The Development of the Functional Urban Region of Dublin: Implications for Regional Development Markets and Planning

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Abstract
This paper investigates the land transformation process and growth pattern emerging in the functional Greater Dublin Area (GDA). The process is considered in the light of the growth pattern of the GDA, which is analysed based upon economic and social statistical evidence. The emergence of discontinuous patterns of development and rapidly expanding functional urban areas has been observed in many developing city regions. Two contrasting trends have emerged with an urban regeneration-driven return of development to the central areas of economically strong cities and a concurrent significant dispersal of housing and employment activities development in a sprawl type manner. It is recognised that such patterns have significant implications for the long-term urban development of regions such as Dublin. This paper includes empirical evidence on emerging development patterns, which it is expected will assist in evaluating the effectiveness of policy measures. The paper argues that the absence of an effective strategic decision-making process at the functional regional level negates national development policy aspirations. A methodology is proposed to develop a regional understanding of current and proposed patterns of development and their influence on urban form. The paper includes a contrast between stated policy aims, analysis of development data and conclusions on likely future trends. The conclusions explore the likely future development trends in the functional urban region and their implications for policy making and development.

Key words: Functional urban regions, urban form, land and housing markets, regional growth patterns.

Section 1: Introduction

City Regions and Functional Urban Areas.
Regional economic development has played an increasingly important role in planning and development policies in Ireland and Europe in recent decades. This can include building economic competitiveness in Ireland or addressing declining industrial competitiveness in established industrial regions suffering from the effects of global economic restructuring (Danson, 2003). From the 1990s onwards, the seminal works of Porter (1990) and Krugman (1991) have developed a critical focus on exploring issues of agglomeration economies and economic competition in a geographical setting (Evans, 2003). Modern enterprise development policies often prioritise enterprise clusters and the role of institutional structures and capacities in developing cost advantages and urban/regional competitiveness. The new urban economic patterns of more diffuse settlement patterns - spread city, edge cities and polycentric city form - are explored from this period in the work of Garreau (1991), and Fujita

(1989). Sassen (2001) is one of a group of researchers who have stressed the emergence and economic importance of major urban regions as dominant economic entities in the emerging global economy.

The structure of the paper involves analysis of the management of growing urban city regions in terms of their urban form which impacts upon their planning and development. The concept of the Functional Urban Region (FUR) is developed, and arising issues of governance, planning and development are outlined. The evolution of policy approaches and objectives in managing growth in the Dublin Region is then analysed and compared with data analysis of the actual development pattern emerging. This spatial representation of emerging development trends is followed by an analysis of the policy implications of such trends and arising issues for the development of the Greater Dublin Area.

Forms of Urban Development

Patterns of urban development are expressed through a variety of distinct forms, which act to constrain and influence the patterns of development in metropolitan areas. Each metropolitan region is the product of a number of principal economic, social, physical and political factors that have influenced the respective character of each urban region to varying degrees (Sassen, 2001). Urban areas have evolved through, and been affected by, various urban development processes, including:

Agglomeration of economic activity

Commercial enterprises tend to cluster together in order to achieve economies of scale and derive the benefits associated from complementarities and the use of a developed infrastructure (Asheim et al, 2006). Major urban areas tend to offer a wide range of infrastructure support to businesses, including transport (roads, rail, airports, and ports), telecommunications, educational institutions and ancillary services. In addition, the agglomeration process tends to be self-reinforcing, as incoming enterprises recognise the economic benefits offered at existing locations and accordingly locate adjacent to these. In essence, businesses that cluster together adopt a risk-minimisation strategy and benefit from shared availability of services (Asheim et al, 2006).

Restructuring of economic activity

Due to the trend towards globalisation of industry and commerce, many traditional industries in Europe and the developed world, particularly of a labour intensive nature, are relocating to low-wage developing economies. The consequence for the built fabric of cities as a result of these trends has been the physical decline of older manufacturing and port areas, and the economic and social exclusion of the semi-skilled and unskilled workforce, contributing to increased unemployment rates (Kasanko et al, 2006). Within Europe, metropolitan regions have increasingly engaged in competitive strategies with each other in order to attract their share of a reducing amount of new commercial activity (Gemaca II/Cheshire, 2002).

Evidence of the increasing effective market size of metropolitan regions is emerging internationally (Parr et al, 2002). This is associated with developments in transportation and technologies, as modern economic growth is often based upon the knowledge industries, including financial services and ICT industries. The major thrust of such growth is towards larger capital and administrative cities, creating tensions with other regions not benefiting from such growth.

The implementation of growth management strategies often proposed by national plans or guidelines is a recurring theme in many areas experiencing rapid urbanisation. Throughout the 1980s and 1990s, concerns about unrestrained suburban development induced national and state authorities across Europe and North America to examine proactive planning legislation to promote compact urban form and more sustainable forms of development. Some of the drivers for this managed, or smart, growth approach are emerging policy priorities, including minimisation of air and water pollution, reutilisation of derelict lands, reduction of commuter travel distances, creation of critical mass for city regions and preservation of natural lands.

The success or failure of such policies in preventing unmanaged or dispersed development continues to be the subject of diverse opinion as to whether growth management works. In particular, attention is often paid to the role of landowners in the transformation of land affected by metropolitan expansion and leapfrog development patterns (Sazak, 2004). The use of urban growth boundaries within regional physical planning in cities as diverse as Oregon, Melbourne and Santiago is cited by Frenkel (2004), who notes the absence of empirical studies to provide evidence for the effectiveness of tools and policy measures.

Recognition of the importance of major cities and their role within all international economies has grown significantly with the rapid pace of economic restructuring. In tandem with such recognition, relationships and governance issues arise in many large metropolitan regions. Combinations of voluntary or statutory authorities have evolved to deal with regional planning issues. (Gemaca 11/ Knapp, 2002).

Fragmented decision-making processes internationally present particular difficulties within a region in dealing with vital infrastructure. As infrastructure is vital to both urban development (Hall 1998) and the economy (World Bank, 2003), pressures for reform towards effective co-ordinating capacities at a regional level are likely to continue. It is therefore essential that mechanisms be developed at an appropriate regional level to ensure an organising capacity exists at this level to plan and implement development policy.

The relative decline in state direct involvement compared to stated aspirations in social and economic development projects is apparent internationally (Stadler, 2008). This is evident in states traditionally viewed as having strong spatial policies aimed at compact and planned urban form, such as the Netherlands. Louw et al (2003) note the trend in the Netherlands towards a reduced role for local government as land developer and an increasing role for private interests. By comparison, in parts of the USA, which might be considered as less open to public interventionist policies, concern is evident at the consequences of unplanned urban growth. Since the 1970s, the land area found to be occupied by urban and metropolitan areas has more than doubled (US Department of Agriculture, 2000) and this expansion is reported to have accelerated in recent years. This is leading to public support for growth management, evidenced in the approval of many measures being adopted across the USA to protect existing open space (Wu et al, 2004).

As North America is the region most affected by sprawl, the debate on its consequences has been ongoing since the late 1970s (Nechyba and Walsh, 2004). In defending the sprawl process, commentators document that sprawl is ubiquitous, and will continue. Sprawl settlement patterns are driven by the choice of consumers for improved housing and living standards and reflect the modern choices for car-based living, and negative quality of life impacts are considered overstated (Glaeser and Kahn, 2003). Opponents of sprawl point to

congestion, environmental damage and a declining sense of community as among the negative impacts of the uneven spatial economic and social developments that result (Squires, 2002). Such commentators further allege that sprawl is not an inevitable function of market forces and choice, but has been supported by public policies favouring new build green-field and roads-based development (Rusk 1999). The continued decentralisation of employment and population to suburban locations along transport infrastructure and the impacts of emerging sub-centres on urban spatial structure continue to be a major feature of the analysis of the development of major metropolitan areas (McMillen and Lester, 2003).

The growth of cities in Europe has historically been driven by increasing urban populations. However, despite the fact that population pressure no longer looms as large a threat as it once did during the mid 20th century, a variety of factors are still driving urban sprawl (European Environmental Agency, 2006). These are entrenched in the desire to follow new lifestyles in a suburban context, outside the inner city. As the EEA further points out, sprawl has accelerated in response to improved transportation links and enhanced mobility. This has made it possible to live increasingly farther away from city centres, while retaining all the advantages of a city location. It has also enabled people to live in one city and work in another. Kasanko (2006) states that the most rapid growth rates for European cities were generally experienced during the 1950s and 1960s, and that in half of the cities studied in his paper Are European cities becoming dispersed?, over 90% of all new housing areas built after the mid-1950s can be described as 'discontinuous urban developments'. This leads Kasanko (2006) to conclude that: "It is clear that the structure of European cities has become less compact. In most cases it is mere a question of taste whether to call it urban sprawl or urban dispersion."

Sieverts (2003), however, stresses that it is imperative not to draw a rigid line between urban sprawl and the compact city and emphasises the importance of avoiding a polarising debate in this regard. In his book *Cities without Cities,* Sieverts asserts that the modern built environment is not simply a city, but increasingly a number of large urban conurbations connected by transportation corridors. Using the German term *Zwischenstadt*[1]*,* Sieverts discusses the the creation of a city web or 'mega city'. This emergence has been facilitated by a movement from a strong social cohesion and interest in towns and cities to individuals pursuing their own goals, with global social links and little interest in 'their' city (Stadler, 2008). Sieverts points out that the "difficulties in managing or even controlling the city web, which is divided arbitrarily into areas of limited size and political power, are enormous". As a consequence, various areas compete with each other rather than co-operate. Rather than applying the simple conjecture of 'sprawl', a better understanding and improved planning systems for a new, emerging urban form is needed. A range of contextual issues arises in such international debates including private versus public property rights and the issues of an individual's right to own, use and develop property (Judge, 2002). This debate as to individual rights, externalities and the constraints of regulation is the subject of continuing debate in Ireland with the recent report of the Commission on Private Property. The divergence in understandings and interpretations of property rights and resulting property pricing systems creates confusion in our understanding of the functioning of property markets (Cole and Grossman, 2002) and, importantly, makes international policy comparisons more difficult.

[1] *Zwischenstadt* is described as a new form of urbanity experienced internationally. It is the urbanised landscape or the landscaped city. Sieverts calls this the *Zwischenstadt,* or "in-between city", as it exists between old historical city centres and open countrysides, between place as a living space and the non-places of movement, between small local economic cycles and the dependency on the world market.

Defining and Measuring Urban Functional Areas

A Functional Urban Region (FUR) is defined as the geographic space appropriate for the comparison of economic development in urban areas (Williams, 2007). It is the space within which businesses enjoy access to a wide range of infrastructure and services including:

1) Telecommunications
2) Business premises
3) Skilled labour Force
4) Educational institutions and research centres

In simple terms, the Functional Urban Region is the space in which businesses operate. Antikainen (2005) provides a more quantitative definition whereby the FUR is described as:

> the 'travel to work area', principally it is an agglomeration of work places attracting the work force from the surrounding area. If a certain share of the labour force in a defined fringe area are out-commuters it is attached to the municipality to which the largest portion of commuters go. This method is good for defining the most pronounced employment centres to which the more simple threshold level of commuting applies. In many international studies, a commuting threshold of 15 – 20% is used to determine whether a municipality is attached to a particular centre or not.

The international definition of a metropolitan area differs widely. In the European context, many historical boundaries of cities developed originally for defensive purposes were absorbed into larger entities for national, regional and local governmental purposes. This has led to boundaries that have major historical, cultural and regional associations. The revision of such boundaries has largely been a political issue, with revisions occurring in some countries, such as the UK, and less frequently in others. In the USA, a similar historical evolution of metropolitan boundaries used for political/administrative purposes has been augmented by significant US census bureau analysis of what is defined as a Metropolitan Statistical Area (MSA). An MSA is defined as an area containing a large population nucleus and nearby areas that are economically integrated as measured by structure of employment, commuting flows and population density.

Differing approaches throughout Europe of what represents a city and its territorial basis presents a challenge to policy makers and planners. Continuous additions to existing urban areas have provided a basis for defining urban areas. In France, the concept of agglomeration and urban morphology are relied upon, which may not include the outward spread of a growing city region. Contiguous urbanisation is prevented by land use policies in countries such as the Netherlands, while current and adapted political /administrative definitions are applied in other jurisdictions.

The research carried out by the EU Gemaca II project aimed to address this issue by adapting from best European and international practice and providing a methodology for analysis of data for comparably and usefully defined cities (Gemaca, 2002). The aim of the project was to define FURs by a consistent set of criteria, including population and employment densities,

and capture the economic and social sphere of influence of each area included in the study. The definition adopted is the Functional Urban Region (FUR) and is examined in the case of Dublin in this paper. In this context, a key message emerging from international experience and research is the necessity for the co-ordination of urban and regional strategies due to:

i. The reciprocal links between core cities and their regions;

ii. The necessity to ensure that the remit of effective strategies and boundaries extends beyond artificial boundaries and administrative jurisdictions (Robson, 2000).

Section 2: Functional Urban Regions and Objectives of Urban Spatial Policy in Dublin

A number of previous studies have examined the spatial implications of the Celtic Tiger period of accelerated economic growth, specifically in relation to the Dublin city-region. Williams and Shiels (1998, 2000 and 2002) identify an increased concentration of development and economic growth in the Dublin and Mid-East Regions since the mid-1990s, associated with a sectoral shift towards high-technology and high-skill industries (see also Breathnach 1998). Williams and Shiels further identify the emergence of an 'edge-city', comprising new employment nodes at locations on the periphery of the existing contiguous built-up area of Dublin city and extending into the Mid-East Region. The M50 C-ring motorway constructed in the 1990s is explicitly identified as a locus for this spatial dispersal of industrial and commercial development. The spatial expansion of the functional labour market area of the Dublin city-region is further characterised in terms of the emergence of 'Outer Leinster'[2] as a location for residential development marketed towards people employed in Dublin. It is argued that residential development has 'leap-frogged' established dormitory towns in the Greater Dublin Area due to a shortage of housing supply within the Dublin Region in particular, and significant house-price differentials between the GDA and other regions (Williams & Shiels, 2002; Williams *et al.*, 2007).

Gkartzios and Scott (2010), in a study of urban-rural migration in the Dublin city-region, highlight the importance of consumer choice in recent settlement trends in Ireland. They identify a preference for rural living and a distinctive Irish rural idyll associated with owner-occupied single rural dwellings in the countryside. For Scott et al (2006), "urban sprawl and dispersed patterns of settlement growth with long-distance commuting" are established as the characteristic features of settlement structure within the GDA (see also Williams & Sheils, 2002). A European Environment Agency study published in 2006 found Dublin to be a worst-case scenario of urban sprawl in Europe (EEA, 2006)[3]. However, the EEA study examined patterns of land-use change only and did not explicitly examine the demographic drivers of urban growth or the functional relationships between areas of settlement growth and traditional urban areas within a city-region.

It is clear from the analysis of population, housing and travel-to-work trends that existing administrative boundaries in Ireland often fail to reflect the reality of contemporary housing and labour markets, which operate at a regional scale and are characterised by complex intra-regional and urban-rural relationships. The purpose of this section is to further explore this

[2] 'Outer Leinster' is understood as the eight counties surrounding the Greater Dublin Area, within the traditional province of Leinster.

theme by applying the concept of Functional Urban Regions as a tool for the analysis of urban systems. This section will focus selectively on the case of Dublin, using data from the Urban Environment Project and material from a previous study .

In Ireland, an advisory regional authority carrying out regional planning functions assists a combination of volountary horizontal linkages between local authorities, along with state sector agencies responsible for infrastructure and services. The principal regional planning strategy that works from a national perspective is the National Spatial Strategy 2002–2020.

Using the guiding principles of the NSS, the Dublin Regional Authority produced the Regional Planning Guidelines (RPGs) for the Greater Dublin Area (2004-2016), applying the vision of the NSS to the GDA. The RPGs followed the Strategic Planning Guidelines for the Greater Dublin Area, which were published in 1999 and reviewed in 2000. Concerning local planning and development practices, County Councils are required to produce a County Development Plan every six years. The purpose of a County Development Plan is to set out the planning authority's policy stance for the sustainable development and use of land within its administrative area. This is done in accordance with the requirements of legislation, ministerial guidance and directives, and other relevant policies and plans. The Plan provides a strategic framework that directs new development towards appropriate locations and clearly sets out criteria against which development proposals are determined. A Development Plan must contain certain objectives (e.g. roads, zoning, proposals to treat wastewater) as listed in Planning & Development Act 2000 (Section 10.2). The County Development Plan is required to be consistent with the Planning and Development Act, the RPGs and the NSS with a view to achieving sustainable growth and development within its administrative area.

In discussing the objectives of urban spatial planning and the role of urban governance, it is necessary to identify those core policy issues which urban development and management policies are directed towards. The National Spatial Strategy (DoEHLG, 2002) was prepared by the Department of the Environment, Heritage and Local Government and set out a 20-year planning framework designed to deliver more and balanced social, economic and physical development across Ireland. Considering the GDA, the NSS aims to consolidate "the growth of the metropolitan area", in order to maintain its status as a driver of national development. The National Spatial Strategy makes a distinction between the existing built up area of Dublin and its immediate environs; that is, the Metropolitan Area and the Hinterland Area, and proposes separate development strategies for these regions. At regional level, the Regional Planning Guidelines for the Greater Dublin Area (2004–2016) embrace the principles of sustainable development as set out in the National Sustainable Development Strategy and aim to provide a coherent strategic planning framework for Development Plans and the provision of major transportation, sanitary services and other infrastructure for the GDA in particular (DoEHLG, 2004). The issue of synchronisation of related policies is relevant; however a more substantial issue is the lack of serious implementation and support at local level.

From stated policy in recent years (DOE, 1997), priority in terms of sustainable urban development is accorded to the following:

[3] The text of the published European Environment Agency does not, in fact, include reference to Dublin as a worst-case scenario. This characterisation emerged from a media interview with the lead author at time of publication (McDonald, 2006).

- Encouraging careful location of residential, commercial and industrial uses;
- Planning and making effective use of existing developed urban areas;
- Integrated strategic economic and social planning.

The NESC report on "Housing in Ireland" (2004) identified the essential characteristics of a sustainable neighbourhood, including the importance of providing essential facilities within walking distance of new homes. This policy approach has been included in the recently published Guidelines on Sustainable Residential Development in Urban Areas (DoEHLG, 2009), which state the range of relevant national policies can be distilled into a series of high-level aims for successful and sustainable residential development in urban areas. Housing developers, their design teams, the planning system, and the community they serve, should share a goal to create high-quality places which should, among their objectives:

- Prioritise walking, cycling and public transport, and minimise the need to use cars;
- Deliver a quality of life which residents and visitors are entitled to expect, in terms of amenity, safety and convenience;
- Provide a good range of community and support facilities, where and when they are needed;
- Provide a mix of land uses to minimise transport demand.

There is a widely recognised need for the growth of Dublin to be consolidated (National Spatial Strategy, 2002) through the use of policy measures to encourage mixed-use, increased-density development. The current pattern of development is characterised by the rapid physical expansion of towns and villages located in a commuter belt extending up to 100 kilometres from Dublin city centre. Development is taking place in an often random, inefficient pattern with insufficient or no regard to the lack of social amenities, particularly in small villages. Decisions by the individual local planning authorities in the outer parts of the region to allow development often conflict with regional planning guidelines.

Unsustainable patterns of development were frequently supported by planning decisions influenced by lobbying from landowners at local level. The prioritisation of individual or local benefits over the general public good is often the result of such advocacy-based planning decisions. From ongoing tribunal level enquiries into planning matters in Ireland, it is clear that such approaches have also resulted in corruption of the decision-making process.

In 2002 An Taisce sought a judicial review of the Meath County Development Plan on the basis that an oversupply of land had been zoned for residential use. The High Court upheld the Plan despite evidence that it did not comply with the Greater Dublin Area Strategic Planning Guidelines, and ruled that councillors were required to have regard to guidelines rather than be strictly bound by them.

Contemporary with the expansion of hinterland towns, older suburban areas of Dublin have experienced population decline in recent decades, exemplified by falling population and school attendance figures (CSO, 2002). There is an apparent need to regenerate the demographic balance of inner suburban communities by consolidating development patterns instead of adding further pressure to rural locations and road networks through long-distance commuting. Limited progress has been achieved in these difficult planning and environmental policy areas, which may necessitate both structural institutional changes and

a cultural acceptance of such priorities. Just as fundamental as achieving specific objectives on targets as set is the basic issue of urban management systems. Achieving such objectives, whether in the short- or medium-term, obviously requires a process of urban management with a capacity to deliver. The need for effective urban management increases with rapid economic development of the type experienced in Dublin in recent years. Existing resources and infrastructure is relatively fixed in the medium-term and the need for effective urban management is consequently greater than before. In particular, the negative effects of rapid growth were quickly felt in the Dublin Region as infrastructure constraints led to congestion and affordable housing problems. As the long-term future of the urban region is intrinsically linked to urban environmental quality, it is essential that a co-ordinated and integrated response be developed to the city region's infrastructure, land-use and economic development pattern.

The National Spatial Strategy 2002–2020 specifies a number of criteria that should be followed by local authorities in permitting housing. The objective is to encourage sustainable residential development through satisfying a set of seven headings. These measures are included below. Whether this test was properly applied to the decision-making process is arguable. Many existing housing developments have been located in poorly selected areas or in places lacking the necessary support infrastructure. For example, large amounts of housing have been constructed in areas where few community resources exist, which goes against the asset test, in flood plain areas, which goes against the carrying capacity test, and in areas dependent on the private motorcar for transport needs, which goes against the transport test. The influence of the NSS Residential Development Evaluation Criteria in the decision-making process is therefore questionable.

Figure 1. National Spatial Strategy 2002–2020 (Residential Development Evaluation Criteria)

Box 5.1: Housing Location in Urban Areas	Evaluation Considerations
The Asset Test	Are there existing community resources such as schools etc with spare capacity?
The Carrying Capacity Test	Is the environmental setting capable of absorbing development in terms of drainage etc?
The Transport Test	Is there potential for reinforcing usage of public transport, walking and cycling?
The Economic Development Test	Is there potential for reinforcing usage of public transport, walking and cycling?
The Character Test	Will the proposal reinforce a sense of place and character?
The Community Test	Will the proposal reinforce the integrity and vitality of the local community and services that can be provided?
The Integration Test	Will the proposal aid an integrated approach to catering for the housing needs of all sections of society?

This growing dominance of the Dublin Region placed particular pressures on urban land markets and is clearly shown in the emerging constraints on development in this region, including problems of accessibility, infrastructure constraints and housing shortages. This situation has resulted in surges of development both at the edge of existing settlements and in a sprawl type pattern at locations connected to Dublin by the region's arterial road network

This region and other major urban centres, such as Cork and Galway, have remained the location of choice for significant inward investment that continues to favour Ireland as a location due to its generally favourable business environment and low rates of corporate taxation. An aim of national government policy is to achieve a wider dispersal of such development to achieve balanced regional development.

The Strategic Planning Guidelines[5] (SPGs) were introduced in 1999 in order to address the problems of the growth of Dublin and to channel such growth into a series of development centres within the commuter belt of the city.

However, the spatial form of recent development often does not conform to the plans outlined in the Guidelines. In addition, a number of problems exist with the policy direction of the Strategic Planning Guidelines, including the following:

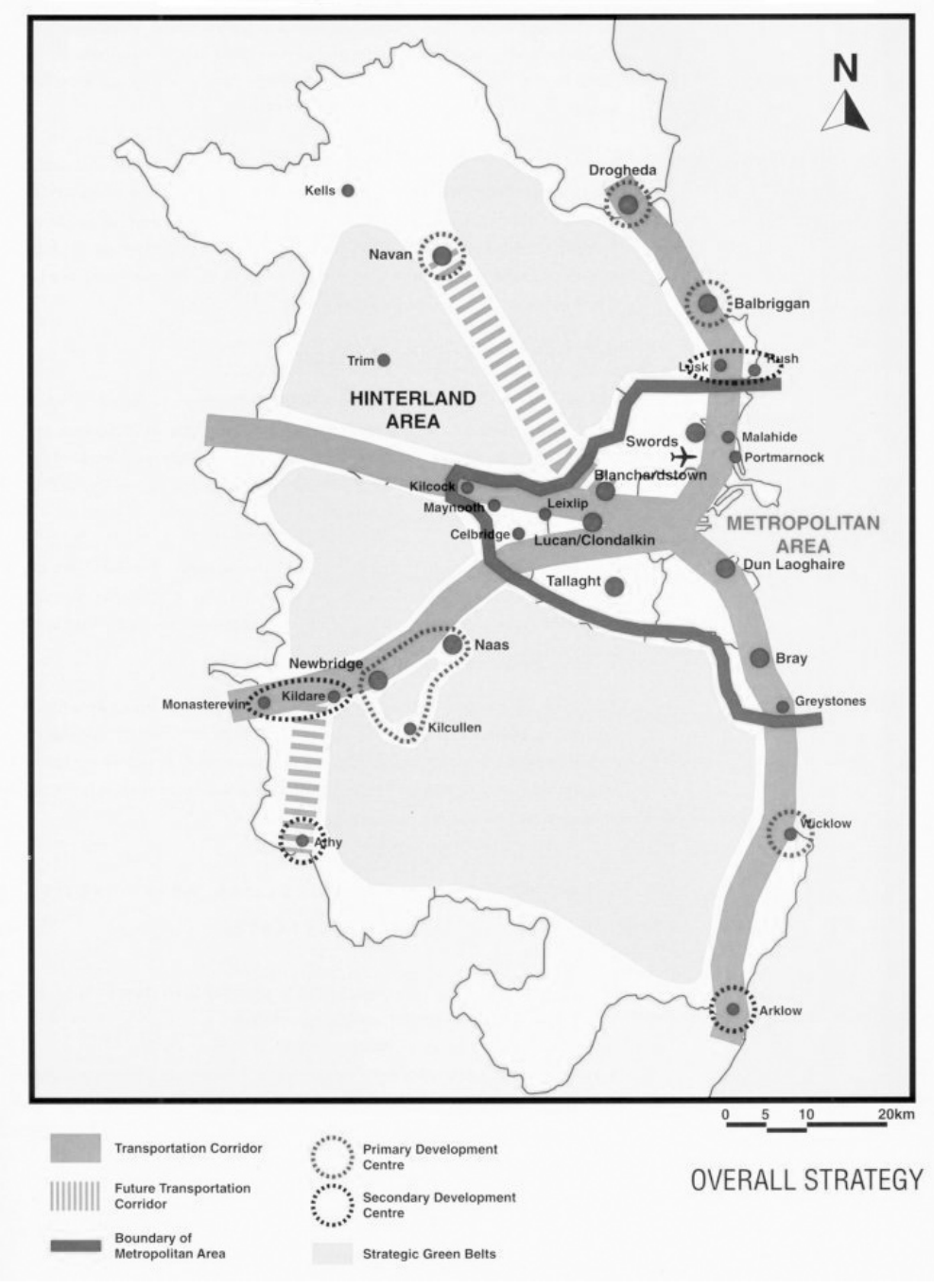
- The absence of effective co-ordination amongst principal stakeholders;
- Competition for resources and revenue amongst the individual affected local authorities who remain the statutory planning authorities for the region;
- The under-estimation of the scale, pace and immediacy of the economic growth experienced in the Greater Dublin Area over the past five years.

Section 3: Dublin's Functional Urban Region: Demographic expansion, economic growth and decline and spatial development patterns

Regional scale spatial planning reports and strategies for the Dublin city-region since the 1960s have attempted to demarcate the boundary of the functional urban area of Dublin. The Wright Plan, published in 1967, sought to plan for the wider functional region of Dublin as stated in the first paragraph of the report: "The Dublin Region may be broadly said to be that part of the Republic where life and livelihood are appreciably influenced by proximity to Dublin" (Wright, 1967a, 3). Although the report contains a detailed mapping of the functional region of the city based on indices of accessibility, commuting and shopping behaviour, the study region was taken to include all of counties Dublin (including Dublin City), Kildare, Meath and Wicklow, as well as south Louth, in recognition of the significance of the functional relationship between Drogheda and the Dublin region. Metropolitan Dublin is defined as the zone where "the regional influence of Dublin is overwhelmingly dominant" and to encompass land lying within 10 to 15 miles of the city and extending further along

[5] The SPGs were replaced in 2004 with statutory Regional Planning Guidelines (RPGs) prepared by each Regional Authority in the State, with the explicit purpose of implementing the National Spatial Strategy published in 2002. The RPGs for the Greater Dublin Area reaffirmed the core spatial strategy and spatial development objectives outlined in the SPGs, with minor alterations to reflect developments in the intervening period..

Figure 2: Strategic Planning Guidelines Spatial Strategy



Source: Brady Shipman Martin et al. 1999

primary routes (Wright, 1967b, 106-7). Similar to the currently designated Metropolitan Area, it includes portions of Kildare, Meath and Wicklow in addition to all of Dublin City and most of the former Dublin County. The Eastern Regional Development Organisation (ERDO) study, produced in 1985 sought to analyse the functional relationships between settlements in the East Region (the current GDA). In total, 11sub-regions were identified through statistical analysis of commuting flows, spatial analysis modelling techniques and information derived from employment surveys and County Development Plans. Sub-regions were explicitly defined as the functional areas ”within which the bulk of day-to-day activities… takes place for the majority of its population”' (ERDO, 1985, 39-40). The principal primary data source for identification of commuting flows was place of work data from the 1981 Census of Population. The Dublin Sub-Region identified in the ERDO report was subsequently adopted as the study area for the report of the Dublin Transportation Initiative, published in 1994 (DTI, 1994).

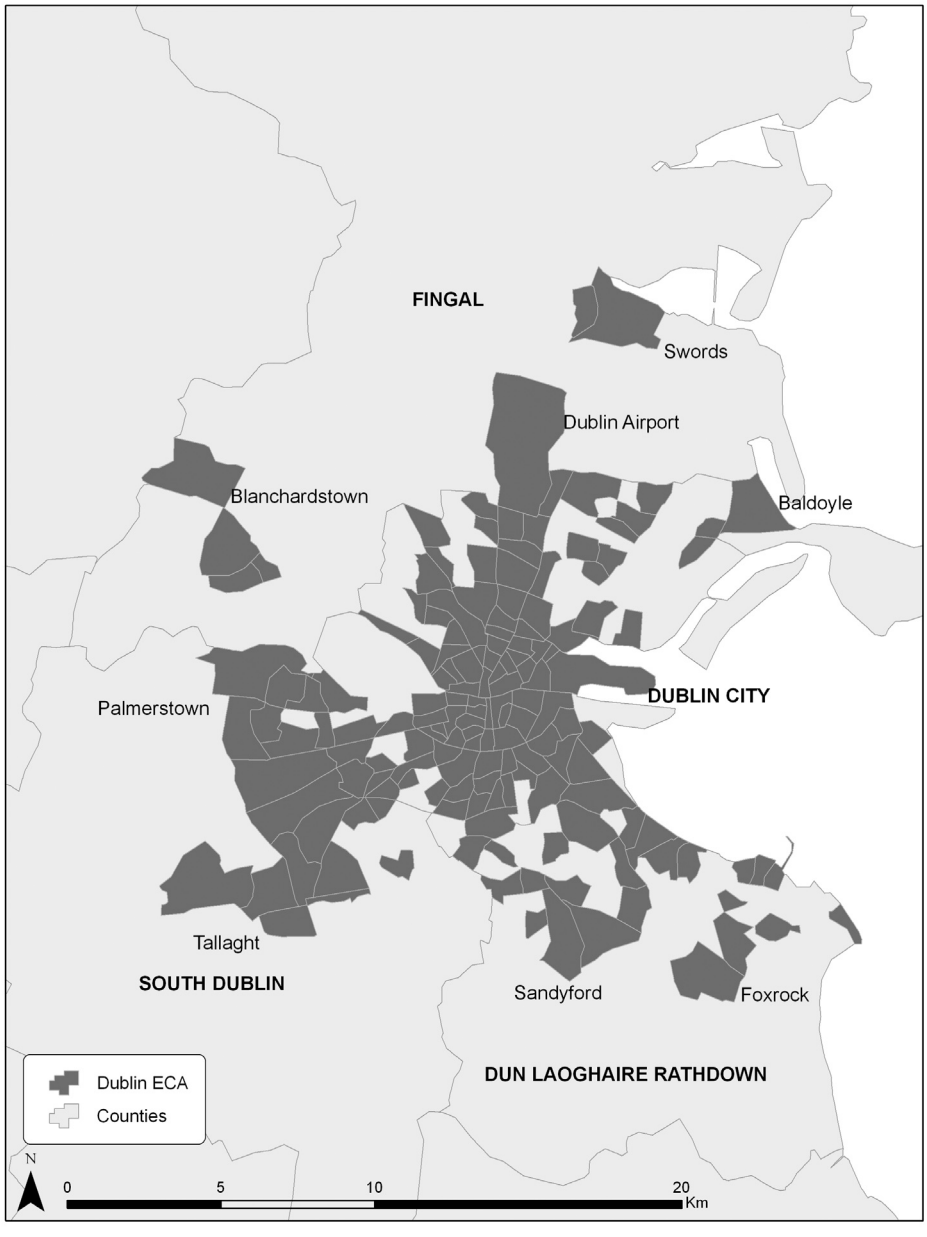
The Strategic Planning Guidelines for the Greater Dublin Area and subsequent Regional Planning Guidelines distinguish between the Metropolitan Area (described as the ”existing built up area and its immediate environs”) and surrounding ”Hinterland Area”. It is noted that a key issue for the Hinterland Area is the ”spill-over of development pressures from the built-up area of Dublin”, indicating the perceived functional relationship between the Metropolitan and Hinterland Areas (Brady Shipman Martin, 1999, viii).

A recent study commissioned by the Society of Chartered Surveyors on housing trends and urban sprawl in the GDA (Williams *et al.,* 2007) included a detailed mapping of the Functional Urban Region and Economic Core Area of Dublin derived from 1996 and 2002 Census of Population data and employment data provided by an economic consultancy firm dated from 1999 (IDS). In this study the Economic Core Area concept was defined as agglomerations of Electoral Districts (eds), where a minimum of seven persons per hectare are employed in that ED with a threshold figure of 20,000 for the minimum size of individual agglomerations. On this basis the Dublin Economic Core Area (ECA) was found to be the only economic core area within the GDA. The Functional Urban Region of Dublin was defined to include all EDs within a distance of 15 miles of Dublin City Centre and those EDs located at greater distances from the city centre where greater than 10 per cent of the population travelled over 15 miles to work and in excess of the 10 per cent of the population at work were employed in public administration and professional services categories (Williams et al. 2007, 48). Employing place of residence data only, this analysis rested on an assumption that the majority of those commuting in excess of 15 miles in the province of Leinster were commuting to Dublin city.

Here, the spatial extent of the Dublin Functional Urban Region and Economic Core Area is derived from 2006 Census of Population data. In contrast to the methodology outlined above, the Place of Work Census of Anonymised Records (POWCAR) subset of the 2006 Census of Population allows for a direct assessment of employment density at a fine spatial scale and a direct matching of origin and destination data for the analysis of commuting flows. The Dublin Economic Core Area, as shown in Figure 3, comprises all EDs where employment density is at least 7 jobs per hectare (700/sq.km) within the four Dublin counties. The ECA includes approximately 406,000 people at work and 525,000 residents in 159 EDs and covers an area of 150.0 square kilometres (sq.km). In addition to the traditional Commercial Business District (CBD), large suburban nodes, including Blanchardstown, Swords, Dublin

Airport, Tallaght and Sandyford, indicate the increasingly dispersed and polycentric pattern of employment distribution within the city (Attuyer *et al.,* 2009).

Figure 3: Dublin Economic Core Area, 2006



Source: Census of Population 2006, POWCAR dataset, analysis and mapping by C. Walsh. Ordnance Survey Ireland boundary datasets, Ordnance Survey Ireland Permit No. MP009006 © Government of Ireland.

The spatial extent of the Dublin Functional Urban Region (FUR) is subsequently defined in relation to the ECA. The inclusion of EDs within the FUR is determined by two criteria:

- At least 10% of workers resident in the ED work in the Dublin ECA;
- 50 workers, resident in the ED, work in the Dublin ECA.

The POWCAR dataset records workers resident in all counties in the state who are employed in the Dublin ECA. Although the absolute numbers of commuters commuting from outside of Leinster are small, it may be assumed that many of the apparent long-distance commuting flows indicated do not in fact represent daily flows, but the misleading recording of migrants to the Dublin city-region as resident at their 'family home' rather than their principal place of residence. The criteria outlined above, based on international standards, are selected to reflect the actual spatial extent of the FUR based on daily commuting flows (Cheshire & Gornostaeva, 2002; Yarwood *et al.,* 2005). In total, 454 EDs are included within the 2006 FUR. The total FUR area covers 4,138 sq.km. (Figure 4). For comparative purposes the spatial extent of the Dublin Sub-Region as defined by the ERDO strategy on the basis of 1981 data is shown in Figure 4. The area of the Dublin Sub-Region (2,016 sq.km) is less than half that of the 2006 FUR. Differences in methodology preclude further inferences to be drawn regarding the spatial expansion over the 1981-2006 period. With the exception of Togher, Calary and Altidore, located in north Wicklow, all EDs included in the ERDO sub-region are also included in the 2006 FUR. The principal contiguous area of the 2006 FUR extends to include all of the Dublin Region and large parts of northeast Wicklow, northeast and central Kildare, south and east Meath and southern Louth. Urban centres located at some distance from the principal contiguous area but included within the FUR include all or parts of Dundalk, Kells, Portarlington, Borris, Athy Baltinglass, Arklow, and Gorey. It should be noted that the spatial extent of the FUR as defined differs from that defined by Williams et al. in the Society of Chartered Surveyors commissioned study. The FUR has not contracted between 2002 and 2006. Rather, improvements in data availability and methodological changes have allowed for a significantly more accurate assessment of the spatial extent of the Dublin Functional Urban Region. In total, approximately 388,000 workers resident in the FUR in 2006 commuted to work in the Dublin ECA. This is, however, only 52% of the total number of resident workers in the FUR, indicating the continued significance of smaller dispersed centres of employment.

A county and regional level analysis of the workforce in the Greater Dublin Area is provided in Tables 1 and 2 below. The Greater Dublin Area workforce (defined by place of work) is composed of workers commuting to a fixed place of work ('commuters'), those working primarily at home ('home workers') and those with no fixed place of work ('mobile workers'). In this analysis mobile workers are excluded as their principal county of work is unknown. Almost 70,500 mobile workers are recorded with places of residence within the Greater Dublin Area. This compares to a total of 626,162 commuting to work in the GDA and 25,968 working from home in the GDA.

The statistics in Table 2 include both commuters and home workers. The place of work of home workers is determined by their place of residence. The total number of jobs in the Dublin Region (525,204) was significantly higher than in the Mid-East Region (126,886) in 2006.

Figure 4. Dublin Functional Urban Region, 2006

Source: ERDO (1985), Census of Population 2006, POWCAR dataset, analysis and mapping by C. Walsh. Ordnance Survey Ireland boundary datasets, Ordnance Survey Ireland Permit No. MP009006 © Government of Ireland.

Comparing with total population figures, however, provides a more meaningful basis for comparing the regional distribution of employment. There were approximately 442 jobs per 1000 population in the Dublin Region, compared with 267 jobs per 1000 population in the Mid-East Region.

In total 82.6 per cent of those at work in the Dublin Region were resident within the Dublin Region[6]. An additional 13.4 per cent are recorded as commuting from the neighbouring Mid-East Region. By comparison, 77.6 per cent of those at work within the Mid-East Region were resident within the Mid-East Region. 11.4 per cent of those at work in the Mid-East Region commuted from beyond the Greater Dublin Area, a significantly higher proportion than for the Dublin Region. In total, 35,845 workers are recorded as commuting from beyond to the GDA to places of work within the GDA. This figure, however, represents only 5.5 per cent of the total workforce in the GDA.

Section 4: Policy issues Arising and Conclusions

The dispersed form of urban development in Dublin is a consequence of rapid expansion of urban development in an often spatially inappropriate manner: for example, the exacerbation of urban sprawl and unsustainable growth patterns emerging on the edge of the city. Such dispersed urban growth, characterised by single use and low-density development, can be viewed as a wasteful use of land and infrastructure resources. In addition it has tended to create oversupplies of speculative housing development in areas where little demand exists (Williams et al, 2010). An analysis of existing local and regional governmental structures impacting upon the region's economic development indicates a need for reorganisation of such structures based upon an analysis of the requirements of the Functional Urban Region of Dublin. This could include an analysis of both the formal local government structures and the equally important linkages of local government, industry and community interests, which shape the future of the urban region. The past experience of horizontal co-operative systems in Ireland has seen a largely fragmented decision-making process. It is therefore suggested that there is a need for an integrated and co-ordinated approach.

In 2009/10, discussions on reforming local government structures in the greater Dublin Area followed the arguments in the consultation paper *New Institutional Arrangements for Land Use and Transport in the Greater Dublin Area* (DOELG, 2001), which provided recognition of the need for key structural changes in the urban management processes for the Dublin area. Existing arrangements, involving the sharing of administrative and executive powers over several layers of central and local government, create overlapping responsibilities. This is often characterised by competing or conflicting interests and an inadequate implementation capacity. The document envisaged the creation of a strategic level authority with responsibilities for linking transportation policy with planning and land-use. This was in recognition of Dublin as a high growth urban centre, facing a number of strategic challenges in areas including planning, transport, housing, waste, water provision and wastewater disposal. The document stated that a regional mayor for Dublin with defined strategic functions should be introduced and that the role of the mayor in relation to current and future institutional arrangements needs careful consideration, particularly with regard to the four Dublin local authorities, the adjoining local authorities, and national offices.

The potential for sudden changes in political priorities is clear when one considers the evolution of these proposals. The document proposed, for example, that the Dublin mayor

[6] If mobile workers are assigned to their region of residence, this figure increases to 84.0 per cent for the Dublin Region, with a corresponding figure of 81.4 per cent for the Mid-East Region.

Table 1: Greater Dublin Area workforce classified by place of work and place of residence, 2006

	Commuting Status		Origin of Commuters		
Place of Work	**Commuters**	**Home**	**Dublin**	**Mid-East**	**Elsewhere**
Dublin City	289,200	5,281	244,096	33,848	11,256
South Dublin	82,878	2,505	63,291	15,428	4,159
Fingal	73,055	3,403	58,644	10,563	3,848
Dún Laoghaire-Rathdown	65,106	3,776	52,692	10,335	2,079
Dublin Region	510,239	14,965	418,723	70,174	21,342
Kildare	53,969	3,673	6,989	40,279	6,701
Meath	33,176	4,158	3,029	25,459	4,688
Wicklow	28,778	3,132	3,882	21,782	3,114
Mid-East Region	**115,923**	**10,963**	**13,900**	**87,520**	**14,503**
Greater Dublin Area	**626,162**	**25,928**	**432,623**	**157,694**	**35,845**

Source: CSO

Table 2: Region of residence of GDA workforce, 2006

	Region of Residence		
Place of Work	**Dublin (%)**	**Mid-East (%)**	**Elsewhere (%)**
Dublin City	84.7	11.5	3.8
South Dublin	77.1	18.1	4.9
Fingal	81.2	13.8	5.0
Dún Laoghaire-Rathdown	82.0	15.0	3.0
Dublin Region	82.6	13.4	4.1
Kildare	12.1	76.2	11.6
Meath	8.1	79.3	12.6
Wicklow	12.2	78.1	9.8
Mid-East Region	11.0	77.6	11.4
Greater Dublin Area	68.6	25.9	5.5

Source: CSO

should become the Chair of the proposed Dublin Transport Authority. Furthermore, detailed consideration was to be given to the administrative and institutional supports necessary for the proper functioning of a mayoral office in Dublin. The Government was progressing legislation to establish a Dublin Transport Authority (DoEHLG, 2008), however in 2009 the Dublin transportation Office was instead subsumed into an expanded National Transport Authority.

The role of economic forces, which ultimately drive the urban economy on a functioning region basis, is often neglected or misunderstood. The patterns of demand that policies in the areas of transportation and planning try to accommodate are directly generated by the flow and direction of investment and development. The key providers of transport services will need to plan for the future demands of the economy in advance of service shortages and deficiencies arising. Population predictions at national, regional and local level clearly play an important part in this.

This should ensure that decisions on development in this area are based upon the needs and emerging demands of the urban region rather than being dominated by the requirements and wishes of existing producers and providers of transport services. It is to be hoped that research and analysis in this policy area will develop and shift urban policy realities towards a more sustainable urban form. While it is clear that sufficient planning and development policy exists at the top level, whether this is put into practice at a local level is often debatable. What is needed in this instance is a more robust implementation of the 'rules', and to avoid divergence between rational policymaking and how it is interpreted on the ground.

Urban development trends are traditionally linked to the context of the general economy and the public policy and regulatory environment. Recent trends include a broadening of the concept of location decision-making to include telecommunications and bandwidth capabilities, and a prioritisation of essential infrastructure, including roads and airports, as transport systems become more congested. In Ireland, as internationally, public responses to planning and development are increasingly attempting to integrate physical, economic and social issues to create a more sustainable environment. The relevance and connectivity of infrastructure provision and its benefits are recognised in the National Development Plan (which outlines strategic infrastructure investment plans) and is linked with the National Spatial Strategy 2002-2020 (DOELG, 2002) which set out public policy on spatial development issues over the medium term and will influence demand and urban development trends. The National Development Plan identifies a number of key strategic infrastructure committments that it states are critical to its successful implementation. Specific reference is made to the implementation of the NSS as being a crucial objective.

In the context of the Dublin area, the NSS envisages the consolidation of the existing metropolitan area for a more efficient and competitive regional future. The role of clusters and innovation is recognised and requirements of potential counterweights to the Greater Dublin Area are addressed in terms of developing the regional area with a critical mass of population skills and innovative capacity. Essential attributes for alternative growth centres are quality of infrastructure, cultural, social and environmental assets, and educational attributes. The development of each region is to be within the context of a set of Strategic Planning Guidelines with which all public and private agencies are expected to comply. All development proposals must conform with the Statutory Development Plan prepared by each Local Authority having had regard to the National Spatial Strategy.

The intention of the selection of such centres is to encourage alternative concentrations of economic activity in the expectation that critical mass will aid the more cost-effective provision of services. In addition, such trends are expected to produce a more sustainable development pattern with a greater regional balance and a reduction in the present trend towards sprawl, particularly in the GDA. In comparing such aspirations to their potential for implementation, the vital role of public finances is evident. The ambitious targets for infrastructure provision in the National Development Plan were subject to a major review in 2003 and 2010. While progress has been achieved on initial projects, the level of cost overruns and time delays occurring presents major challenges. With weakening public finances and continuing obstacles to implementation, difficulties emerge. An increased role for Public Private Partnerships is being promoted as potentially assisting in achieving policy goals. However, policy makers are continuing to seek additional options, including legislative change to speed actions on vital economic infrastructure projects necessary to maintain economic competitiveness.

A rationale presented for this dispersal is that the Dublin Region and other major urban centres such as Cork and Galway have remained the preferred locations for investment and development during the recent period of rapid economic development. This has created problems and development constraints in terms of housing, access, infrastructure and services. Such problems can be linked to past failures to invest in and plan adequate infrastructure and services, but are often simplistically represented as a function of city size.

Difficulties persist in the promotion of a dispersal of foreign direct investment to regions outside the GDA. Dublin remains the main focus for international mobile investment and for many of these investors the reality is that the main alternatives considered are other medium-sized European centres such as Edinburgh and Amsterdam. Despite its recent population and employment growth, Dublin, by international standards, requires considerable improved development and management rather than diversion of development funding. Some essential improvements identified in the NSS include improved land access to the airport and broadband capacity throughout the region. A central feature of urban development policy debates has been the sustainability of dispersed housing settlement patterns particularly in the Dublin area. The review of Regional Planning Guidelines for the region (2003) highlights the importance of quality of life and accessibility issues.

The general issue of housing and settlement patterns was also examined by the NESC report on *Housing in Ireland: Performance and Policy* (2004). This report characterised the Irish housing system as dynamic but unstable, with problems in terms of the uncertainty and variability in land supply. The weak supply response in areas where demand was highest, such as Dublin in the late 1990s, was identified as a factor in the exporting of such demand regionally in a sprawl type manner. The later strong supply response is described as poor in quality in urban development terms. As with previous studies, the report noted the absence of integration between housing, land use and transportation strategies within the Greater Dublin Area.

Future urban development trends are likely to be linked to progress in infrastructure improvement, which results in shifting urban development market trends. The consolidation of existing urban areas with development along principal transportation corridors is now commencing. This represents a refinement of the extensive sprawl type patterns of development experienced in recent times when commuting patterns up to 100km from city-

based employment developed, facilitated by improvements in the radial road networks near major urban centres. Development based upon improved access is seen particularly in Outer Leinster, which has the benefit of proximity to the major employment zones at edge city locations surrounding Dublin on the M50.

In the short term, the location that has received the most significant boost to infrastructure is the area included in the Dublin to Belfast corridor. The upgrading of existing rail systems and the completion of the motorway from Dublin to the border with Northern Ireland represent a significant uplift to access and potential developments in this area. If political stability is maintained, the benefits of linking more closely the two largest population centres on the island will increasingly become evident with significant implications for urban development trends. Yarwood (2006) confirms that this region is the principal driver behind both the Republic of Ireland and Northern Ireland economies and underlines that strong support for the former's Regional Development Strategy and the latter's National Spatial Strategy provide strong support for this corridor. Yarwood (2006) also suggests that the development of a healthy and internationally competitive all-island economy can be aided by the complementary development of nearby cities and intervening towns and rural areas. This will encourage the emergence of an integrated and well-connected package with distinctive urban and rural elements.

Conclusions

It is now clear that the urban regional market of city regions such as Dublin have expanded considerably beyond historic city and county boundaries. The level at which territorial administrative agencies operate needs to take account of such trends. The most appropriate level for territorial competitive agencies based upon international research evidence is the Functional Urban Region. Absence of co-operation between agencies within such regions can be both wasteful and inappropriate. Further discussion of urban form and spheres of influence and an improved understanding are necessary to move away from the term of 'sprawl' that is often applied too liberally in describing unsustainable urban forms.

Residential and commercial occupation, employment, development and investment trends are all now regional rather than local issues. There is a necessity to manage such growth in a sustainable manner in the regional and national interest. Evidence is therefore required as to what is the economic sphere of influence of the Dublin area. The Functional Urban Region concept offers an appropriate methodological basis for examination of the growth of urban/regional growth and can be readily applied to other regions. Having established the importance of the functioning regional dimension, debates on urban and regional governance, strategic planning, development and environmental issues arising will hopefully be more informed. This will assist in attempts at policy reform in the area of implementing agreed national and regional spatial strategies.

It is evident that current planning and development organisational structures were not capable of handling the management of development on the city-region or functional urban scale. Part of the problem lies in the lack of willingness within existing structures to accept multi-level partnerships and collaboration. There remains a need for effective spatial governance to achieve coordination in the provision of infrastructure in tandem with residential and commercial development

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