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THE FUNCTIONAL URBAN REGION OF DUBLIN:
THE EVOLUTION OF THE NEW FUNCTIONAL URBAN REGION OF DUBLIN AND ITS INFLUENCE ON FUTURE REGIONAL PLANNING AND DEVELOPMENT.

Dr. Brendan Williams
University College Dublin

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Dr. Brendan Williams

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PLANNING AND ENVIRONMENTAL POLICY, UNIVERSITY COLLEGE DUBLIN, RICHVIEW, CLONSKEAGH, DUBLIN 14, IRELAND

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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 will include empirical evidence on development patterns emerging, which it is expected will assist in evaluating the effectiveness of policy measures. In particular the methodology of the paper was designed to include a focus on the critical issues which emerged over the period from 1994 to 2002 and their continuing impact on the regions urban development pattern to 2006. This period reflected the regions transition from an underperforming area in terms of economic development to rapid and sustained economic development. Local policy measures and responses are analysed as both a response to and shaping force in such urbanisation. 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 will include a contrast between stated policy aims, analysis of development data and conclusions on likely future trends. The conclusions will 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.
Introduction
The structure of the paper involves in Section 1 a discussion on the emergence of fast growing urban city regions internationally and issues in terms of their urban form which impact upon their planning and development. The concept of the functional urban region is developed and issues of governance, planning and development arising are outlined. A suggested methodology for the examination of the Functional Urban Region of Dublin using statistical evidence is then developed in Section 2. This analysis will be carried out using standard systems for establishing spatial boundaries of metropolitan regions internationally as adapted by the Gemaca 11 study (2002). This spatial representation of emerging development trends will be accompanied by an analysis of the policy implications of such trends in Section 3 and is followed by an exploration of issues arising for the development of the Greater Dublin Area.
A significant element of this paper is the inclusion of the mapping and analysis of the spatial development zones influenced by Dublin including:
- The Economic Core area.
- The functional commuting zone
- The expanded continuously developed area.

Section 1: 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.

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. The success or failure of such policies in preventing sprawl 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 these 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). In Ireland an advisory regional authority in carrying out regional planning functions assists a combination of voluntary horizontal linkages between local authorities, along with state sector agencies responsible for infrastructure and services. Proposals for reform have been debated but not enacted. 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 coordinating 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 in social and economic development projects is apparent internationally. This is evident even in states, which traditionally were viewed as having strong spatial policies aimed at compact and planned urban form such as the Netherlands. Louw et al (2003) note as a threat the trend in the Netherlands towards a reduced role for local government as a 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 approval of many open space 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 defence of sprawl commentators document that sprawl is ubiquitous, and will continue. Sprawl settlement patterns are driven by consumer choice for improved housing and living standards and reflect the modern choices for car based living. 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 resulting social developments (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).

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’s 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 creates confusion in our understanding of the functioning of property markets (Cole and Grossman, 2002) and importantly makes international policy comparisons more difficult.

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, which 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 11 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). A difficulty in term of the comparability of European social and economic data has hampered urban and regional research in recent years (Cheshire and Magrini, 2002). The aim of the project was to define FURs by a consistent set of criteria 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 an era of increasing economic competition and restructuring the issues of life quality and sustainability remain essential at national regional and local levels (Clinch, 2002). 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:

(1) The reciprocal links between core cities and their regions
(11) 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

It is clear from the analysis of population, housing and travel-to-work trends, that existing administrative boundaries in Ireland and internationally 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 theme by applying the concept of Functional Urban Areas as a tool for the analysis of urban systems. This section will focus selectively on the case of Dublin, developing data and material from a previous study undertaken as part of the EU Gemaca II Project team and used for the analysis of large metropolitan areas in North West Europe. In particular, this would provide a useful framework to examine the functional relationships that exist between urban centres and their hinterlands, and in the context of polycentric development, to examine the relationships between urban centres. The results of this project involved the identification and mapping of the Functional Urban Regions which was broadly defined as the area surrounding a major metropolitan area containing at least 1 million inhabitants and which is functionally dependant on the central city. This exercise was carried out for Dublin and other metropolitan areas in the North-West European area.

Managing Growth in the Dublin Functional Urban Region

Since the mid 1990s, rapid economic growth, with average annual GNP growth rates in excess of 7%, has characterised the Irish and Dublin development experience. Increased consumer spending, manufacturing output, service provision and housing demand have resulted in a significant expansion of development activity (Williams and Shiels, 2000). Unless the generally outward expansion of the Dublin region is occurring in accordance with a regional strategy or plan significant implications for the long-term ambitions of sustainable
development policies are likely. A consolidated core with a rapidly expanding edge city is currently the predominant trend in the spatial evolution of Dublin. This is evidenced by the significantly expanded commuter belt, which by 2006 is extending up to 100 kilometres distance from the centre of Dublin with much of the growth in the commuter hinterland comprising of one-off housing rather than expansion of existing settlements. It is essential to develop an understanding of the fundamental economic forces driving this pattern of expansion and to investigate the implications of urban development patterns on future prospects for economic competitiveness.

A major aspect of such research is the identification of alternative forms of urban governance, which have the capacity to ensure that maximum social and economic benefits can be derived from such growth whilst avoiding the negative impacts of development (Gemaca II, 2002). The illustration of the expansion of the region is included in map and table format indicating the Functional Urban Region, Morphological Urban Region and the Economic Core of Dublin. This is an important element in our analysis of the future direction of policy development for Dublin and its surrounding region in the current period.

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. 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. Major urban areas tend to offer a wide range of infrastructure supports 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, which cluster together, adopt a risk-minimisation strategy and benefit from shared availability of services.

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. Within Europe, metropolitan regions have increasingly engaged in competitive strategies with each other in order to attract a reducing amount of new commercial activity (Gemaca II/Cheshire, 2002).

Modern inward investment demands a different range of facilities compared to industry in previous years:

- The quality and capacity of telecommunication systems have become a major priority, particularly for the Information Technology and Financial Service sectors, which are a vital part of the Dublin economy.
- The importance of air cargo facilities has increased due to the use of this type of transport for lightweight electronic components which are used by the electronics sector. This is of particular importance for the region.
• Good educational facilities, particularly third-level institutions, with a heavy emphasis on research activity and links to industry have become an important asset for cities wishing to maintain a competitive edge.

• Cultural, social and environmental assets of all cities are becoming more important in terms of their ability to compete on a global basis. Prospective enterprise increasingly seeks locations with a high degree of social and environmental quality standards.

Physical agglomeration of cities and economic corridors
• As urban settlements develop and expand in a peripheral fashion, many cities and towns in close physical proximity have merged together, forming a continuous zone of a built-up area. Planning policies have been developed by these metropolitan regions to mitigate the negative effects of agglomeration and to preserve open space. Alternatively, two adjacent cities can heavily influence the region between them. Typically, most economic development occurs along the main transportation axis linking the urban areas, with each intermediate city acting as a “pole of growth” at either end. This type of development is known as an Economic Corridor, and the Dublin to Belfast corridor has potential for this form of development strategy, particularly in the light of political changes and the upgrading of transport infrastructure.

Peripheral expansion and urban sprawl
In Ireland development of urban areas often takes the form of outward expansion of the built-up area. During this process, adjacent towns and villages are subsumed by suburban development, often with negative consequences in terms of sustainability due to infrastructure deficits in the medium term. New infrastructure needs to be constantly provided to service peripheral expansion, and scarce land resources are used, often in a wasteful fashion. Peripheral expansion of urban areas such as Dublin can often characterised by:

• Suburbanisation of residential functions, usually resulting in low-rise, low-density housing development. This form of development can be highly wasteful of land resources and causes problems in terms of traffic congestion from long distance commuting.

• Decentralisation of local commercial activity. During the past four decades, commercial activity has decentralised outwards from the traditional central business district of cities to suburban locations. This trend has been most recently exemplified by the movement of offices to suburban office parks and decentralisation of state offices. This has had major implications for city transportation systems.

• Dispersal of population to the hinterland of metropolitan regions. This activity results in the rapid development of towns and villages at increasingly further distances from major cities. The net result of this trend is congested commuting patterns and transportation difficulties.

The negative effects of peri-urban development require an integrated planning approach. The Greater Dublin Area has experienced particular problems in this regard in recent years including:

• Congestion (traffic, population, land use);
• Rapid peripheral expansion (negative aspects of urban sprawl);
• Increased levels of pollution and energy usage (reduced environmental quality);
• Increased land and property prices - (reduced housing affordability).
Objectives of Urban Spatial Planning in Dublin

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

- 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.

Limited progress may have been achieved in these difficult planning and environmental policy areas, which might necessitate both structural institutional changes and a cultural acceptance of such priorities (Williams, 2002). This can be as fundamental as achieving specific objectives and basic issues 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 Strategic Planning Guidelines were introduced in 1999 and reviewed in 2003 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 individually 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.

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 appropriate, 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 allowing development by individual local planning authorities in the outer parts of the region often conflict with regional planning guidelines. The contemporary expansion of hinterland towns and 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.

Rapid population and economic growth in Dublin and its environs (known collectively as the East Region or the GDA) has added pressure to provide new housing, increase services and upgrade transport infrastructure. The Dublin and Mid-East (Kildare, Meath and Wicklow) Regions, which together constitute the East Region, are currently experiencing rapid population growth in excess of the national rate of growth. Such growth is both a
contributory factor to and a result of greatly increased economic activity in these regions in recent years.

**First Stage Expansion: 1994-2000**

The share of national population by the East Region is estimated to have increased from 38.8% in 1996 to 39.5% by 2000. Between 1994 and 2000, 278,000 persons migrated to Ireland, with 43.8% of this group aged between 25 and 44 years of age, the prime age category for family establishment and house purchase. The disproportionate share of economic growth in the East Region has not, however, been met with corresponding housing provision. The East Region accounted for 49% of the growth in the population over 15 years of age, 47% of the increase in total numbers at work and 46% of new private cars registered in Ireland between 1994 and 2000. However, the East accounted for only 35.6% of the share in the total number of new dwellings produced in the 1994-2000 period, well below the percentage share for the other three economic criteria. (Williams and Shiels, 2000) Despite this growth, housing provision falls behind the other three categories substantially as illustrated in Figure 1.

Figure 1

*Comparison between East Region and the Remainder of Ireland of Population Share and Other Economic Variables 1994-2000*

Source: Gemaca II analysis of CSO and DoELG data

The East Region experienced 13% growth in population over 15 years of age between 1994 and 2000, compared to a national rate of 10%. Between 1994 and 2000 the East Region experienced 47% growth in employment, compared to 36.4% for the remainder of Ireland, indicating that the provision of employment in the East Region is disproportionately greater than for the rest of the country. However, the provision of new housing lags considerably behind the other economic criteria. Compared to a growth rate of 7.1% between 1999 and 2000 for Ireland as a whole, the number of new houses completed in the Dublin Region experienced a decline of 6.7%, from 10,035 to 9,405 dwellings completed.

The declining affordability of housing in the Dublin and East Regions pushed house buyers to purchase in peripheral and Outer Leinster locations where house prices are more affordable. Between 1994 and 2000, new house production increased by 192% in the Outer Leinster counties, a rate over four times that of the East Region. The proportion of total national housing output accounted for by the Dublin Region has sharply declined from 29.4% in 1994.
to 18.9% in 2000 whilst the proportion accounted for by the Outer Leinster counties has increased from 10.1% to 16% during the corresponding period. (DOEHLG Housing Statistics)

**Second Stage Expansion: 2000-2006**

During the period 2000-2006 a sprawl type pattern of development became strongly established in the East Region. GPEP analysis of CSO and Housing statistics show that its population growth continued to increase as the regions share of national population increased from 38.8% to 39.2% over the period from 1996 to 2002. In the key age group for future housing demand (those over 15 years of age) the region also experienced a 13% higher growth rate than the national rate of 11.7%. However, new housing completions as a share of national figures still accounted for only 33.2% of the total number of units constructed nationally over the period 2000 – 2004.

These trends point to a continuation of supply deficiencies in Dublin and the East region until the very recent period. A result of this housing under-provision close to the economic core areas of the region has led to a continuing push of employment related housing demand at increasing distances from Dublin.

The national surge in house completion figures has been particularly evident in the outer parts of Leinster and the midlands catering largely for Dublin commuters. The recent trends towards increased supply in the older core Dublin area is at an advanced stage in the region’s current development cycle where a dispersed pattern has already become established.

**Defining and Analysing the Functional Urban Region of Dublin.**

This paper defines and analyses the Dublin FUR based upon the agreed definitions for the Gemaca11 EU study which were developed with data from the CSO Small Area Population Statistics (SAPS) which is divided into Electoral Districts (EDs). Firstly the EDs of the actual built up area of the city were included which stretches up to 25KM from the city centre. For EDs at distances greater than 25KM from Dublin City Centre the following criteria were required for inclusion in the Functional Urban region

- Distance travelled to work (in miles) over 15 miles - in excess of 10% of the employed population.
- Cross tabulated with: Mode of travel to work - excluding Foot or Bicycle and with proportion of workers (in or at work by Industry category) employed in Public Administration and Professional Services sectors - in excess of 10% of employed population.

The Functional Urban Region of Dublin (FUR) extends c.45 kilometres from the centre of Dublin city, but is irregular in morphology and extends beyond the average distance along major arterial routes, particularly along the coast (see Fig 2). The 2002 analysis of The FUR of Dublin was based primarily on data from the 1996 Census of Population. Work on a revised FUR map representing Census and other data to 2006 is in progress and indicates a continuation of these trends. The Functional Urban Region of Dublin in this map has an area of 3,017 square kilometres, a population of 1,304,456 persons, and is comprised of 407 EDs (Electoral Divisions). The FUR includes all of the Dublin Region (composed of Dublin County Borough, Fingal, South Dublin and Dun Laoghaire-Rathdown) and a large portion of the surrounding Mid-East Region (counties Meath, Kildare and Wicklow). The FUR extends into the Border Region in South County Louth at Drogheda. Current trends indicate that the outward growth of Dublin related development would extend the area of the FUR appreciably along the main arterial road networks by 2006.
Figure 2: Functional Urban Region

Source: Gemaca II, 2002
The Functional Urban Region of Dublin

**Morphological Urban Region of Dublin**

The Morphological Urban Region of Dublin (MUR) is defined as the aggregation of EDs characterised by a population density of greater than seven persons per hectare (70 persons per km²). The MUR essentially coincides with the contiguous or continuous built-up area of Dublin city, extending from the city centre at an average distance of 9 kilometres. Based on the 1996 Census, the population of the Morphological Urban Region of Dublin is 972,536 persons and extends to an area of 333 km² (see Fig 3).

**Figure 3: Morphological Urban Region**

![Morphological Urban Region](image)

*Source: Gemaca II, 2002*
Economic Core of Dublin

The Economic Core (see Fig 4) is defined as the aggregation of EDs within which the greatest concentration of employment is located, containing a minimum of 7 employed persons per hectare. The Economic Core of Dublin, unlike many of the Continental European Cities that were also examined in the GEMACA II study, is of a substantially smaller area than the MUR, reflecting the low density and residential function of much of the MUR of Dublin. The Economic Core is concentrated in the inner city and inner suburban areas, the industrial area located adjacent to the Naas Road to the Southwest of the city, along the South coast of Dublin Bay towards Dun Laoghaire and Northwards towards, and including, Dublin Airport. The Economic Core of Dublin contains 507,924 employed positions, a population of 438,882 persons and an area of 124 km², less than 40% of the total area of the Morphological Urban Region. The relevant data are summarised in Table 1 below and shown as in Figure 5. This in turn can be compared with the map showing the Strategic Planning Guidelines for the Dublin Region in Figure 6.

Figure 4: Economic Core

![Economic Core Map](source: Gemaca II, 2002)

<table>
<thead>
<tr>
<th></th>
<th>No. of EDs</th>
<th>Area (km²)</th>
<th>Population</th>
<th>Employment</th>
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<td><strong>Functional Region</strong></td>
<td>407</td>
<td>3,017</td>
<td>1,304,456</td>
<td>669,917</td>
</tr>
<tr>
<td><strong>Morphologic Region</strong></td>
<td>289</td>
<td>333</td>
<td>972,536</td>
<td>558,896</td>
</tr>
<tr>
<td><strong>Economic Core</strong></td>
<td>152</td>
<td>124</td>
<td>438,882</td>
<td>507,924</td>
</tr>
</tbody>
</table>

Source: Adapted from CSO and IDS data
Figure 5: **Combined map of Dublin Functional Urban Region (FUR)**

Source: Gemaca II Project, 2002
Figure 6 Strategic Planning Guidelines

Source: National Spatial Strategy 2002 with permission of DOELG
Section 3: Policy issues Arising

The dispersed form of urban development in Dublin is a consequence of rapid expansion of urban development in an often spatially inappropriate manner. Such dispersed urban growth, characterised by single use and low-density development can be viewed as a wasteful use of land and infrastructure resources. 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. The consultation paper *New Institutional Arrangements for Land Use and Transport in the Greater Dublin Area* (DOELG, 2001) 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 creates 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.

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. It is also clear that the needs and demands of the urban economy and consumers needs require to be given full weight alongside the views and inputs of, for example, the key providers of transport services. 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.

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 2000(DOE, 2000) and 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.

While most parts of Ireland have benefited from recent economic growth the impact has been uneven. The dominant role of Dublin and surrounding Greater Dublin Area is illustrated by comparing the GDA to the rest of Ireland. The GDA, which incorporates Dublin City and county and surrounding counties such as Kildare, Meath and Wicklow, contains 1.53 million inhabitants representing 40% of the National population according to Census 2002 (CSO, 2002). Approximately 49% of all employment growth in Ireland in the 1990’s occurred in this region and similarly 47.5% of all immigration into the state comes to this region. (Williams and Shiels, 2001). The most recent regional population projection (CSO, 2005) indicates that the population of the Greater Dublin Area is due to increase by a further 500,000 in the period 2006 - 2021. This projection will be heavily driven by inward migration of an estimated 232,000 into the Dublin Region according to CSO estimates.
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 which continues to favour Ireland 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. Recent economic growth in GDP terms has continued at 5% in 2005 and this performance of the economy is reflected in continued low levels of unemployment with Live Register figures at 4.4% in 2006 (CSO, 2005, 2006).

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 regional areas 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 which will have 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. While progress has been achieved on initial projects the level of cost overruns and time delays can present 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 and was facilitated by improvements in the radial road networks near major urban centres. Development based upon the 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, which 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 more closely linking the two largest population centres on the island will become increasingly evident with significant implications for urban development trends.

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 spatial 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 approximates to the Functional Urban Region. Absence of co-operation between agencies within such regions can be both wasteful and inappropriate. 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. This has been recognised in a shift towards the strengthening of the role of Regional Planning Guidelines in recent years. 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 expansion 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 will hopefully be assisted. This will augment attempts at policy reform in the area of implementing agreed national and regional spatial strategies. Critical issues arising from this debate include:

- The capacity of current planning and development organisational structures to manage the development on the city-region or functional urban scale?
- The choice of best practice national or international models in local and regional governmental structures to deal with the management of rapid development in city-regions?
- The fostering of a willingness within existing structures to accept multi-level partnerships and collaboration or alternatively the introduction of new structures.
The Functional Urban Region of Dublin

References


Robson, B. (2000) Key challenges for an urban white paper, Cityscape, Autumn 20000, ESRC UK


