metropolitan area to another) could be problematic. Many employers thus prefer central location, because

> "Funnily enough a city centre location is seen as the fairest for staff. If we were to move, we are going to disenfranchise some group of staff" (Interview, in00-07, 2004).

On the other hand, in certain circumstances, firms may see a disruption of their existing labour force as 'desirable'. This is especially true when firms are seeking efficiency gains via reduced labour costs and/or an introduction of new labour practices. In such cases, KIBS firms are using the strategy (simillar to their manufacturing counterparts) of relocating operations precisely in order to instigate a labour changeover. There is some evidence to suggest

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that this is indeed happening. Indeed, several financial services providers indicated during the interviews that their decision to open new back-office facilities outside the capital city was partly influenced by the desire to move away from the overheated labour market in Dublin. Such firms target more remote locations (often beyond the boundaries of the Greater Dublin Region) and more remote labour markets where they can recruit staff that are perceived as generally cheaper, more loyal and more flexible.

Another interesting (if hardly surprising) aspect of the survey results on labour market in and around the capital city is a residential geographical “segmentation”. Many people are simply priced out of the Dublin housing market and end up commuting from various locations within the sprawling metropolis and beyond (see also WILLIAMS and SHIELS, 2000, 2002a). Having said that, there are people who actually do prefer to live (and work) in smaller towns or more rural settings. The issue is that such locations may not be able to offer jobs that would suit their qualifications and career aspirations. This leads us to the consideration of differences between Dublin and surrounding urban centres in terms of labour supply and demand.

It is safe to argue that Dublin metropolis dominates the entire city-region in both labour supply and demand. For KIBS firms, Dublin is seen as a large pool of talent they can tap into. In fact, some skills are only available in the capital city (thus clearly constraining locational choices of KIBS firms). For instance, a Chief Executive Officer (CEO) of an advertising firm suggested the following:

> "If we were up in Dundalk, we wouldn't be able to recruit the people (…) Students who want to get into advertising wouldn't go there (…) You just would not get people who want to work in advertising … if we move down to Cork, or even 50 miles out of Dublin, you would have no staff. It would be impossible to find the skills in a town like Naas" (Interview, ad00-08, 2004).



Importantly, Dublin provides a continuous stream of graduates from its universities where KIBS providers recruit from every year. Attractiveness of Dublin is also important and works as a "magnet", especially for younger people, who "like to live in Dublin… Dublin has an attraction socially which I don't think you would get in Naas or Navan" (Interview, lw00-05, 2004). One could add that a prestige and image of a particular place also plays a role, for both firms and people.

One way or another, the smaller towns in the study area have a relatively limited supply of professional staff. It is possible that one faces a circular and cumulative causation (MYRDAL, 1957) or a "chicken-and-egg" problem here. Large KIBS firms would not move to these centres, because there is not enough relevant staff, and vice-versa. By the same token, jobs in KIBS sectors attract skilled professionals, but also skilled labour attracts KIBS firms. One could argue that this is just a part of a wider circular and cumulative causation in the "knowledge economy", reinforcing existing (uneven) urban-regional patterns and thus working against balanced regional development (cf. SOKOL and TOMANEY, 2001). Such a process would also work against a polycentric development and will be hard to reverse without a policy intervention (cf. BANNON, 2004) to which we now turn.

## 6. Public policy and the role of state

The Irish case demonstrates that public policy can make a difference and that, more generally, the role of the state at various scales still does matter. Indeed, various levels of governance, from local to regional to national to supra-national, individually or in combination, exercise considerable influence over economic affairs. A good example of this is an aforementioned concentration of financial services into Dublin's IFSC, created through national government intervention and EU tax concessions, and connecting the city with global 'space of flows' (see MURPHY, 1998; WILLIAMS and SHIELS, 2002b; WHITE, 2005; SOKOL, 2007; for more details).

However, while the economic success of Dublin is welcome, it also fuels space-economic imbalances at national, regional and metropolitan levels (SOKOL, 2005). Therefore, the key question for our study is whether the state and public policies are encouraging the emergence of a polycentric city-region and balanced development in and around Dublin. Our research suggests a mixed picture, as policy makers are facing major dilemmas.

These dilemmas are perhaps most apparent at the level of national policy-making. The difficulty is that national policy find itself in a continuous tension between the need to foster competitiveness and, simultaneously, to promote balanced development. This tension has been reflected in the National Development Plan (GOVERNMENT OF IRELAND, 2000), generously part-financed by EU funding. The plan, on the one hand, seeks to address bottlenecks in Dublin (seen as the engine of the Irish economy) and on the other hand aims to support balanced regional development for the rest of the country.

There are no easy solutions to the above conundrum, however. Interviews with experts working in the field of inward investment confirmed that, in the case of international financial services for instance, investors are encouraged to set up front office/head office-type operations in the capital city, while the rest of the country is promoted as being more suitable for back office functions (Interview, ii01-00, 2004; Interview, ii02-00, 2004). Occasionally, urban centres in Dublin's hinterland may benefit from such a promotional effort, but it remains to be seen if such approach will bring about balanced development within the Greater Dublin region.

In the meantime, an intervention at the regional level may be considered as suitable. However, regional governance in Ireland is rather weak (MORGENROTH, 2000). While the strategic regional documents (e.g. Regional Planning Guidelines) are officially promoting a polycentric city-region around Dublin, strong implementation mechanisms are missing (see more in SOKOL and EGERAAT, 2005b; STAFFORD *et al.*, 2005; CONVERY *et al.*, 2006; SOKOL *et al.*, 2006).

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In comparison, local state (city and county councils) has currently more leeway for influencing corporate behaviour and the location of KIBS, or businesses more generally. Interviews with senior planning and economic development officers of local authorities *outside* the Dublin metropolitan area (Counties Louth, Meath, Kildare and Wicklow) indicated a strong desire to further capitalise on advantages their areas offer to potential investors. The advantages (as compared to Dublin) most frequently quoted by the interviewees included better quality of life, cheaper housing, cheaper office space and the availability of a labour force eager to abandon the commute to Dublin in favour of working locally, even at lower wages. Recently, three local authorities of Mid-East region (Kildare, Meath and Wicklow) have considered policies of encouraging Dublin-based businesses to relocate in the hinterland (e.g. Interview, ii18-00, 2004; Interview, ii20-00, 2004), in an attempt to boost their income from local business rates. It remains to be seen what effect such initiatives will have on their economic fortunes or their share of KIBS.

In the meantime, economic strategists at the local (county) level start to realise that they cannot compete on a cost basis alone and are keen to develop more knowledge-intensive and value-added business. Thus strategies are being developed in County Louth to promote, for instance, a multimedia cluster in Dundalk (Interview, ii17-06, 2004) as part of the effort to foster “knowledge based industry” (Interview, ii17-04, 2004). Similar thoughts are emerging in County Kildare which is working on its own development strategy amid the growing realisation that the rules of the game for attracting investment are changing with the advent of the globalising economy (Interview, ii19-12, 2004).

It is important to recognise, however, that local authorities *within* the Dublin metropolitan area do not remain passive. They are active players in the competition for investment and economic success. For instance, the Dublin City Development Board, the economic development arm of the Dublin City Council, works actively to foster a favourable business environment in the city. This includes strengthening telecommunications infrastructure and harnessing ICT to support the transition “from an investment driven society to a knowledge driven society” (Interview, ii13-01, 2004). Therefore, it seems that in the case of Dublin city, the combined forces of the state (local and national) work together to accommodate rather than reverse the centralising tendencies of KIBS. On the other hand, one could argue that the initiatives of the counties in the Dublin’s hinterland may provide some impulses for decentralisation of certain KIBS operations. However, it is not clear if such decentralisation will provide a balance to overwhelmingly centripetal tendencies of KIBS and in doing so instigate a ‘new spatial logic’ as portrayed by CASTELLS (1989). This leads us to a reconsideration of the ‘informational city’.

## 7. Beyond the ‘informational city’

In the light of the evidence presented above, Castells’s thesis looks problematic, but we cannot reject a theory on a basis of one case study.

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Instead, we would like to undertake a careful interpretation of our findings and, where appropriate, to advance the argument further.

The key consideration has to be given to the factors that impinge upon the processes of centralisation and decentralisation. As shown in our study, these two processes are not universally present on the economic landscape. Instead, we could argue that these processes work differently at different spatial scales. In our case, decentralisation is very limited at the regional level, while at the metropolitan level, a two-fold process of simultaneous spatial centralisation and decentralisation is more evident. At both spatial scales, centralisation seems to be dominant, however. The question arises as to why, in the case of Dublin, centralisation and decentralisation processes are not in balance.

Several hypotheses can be put forward. One obvious proposition would be to highlight the role of size. One could imagine that Dublin is simply too small a metropolis to display processes expected from a major 'informational city' by Castells. Indeed, it is plausible that the (limited) size of Dublin has an impact both on the size/type of KIBS operations and their locational distribution. This would imply that metropolitan areas considered by Castells are not displaying universal patterns, but instead are behaving differently according to their size. However, the case of a rather monocentric Paris region (see HALBERT, this issue), which is 10 times bigger than Dublin, underlines the fact that the level of polycentricity is not necessarily a function of size either (see also HALL and PAIN, 2006).

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Another hypothesis is that the 'new spatial logic' has not yet fully materialised and has yet to supersede the old spatial form. This would imply that the pre-existing urban pattern of the Greater Dublin region, characterised by a strong dominance of Dublin, is likely to continue for some time. In other words, the process of a circular and cumulative causation will continue until old historical legacies associated with this urban pattern (e.g. transport infrastructure centred on Dublin) will be subverted by a new logic driven by ICT. It is also possible that the 'new spatial form' will never materialise, in Dublin or elsewhere, if Castells and other thinkers overestimated the decentralising power of ICT.

Yet another possibility is that the processes of centralisation and decentralisation do work as predicted by Castells, but are operating at much higher spatial scales. If so, we would need to zoom out of relatively small metropolitan and regional scales and consider Dublin as operating within 'space of flows' at international and global scales. Seen from this perspective, Dublin could be considered, in Castells's language (CASTELLS, 2000, 440), as a 'hub' at a receiving end of decentralised KIBS operations from global 'nodal points' or 'mega-cities' such as London or New York. One way or another, these tentative hypotheses could have important implications for the way the 'new spatial logic' is understood or conceptualised.

A further point we wish to make relates to the alleged drivers of the 'new spatial logic', KIBS themselves. Despite some common features, we found a huge diversity among KIBS firms in a way they organise and locate their operations. There are big differences both *between* and *within* KIBS sectors. For instance, creative or team-work based firms (e.g. in advertising and management consultancy) usually have only one single office within the region, invariably located in Dublin. Meanwhile, financial services firms display perhaps the biggest propensity to locate some of their operations outside the capital city, reflecting their complex internal division of labour. However, there are also significant differences with the financial services sector itself (see SOKOL, 2007, for more details). One way or another, some KIBS firms may have a bigger potential to fuel decentralisation, while other firms display a fundamental lack of it. The bottom line is that there is no universal organisational-spatial logic of 'large-scale organisations' that would automatically contribute to the emergence of a 'multifunctional, multinuclear spatial structure'.

Despite all this diversity, it needs to be recognised that there is one logic shared by all KIBS - a business logic of profit-making. Indeed, one could argue that the profit imperative has not been disrupted by the arrival of the 'knowledge-based economy' (SOKOL, 2004). KIBS are no exception to this rule and so while the flow of information may be critical to their operation, it is the creation and appropriation of surplus value that pre-occupies their managers. Therefore, instead of 'space of flows' (read 'flow of information'), it is the 'flow of value' that is critical for the economic fortunes of firms, organisations, people and places. Indeed, the examination of geographies of economies may be more fruitfully approached through the prism of 'value chains' or 'value networks' (SMITH *et al.*, 2002).

While all the above points suggest that 'informational city' thesis needs further elaboration and testing, there is one concern that we do share with Castells (1989) - the concern about the inequality produced under the 'new spatial logic'. Indeed, the evidence collected in the case of Dublin confirms that even where (modest) processes towards a 'multifunctional, multinuclear spatial structure' are in operation, the emerging spatial structure is highly uneven in its nature. Decentralised operations are usually subordinated to higher level of decision-making invariably located in Dublin. In other words, such decentralised operations form part of a highly hierarchical corporate structure and sharp intra-firm spatial division of labour. This opens up the question about the implications of the 'new spatial logic' for balanced development, echoing old concerns about the uneven spatial divisions of labour (MASSEY, 1995).

As discussed earlier, CASTELLS (1989) is aware of the 'hierarchical structure' and 'directionality' of the 'space of flows' and negative implications it can bring to people and places. Castells's strategy to counter the ever increasing power of 'space of flows' over the 'space of places' is through the 'renaissance of the local state' (ibid., 352) and 'a network of local communes controlling and shaping a network of productive flows' (ibid, 353). But as we have seen in the case of Dublin, local authorities are often mediating and welcoming the 'space

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of flows' rather than resisting it. In doing so, they often compete against each other, rather than forming co-operative networks. It is hard to see how local governments alone can master the 'space of flows'. Rather, we would suggest that synchronised interventions at all governance levels needs to be in operation if the hope for a more balanced development in the 'knowledge economy' is to last.

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## Table 1. Selected urban centres outside Dublin

| Urban centre | Total Population (including suburbs or environs) 1996 | 2002 | 2006 | Population change 1996-2006 | Note |
|---|---|---|---|---|---|
| Drogheda | 25,282 | 31,020 | 35,090 | 38.8% | Ireland's largest provincial town. Previously industrial and port town, becoming established commuter town of Dublin. |
| Dundalk | 30,195 | 32,505 | 35,085 | 16.2% | Administrative centre of County Louth. Previously industrial and port town, now developing niche expertise in digital media. |
| Bray | 27,923 | 30,951 | 31,901 | 14.2% | Established suburb of Dublin with recent new economy developments. |
| Navan (An Uaimh) | 12,810 | 19,417 | 24,851 | 94.0% | Principle town and administrative centre of County Meath, becoming commuter town of Dublin. |
| Naas | 14,074 | 18,288 | 20,044 | 42.4% | Administrative centre of County Kildare. Market town, developing as commuter town. |
| Newbridge (Droichead Nua) | 13,363 | 16,739 | 18,520 | 38.6% | Market and industrial town, now affected by commuting developments. |
| Balbriggan | 8,473 | 10,294 | 15,559 | 83.6% | Previously industrial and market town, now experiencing high levels of residential commuter development. |
| Maynooth | 8,528 | 10,151 | 10,715 | 25.6% | University and market town, recently developing as a commuter centre. |
| Wicklow | 7,290 | 9,355 | 10,070 | 38.1% | Administrative centre of County Wicklow. Market town with recent commuter developments. |

Source: CSO (2007) and authors

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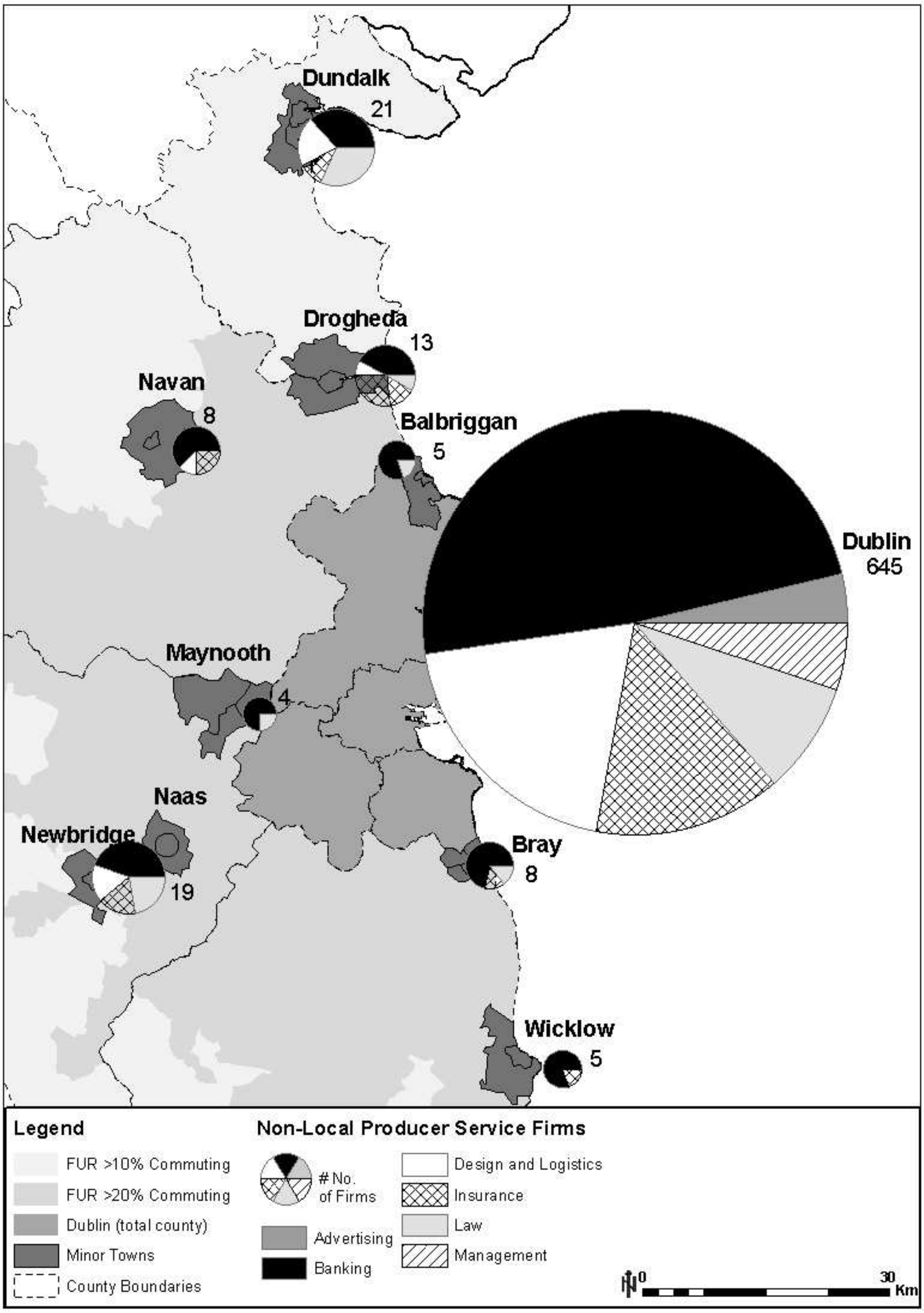
## Fig. 1: Distribution of multi-location KIBS firms in the Greater Dublin region



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**Endnotes:**

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[1] Two additional dimensions of decentralisation are represented by offshoring of service activities abroad and the decentralisation of office work at home ('telecommuting'; Castells, 1989, 152).

[2] For an interesting discussion on forces for agglomeration and deagglomeration see also Leamer and Storper (2001), who also acknowledge that the geography of the Internet Age will be dominated by 'increasingly large and internally polycentric' metropolitan areas (ibid, 658).

[3] These communication flows, however, are notoriously hard to measure (see HALL and PAIN, 2006).

[4] The prominance of KIBS is also emphasised by HALL and PAIN (2006) and GaWC researchers (e.g. TAYLOR et al., 2002). See also the work of LEAMER and STORPER (2001, 642) who emphasise the importance of 'specialised firms' producing 'intellectual inputs' for other businesses.

[5] Perhaps with the exception of logistics firms which seem to favour locations close to the Dublin airport.